



The Connectivity Group Limited (TCG)

Submission on the Draft National Infrastructure Plan

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1. Executive Summary

The Connectivity Group (TCG) welcomes the direction set out in the Draft National Infrastructure Plan. However, while we acknowledge progress on spatial planning and investment horizons, the plan underrepresents the strategic importance of connectivity infrastructure, especially in rural and regional New Zealand.

Connectivity is no longer a convenience; it is core national infrastructure. Our submission outlines the need for a multilayered, sovereign, and regionally integrated digital network, powered by fibre, wireless, Digital Mobile Radio (DMR), and sovereign satellite. This network must be inclusive of regional providers, supported by open access and fair spectrum allocation, and planned in unison with broader infrastructure development.

2. Connectivity Must Be Treated as Critical National Infrastructure

The current Plan mentions telecommunications but fails to elevate connectivity to the tier of essential infrastructure alongside water, transport, and energy. In 2025, New Zealand's functioning relies heavily on robust digital infrastructure to support health, education, emergency services, economic activity, and civic engagement.

We recommend that connectivity infrastructure be given equivalent planning, funding, and resilience prioritisation. This means setting national targets for uptime and service reach, integrating connectivity into climate resilience frameworks, and including fibre and wireless corridors in all regional and urban spatial planning.

Connectivity should be represented at the same policy tables that energy, roads, and water currently sit at. The risk of digital exclusion, and the economic drag from subpar connectivity, are national issues requiring whole of government leadership.



3. A Multi-layered Connectivity Model for National Resilience

A single technology approach will not deliver true national resilience. We propose a multilayered model:

- **Fibre:** As the primary backbone, providing scalability and ultralow latency. Critical for towns, villages, key infrastructure hubs, and wireless tower backhaul.
- **Wireless:** Including FWA, 5G/6G for flexible access across rural and remote locations. Useful for reaching end users in hard to reach areas or rapid deployment.
- **DMR:** Critical for emergency and disaster resilient communication. Allows critical infrastructure to continue communicating during fibre cuts or power failures.
- **Sovereign Satellite:** Ensuring connectivity where fibre and wireless may fail, and critical for outlying islands, backup during natural disasters, and resilience for PSN and other government networks.

For example, during recent cyclones and earthquakes, areas with multipath communication methods (fibre plus wireless or DMR) recovered more quickly. Single reliance locations remained cut off. The Plan should support integrated deployments that recognise the different roles these technologies play in achieving true coverage and resilience.

4. Missing: Sovereign Multi Orbit Satellite Infrastructure

The Plan lacks vision for sovereign satellite capability. This is a strategic vulnerability. New Zealand must not rely solely on foreign owned platforms like Starlink, which may reprioritise users, increase prices, or alter services during crises or commercial transitions.

We propose:

- Investment in multi orbit (LEO/MEO/GEO) sovereign satellite services that are designed for New Zealand conditions and prioritised for emergency and public good use.
- Support for New Zealand's growing space industry, including launch capability and space technology investment, to deliver broadband and mobility services.
- Integration of sovereign satellite into the Public Safety Network (PSN), NEMA frameworks, and disaster recovery infrastructure for core government services.

New Zealand has the technical capability, and a growing commercial space sector. It is time to pair this with national investment and policy clarity. A sovereign satellite platform enhances national autonomy, disaster response, and rural access.



5. Digital Mobile Radio (DMR): A Critical Backbone for Resilient Communications

DMR networks are a proven, reliable, and disaster resilient solution that is severely underutilised in national planning. In fibre outages or power failures, DMR can maintain communications for civil defence, council infrastructure, emergency services, and critical utilities.

We recommend:

- Investing in a nationally coordinated DMR backbone, built in collaboration with local wireless operators who already maintain tower infrastructure.
- Connecting key fibre fed tower sites to ensure regional redundancy and creating radio paths that complement national fibre routes.
- Including DMR as part of the Public Safety Network (PSN) design, especially for remote or difficult to access locations.

Unlike commercial mobile networks which often fail during power outages or fibre disruptions, DMR operates independently and with far lower power draw. It is used globally in disaster prone regions and should be a formal part of New Zealand's comms resilience.

6. Spectrum is Infrastructure: The Bitumen of Wireless Networks

Spectrum is the bitumen of wireless networks, yet it is not treated as such. Current policy often treats spectrum purely as a revenue stream rather than a national infrastructure resource.

We recommend:

- Declaring spectrum a core infrastructure asset in national infrastructure policy.
- Mandating access to regional spectrum for community operators, especially where incumbent operators are not using licensed bands.
- Recognising spectrum scarcity as a bottleneck to wireless service delivery, and making shared and dynamic spectrum models a national norm.

Without spectrum, even the best wireless infrastructure remains useless. Regional operators with available towers and backhaul are prevented from delivering broadband due to inaccessible or prohibitively expensive spectrum.



7. Recognising Regional Providers and WISPs as Nation Builders

Local ISPs, WISPs, and fibre operators have connected hundreds of rural communities with private capital, dedication, and innovation. Yet these providers are often excluded from funding, overbuilt by incumbents, or overlooked in planning.

Their agility and deep local presence make them ideal partners for government programmes. In many cases, regional operators have outperformed incumbents in delivery speed and cost effectiveness.

We urge the Commission to:

- Recognise these providers as strategic infrastructure partners.
- Include them in co-investment frameworks, including PSN, rural broadband expansion, and resilience programmes.
- Avoid duplication of infrastructure where networks already exist and work well.

These providers often mortgage homes and take on personal risk to deliver connectivity. Their role must be respected and supported.

8. Fibre Islands, Open Access, and National Trunk Resilience

Rural New Zealand needs more fibre, not less. But it doesn't need to be everywhere. The solution is targeted fibre deployment complemented by hybrid connectivity.

We support:

- Targeted fibre 'islands' in rural areas linked via wireless or DMR, which serve small towns, farms, or roadside cabinets.
- Open access for all operators, so fibre laid under public funding or public private partnerships is available to every ISP and therefore every consumer.
- Partnering with LFCs to co-build and coinvest in remote backhaul extensions and resilience paths.

By planning small scale builds that feed local towers or communities, we can extend fibre's benefits while ensuring cost effectiveness. These builds are ideal during road or utility trenching projects, and should be part of national infrastructure coordination.



9. Smarter Infrastructure Coordination: Opening the Ground Once

Too often, water, power, and roadworks occur without coordination with digital infrastructure providers. This creates repeated disruption and missed opportunities to build connectivity efficiently.

We propose:

- A national directive requiring civil coordination with local wireless, fibre, and mobile providers.
- A registry of providers local councils must notify when undertaking public works.
- Conduit installation mandates in all significant groundworks, especially in areas with no fibre or limited wireless.

The principle is simple: open the ground once, benefit multiple networks. This approach can unlock millions in savings and vastly accelerate broadband expansion.

10. Final Statement

New Zealand has the opportunity to lead the world in integrated, sovereign, and inclusive infrastructure if we:

- Prioritise digital as critical infrastructure
- Build a multilayered model (fibre, wireless, DMR, satellite)
- Treat spectrum as essential infrastructure
- Include regional providers in planning and funding
- Coordinate groundworks for efficient multiutility rollout
- Invest in sovereign satellite and resilient radio infrastructure

Connectivity is pivotal. The best connectivity is pivotal. That means fibre, wireless, and satellite that is fast, resilient, and sovereign — and owned by New Zealanders.

We must not entrust our critical infrastructure to offshore commercial entities alone. When companies are sold or global priorities shift, New Zealanders should not be left vulnerable. We must build a network that we own, operate, and trust so along with our produce, we can lead the world.