

**BEFORE THE HEARINGS PANEL**

**WAIKATO DISTRICT COUNCIL**

**IN THE MATTER** of the Resource Management Act 1991

**AND**

**IN THE MATTER** of the Proposed Waikato District Plan (Hearing 28 - Other Matters)

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**STATEMENT OF EVIDENCE OF SARA KRISTY MCMILLAN (PLANNING)  
ON BEHALF OF THE NEW ZEALAND DEFENCE FORCE**

**SUBMITTER 796**

**21 JUNE 2021**

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## **INTRODUCTION**

- 1 My full name is Sara Kristy McMillan. I am a Senior Planner at Tonkin & Taylor Limited and have over fifteen years of planning experience in New Zealand. I hold the qualifications of a Bachelor of Science (Geography) and Master of Science (Environmental Science) with first class honours from the University of Auckland.
- 2 I am a full member of the New Zealand Planning Institute (MNZPI) and a member of the Resource Management Law Association.
- 3 My experience spans most aspects of planning including policy advice and preparation of submissions on plan changes around New Zealand, and the preparation of resource consent applications. I have particular experience in the matter of temporary military training activities (TMTA) having given evidence to a number of Councils on this subject.

## **CODE OF CONDUCT**

- 4 I confirm that I have read the Environment Court's Code of Conduct for Expert Witnesses set out in the Environment Court's Code of Practice Note 2014. I agree to comply with this Code. I confirm that the issues addressed in this statement of evidence are within my area of expertise and that I have not omitted to consider any material facts known to me that might alter or detract from my opinions expressed in this evidence.

## **SCOPE OF EVIDENCE**

- 5 I have been engaged by the New Zealand Defence Force (NZDF) to provide expert planning advice in relation to the Proposed Waikato District Plan (pWDP). I oversaw the preparation of NZDF's original submission on this Plan review.
- 6 NZDF's submission contains a number of submission points which have been assigned to Hearing 28 relating to temporary military training activities.
- 7 I am familiar with the pWDP to which these proceedings relate. I have read the section 42A reports prepared by Ms Susan Chibnall as it relates to NZDF's submission.
- 8 Ms Rebecca Davies has explained the background to NZDF's original submission, the varied nature of temporary military training activities and the importance of

these activities to enable NZDF to meet its obligations under the Defence Act 1990.

- 9 Mr Darran Humpheson has presented technical noise evidence explaining the noise standards requested by NZDF and addressing the section 42A report prepared by Council. My evidence relies on the evidence statements of both Ms Davies and Mr Humpheson.
- 10 My evidence addresses the key matters raised in NZDF's submission which, in summary, seeks amendments to the rules for Temporary Military Training Activities (TMTA), including alternative noise standards for TMTA that provide a more efficient and effective standard for NZDF to comply with, and for Council to administer and enforce.

## **INTRODUCTION TO TEMPORARY MILITARY TRAINING ACTIVITIES**

- 11 Section 5 of the Defence Act 1990 provides for the raising and maintenance of armed forces for various purposes, including for the defence of New Zealand, to protect the interests of New Zealand, to assist the civil power in times of emergency, and in the provision of any public service. The maintenance of armed forces includes undertaking the necessary training to ensure capability is maintained across a multitude of scenarios.
- 12 Ms Davies has provided a description of the nature of TMTA in her evidence. These activities can include a wide range of exercises. In my experience, the approach to regulating TMTA in District Plans is frequently driven by a misunderstanding of what TMTA involve. It is essential to understand that the use of weapons and explosives is only one aspect of TMTA, and that there are a broad range of other activities undertaken by NZDF on a regular or intermittent basis which also fall within the definition of TMTA, many of which are not distinguishable in terms of effects from day-to-day activities. The use of weapons and explosives outside of NZDF military camps and bases as part of TMTA is by necessity limited in nature and very closely controlled.
- 13 In order to maintain capability for real-life situations, Ms Davies has explained the importance of training being undertaken in a range of environments and locations throughout New Zealand, and not just at NZDF facilities. The importance of NZDF personnel being well trained was seen in NZDF's natural disaster and civil defence emergency responses described in Ms Davies' evidence. Proper 'real world'

training is critical to providing this assistance and relief in a responsive and effective manner to people and communities in a time of need.

- 14 As Ms Davies has described, NZDF is undertaking a nationwide project to achieve consistency in TMTA provisions in District Plans. To this end, NZDF has submitted on approximately 30 Council plan changes and plan reviews over the past 8 years.
- 15 NZDF's requested provisions for TMTA have been incorporated into the operative planning documents for a number of territorial authorities (with or without minor modifications), including the Horowhenua, South Waikato, Rotorua, Napier, Southland, and Whangarei District Councils as well as the Auckland Unitary Plan. Further, some councils such as the Thames-Coromandel and Queenstown Lakes District Councils have decided not to regulate TMTA at all in their District Plans on the basis that the activity does not warrant a regulatory approach.
- 16 Aside from the operational difficulties created by variations in TMTA provisions nationwide, from a planning perspective I consider there to be little merit in each City or District Plan having its own set of rules for TMTA. Nationally consistent provisions also align with the approach promoted through the National Planning Standards.

#### **NOISE STANDARDS FOR TMTA**

- 17 NZDF sought the inclusion of activity-specific TMTA noise standards in its submission on the pWDP. NZDF's proposed standards divide noise sources from TMTA into four categories. Each of these noise sources has different noise characteristics and therefore a different set of activity-specific standards is proposed by NZDF for controlling noise.
- 18 The assessment set out in the section 42A Report does not correctly reflect or respond to the approach sought by NZDF in its submission. I therefore think it is useful to outline the proposed activity-specific standards as follows.

**Mobile noise sources:**

- 19 For mobile noise sources i.e. vehicles/personnel and earthmoving equipment, where the effects are temporary and intermittent<sup>1</sup>, compliance with *NZS6803:1999 Acoustics – Construction Noise* is proposed as this standard most appropriately addresses this type of noise.

**Mobile noise sources:** Shall comply with the noise limits set out in Tables 2 and 3 of *NZS6803:1999 Acoustics – Construction Noise*, with reference to ‘construction noise’ taken to refer to mobile noise sources. Note: Mobile noise sources include personnel and light and heavy vehicles, self-propelled equipment, earthmoving equipment, etc.

- 20 This is accepted in the section 42A report (at Paragraph 30) and I agree with the reasons set out in this section of the report, however it is not reflected in the tracked-changes. Instead the proposed standard for fixed (stationary) noise sources at paragraph 21 below has been applied to all TMTA including mobile sources.

**Fixed noise sources:**

- 21 For fixed noise sources such as power generators and water pumping infrastructure, which can be located to ensure compliance with standards, dB LAeq levels are specified in line with *NZS6802:2008 Acoustics – Environmental Noise*. This ensures stationary noise sources are subject to noise limits which are suitably protective of residential amenity, as explained in Mr Humpheson’s evidence.

**Fixed (stationary) noise sources:** Shall comply with the noise limits set out in the table below when measured at the notional boundary of any building housing a noise sensitive activity.

Time (Monday to Sunday)	LAeq (15 min)	LAFmax
0700 to 1900 hours	55 dB	n.a.
1900 to 2200 hours	50 dB	
2200 to 0700 hours the next day	45 dB	75 dB

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<sup>1</sup> Due to the nature of TMTA and the mobile nature of the source.

Note: Fixed (stationary) noise sources include power generation, heating, ventilation or air conditioning systems, or water or wastewater pumping/treatment systems.

- 22 I also note that the above standard proposed by NZDF is more stringent than the approach to farming noise<sup>2</sup> or noise from emergency generators<sup>3</sup> in the pWDP. These appear to be permitted activities with no corresponding noise standards. Furthermore noise from frost fans which is a permanent activity within a particular location (albeit seasonal/intermittent), is also subject to a more lenient approach (i.e. 55 dBA at all times including 7pm to 7am).

**Helicopter landing areas:**

- 23 NZDF proposes the use of *NZS6807:1994 Noise Management and Land Use Planning for Helicopter Landing Areas* to control noise from helicopters associated with TMTA. I understand that TMTA only very occasionally involve the use of helicopters and even then the use of any one site would occur very intermittently and certainly well under the 10 per month threshold established by NZS6807. However for the type of intermittent use of any particular site undertaken by NZDF, then NZS6807 still applies where the use is particularly 'noisy'<sup>4</sup>.

**Helicopter landing areas:** Shall comply with *NZS6807:1994 Noise Management and Land Use Planning for Helicopter Landing Areas*. Noise levels shall be measured in accordance with *NZS6801:2008 Acoustics – Measurement of Sound*.

- 24 Based on the expert opinion of Mr Humpheson, I consider the provisions for mobile and fixed noise sources and for helicopter landing areas in relation to TMTA are appropriate for insertion into the pWDP as permitted activity standards as shown in Attachment 1 of my evidence. I specifically address weapons firing and the use of explosives below.

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<sup>2</sup> 'Means noise generated by agricultural vehicles, any aircraft used for aerial spraying, agricultural machinery or equipment and farm animals, including farm dogs. It does not include bird scaring devices and frost fans'.

<sup>3</sup> 'Means either a fixed or trailer-mounted generator that can supply reticulated water and wastewater networks or treatment facilities with emergency power where and when necessary'.

<sup>4</sup> NZS6807:1994 applies where a particular landing site is used more than ten times in any month, or where the use is likely to exceed an L<sub>max</sub> of 70dBA during the night time or 90dBA during the day time in residential zones or within the notional boundary of any rural dwelling.

### **Weapons firing and the use of explosives:**

- 25 As I have noted above, the effects of many TMTA are unlikely to be of particular note beyond a broad range of other day-to-day activities, with the exception of weapons firing and the use of explosives which I consider warrant specific management through the pWDP.
- 26 The section 42A report recommends these activities are subject to NZDF's proposed standards for fixed (stationary) noise sources. However as Mr Humpheson has explained, this is not an appropriate standard for managing impulsive noise of very short duration. Rather, the accepted approach is to apply a C- weighted peak level.
- 27 The New Zealand Standard *NZS 6803:1999 Acoustics - Construction Noise* sets out a guideline maximum "peak" sound level due to explosions of 120 dBC. As set out in Mr Humpheson's evidence, the recommended permitted activity noise standard for this component of TMTA is more stringent (lower) than this and ensures noise effects are reduced to acceptable levels when received at noise sensitive locations. The limits sought by NZDF are as follows:

The activity shall comply with the following peak sound pressure level when measured at the notional boundary of any building housing a noise sensitive activity:

- a) 0700 to 1900 hours: 95 dBC
- b) 1900 to 0700 hours: 85 dBC

- 28 The TMTA noise provisions proposed by NZDF for these activities work by using separation distances from sensitive receivers to ensure that the sound levels received at the specified distances will be reasonable. As set out in Mr Humpheson's evidence, the minimum setback distances are based on modelling of data from military activities which shows the relevant noise limits set out above can be comfortably met with a factor of safety/conservatism built into modelling to allow for weather conditions and site differences.

The activity shall comply with the following minimum separation distances to the notional boundary of any building housing a noise sensitive activity:

- a) 0700 to 1900 hours: 500m
- b) 1900 to 0700 hours: 1,250m

- 29 TMTA involving firing and the use of explosives are permitted activities within the minimum separation distances, however in this case they would still need to meet the limits applying to peak sound pressure levels at the closest sensitive receiver site. Where these controls cannot be met then a resource consent would be required (or the activity cannot proceed at that particular location).
- 30 NZDF is effectively requesting a tiered approach to managing noise from weapons firing and the use of explosives, where the first tier is a separation distance from sensitive receivers. Where these distances are met, then the activity automatically complies with the relevant limits. As described by Ms Davies, when NZDF is devising a training activity involving weapons firing or explosives use, the exercise co-ordinators generally prefer to select a location that complies with the first tier setback distances. This is not only easier for the exercise co-ordinators, but is also straightforward for Council or a member of the public to determine whether the activity complies with the district plan rules, based simply on the location of the activity.
- 31 For activities that are not able to meet the setback standards, or if the site location conditions meant that the setback could be reduced (i.e. where a hill separates a sensitive receiver from the TMTA), then the second tier - the peak sound pressure levels - would apply. Where these peak sound pressure levels can be met, then the TMTA would be a permitted activity.
- 32 In my opinion, these controls represent an applied approach to managing the noise effects of weapons firing and the use of explosives. Use of minimum setback distances as an alternative to actual noise measurement creates a practical tool for planning and compliance that is both effective and efficient. It has the advantage of being an easy to comply with, and easy to monitor, standard.
- 33 NZDF's requested noise standards also require that Council be notified at least five working days prior to an activity that is to involve weapons firing. Depending on the nature and extent of weapons and explosives use, this notice may include details such as the location, timing, duration and the particular nature of the activity.
- 34 I consider the noise standards requested by NZDF are appropriate for insertion in pWDP as these standards specifically respond to and adequately manage the potential noise effects of TMTA. As outlined by Mr Humpheson, these provisions



are designed to protect residential amenity and therefore can apply at any location in a District.

## PERMITTED ACTIVITY STANDARDS

35 The intent of NZDF's submission is to provide for TMTA as a permitted activity in all zones in the District, subject to compliance with noise standards that have been specifically developed for the different types of noise generated by TMTA. While the Council's section 42A report recommends TMTA are permitted activities, the recommended permitted activity standards do not reflect those proposed by NZDF in its submission.

36 I have addressed the permitted activity standards as they relate to noise limits in my evidence above. This section addresses the other permitted activity conditions recommended in the section 42A report, specifically (b) – (d):

*b The event occurs not more than 3 times per single 12-month period.*

*c The duration of each event is less than 72-hours.*

*d The site must be returned to its original condition no more than 3-days after the end of the event.*

*e There is no direct access from a national or regional arterial road.*

37 The section 42A report largely applies the permitted activity standards which apply to a temporary event<sup>5</sup> in the pWDP to TMTA. However the temporary events provisions anticipate medium to large-scale events and the effects associated with such events, particularly traffic, noise and amenity effects. Grouping TMTA with these types of events suggests the nature and scale of TMTA and associated effects are broadly similar and in my opinion this is reflected in the approach to the TMTA provisions.

38 However this reflects a misunderstanding of what TMTA involve. As Ms Davies' has explained in her statement, for the most part TMTA comprise a broad range of activities many of which are not distinguishable in terms of effects from day-to-day activities, with the use of weapons and explosives a limited and infrequent

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<sup>5</sup> "Means a social, cultural or recreation event that has a duration of less than 72 hours, including entertainment events, carnivals, festivals, fairs, markets, and exhibitions, and associated temporary buildings and car parks."

component of TMTA. TMTA are not similar in nature, scale or extent to temporary events as defined by the pWDP and should not be subject to the same limitations.

- 39 Considering the nature of TMTA described in Ms Davies' evidence, specifying controls relating to the number of activities and/or their duration is generally not warranted to manage effects. However to ensure that activities are temporary in nature, I consider the 31-day period which NZDF has indicated is typically adequate for the majority of TMTA should be included as a permitted activity standard.
- 40 The restriction in relation to access, while relevant for temporary events where there are potentially large volumes of traffic accessing a site, is not necessary to manage the effects of TMTA.
- 41 Suggested **amended** wording for standards (b), (c) and (e) is set out below and in Attachment 1 to my evidence:
- ~~b — The event occurs not more than 3 times per single 12-month period.~~
- ~~c — The duration of each event is less than 72-hours.~~
- The duration must be less than 31 days (excluding set up and pack down).
- d [Refer below and Attachment 1].
- ~~e — There is no direct access from a national or regional arterial road.~~
- 42 Although not generally part of TMTA, I understand that on very limited occasions a permanent structure (e.g. a ford or farm bridge) may be constructed or modification of a site (e.g. earthworks) undertaken as part of a TMTA. I consider that any permanent structure or earthworks associated with TMTA should not be a permitted activity as-of-right, however if it complies with a permitted activity rule elsewhere in the plan then it should be able to rely on the relevant permitted activity rule. As currently drafted standard (e) potentially precludes this.
- 43 To address this matter, I suggest the wording is amended as follows (revised wording shown underlined):

(e) The site must be returned to its original condition no more than 3-days after the end of the ~~event~~ TMTA, unless provided for elsewhere in this plan as a permitted activity.

## **ACTIVITY STATUS FOR TMTA THAT ARE NOT PERMITTED**

- 44 The section 42A report recommends a Restricted Discretionary activity status, as opposed to the Controlled activity status sought by NZDF in its submission, for TMTA that do not comply with the permitted activity standards. I support the general default activity status of Restricted Discretionary shown in the track change version of the section 42A report (acknowledging that controlled activity status is used sparingly within the pWDP).
- 45 As explained by Mr Humpheson, the noise generated by TMTA has been well studied and assessed. My opinion is that Council's consideration of such an activity should be restricted to matters relating to noise and duration. I note that the proposed matters of discretion set out in the section 42A report track changes specifically address noise, timing and duration of TMTA. I consider these are appropriate matters of discretion and support the inclusion of Rule RD1 as set out in the section 42A report track changes.

## **CONCLUSION**

- 46 I consider TMTA can be provided for as a Permitted Activity subject to appropriate standards. This is because TMTA include a wide variety of activities that are not dissimilar to other permitted activities across the District and for the most part have very minor effects. The aspects particularly unique to TMTA can be managed through permitted activity standards to ensure that any effects are appropriately avoided, remedied or mitigated.
- 47 Based on the expert opinion of Mr Humpheson, I consider the provisions for mobile and fixed noise sources and for helicopter landing areas in relation to TMTA are appropriate for insertion into the pWDP as permitted activity standards as shown in Attachment 1 of my evidence.
- 48 Use of minimum setback distances as part of a tiered approach to managing the noise effects of weapons firing and the use of explosives represents a practical tool for planning and compliance that is both effective and efficient. These standards specifically respond to and adequately manage the potential noise effects of TMTA. As outlined by Mr Humpheson, these provisions appropriately reflect relevant New Zealand Standards and protect amenity values.

- 49 TMTA undertaken by NZDF contribute to maintaining the nation's security and ultimately provide for the well-being, health and safety of people and the community. I consider that the provisions of the pWDP should be amended to:
- a Provide an appropriate set of permitted activity standards for TMTA, limited to duration and NZDF's bespoke noise standards; and
  - b Provide for TMTA that do not comply with the permitted standards as a restricted discretionary activity across all zones in the pWDP.
- 50 In my opinion these amendments enable NZDF to meet its obligations under the Defence Act 1990 while giving effect to the objectives and policies of the Proposed WDP and Part 2 of the Resource Management Act 1991.

Sara McMillan

21 June 2021

# Attachment 1: TMTA noise standards

Activity		Activity-specific conditions
PXX	Temporary military training activities	<p>a) The activity must comply with the permitted activity noise standards for Temporary Military Training Activities.</p> <p><del>b) The event occurs not more than 3 times per single 12-month period.</del></p> <p><del>c) The duration of each event is less than 72 hours.</del></p> <p><u>The duration must be less than 31 days (excluding set up and pack down).</u></p> <p>d) The site must be returned to its original condition no more than 3-days after the end of the <del>event-TMTA</del>, <u>unless provided for elsewhere in this plan as a permitted activity.</u></p> <p><del>e) There is no direct access from a national or regional arterial road.</del></p>
RD1	<p>Temporary Military Training Activities that do not comply with Rule PXX.</p> <p>Council's discretion shall be restricted to the following matters:</p> <ul style="list-style-type: none"> <li>· Effects on amenity values</li> <li>· Timing and duration</li> <li>· Hours and days of Temporary Military Training Activities</li> </ul>	

## Noise – Temporary military training activities

Activity		Activity-specific conditions
PXX	Temporary military training activities (other than the firing of weapons or use of explosives)	<p>a) <u>Mobile noise sources, including personnel and light and heavy vehicles, self-propelled equipment, earthmoving equipment, shall comply with the noise limits set out in Tables 2 and 3 of NZS6803:1999 Acoustics – Construction Noise (with reference to ‘construction noise’ taken to refer to mobile noise sources).</u></p> <p>b) <u>Fixed (stationary) noise sources including power generation, heating, ventilation or air conditioning systems, or water or wastewater pumping/treatment systems shall comply with the noise limits set out in the table below when measured at the notional boundary of any building housing a noise sensitive activity:</u></p> <ul style="list-style-type: none"> <li>· <u>55dB (LAeq), 7am to 7pm every day.</u></li> <li>· <u>50dB (LAeq), 7pm to 10pm every day.</u></li> <li>· <u>45dB (LAeq) and 75dB (Lmax), 10pm to 7am the following day</u></li> </ul> <p>c) <u>Helicopter landing areas shall comply with NZS6807:1994 Noise Management and Land Use Planning for Helicopter Landing Areas. Noise levels shall be measured in accordance with NZS6801:2008 Acoustics – Measurement of Sound.</u></p>
PXY	Temporary military training activities (which involve the firing of weapons or use of explosives)	<p>a) <u>Notice is provided to the Council at least 5 working days prior to the commencement of the activity.</u></p> <p>b) <u>The activity complies with the following minimum separation distances to the notional boundary of any building housing a noise sensitive activity:</u></p> <ul style="list-style-type: none"> <li>· <u>0700 to 1900 hours: 500m</u></li> <li>· <u>1900 to 0700 hours: 1,250m</u></li> </ul> <p>c) <u>Where the minimum separation distances specified above cannot be met, then the activity shall comply with the following peak sound pressure level when measured at the notional boundary of any building housing a noise sensitive activity:</u></p> <ul style="list-style-type: none"> <li>· <u>0700 to 1900 hours: 95 dBC</u></li> <li>· <u>1900 to 0700 hours: 85 dBC</u></li> </ul>