
KEI MUA I TE AROARO O TE RŌPŪ WHAKAMANA
I TE TIRITI O WAITANGI

BEFORE THE WAITANGI TRIBUNAL

WAI 2180

IN THE MATTER OF the Treaty of Waitangi Act 1975

AND

IN THE MATTER OF THE TAIHAPE: RANGITĪKEI KI
RANGIPŌ DISTRICT INQUIRY

BRIEF OF EVIDENCE OF COLONEL JAMES KAIO

14 February 2019

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INTRODUCTION

1. I am Colonel James Kaio and I am the Commander of the Army's Training and Doctrine Command based in Waiouru. I will provide evidence on behalf of the New Zealand Defence Force and I am authorised to do so.
2. I have been in the NZ Army for 28 years and have lived in Waiouru for nine of those years. I am currently living in Waiouru with my family and two of my units. The Army Depot which trains our recruits, and the Army Command School are based there as well. I have deployed on a number of overseas operations with my most recent operational experience being in Iraq last year.
3. My evidence will be focused on what our Defence Force, and in particular the Army, has forecasted the future environment to be and what this may mean to the Waiouru Military Training Area.

The role of the NZDF

4. At its core, the Defence Force's role is to defend the nation's sovereign territory and those areas for which New Zealand is responsible, delivering security including against terrorism and related asymmetric threats. The Defence Force also contributes to collective security initiatives overseas and efforts to strengthen a rules-based international order that serves the nation's wider interests.
5. The Defence Force is primarily responsible for delivering Defence outputs through military operations and building and maintaining military capability. Capability includes the personnel, equipment, platforms and/or other materiel that affects the capacity to undertake military operations.
6. It is the Defence Force's goal to maintain armed forces that can react to crisis at short notice. The Defence Force has a responsibility to achieve success on military operations, remain affordable, and prepare for future security challenges, while also providing welfare for military members, their families and preserving the wellbeing of civilian staff.

Combat operations are our core task

7. The core task of the Defence Force is to conduct military operations, in particular combat operations. To ensure these combat forces are able to carry

out their missions effectively, Defence Force personnel must be appropriately trained and equipped for the likely threats they will face as well as to ensure New Zealand's contributions to multi-national operations are credible and valuable.

8. Well-trained and operationally prepared soldiers provide effective land combat capabilities that the Government can deploy for a wide range of tasks, either independently or as part of a multinational force. These land force elements are flexible and can be configured to respond to tasks ranging from humanitarian support through to combat in the form of a combined arms task group that includes infantry, artillery and Light Armoured Vehicles.
9. New Zealand Special Operations Forces maintain a high state of readiness to inform or resolve contingencies that are of significant importance for New Zealand. These forces are trained and equipped to conduct special operations independently or as part of a multinational coalition, and are able to do so discreetly or visibly. Special Operations Forces are innovative, adaptive and agile but generalist.
10. All of these Combat Forces use the Waiouru Military Training Area for tactical training as well as professional development.

Non-combat roles

11. The Defence Force plays an important role, alongside a range of other Government agencies, in supporting New Zealand's overall wellbeing and resilience. Government expects the Defence Force to be prepared to contribute capabilities to whole-of-government responses to a range of hazards and threats.
12. The impacts of climate change, including more frequent extreme weather events, will likely see increasing requirements for Defence Force support to domestic civil defence emergency management planning and responses, both proactive and reactive. Climate change may also lead to more extensive Defence Force support for the Government's conservation, environmental protection, and biosecurity efforts.

13. The Defence Force also plays an important role in supporting the New Zealand Police to respond to a range of domestic emergencies. This support extends from search and rescue on both land and water, through to assisting Police's counter-terrorism activities. The Defence Force is also responsible for conducting explosive ordnance disposal which is trained for within the Waiouru Military Training area. Additionally, Defence supports Police and other agencies, when requested, by providing specialist underwater search capability – sometimes this specialist training is conducted at Lake Moawhango.

14. Through programmes such as the Limited Service Volunteers and the Cadet Forces, Defence motivates New Zealand's youth and provides life and employment skills. This bolsters individuals' prospects at critical points in their life paths and broadly contributes to community wellbeing. These programmes support the Government's broader efforts to manage social challenges and mitigate future requirements for Government interventions. The Cadet Forces regularly utilise the Waiouru Military Training area for training camps and activities while the North Island Service Academies utilise the facilities each summer.

A more complex future environment

15. The recently released Defence policy statement sets out a more challenging and complex strategic environment than the one we are accustomed to – one in which the international rules-based order, the foundation for New Zealand's security and prosperity, is coming under increasing pressure.¹

16. Based on current and future global trends and the likely nature of land warfare out to 2035, it is assessed that the NZ Army's future land operating environment will be characterised by the following trends: It will be increasingly:
 - 16.1 connected and monitored;

 - 16.2 crowded;

 - 16.3 partnered;

¹ The Defence policy can be downloaded at: < <https://defence.govt.nz/assets/Uploads/Strategic-Defence-Policy-Statement-2018.pdf> >

16.4 lethal; and

16.5 complex.

17. This will mean that there is a need for need for combat-capable forces; combined-arms excellence; expeditionary forces that have strategic agility based on multi-role skills and the ability to quickly task organise; and superior situational awareness and decision-making.
18. These key characteristics of the future environment will impact on the use of the Waiouru Military Training area:

Increasingly crowded

19. Future land operations will typically occur among the people. In part this reflects adversaries' desire to control the people and the importance Western forces place on protecting the populace and defending the resources and legitimate social structures that support their survival and prosperity. Consequently, future land operations, ranging from humanitarian intervention to combat, are likely to be concentrated in or around cities and the hinterlands and coastal zones that sustain them.
20. What does this mean for Waiouru? We are likely to see an increased use of the training area as a staging base from which we can venture into the local towns and communities to gain this type of realism. We are also likely to see an increase in urban environment infrastructure that can be used to simulate environments that we will operate in overseas.

Increasingly lethal

21. Technology will continue to shape the conduct of war. Every major technological advance has brought with it improvements to weaponry, sensors and systems that can, in turn, be harnessed by evolutions in tactics and training with the overall outcome of increasing lethality. In recent history, the rate of change has accelerated. Previously step changes in warfare took centuries to occur. Current step change is far more rapid, with capabilities a decade old now subject to battlefield obsolescence. Digitisation has been a key accelerant. For instance, digital communications allow a contemporary land force to completely out-class forces from even a decade ago - individual soldiers will

have access to greater levels of lethality than previously seen in history. This trend will continue. Advances in networks, sensors and decision-making tools will continue to improve the situational awareness, response time and agility of land forces. Weapons will become more effective, precise and autonomous, and active-seeking munitions will become widespread and increasingly economical. Such capabilities will not be limited to traditional militaries – non-state actors are also increasingly technologically enabled and in some cases they are leading innovation.

22. What does this mean for the Waiouru Military Training area? We are likely to see an increased demand for airspace management as we acquire more remotely piloted aerial systems which may be equipped a variety of sensor suites and munitions. This increased use will also mean an increase in safety restrictions and management.

Increasingly Dispersed

23. As weapon-systems have become increasingly lethal, military forces and soldiers have adapted by operating with increasing levels of dispersion. Tactical dispersion is highly reliant on modern communications technology, and the individual and collective professionalism of modern forces. Operationally, land forces have shrunk in size while their lethality has increased. Modern armies, especially those from developed countries, rely increasingly on technology, information superiority and mobility to synchronise operations and to compensate for reduced numbers of deployed personnel. Irregular or unconventional forces will also be able to take advantage of the increasing sophistication and prevalence of civilian information networks to co-ordinate their own regional and global manoeuvre. As a result, the distributed application of force will be a developing theme in the coming decades.
24. The areas of operation in which the NZ Army / NZDF operates around the world has increased significantly in the past 20 years. As an example, the area of operations for a battalion (1000 soldiers) in Vietnam was smaller than the area of operations for Company in East Timor. Whilst the same sized area of operation for a Battalion in East Timor was given to a patrol sized organisation (20 soldiers) in Afghanistan. In order to replicate some of these operational environments the Army has been forced to conduct operations in non-

traditional areas which includes New Zealand towns and communities, but we can still only conduct large scale live fire manoeuvres in Waiouru.

25. For the Waiouru Military Training area this means that we will be looking to open more and more areas of the terrain for use. Up until 12 years ago the Tarn Track was the remit of Tracked Armoured vehicles only but with the increasing demand for 'space' we have needed to improve the roading networks. As the Army acquires more operational vehicles that have cross country capability, the demand for training areas increases. The Waiouru Military Training area allows many different units to train simultaneous yet be de-conflicted by location.

Increasingly autonomous

26. The increasing economic viability and technical capabilities of remote and autonomous systems, that is, robotics, will see them playing a far greater role in every aspect of commerce and daily life, as well as on the battlefield. By 2035 Western forces will be increasingly exposed to observation and attack from remote and autonomous systems as they become readily available to militaries, civilians and irregular forces alike. Large quantities or 'swarms' of small and disposable remote or autonomous air systems, for example, may be used to harass and attack friendly forces, even if the enemy does not possess a conventional air force and has not gained control of the air in the traditional sense. Irregular adversaries will compete with conventional military forces in new and novel ways by using improvisation to weaponise commercially available systems. This will mean that Western land forces used to operating with minimal concern for air attack or artillery interdiction will now need to reconsider the extent and types of threat they will be facing out to 2035.
27. The impact for the Waiouru Military Training area is that we may need to replicate these types of environments whereby swarms of drones or autonomous vehicles attempt to attack our forces as part of our training exercises. This type of training event would require tightly controlled safety parameters and space in which to react to the threat.

Increasingly partnered

28. The complexity of the future operating environment means that military responses will not be sufficient on their own. Future operations will see the

NZ Army operate alongside joint, interagency, multinational (JIM) and public partners. In addition, the requirement for partnered operations will be made necessary by the nature of NZDF operational objectives. These conditions will likely be linked to civil governance and services. Land forces will need to integrate a range of agencies and departments to ensure an All of Government effort can align with the desired success criteria.

29. This will see an increased demand for use of the Waiouru Military Training area by other government agencies as well our Army partnering with other coalition nations. New Zealand is a member of the Five Eyes organisation which sees our Army training and deploying alongside our Australian, British, Canadian and American partners regularly. We also maintain bilateral defence relationships with countries across Asia. Some of these relationships are long-standing and enduring, including those with Singapore, Malaysia, and Brunei Darussalam. New Zealand's defence relationships with other Southeast Asian partners including Viet Nam, Indonesia, and the Philippines have also deepened in recent years.
30. The Singaporean Armed Forces is the most regular international user of the Waiouru Training Area. Having started in 1997, the Singaporean Army deploys assets to NZ each year to undertake live fire activities, typically being artillery assets. The Waiouru Training area, which is considerably larger than the geography of Singapore itself, allows for their soldiers to conduct military operations that they physically are not able to conduct in their homeland. Over the past few years there has been discussion about relocating a Singaporean Fighter Jet Squadron to Ohakea however late last year this proposal was cancelled.

Our future army

31. By international standards, the New Zealand Army will remain a small army with limited firepower and levels of force protection compared to medium or heavy forces in other nations. To succeed in the future operating environment, the New Zealand Army will require a qualitative edge based on highly trained and motivated soldiers who are ethical, physically tough and well equipped. Cutting-edge investment in situational awareness and command and control tools will give New Zealand Army elements the agility to remain a relevant

combat force on the future battlefield. The New Zealand Army will actively seek to maximise its qualitative edge through ‘force multiplier’ strategies. Key among these is the preservation of legitimacy, improving the synergies between special and conventional operations and enhancing interoperability so the New Zealand Army can multiply its effect through partnerships.

32. The Army’s future joint operating concepts explains the need for combat-focused joint forces that are expeditionary by design and able to project and sustain force elements (including land forces) in the Pacific and elsewhere throughout the world, and be networked and interoperable with partners. Given resource constraints, the New Zealand Army is a light fighting force; therefore, it must be agile: it needs to be able to do more than one task and transition between tasks quickly. It must also be precise, so that its limited combat power can be employed to greatest effect. Finally, the future force must employ multiplier strategies to generate effects that are greater than the sum of its parts. The ability to win in close combat is the ultimate relevance of the New Zealand Army and therefore its primary capability determinant. The focus of the future capability programs will be to build an excellent light fighting force that is interoperable with and can leverage the capabilities of larger and heavier forces.
33. Tactical success is founded on a force’s ability to leverage the sum of its parts through combined-arms tactics. Used well, combined-arms tactics create a dilemma for the adversary who, in countering one element, is exposed to another. In the face of emerging tactics and technologies, combined-arms tactics will need to evolve to encompass additional capabilities, including information manoeuvre and remote and autonomous systems.

Training the force

34. Training is vital in preparing the force. Training allows the force to master complex manoeuvre, build resilience, and experiment with new techniques. It follows that if personnel and units are not prepared to fail in training, they are preparing to fail on operations. The principles of effective military training will not change, but substantial scope exists to enhance the quality of training through organisational improvement and emerging technologies. The following are the key development priorities.

Individual training

35. As a small force, the New Zealand Army places significant emphasis on challenging, relevant and safe individual training. It is in large part the adaptive foundation on which all other elements of preparedness rest. However, there will be increasing demands on time, and the future individual training systems need to modularise courses, look for opportunities for concurrent training, and ruthlessly remove redundant courses and learning objectives.

Collective training

36. Collective training is the basis for building combined-arms and joint operational excellence. It is both an art and a science. Scientifically, exercises practice selected mission-essential tasks. Recording the number of times tasks and standards are achieved is essential to quantifying force preparedness. In the 2035 timeframe, the New Zealand Army must continue to improve its analysis of training objectives and standards. However, the real value of training is derived from graduated levels of training realism provided by experienced and imaginative trainers. In the 2035 timeframe, trainers will need to weave together live, virtual and constructive training methods. Operations are increasingly integrated; therefore, large exercises should practice end- to-end training (factory to foxhole) in addition to combined-arms training. Even the smaller exercises should be networked to regimental or brigade headquarters, to practice distributed operations.

Training realism

37. Training cannot replicate operations, but within the bounds of safety and resources, it must simulate them as closely as possible. Not to do so means soldiers will be under-prepared for what they will face in operations. The future land force should ensure that individuals and force elements have conducted their roles or task to job standard under a variety of testing and challenging conditions, before they are required to deploy. Training areas and aids need to represent operational environments as realistically as possible. To achieve the level of proficiency required, multi-role forces will need to adopt many of the training concepts and approaches currently used by Special Operations Forces– including an emphasis on rehearsals, repetition and rigorous review, free-flow exercises, and creativity that interests, challenges and

extends soldiers. Technology advances such as augmented reality and virtual-reality systems will also assist.

Infrastructure

38. Training areas are to the Army what ports and airfields are to the Navy and Airforce. Training infrastructure is used to train for and mount operations. It incorporates both natural infrastructure (land) and built infrastructure (training facilities and garrison structures). Looking ahead, the Army needs to adapt its training infrastructure to leverage developments in technological training aids, Integrated Land Missions, emergent outputs, and the need for Army families to have improved stability.
39. Key requirements for the New Zealand Army's future training infrastructure, which includes the Waiouru Military Training area are:
 - 39.1 Modern Learning Environments. Improved garrison training facilities will support junior leaders' conduct of procedural training. They will need to cater for new generations of learning techniques as well as social and cultural norms.
 - 39.2 Environmental Training. Multiple environments are required that support open and close country training, brown and green water training, air-land integration, and urban training. Thought should be given to the complexity of urban terrain, including simulating different building types, engagement angles and ranges, trafficability, and constrained communications.
 - 39.3 Range and Training Staff. Facilitated training will maximise the value of training and the time invested, by minimising the risk and administrative burden of organising, conducting and reconstituting training.
 - 39.4 Automation. Learning will be faster and achieve higher levels because of automation that creates sophisticated scenarios and provides real-time feedback on performance and after action review.
 - 39.5 Networking. Networked training facilities will allow distributed training between units and even countries. This will reduce travel

expense without foregoing the value of collaboration and competition.

40. The future operating environment for our Army looks increasingly complex but we have started to prepare ourselves for it. We see the Waiouru Military Training Area and the freedoms that it allows us, as a vital part of ensuring that our people will be prepared to face tomorrow's threats.



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