

A new *Land Mobile Radio network* for the people keeping communities safe



Public Safety Network

Te Kupenga Marutau

For many decades, Land Mobile Radio technology has been relied on by millions of emergency responders worldwide. Whether it's for day-to-day support or large emergencies, the radio network supports them to respond and help keep people safe.

To make a call, a user presses a push to talk button, speaks, and then releases the button to put the radio into receive mode. Communication is quick and simple enabling frontline responders to share and access the information they need to do their jobs and stay safe.

In New Zealand, some of the mobile radio services in use today are nearing end of life and they don't all offer the modern safety features that are so beneficial to frontline responders.

Now, as part of the new Public Safety Network Te Kupenga Marutau, Tait Systems NZ is working closely with the government through Next Generation Critical

Communications Poutama Whai Tikanga Pāpāho to deliver a new radio network to support New Zealand's core emergency services.

The new radio network will give emergency responders, including Fire and Emergency New Zealand, Wellington Free Ambulance, Hato Hone St John and Police, an encrypted, resilient, digital radio communications network they can rely on when they need it most.

The network is being built across the country throughout 2025 and 2026. Once complete, for the first time in New Zealand's history, the four core emergency services agencies will share the same radio network.

The *Land Mobile Radio network* brings many benefits to the emergency responders supporting our communities

- **Working together:** The network offers common channels for the emergency services to use to better help them work together, especially in large emergencies when real-time coordination and safety are top priorities.
- **Responder safety:** Advanced safety features such as Emergency Alert mean for each device equipped with an emergency alarm button, frontline responders can push these to alert other users and dispatchers that they require urgent assistance. Their communications are given the highest priority access to the network.
- **Security:** It will be an encrypted and secure network meaning no one other than the emergency services can access the voice and data transmissions. This protects the public's private information and helps keep emergency responders safe.
- **Coverage:** Broad coverage provides voice and messaging services in areas where cellular service is not available. This helps support continuous contact for frontline responders.



- **Managing network capacity:** Designed to ensure there is more than sufficient network capacity for ongoing communications during very busy periods. The network can also dedicate capacity and channels during specific 'surge' events meaning calls can be made concurrently without overloading the network for other users.

Next Generation Critical Communications is the government's leading advisor on critical communications for public safety and is responsible for developing the Public Safety Network on behalf of emergency services.

www.ngcc.govt.nz



Version 0.2 | December 2024

Building the Land Mobile Radio network

Tait Systems New Zealand are building the new radio network – putting trusted P25 technology used by emergency services around the world into a network of over 500 sites built for New Zealand’s conditions and communities.

Designed to be resilient to New Zealand’s weather and natural hazards, the network is also as invisible as possible and has as small an impact as possible on communities and the environment.



The sites

For the network to deliver what our emergency services need, we need sites across New Zealand in a variety of settings, in both rural and urban areas reflecting the places where the emergency services are called on for support.

Wherever possible we are adding new equipment to existing telecommunication network sites. Where that’s not possible, we’re building new standalone facilities on road reserves, private land and commercial buildings.

We consider several factors when choosing sites. The most important is coverage for the emergency services. Other factors include technical requirements such as connectivity to the rest of the network, power, security, resilience, and risk from natural hazards. Other considerations include impacts on existing land use and cost.

The towers

The radio network towers can provide coverage for the emergency services over a wide range of distances – some focus on short range transmission and others can reach up to hundreds of kilometres - depending on the terrain and other conditions.

They are much like existing mobile network towers – generally made up of a pole around 15 meters tall, broadcasting and receiving equipment, and security infrastructure.

The towers are designed in line with all relevant safety, environmental and technical requirements, standards and guidelines. The network poses no risk to public health.

Where to go for more information

Tait Systems NZ is part of Tait Communications – a global, New Zealand-based company headquartered in Christchurch. We’re proud to be a key part of a project that is strengthening and upgrading the communications systems used by New Zealand’s emergency services across the country.

www.taitcommunications.com/about-us/our-value

**TOGETHER FOR A
SAFER NEW ZEALAND.**

