

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER Proposed Waitomo District Plan

Hearing – Subdivision

JOINT STATEMENT OF EVIDENCE OF

GRAEME MCCARRISON FOR

SPARK NEW ZEALAND TRADING LTD

AND

ANDREW KANTOR FOR

CHORUS NEW ZEALAND LTD

AND

COLIN CLUNE FOR

ONE NZ GROUP LTD AND FORTYSOUTH

AND

FIONA MATTHEWS FOR

CONNEXA LTD

21 JUNE 2024

1. EXECUTIVE SUMMARY

- 1.1 Spark, One NZ (formerly Vodafone), Chorus, Connexa and FortySouth welcome the opportunity to provide this subdivision evidence.
- 1.2 The core of Chorus' business is the nationwide network of fibre optic and copper cables connecting homes and business together. FortySouth is responsible for, building, owning, operating, and maintaining the mobile tower/structure infrastructure for One NZ to attach their active network equipment. Spark and 2degrees have the same arrangement with Connexa. Spark and One NZ remain telecommunication network operators providing customers the opportunity for digital connectivity. The diagrams in Appendix 1 give a general understanding of what each organisation is responsible for and highlights the split between passive structures owned by Connexa and Forty South and the active components of the Spark and One NZ wireless networks.
- 1.3 Telecommunications providers provide critical communications infrastructure that connects communities, promotes inclusivity, supports economic and environmental objectives, and is a critical part of our response to climate change. Telecommunications infrastructure is highly dynamic and - unlike other infrastructure sectors - our network requirements are changing and evolving constantly and at a fast pace.
- 1.4 Spark, One NZ and 2Degrees are currently rolling out new 5G mobile networks, deploying over 1,000 new mobile sites and extending network coverage to regional communities. As part of this we expect to have closed off our 3G networks by the end 2025. This will us to bring more 5G to more places, including rural Aotearoa. Work has started on planning for the 6G network. Chorus continues to expand its fibre network in urban and small rural settlements. The continuous technology upgrades are needed to keep up with the increasing demand from consumers and businesses – exponential growth in the use of data is continuing and each year the amount of data handled by telecommunications networks roughly doubles¹. Chorus, Spark, One NZ, Connexa and FortySouth, along with other telecommunication providers, invest significantly every year in our networks to ensure New Zealanders have access to world class digital services.

¹ The New Zealand Commerce Commission, [Annual Telecommunications Monitoring Report – 2021 Key Facts](#), 17 March 2022

- 1.5 Telecommunication connections for all new allotments is as essential as electricity. We generally accept, subject to a few alterations the recommended proposed amendments to SUB-R18 by the reporting planner in paragraph 64 & 66 of the S42a report. We believe it is important for SUB-R18 to provide stronger direction to guarantee the provision of an appropriate level of service at the time of subdivision, alongside other essential services.
- 1.6 Satellite technology with satellites acting as cell towers and integrating with the existing on the ground networks is still new and evolving technology. The technology will enable the satellites to connect devices (mobile phones) directly. The first service will be texts expected in late 2024² and followed by voice and data services in the future. Satellite broadband services are widely available in NZ via a range of providers. This service depends on satellite connected via a dish which connects via cable to a wifi router inside the building receiving the service. These networks, supplement, rather than replace, ground-based networks. Dependency on the ground-based networks for telecommunication services is not changing anytime soon.
- 1.7 The companies would like to commend the officers on the engaging process to create the Proposed Plan changes. The opportunities to discuss, workshop and provide feedback on early drafting versions of the Plan has we believe has resulted in a Plan that is practical and generally works well for telecommunications.

² <https://one.nz/why-choose-us/spacex/>

2. INTRODUCTION

Graeme McCarrison

- 2.1 My full name is Graeme Ian McCarrison. I am the Environment & Planning Manager at Spark, a position I have held since February 2015. I am authorised to give this evidence on Spark's behalf.
- 2.2 I hold the qualification of Bachelor of Regional Planning (Honours) from Massey University. I am a Fellow member of the New Zealand Planning Institute and have 40 years' experience in New Zealand and overseas. I was on the board of the New Zealand Planning Institute ("NZPI") between April 2018 and April 2022. Between 2012 and April 2015 I was the chairperson of the Auckland branch of the New Zealand Planning Institute. In 2024 I was honoured made a Fellow of NZPI. In 2016 I received a NZPI Distinguished Service Award, and I part of the team that received a best practice award for iwi engagement by NZPI in 2015.
- 2.3 During the last 40 years I have worked in the public sector in Auckland including as Director of Regulatory Services at Papakura District Council, Planning Manager for Waitakere City Council and in the private sector as a self-employed consultant and as a consultant at Murray North Partners. I have worked the last twelve years in the telecommunications sector. Prior to Spark I held the equivalent position at Chorus (November 2011 to January 2015), where I advised both Chorus and Spark on resource management and government matters. I am involved in the review of all regional and district plans plus any related local government documents that have the potential to enable or impact the telecommunications industry. During the proposed Unitary Plan process, I led and facilitated the combined approach of the Auckland Utility Operators Group (Spark, Chorus, Vodafone, Counties Power and Vector) over the four years of our involvement.
- 2.4 I continue to co-ordinate a wider group of network utility organisations with interests in Auckland and nationally. I organise a shared approach and resources that enables Spark, FortySouth, One NZ, Connexa and Chorus to be involved at a national level in every relevant Plan review including: Horizons, Gore, Wairarapa, Wellington City & Region, Timaru, Selwyn, Waitomo, Whangarei, Waimakariri, Timaru, Waitaki, Waikato Region, Porirua, Far North, Napier and Nelson. In addition, we are engaged with the Future Development Strategies across NZ.
- 2.5 I represented the telecommunications industry on the MfE established project and working group to draft a potential draft National Planning Standards for Network

Utilities, which first met on the 12 October 2016. Post February 2018, I co-ordinated the project working group of experts and specialist knowledge from in-house and external professionals representing a range of network utilities including telecommunications, rail, electricity distribution, gas transmission, 3 waters, road transportation which continued to fund and develop as draft provisions until early 2020. The work was in part been adapted into the Transitional National Planning Framework under Chapter 13.2.

- 2.6 I represent the Telecommunications Forum (TCF) on the Technical Advisory Group for the NESTF alongside my colleagues Andrew Kantor – Chorus, Colin Clune – FortySouth, and Fiona Matthews Connexa. Since the NESTF 2016 amendments, the group made up of representatives from the Ministry of Business, Innovation and Employment, Ministry for the Environment ("MfE"), and Local Government New Zealand meet at least annually to discuss and review the effectiveness of the National Environmental Standards for Telecommunication Facilities Regulations 2016 (NESTF). The NESTF was integrated to the draft Transitional National Planning Framework (dTNPf) under the now repealed Natural and Built Environments Act. Chapter 13.2 of the dTNPf contains standards for telecommunications facilities. We are currently working toward either amended NESTF standards being integrated in a new Infrastructure National Direction or a updated NESTF.

Colin Clune

- 2.7 My full name is Colin William Clune. I am the Resource Management Manager at FortySouth, previously I held a similar a position at One NZ/Vodafone since October 2014. I was an in-house contractor for Vodafone (September 2010 to September 2014). I advise FortySouth and One NZ on resource management and government matters. I am authorised to give this evidence on FortySouth and One NZ behalf.
- 2.8 I hold the qualifications of Bachelor of Urban Planning and Master of Planning from the University of Auckland.
- 2.9 I am currently on the Technical Advisory Group for the NESTF amendments. I am also a participating member of the New Zealand Telecommunications Forum, working to efficiently resolve regulatory, technical and policy issues associated with network telecommunications.

Andrew Kantor

- 2.10 My full name is Andrew Robert Kantor. I am Environmental Planning and Engagement Manager at Chorus, where I been employed since 2015. I am authorised to give this evidence on Chorus' behalf.
- 2.11 I hold the qualification of Master of Science (Environmental Science) from the University of Auckland and am an associate member of the New Zealand Planning Institute. I am also a participating member of the New Zealand Telecommunications Forum's local government working group.
- 2.12 I have 15 years of resource management experience, comprising of roles for various infrastructure providers in New Zealand and overseas.
- 2.13 I am currently on the Technical Advisory Group for the NESTF amendments. I am also a participating member of the New Zealand Telecommunications Forum, working to efficiently resolve regulatory, technical and policy issues associated with network telecommunications.

Fiona Matthews

- 2.14 My full name is Fiona Elisabeth Matthews. I am the Planning Manager at Connexa Limited (Connexa). I have held this position since October 2022. Previously, I was a Planner for Spark New Zealand, (May 2018 to September 2022), where I advised Spark on resource management and regulatory matters. I am authorised to give this evidence on Connexa's behalf.
- 2.15 I obtained a Bachelor of Science and a Post-Graduate Diploma of Environmental from Massey University. I have 12 years' experience in the resource management field, and in addition to my roles at Connexa and Spark I have had various local and central government roles. c I hold an associate New Zealand Planning Institute Membership.
- 2.16 I am on the Technical Advisory Group for the National Environmental Standard Telecommunication Facilities amendments (NESTF amendments). I am also a participating member of the New Zealand Telecommunications Forum, which works to efficiently resolve regulatory, technical and policy issues associated with network telecommunications.

Scope of evidence

- 2.17 This statement of evidence covers the following areas:
 - a. Telecommunication in New Zealand.
 - b. 5G Connectivity

- c. Rural Telecommunication Coverage
- d. Satellite services
- e. Subdivision SUB-R18

3. TELECOMMUNICATION IN NEW ZEALAND

- 3.1 Modern telecommunication networks are about enabling the opportunity to create and connect data and provide digital services such as being able to communicate with family, friends and businesses or other services.
- 3.2 Every day, it is estimated that roughly 2.5 quintillion bytes of data are created globally. By 2025, the amount of data generated globally each day is expected to reach 463 exabytes. In 2019 the World Economic Forum estimated that the amount of data globally was 44 zettabytes in 2020. A zettabyte is 1,000 bytes to the seventh power (one zettabyte has 21 zeros). By 2025 the global amount of data is predicted to be 175 zettabytes. Some examples of the way data are generated or consumed include social media sites, financial institutions, medical facilities, shopping platforms, vehicles, and mobile calls, gaming, video conferencing, streaming films/series including via Netflix or YouTube and smart technology machine to machine.
- 3.3 The critical and essential nature of the telecommunications network infrastructure to a modern economy was only highlighted during the COVID-19 pandemic where a significant portion of people's businesses, working ability and life transitioned to an at home online set up. Overnight COVID-19 disrupted and changed the way we work, where we work, live and human interaction. Face to face meetings, travel (overseas and domestic), or meetings at a restaurant just stopped. Video conferencing via Zoom and Microsoft Teams gained critical importance even though neither was a new tool for digital communication. Long periods of time working and learning from home made the realities of living in a 'digital world' very real. Connectivity to those 'invisible' telecommunication networks that deliver the calls, digital services, internet to our devices, were no longer a "nice to have" but essential and critical to economic activity and daily life wherever you were. Access to and awareness of the quality/speed of your connection became and remains today a topic of conversation and need especially for communities in rural or more remote locations.
- 3.4 The COVID-19 pandemic demonstrated just how much we rely on access to 'public digital infrastructure'. A lack of, or limited access, to telecommunications for whatever reason is referred to as digital inequity. The consequences of digital inequity are explored in later sections of this evidence.

- 3.5 Public digital infrastructure, even though privately owned and funded, is commonly used to describe telecommunication technologies, equipment and systems/networks that connect people, communities, businesses and public infrastructure (including transport, social education, health) with data, products and services. Our physical networks/infrastructure include fibre, satellites, IoT devices, high-powered computing facilities and data centres, to support telecommunication services such as the mobile network, fixed phone and broadband services and location-based services that enable the digital economy with access to data. This public digital infrastructure is critical and is fundamental to digital transformation of private and public (social and network) infrastructure if New Zealand is going to remain competitive internationally and face up to challenges such as climate change.
- 3.6 Telecommunication connectivity appears simple. For example, via my device I dial a phone number and I am connected. I can ask Siri or Google a question, and in a fraction of a second, I have an information response. The telecommunications network provides an invisible connectivity that the user does not need to understand. However, the invisible infrastructure is a complex, ever changing and expensive technology that has a lot of dependencies and components including cell towers, cabinets, cables, antennas, buildings with a variety of functions (ie switch software technology) and data centres for cloud services. These components are connected as a global network which all come together to provide a seemingly instant digital service for most users wherever they are. New Zealand's networks are part of the global networks of connectivity on which we depend on a few international submarine telecommunication cables. Approximately 98% of our digital traffic travels via these submarine cables.

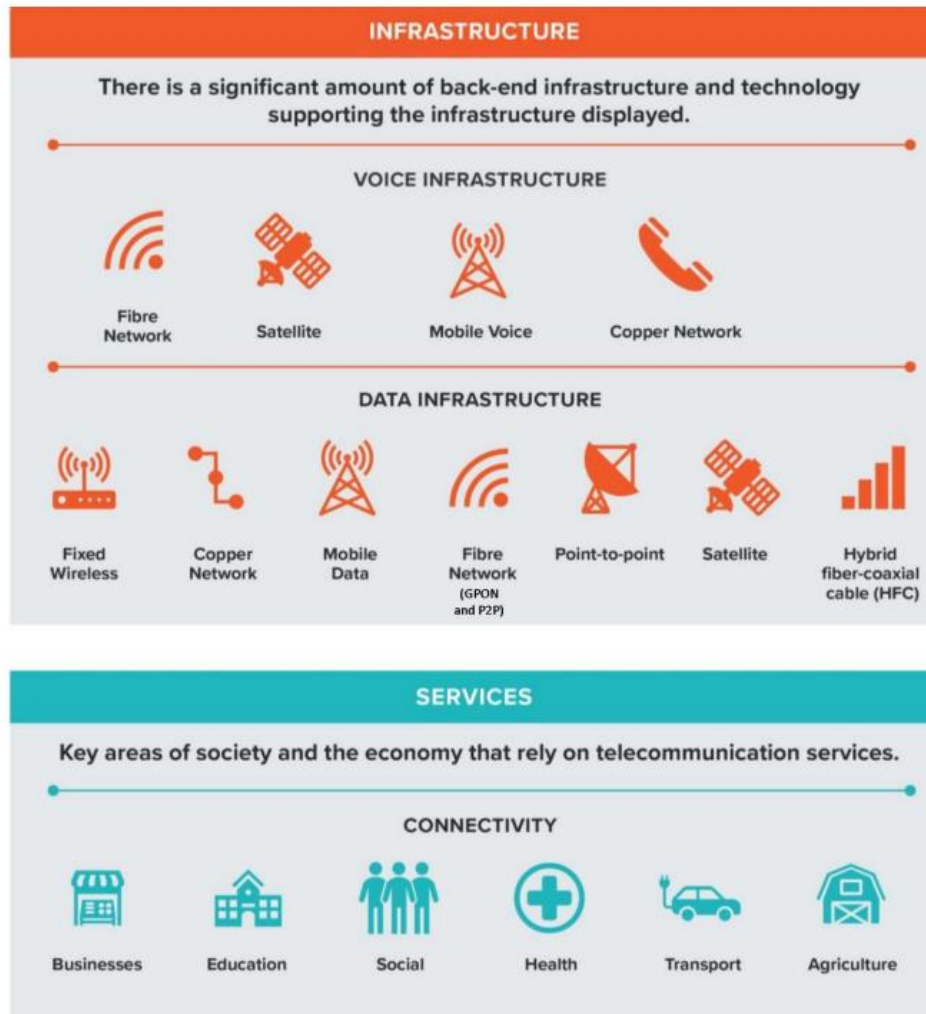
Digital connectivity underpins essential services

- 3.7 Digital connectivity and services, provided by Spark, One NZ and Chorus, underpin and transform a range of services delivered by Central Government and businesses alike, including (to name a few):
- (a) Remote environmental sensing for early fire detection network in forests or areas at risk from fire. The 360-degree cameras and IoT sensors are continuously monitoring conditions, supported by Artificial Intelligence ("AI") analytics providing valuable real-time data on statistics such as air quality and ground temperature. Warning data is transmitted to Fire and Emergency New Zealand who can then take action if appropriate.

- (b) Smart pay apps on your device and other payment services including payWave.
- (c) Infrastructure management ie monitoring movement and traffic flow, monitoring and managing water, electricity and other utility services including waste management providing customers real-time information.
- (d) Monitoring and real-time reporting of air flow and quality; or water quality for swim ability or drinking; flood warning accompanied with real-time mapping and predictions.
- (e) Drones for monitoring especially in high hazard environments e.g. during a forest fire or a flood event when it is unsafe to fly other aircraft; reporting fires and managing search and rescue situations; mapping for hazards or size of forests for carbon credit assessments.
- (f) Health and safety monitoring, for example GPS tracking sensors.
- (g) Communication in all its forms from calling, text, social media, Microsoft Teams or Zoom to evolving VR meeting and collaboration interaction services in 3D platforms such as MeetinVR.

3.8 The telecommunications services that are relied on by many areas of society and the economy are provided via several different types of infrastructure and technologies, as illustrated in the diagram below by New Zealand Infrastructure Commission, State of Play: Telecommunications discussion document December 2020.³

³ New Zealand Infrastructure Commission / Te Waihanga *State of Play: Telecommunications Discussion Document*, (December 2020) www.tewaihanga.govt.nz at page 9.



Source: New Zealand Infrastructure Commission, Te Waihanga and TCF

New Zealand's Telecommunication Networks

3.9 Rapid advances in technology are driving transformational changes as our products and services become increasingly important in the daily lives and businesses of New Zealanders. These advances have seen the telecommunications industry collectively investing on average \$1.6 billion each year to deliver new services and network technology. The latest Commerce Commission industry monitoring report⁴ shows the industry has invested \$15.7 billion over the past decade. At the same time, fierce competition is delivering more value to consumers at lower prices, meaning New Zealand is now in the enviable position of having world-class networks and services, at below OECD average prices, for both fixed and mobile communications.

⁴ Commerce Commission New Zealand / Te Komihana Tauhokohoko *Annual Telecommunications Monitoring Report 2021* (17 March 2022). https://comcom.govt.nz/_data/assets/pdf_file/0019/279100/2021-Annual-Telecommunications-Monitoring-Report-17-March-2022.pdf.

- 3.10 In mobile services, Spark, One NZ and 2degrees are the three major mobile network operators who each compete for customers over their own networks, utilising poles and cabinets owned by Connexa and FortySouth, and radio spectrum licensed from Central Government. Sometimes we are able to co-locate our electronic equipment on another operator's facility to save the cost of building a separate facility. Additionally, Spark, One NZ and 2degrees established and jointly own Rural Connectivity Group ("**RCG**"), a wireless network that is extending mobile and wireless broadband coverage to remote areas of rural New Zealand as part of the Government's Rural Broadband Initiative and other dedicated funding sources.
- 3.11 The national line networks are owned by wholesale companies such as Chorus. Chorus is the line network company providing fixed line connections within the Waitomo district. Retailers like Spark, and One NZ that provide customers connectivity for digital services via fixed, and/or wireless networks.
- 3.12 Chorus owns the national copper line network, and most of the fibre network built in cities and towns, under the Government-sponsored ultra-fast broadband ("**UFB**") programmes, including Te Kuiti, Piopio, Benneydale and Mokau within the Waitomo District..

Ultrafast Broadband

- 3.13 The Ultrafast Broadband (UFB) network comprises cable, duct and cabinet or exchange based electronics, to provide GPON (Gigabit Passive Optical Network) equipment and routing equipment, between the end customer the Point of Interconnect ("**POI**"). Multiple cables emanate from GPON locations to clusters of end users within a geographic area.
- 3.14 The UFB network is an open access network, which allows a variety of internet service providers and resellers to operate off the fibre network infrastructure, ensuring end users have a variety of choice as to the ISP as well as packages, pricing and service levels on offer. Fibre is a future-proofed technology that offers a scalable, low-cost pathway to major ongoing performance upgrades. The UFB network is continually developed and expanded to meet demand within the existing coverage area and grown to meet demand where economically feasible.

Wireless telecommunications networks

- 3.15 Our wireless telecommunications networks have a number of benefits, including enabling the provision of Emergency Mobile Alerts by the National Emergency

Management Agency. The alerts have been used numerous times for local and national emergencies, including:

- (a) the COVID-19 pandemic; and
- (b) natural emergencies such as fire or snow flood event warnings to potentially affected people, such as flooding in Nelson, Marlborough, and Westport areas and regularly in Otago for snow events. The alerts are becoming the means by which nationally significant events and information are communicated to New Zealanders in an immediate and succinct manner.

3.16 New Zealand has multiple layers of networks (wireless, IoT and fixed line, plus satellite) and providers include:

- Wireless networks of Spark, One NZ, 2 degrees and Rural Connectivity Group (RCG) (a joint venture between Spark, One NZ and 2 degrees)
- Fixed line networks operated by Chorus nationally including Waitomo district. Note that Spark and One NZ have large fibre networks of their own.
- Wireless Internet Service Providers (WISPs) – including local provider Wireless Dynamics.
- International companies e.g. Starlink (SpaceX service), Lnyx, Amazon, Google

3.17 Our wireless telecommunications networks enable the provision of Emergency Mobile Alerts by the National Emergency Management Agency. These are messages about emergencies sent by authorised emergency agencies to capable mobile phones. The alerts are designed to keep people safe and are broadcast to all capable phones from cell towers within the emergency area.

3.18 Telecommunications infrastructure is a key enabler of future technologies that are expected to be one of the solutions to many of today's challenges, from climate change to lifting our productivity and innovation. The Climate Change Commission's final advice to the government for its emissions reduction plan notes precision agriculture as an example of the ways in which technology will help to improve efficiency and reduce environmental impacts in agriculture – it requires digital connectivity and networks to be possible⁵.

3.19 The Infrastructure Commission's discussion document on Infrastructure for a Better Future recognises the critical nature of telecommunications infrastructure. The report

⁵ <https://ccc-production-media.s3.ap-southeast-2.amazonaws.com/public/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa.pdf>; p. 306

notes that ‘Increasing reliance on communications makes telecommunications infrastructure more critical.’⁶

4. 5G CONNECTIVITY

4.1 The rollout of 5G and the digital technology that it enables is critical to a well-functioning urban environment. It is widely expected to transform our cities and the ways in which we use other kinds of infrastructure. 5G into the rural communities enables access to the 600Mhz band, which is particularly important for rural areas given its ability to provide 5G connectivity over greater distances, including 3.5GHz.

4.2 In May 2023 the government announced the agreement reached with Spark, One NZ and 2degrees to:

- deliver a faster roll-out of 5G services to around 55 towns across New Zealand. such as Otorohanga and Te Kuiti. Spark has established 5G in these locations.
- further expand mobile wireless coverage in rural areas,

4.3 One NZ & Spark has committed to accelerating deployment of its 5G network aiming to expand 5G connectivity to all towns with a population of more than 1,500 people by the end of June 2026 using the allocated C-band spectrum.

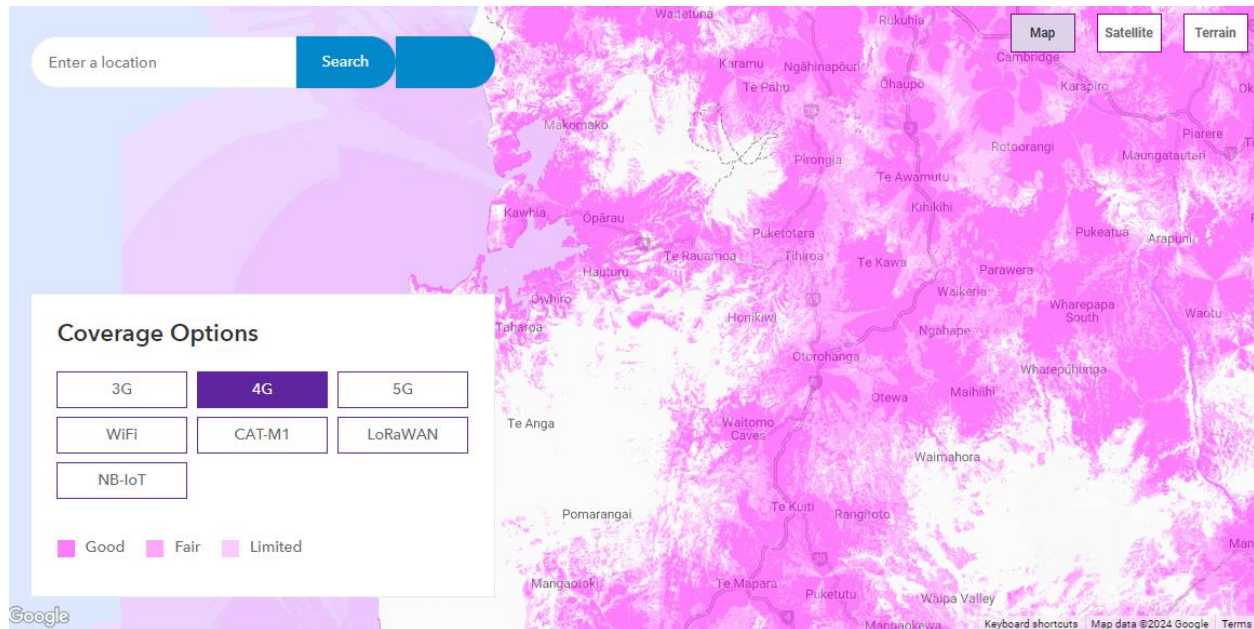
4.4 Telecommunication networks are undergoing a migration towards 5G technology nationwide. 5G technology has a higher bandwidth allowing a greater amount of data to be sent and received. As a result, the radio frequency fields emitted from 5G antennas are larger than previous generations of technology. Consequently, to remove these fields from entering the public domain, antennas need to be placed on correspondingly taller poles.

5. RURAL TELECOMMUNICATION COVERAGE

5.1 Availability of telecommunication connectivity in rural areas can be variable. Each of the network operators such as Spark and One NZ provide indicative coverage tools to show what services are available nationally. The following image is from Spark showing 4G coverage across part of Waitomo district <https://www.spark.co.nz/shop/mobile/network.html>. Note that the information comes with the following note: *updated on a monthly basis around mid-month. They may not reflect the coverage we have available today due to the timing of updates and the*

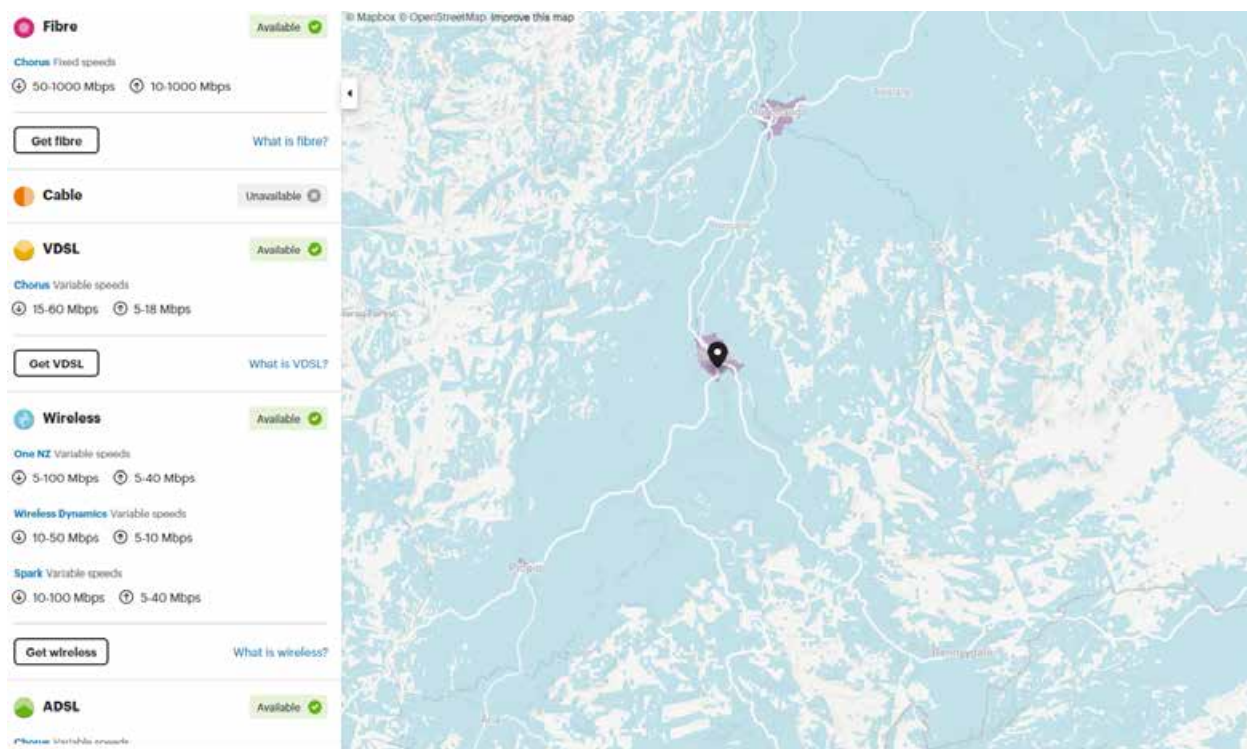
⁶ <https://www.infrastructure.govt.nz/assets/Uploads/Infrastructure-Strategy-Consultation-Document-June-2021.pdf>; p. 34

nature of coverage being predicted. RCG customers select "4G" in the options above to check your coverage. If you're in a rural area and a nearby site has recently been activated you will see reception bars and the words 'Spark NZ' displayed at the top of your mobile whilst you are located in the area you're expecting coverage and using an eligible device.



5.2 The following image is from Broadband Map NZ⁷ for Te Kūiti and surrounding area. This tool is supported from data from the network operators to assist New Zealanders to establish what telecommunication services should be available locally. Note that the data is indicative, and customers should confirm availability with the relevant provider. While the map can show coverage there may not be network capacity to offer a service contract. The capacity constraints also apply to satellite services.

⁷ <https://broadbandmap.nz/home>



6. SATELLITE SERVICES

- 6.1 Telecommunication connectivity infrastructure (satellite direct to phone or device) continues to be fast evolving and ever changing as we integrate new technology to expand customer opportunity to connect when they want it just about anywhere. New Zealand has a long history of satellite services going back to Warkworth Satellite Earth Station to broadband services satellite to a dish connected to wifi router into a building. However, the utilisation of new non geostationary constellations of multiple satellites that orbit earth has significantly improve the broadband services available to business/rural and residential customers⁸. SpaceX Starlink service is one such global company that retail broadband services into New Zealand. Lynk Global is a satellite service provider that is expanding services into Aotearoa.
- 6.2 Spark and One NZ have announced they will set providing satellite-to-mobile services. The One NZ expects in late 2024 to be providing text to mobile phone/devices⁹. It is worth remembering that the technology is still evolving, so the service and experience will improve and expand as the number of satellites in the sky increases. Satellite services can't provide 100% connect ability, as you need a clear line of sight to the sky to get connected. Satellite services¹⁰ add an additional layer of resilience, particularly now, as we face increasingly severe and frequent weather events due to

⁸ <https://www.sparkwholesale.co.nz/products/satellite/corporate-satellite-internet/>

⁹ <https://one.nz/why-choose-us/spacex/>

¹⁰ https://www.sparknz.co.nz/news/Spark_sends_first_satellite_text_message

climate change. Once there are more satellites launched and the service is available more broadly, it will allow mobile customers to start to use their phones in more areas that aren't reached by traditional mobile coverage.

- 6.3 Satellites are part of the integrated communications network solution and are not expected to replace the need for cell towers. A satellite has finite capacity (e.g. when a satellite service is used for making calls, connectivity is lost inside a building). Hence the continued need for cell towers. To address this, there will continue to be an increasing number of new infill cell towers constructed across Aotearoa, including in sensitive environments such as outstanding natural landscapes, or in the coastal environment.

7. SUBDIVISION – SUB-R18

- 7.1 We recognise that potentially any new subdivision can be serviced via the fixed and/or wireless networks. Given that telecommunication connectivity is classified as critical infrastructure especially in an emergency and very day life subdivision applicants should be required to prove that at the time of subdivision telecommunication connectivity to the allotment was available. The network operators are the only organisations that can confirm availability. The public connectivity availability tools are indicative only. Purchasers of new allotments should be advised if service is not be available at the time of subdivision. In our experience it is common for people purchasing rural properties to assume that there is connectivity available but not check with operators as to what telecommunication services are available.
- 7.2 We generally accept, subject to a few alterations the recommended proposed amendments to SUB-R18 by the reporting planner in paragraph 64 & 66 of the S42a report We believe it is important for SUB-R18 to provide stronger direction to guarantee the provision of an appropriate level of service at the time of subdivision, alongside other essential services. Failing to provide adequate telecommunications infrastructure at the time of subdivision can lead to unnecessary disruptions and increased costs for end-users when installed retroactively. An example of this would be to dig up new berms and or footpaths to trench for fibre. The Reporting Planner for the Subdivision Chapter has recommended rejection of our request for the level of service required to be specified within certain zones.
- 7.3 Without a clear directive to applicants of the level of service to be provided to each new allotment, owners of new lots may not have access to the telecommunication connectivity they expect. This concern is particularly pronounced in urban settings

where there is an expectation for access to higher capacity telecommunication services. The Telecommunications Companies believe the amendment to SUB-R18 proposed below achieves an appropriate balance to ensure that all allotments created by any subdivision are adequately serviced by telecommunications.

7.4 The Telecommunications companies' proposed amendments to the Section 42A report version of SUB-R18 are shown in *blue italics below*. In Appendix 2 we have included various versions of the SUB-R18 from the proposed district Plan to the below response to the recommendations of the S42a report.

3. Every new allotment in the residential, settlement, tourism, rural lifestyle, commercial and industrial zones must have provision for telecommunication (*including open access fibre where practicable*) and electricity connections to their legal boundary and sufficient land set aside for them on site where required.
4. In all other zones,
 - a. where electricity lines *and telecommunication lines* are available within 200m of any boundary of a new allotment, ~~these services~~ *electricity* must be provided to the legal boundary and sufficient land set aside for them on site where required; and
 - b. *a telecommunication connection (fibre, mobile or wireless including satellite) can be provided to all new allotments.*
5. All necessary easements for the protection of network utility services must be duly granted and reserved; and
6. The provisions of SUB-R18.3 – R18.5 do not apply to the Te Maika precinct (PREC7) or to the natural open space zone.

Note: Where telecommunications and electricity are not required to be provided to a new allotment as set out in SUB-R18.3 – R18.5, pursuant to Section 221 of the Resource Management Act 1991 a consent notice must be placed on the Record of Title being created for the new allotment to advise of these circumstances.

7.5 We are more than happy to work with Council to establish a process to assess connectivity requirements.

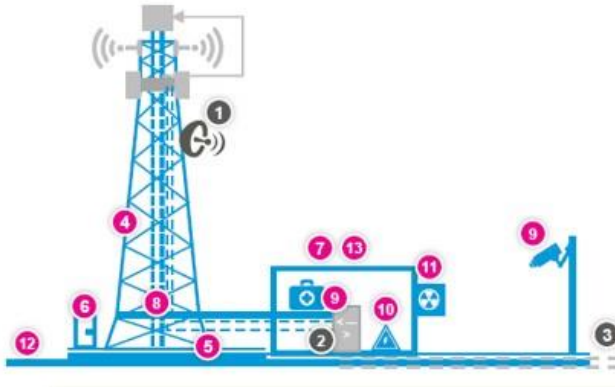
GRAEME MCCARRISON, COLIN CLUNE, ANDREW KANTOR AND FIONA MATTHEWS,

21 June 2024

Appendix 1 Connexa, FortySouth and Chorus

park Connexa asset split on a typical macro tower

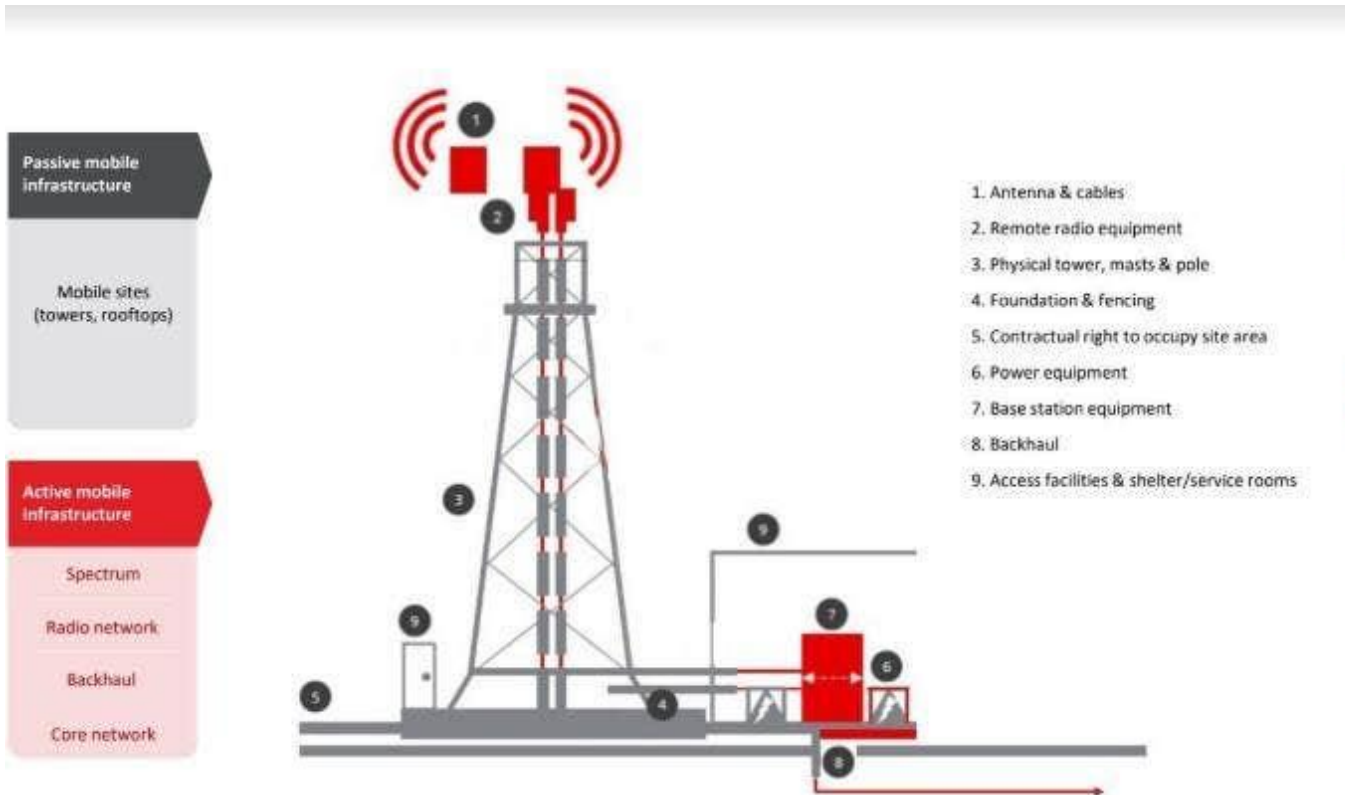
Standard configuration of a Macro tower



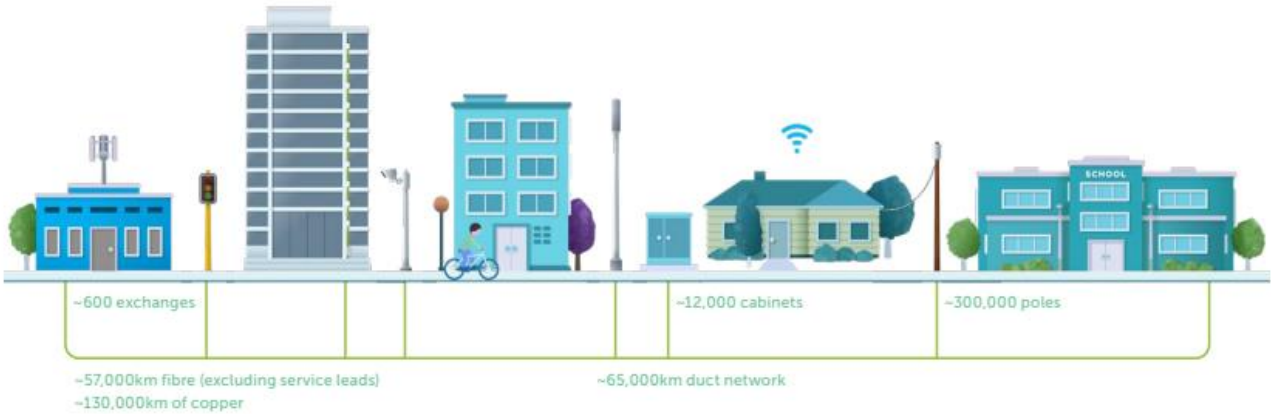
1	Active radio-transmission equipment	
2	Backhaul router	
3	Backhaul fibre	
4	Transmission masts and towers	
5	Fencing / gates	
6	Access facilities	
7	Huts (incl. rack space and cabinets)	
8	Rooftop walkways / ladders	
9	Fire suppression and security systems ⁽²⁾	
10	DC power, back-up generators and batteries	
11	Airconditioning units	
12	Mobile only freehold sites	
13	Other passive equipment	

1

FortySouth



Chorus



Appendix 2 – Verisons of SUB-R18

Notified Waitomo Proposed District Plan - Sub-R18

SUB-R18.	Allotment configuration and utilities
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1. All subdivision and boundary adjustments must comply with the requirements in SUB - Table 3; and
2. New allotments created by subdivision or boundary adjustments must be able to incorporate the allotment shape factor in a position which does not encroach on any building setback or easement requirements. A building platform may be located over the same area as the allotment shape factor; and
3. Except in the Te Maika precinct (PREC7), every allotment must have provision for electricity connections; and
4. Except in the Te Maika precinct (PREC7), every allotment must have provision for telephone and/or ethernet connections.

Telco submission amendments to Sub-R18

Amend SUB-R18 as follows:

....

4. Except in the Te Maika precinct (PREC7), Every allotment in Residential, settlement, tourism, rural lifestyle, commercial and industrial zones and the Te Kuiti CBD precinct must have provision for telephone and/or ethernet connections to an open access fibre network.
5. For every allotment in the Future Urban, Rural Production, Tourism, Open Space and General Rural zones the applicant must provide written confirmation from a telecommunication network operator confirming that a telecommunications connection (fibre, mobile or wireless including satellite) can be provided to all new allotments and describing how this can be achieved.
6. In all zones except the Te Maika precinct (PREC7), at the time of subdivision, sufficient land for telecommunications, and any associated ancillary services must be set aside. For a subdivision that creates more than 15 lots, consultation with telecommunications network utility operators will be required.
7. All necessary easements for the protection of telecommunication network utility services must be duly granted and reserved.

S42a Report recommends the following changes to Sub-R18

- ~~3. Except in the Te Maika precinct (PREC7), every allotment must have provision for electricity connections; and~~
- ~~4. Except in the Te Maika precinct (PREC7), every allotment must have provision for telephone and/or ethernet connections.~~
3. Every new allotment in the residential, settlement, tourism, rural lifestyle, commercial and industrial zones must have provision for telecommunication and electricity connections to their legal boundary and sufficient land set aside for them on site where required.
4. In all other zones, where electricity lines and telecommunication lines are available within 200m of any boundary of a new allotment, these services must be provided to the legal boundary and sufficient land set aside for them on site where required; and
5. All necessary easements for the protection of network utility services must be duly granted and reserved; and
- ~~6. The provisions of SUB-R18.3 – R18.5 do not apply to the Te Maika precinct (PREC7) or to the natural open space zone.~~

Note: Where telecommunications and electricity are not required to be provided to a new allotment as set out in SUB-R18.3 – R18.5, pursuant to Section 221 of the Resource Management Act 1991 a consent notice must be placed on the Record of Title being created for the new allotment to advise of these circumstances.

Telco response to the reporting planner amendments SUB-R18 are as follows highlighted in light blue and italics:

3. Every new allotment in the residential, settlement, tourism, rural lifestyle, commercial and industrial zones must have provision for telecommunication (*including open access fibre where practicable*) and electricity connections to their legal boundary and sufficient land set aside for them on site where required.
4. In all other zones,
 - a. where electricity lines ~~and telecommunication lines~~ are available within 200m of any boundary of a new allotment, ~~these services electricity~~ must be provided to the legal boundary and sufficient land set aside for them on site where required; and
 - b. *a telecommunication connection (fibre, mobile or wireless including satellite) can be provided to all new allotments.*
5. All necessary easements for the protection of network utility services must be duly granted and reserved; and
- ~~6. The provisions of SUB-R18.3 – R18.5 do not apply to the Te Maika precinct (PREC7) or to the natural open space zone.~~

Note: Where telecommunications and electricity are not required to be provided to a new allotment as set out in SUB-R18.3 – R18.5, pursuant to Section 221 of the Resource Management Act 1991 a consent notice must be placed on the Record of Title being created for the new allotment to advise of these circumstances.