
NEW ZEALAND CLAY TARGET ASSOCIATION INC.



Noise Management Guideline Plan for Shooting Ranges

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Introduction

Purpose

This Plan is to assist clubs with the management of noise.

Noise from all activities on the site need to comply with the noise performance standards set out in any conditions of the resource consent.

This Plan sets out the practices and procedures for noise mitigation and management to be followed to help ensure that the noise performance standards will be met and the effects of noise at any neighbouring rural dwelling will be no more than minor.

Scope

This Noise Management Guideline Plan covers all activities taking place within the exclusive areas for all ranges established within the New Zealand by NZCTA shooting clubs:

Objectives

To comply with the specified noise performance standards.

To avoid, remedy or mitigate any adverse effects on the surrounding rural environment as a result of noise generated by activities on the site that exceeds the noise performance standards that are required to be achieved.

To adopt the best practicable option in terms of Section 16(1) of the Resource Management Act to ensure that the emission of noise from the activities do not exceed a reasonable level.

Review Process

This document has been reviewed and certified by Design Acoustics Ltd when compiled for the Bay of Plenty Club, February 2010.

Noise Performance Standards

December 2004 Resource consent (Commissioner Decision 857)

The noise performance conditions of this resource consent are as follows:

4d Where the activity is a significant noise producing activity, (being an activity with a total A-weighted sound power level of 95 dBA or greater), a Noise Management Plan is to be provided.

NB. Shooting activities are a significant noise producing activity, and will require a noise management plan (The purpose of this document).

<i>Time Period</i>		<i>Sound Level Not to be Exceeded</i>	
<i>Day</i>	<i>Hours</i>	<i>L10</i>	<i>Lmax</i>
<i>Monday to Saturday</i>	<i>TBA</i>	<i>TBA</i>	<i>N/a</i>
<i>Sunday</i>	<i>TBA</i>	<i>TBA</i>	<i>N/a</i>
<i>At all other times and on public holidays</i>		<i>TBA</i>	<i>TBA</i>

NB. Gunshot noise may be explicitly included in this condition, but all other activities conducted by club members will have to comply with this condition.

9. Firing from any shooting range shall be only within the hours stipulated and shall be so conducted as to ensure that gunshot noise does not exceed a composite noise rating

(CNR) as stipulated at any point within the proposed boundary $CNR = Y - 25 + 10 \log (N) + 10 \log (R)$

Where: CNR= composite noise rating

Y= dB linear peak level of the burst

N= number of single shots or bursts per day

R= number of rounds, or detonations, (acoustic events) per burst

NB. Relevant to all shooting activities

10 All activities on the subject site may be so conducted as to ensure that noise shall not exceed the following noise limits within the stated timeframes at any point within the boundaries of the identified area:

Time Period		Sound Level Not to be Exceeded	
Day	Hours	L10	Lmax
Monday to Sunday			
At all other times			

11 Noise shall be measured and assessed in accordance with NZS6801:1999 and NZS6802:1991. Adjustments for special audible characteristics shall not apply to the assessment of gunshot noise.

12 In accordance with Condition 4(d) the Plan shall outline the range of activities, their potential noise levels and any noise mitigation / management measures that will be implemented to ensure compliance with Conditions 8,9 and 10. Such plan shall take into account any potential for cumulative effects from other noise sources that may be established on the subject site. This will only apply to noise sources which are “significant noise producing activities” that are defined as those activities that are established on the subject site with a total A-weighted sound power level of 95 dBA or greater.”

Noise Control Measures

The following mitigation and management measures will be adopted to ensure compliance with the noise limits and minimise potential for adverse noise effects to arise.

Duration of Activities during Daytime hours:

If there are any time conditions of the Consent, shooting activities shall take place on site only between those hours stipulated daily. There will be no shooting during the more ‘noise-sensitive’ night time period, unless specified.

Buffer Zones

A noise ‘buffer zone’ between the shooting ranges and the nearest rural dwellings may have been created by locating the shooting ranges in their current positions. There is a considerable distance between the shooting ranges and the nearest rural dwellings (or potential rural dwelling). Noise from gunshots will reduce with distance from the shooting ranges. The isolated location of the ranges and the exclusive property boundaries effectively establish an additional noise buffer zones around each range that provides an additional level of noise management control within the area.

Topography and Ground Cover

Noise from the shooting ranges will be reduced significantly by natural topography (for example, an earth “cut” or a hill which screens the nearest rural neighbours from the noise source). Dense bush and vegetation will, over distances of 100 metres or greater, also

provide significant absorption of noise as it travels through the vegetation . Plantation trees may be established within the exclusive areas on some ranges to reduce wind, which will also provide an additional level of noise reduction, however the primary purpose of tree planting will be for wind reduction and not specifically noise reduction.

Given the large separation distance between the shooting ranges and the nearest rural dwellings, there will be significant noise attenuation provided by topography, 'soft' ground cover conditions, air absorption, and meteorological conditions (eg., Wind speed, direction and thermal lapse during daytime) will be significant, and will reduce shooting noise levels received at the nearest rural dwellings. Further, there will be significant 'directivity' associated with those shooting ranges which are established so that the line-of-fire is away from nearest rural dwellings ie. noise is directed away from the dwelling .

Cumulative Effects

The noise consent condition is written in terms of noise received at nearest dwellings. As there is the potential for more than one club to operate simultaneously, then there is potential for noise from all sources to add together and exceed the noise limit (CNR) at the assessment locations.

However, this scenario has been included in the assessment (carried out by Design Acoustics Ltd). The CNR rating (Composite Noise Rating) includes the number of shots fired from all shooting ranges and therefore the potential for cumulative effects is included in the CNR assessment procedure.

Complaints and Reporting Procedures

Club Representatives

Each shooting club shall appoint a responsible person to receive and investigate any noise complaints by neighbours related to their club's activities. This list should be updated whenever contact details change, and a copy sent to Council's Senior Monitoring Officer.

Council Notification

The District Council's Senior Monitoring Officer, or his/her delegate shall be advised within 48 hours of any complaint regarding noise from the activities on the site, and advised of the action taken to remedy or mitigate the cause of the complaint.

Shooting Activity Log

It is recommended that each club keeps a log of dates/times of shooting on their ranges, which would be useful record in case a complaint is made. The operations and range safety procedures for each range usually require a log to be recorded.

Monitoring and Review

Conditions of the resource consent may require ongoing noise impact monitoring. Monitoring shall be carried, when required by Council.

Review

As a result of any Noise issues arising from noise monitoring, the Noise Management Plan may be reviewed and updated as necessary and a copy of the current Plan shall be provided

to the Councils. The Senior Monitoring officer will then determine whether any modifications are needed. Further monitoring will take place if requested by the District Council.