



Spark NZ Trading  
Submitter number S17

Manawatu  
Primary evidence

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

**AND**

**IN THE MATTER** of the Proposed Plan Change 55 Manawatu  
District Plan

**STATEMENT OF EVIDENCE OF GRAEME IAN MCCARRISON  
FOR SPARK TRADING NEW ZEALAND LTD**

**IN RELATION TO THE  
PROPOSED PLAN CHANGE 55 MANAWATU DISTRICT PLAN**

**7 December 2016**

**1. QUALIFICATIONS AND EXPERIENCE**

1.1 My full name is Graeme Ian McCarrison.

1.2 I am the Engagement & Planning Manager at Spark New Zealand Trading Limited (**Spark**) a position I have held February 2015. Previously, I held the equivalent position at Chorus NZ Limited (**Chorus**) (November 2011 to January 2015), where I advised both Chorus and Spark on resource management and government matters. As part of this I am involved in the review of all regional and district plan plus any related local government documents that have the potential to enable or impact on the telecommunications industry. I lead, provide guidance and co-ordinate the Auckland Utility Operators Group (Spark, Chorus, Vodafone, Counties Power and Vector) involvement, which started four years ago, on the Proposed Auckland Unitary Plan, now operative in part since 15 November 2016. Currently also involved in the Christchurch Replacement, Queenstown, South Taranaki, Great Wellington, Dunedin, Buller, Hurunui, Palmerston North, Thames Coromandel Plans. We are also in the early stages with engagement and the provision of comments on the Waitaki, McKenzie, Selwyn, New Plymouth, Far North and Waikato proposed district plans.

1.3 I hold the qualification of Bachelor of Regional Planning (Honours) from Massey University. I am a full member of the New Zealand Planning Institute and have 32 years' experience in New Zealand and overseas. Currently I am on the Technical Advisory Group for the National Environmental Standard Telecommunication Facilities amendments (NESTF amendments). Up until April 2015 I was the chairperson of the Auckland branch of the New Zealand Planning Institute and continue as member of the branch committee and was 2016 honoured with a Distinguished Service Award and a best practice award for iwi engagement by NZPI.

1.4 I confirm that I have read the Hearing Commissioners minute and direction on Procedures for the Hearing of Submissions and the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2014. I provide in-house technical and planning advice to Spark on the provisions of the Proposed Plan that impact on the operational requirements of the business. I am not

giving evidence as independent expert. My evidence should be read in conjunction with the evidence of Mary Barton of Chorus.

## **2. SCOPE OF EVIDENCE**

The scope of this evidence is structured into general subject areas as follows:

- a. Spark operations and how the growth from demand for services is driving expansion of the fixed line and mobile networks;
- b. Explanation on how the mobile network operates;
- c. General Comments on the s42A report to support the evidence of Tom Anderson in relation to:
  - (i) Temporary activities
  - (ii) Natural hazards and lifeline activities
- d. Outline of the National Environment Standards Telecommunications Facilities amendments (NESTF 2016) including a comparison to the relevant Proposed Plan Change 55 provisions

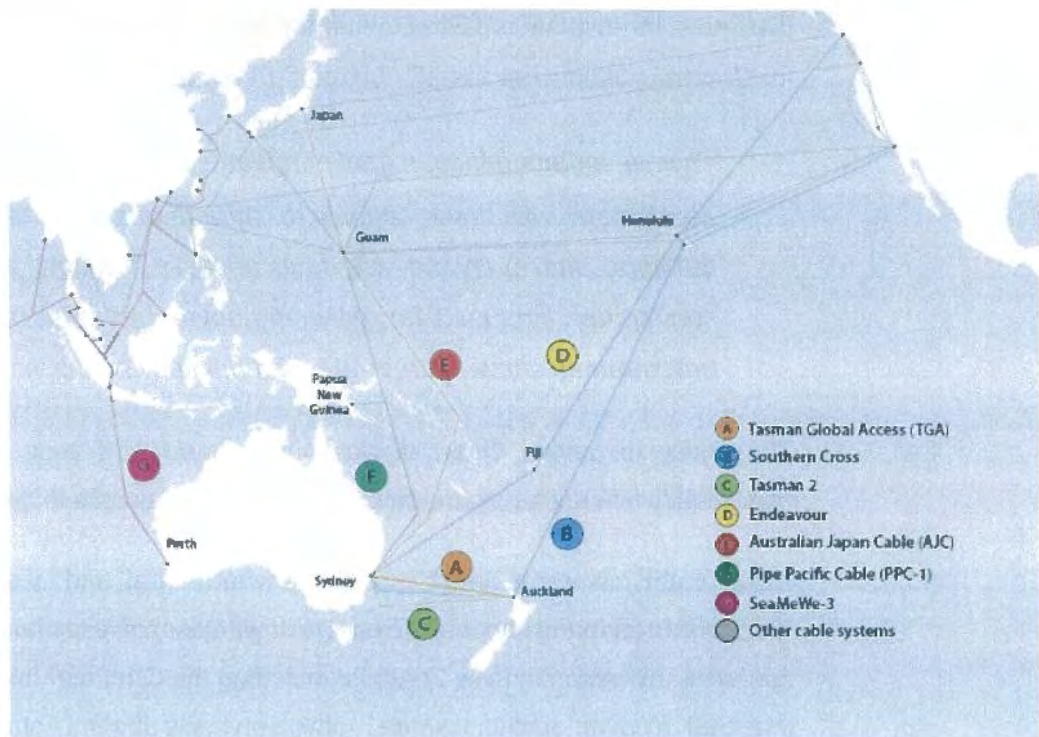
## **3. SPARK NEW ZEALAND TRADING LIMITED**

- 3.1 Spark is New Zealand's largest digital services company delivering mobile, fixed and IT products and services to millions of New Zealand consumers and businesses. Our ambition is to be a winning business, inspired by customers to unleash the potential in all New Zealanders.
- 3.2 Spark is a multi-brand business, with principal brands Spark (supporting home, consumer mobile and small business customers) and Spark Digital (supporting government and business customers with strong Cloud services, mobility and ICT capabilities).
- 3.3 Specialist and flanking brands include Skinny (consumer mobile), Revera and Appserv (data hosting services), Lightbox (internet TV), Qrious (data analytics), and Bigpipe (consumer broadband). An in-house incubator, Spark Ventures, is developing other new business opportunities.



- 3.4 Fully privatised since 1990, Spark is listed on the NZX and ASX stock exchanges. Spark New Zealand contributes significantly to the community via the Spark Foundation, whose activities include ownership of Givealittle, New Zealand's first 'zero-fees' online crowdfunding platform through which generous New Zealanders donate millions of dollars annually to thousands of charities and deserving causes; and as a key partner of the Manaiakalani Education Trust, which is transforming digital learning at schools within economically-challenged communities across New Zealand.
- 3.5 The New Zealand mobile market is growing at approximately 6 percent per annum, which is primarily driven by growth in mobile data and handset sales. The increase in mobile data usage has been driven by the increased uptake of smartphones. To support the "smartphone revolution" we are recently upgrading the existing mobile sites with the deployment 4G technology throughout New Zealand including the Manawatu. More than 60 percent of mobile customers now use a smart phone, with the ability to receive and upload data. In 2015, 18 percent of data was generated by mobile devices. By 2020 this is projected to be 27 percent.
- 3.7 There has also been significant growth in the transfer of data between devices (Machine to Machine (M2M) communication) and this demand is expected to increase rapidly over the next few years. Aligned to this growth in the "macro" network, developing technological breakthroughs have enabled the deployment of micro cells, small cells and cel-fl units to provide improved in-building and black spot coverage.
- 3.7 Spark is expanding the access to broadband services through Skinny Broadband, a prepaid service, and Wireless Broadband, which since its launch in the middle of last year has attracted more than 11,000 customers. All these wireless broadband services deliver a fast and reliable internet connection using 4G mobile technology instead of a connection using the traditional copper line ADSL network.
- Spark has joined forces with Vodafone and Telstra to lay the 2,300km Tasman Global Access (TGA) submarine cable between New Zealand and Australia to service the growth in trans-Tasman data traffic. New Zealand's international capacity requirements growing 60 percent year-on-year (and projected to grow a whopping 11,000% in 10 years), the TGA Cable will support the future needs

of consumers and the growth aspirations of New Zealand businesses. Other benefits of the new cable include strengthened links into fast-growing Asian markets, important redundancy and resiliency, and better connection with the five main international cable systems currently serving Australia.



#### 4. GOVERNMENT INITIATIVES

- 4.1 In June 2015 the Government announced it is investing up to \$210 million to lift the Ultra-Fast Broadband (UFB) program coverage to at least 80 per cent of New Zealanders. The new funding also includes \$100 million for major improvement in rural broadband and \$50 million to improved mobile coverage in black spot areas along main highways and in popular tourist destinations.
- 4.2 In October 2015 the government announced that Crown Fibre Holdings, the government entity tasked with overseeing the taxpayer-sponsored fibre network build, will have its mandate extended to cover rural connectivity. The extension to the rural broadband initiative and the mobile black spot fund requires another \$150 million through the Telecommunications Development Levy. The fund will be used to build a contestable fund for commercially unviable telecommunications services. The Commerce Commission issued a draft determination allocating the size of the levy, with Spark New Zealand to pay \$19 million of the \$50 million total, followed by Vodafone New Zealand at \$13.8



million, and Chorus at \$11.1 million. Two Degrees Mobile faces a bill of \$2.9 million, and CallPlus will pay \$1.2 million.

- 4.3 The importance of the previous RBI1 (completed) and UFB1 (completion in 2019) and proposed UFB<sup>2</sup> and RBI<sup>2</sup> programme rollouts is highlighted on the Ministry of Business, Innovation and Employment (MBIE) website. Hon Amy Adams Minister for Communications on the 27 October 2016 stated;

*“We’ve set an ambitious goal of ensuring that by 2025, 99 per cent of New Zealanders will have access to broadband peak speeds of at least 50Mbps, and everyone will have at least 10Mbps. We’re interested in seeing how proposals for delivering coverage under the RBI2 and MBSF programmes show an upgrade path in line with this vision”*

- 4.4 The ability to deliver these services in a timely and cost effective manner is significantly influenced by the policy and rules frameworks in district plans.
- 4.5 RBI2 target coverage areas are those where rural end users have access to terrestrial broadband services (fixed line or wireless) of less than 20 Mbps maximum speed in any region in New Zealand (including the Chatham Islands). The MBSF is intended to cover locations where mobile service is absent, comprising segments of state highway and tourism destinations. The tenders for RBI2 and MBSF are currently open with the first contracts expected to be awarded in June 2017. The following locations are identified in the MBSF – Highways:

STATE HIGHWAY LOCATION	STATE HIGHWAY	APPROXIMATE START AND END POINTS	REGION/S
National Park	4	Raetihi, Owango	Manawatu-Wanganui
Whanganui River	4	Old Parapara Road, Raetihi	Manawatu-Wanganui
Forgotten World Highway	4; 43	Taumaranui, Toko	Taranaki, Manawatu-Wanganui
Pureora Forest	30; 32,4	Waiteti, Barryville	Waikato, Manawatu-Wanganui
Pureora Forest	30; 32,4	Te Koura, Mapara Stream	Waikato, Manawatu-Wanganui

The following locations are identified in the MBSF – Tourism:

REGION	TOURISM LOCATION
Manawatu-Wanganui	Entrances/exits to The Timber Trail
Manawatu-Wanganui	Entrances/exits to Whanganui National Park and Great Walk
Manawatu-Wanganui	Lake Moawhango
Manawatu-Wanganui	Owhango
Manawatu-Wanganui	Pongaroa
Manawatu-Wanganui	Raurimu
Manawatu-Wanganui	Whakahoro
Manawatu-Wanganui	Whangamomona - Forgotten Highway

## 5. ESSENTIAL INTEGRATED NETWORK

- 5.1 The telecommunications industry is in a unique position of comprising a group of businesses that operate private networks on a national scale. The applications and services that these networks enable are essential for businesses, tourism and residential users who expect high speed, reliable services wherever they are and whatever they are doing. The majority of businesses within the district and New Zealand rely on telecommunications services (whether that be fixed or mobile, voice, data or digital) for at least some part of their operation. It is vital that the district plan recognises the importance of telecommunications to the wider economy.

MBIE noted in a recent consultation document<sup>1</sup> that:

*"Digital communications technologies are impacting almost every aspect of our lives. We rely on them for business, government, education, health and in our communities. The communications sector is a critical enabler of economic growth in the twenty-first century."*

<sup>1</sup> Ministry of Business, Innovation & Employment Review of the Telecommunications Act 2001, Regulating Communications For The Future, September 2015

- 5.2 Meeting consumer and business demands for new and improved digital services means constant investment and innovation and strong government support through nationwide policies. In 2013, total telecommunications investment reached \$1.7 billion. This level of investment, compared to revenue, put New Zealand near the top of the OECD in 2013. There has been a rapid deployment of competing 4G mobile networks with the deployment of 5G networks on the horizon. Further deployment into regional areas to provide broadband to rural communities via the Government's Rural Broadband Initiative (RBI) continues and New Zealand has seen the fastest uptake of fibre in the developed world<sup>2</sup>.
- 5.3 Telecommunications infrastructure is significant and essential, and the safe, reliable and efficient functioning of the network is vital for the national, regional and local economy and is in the public interest (both in terms of allowing people and communities to provide for their "wellbeing", and also for assisting to ensure their "health and safety").
- 5.4 The network is utilised for a wide range of purposes that are essential to modern mobile society. Access for residents and business to quality, reliable telecommunications is a fundamental pre-requisite for the region to be a competitive, attractive and safe place to live and work. The pivotal role of modern telecommunications as a catalyst for social and economic development is now widely recognised around the world. This includes personal and commercial communications, wireless data transfer, linking financial institutions to convey critical financial transaction data, fire and burglary monitoring and control facilities, and other emergency services communications.
- 5.5 Critical services include access "111" service for emergency calls; receive early warning notices from Civil Defence e.g. Tsunami text or emails replacing local siren warning systems and post event information updates.

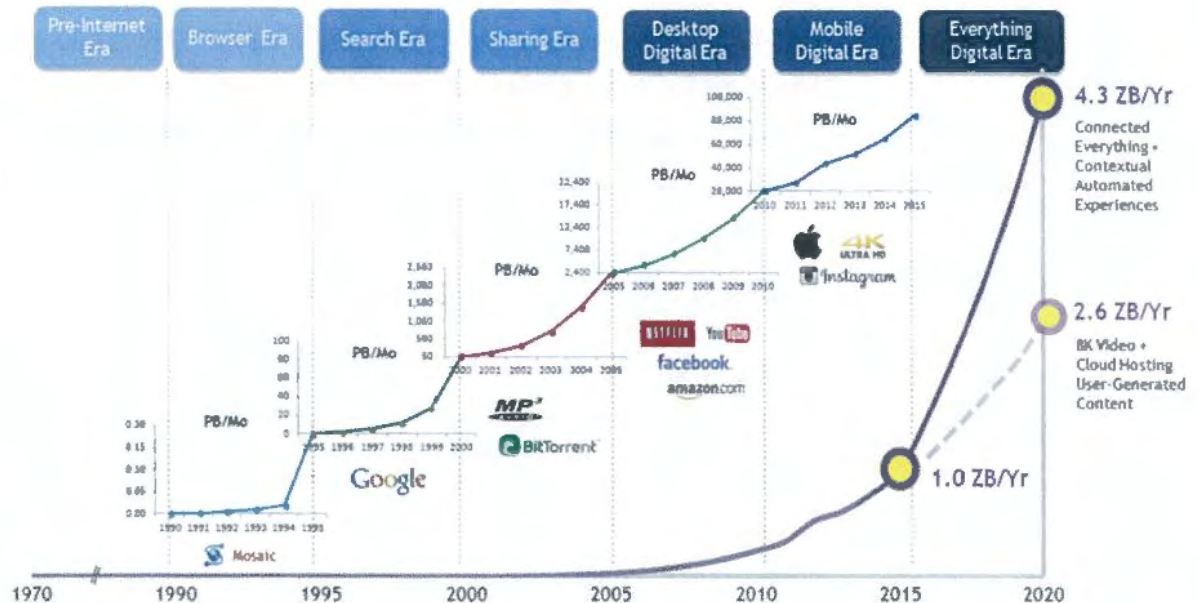
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<sup>2</sup> TCF 'Telecommunications – Enabling New Zealand's Future' prospectus 2016



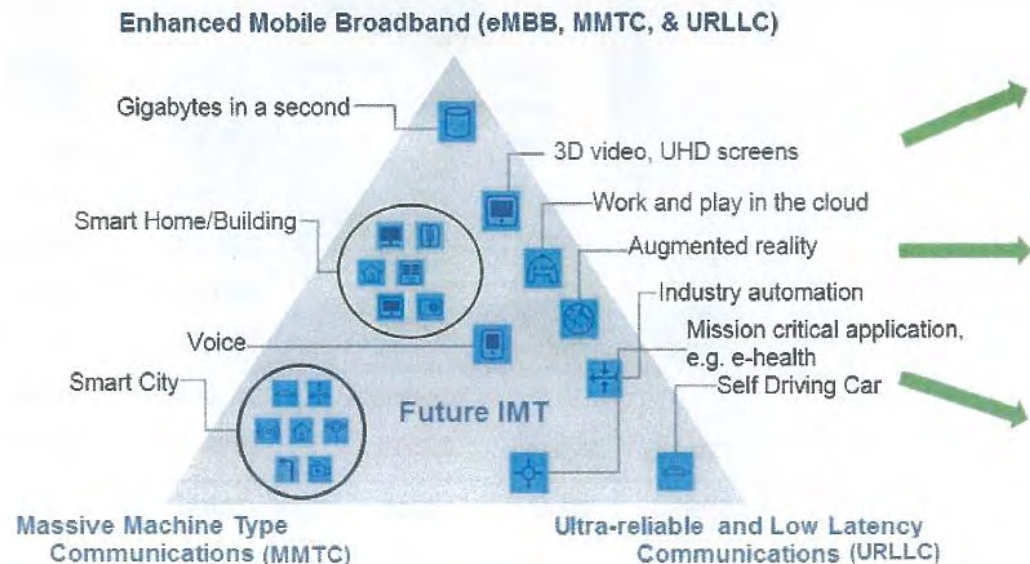


5.6 Bell Labs predict and massive growth in data consumption around the world triggered by high definition content and the Internet of Things communication.



5.7 Spark continues to develop and improve the 4G network with the latest evolution being the launch of the first 4.5G sites in Christchurch and Silverdale (Auckland). This advancement is to support high quality services such as video over Mobile Broadband as we move toward 5G within the next 5 years.

- 5.8 5G the next evolution in mobile network technology and new network. The following summaries what 5G is expected to support and enable.



- 5.9 It will be essential that further investment in telecommunications infrastructure can be made efficiently and with as much certainty as possible. The updated National Environmental Standard for Telecommunication Facilities (NESTF) 2016 will permit a significant range of telecommunication activities. The NESTF has to be recognised as providing part of the solution in the Manawatu district. However there are other opportunities to be explored via the current district plan review if investment in our essential networks is to match rapid customer demand for telecommunications.

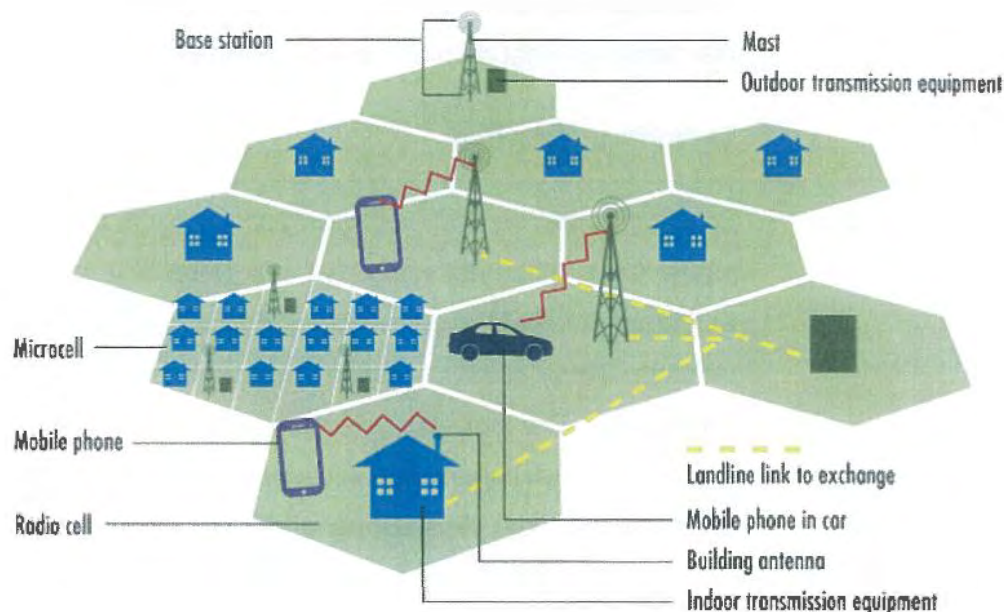
## 6. HOW A MOBILE NETWORK WORKS

- 6.1 Mobile telecommunications infrastructure is designed around the cellular concept; hence, they are often known as cellular networks. Cellular networks divide the target service area into cells and each cell is served by a central cell site. A cell site typically consists of antenna, an antenna support structure such as a mast or rooftop and a base station which contains electronic equipment, (examples of cell sites are attached as Appendix A). The cell site communicates with individual mobile users within its service area using dedicated radio channels, which are limited by the spectrum licence holding of the operator. These dedicated radio channels are reused in other cells for better network efficiency. One of the major advantages of the cellular topology is that extra capacity can be added by increasing the number of cells, (each with a smaller



service area) in areas of high traffic demand. Modern mobile networks often comprise of a macro coverage layer providing wide-area coverage that is complemented with a micro capacity layer in high traffic areas providing extra targeted capacity.

6.2 The operation of the cell phone network is generally represented in diagram.



## 7. COMMENTS ON THE S42A REPORT & RECOMMENDATIONS

7.1 The telecommunications industry has taken all opportunities to engage with Council during the Proposed Plan Change 55 process. Since the proposed plan change was notified there has been open and constructive discussions with Council and the reporting Planner on the Chorus and Spark submission points. However as outlined in the evidence of Tom Anderson there are number of changes required before the Objective/policy framework is appropriately supported with the rules to enable the efficient and effective upgrading and rollout of new telecommunications technically that reasonably support the district. In regard to the objectives and policies plus the structure of the District Plan consideration should be given to for example the inclusion of infrastructure enabling objectives and policies similar to those agreed to in the Auckland Unitary Plan E26.2.1 Objectives or Policies E26.2.2, refer to appendix B. The use a comprehensive infrastructure/network utilities single chapter would enable network utility operators to easily find the provisions relevant to a project without having to read each chapter of a Manawatu district plan.



- 7.2 There have been reasonable and constructive change proposed in the S42a report in regard to the District Wide rules, Chapter 3 which are accepted but some change is still in needed. In addition to the planning evidence of Tom Anderson my evidence provides supporting information and comment in rule 3F.4.1 temporary activities, rule 3A.4.2 setbacks from Flood Channel - natural hazards and the role of telecommunications as a "Lifeline Utility" and finally an introduce the NESTF 2016 amendments and a comparison to the provisions in the proposed change plan network utilities provisions in chapter 3A.

### **Temporary Activities**

- 7.3 Spark (in Vodafone and 2degrees) provide temporary cell sites to support events where the existing network is unlikely to be able to support a large event such as the annual Field days in Feilding that attracts a large numbers people to that location. These temporary sites are known as a "COW" which stands for "cellular on wheels". The purpose of temporary sites is to enhance the capability of the existing network when due to a high demand for service i.e. snap-chats or sharing photos etc. The setting of a COW typically involves the following:
- a. Negotiation with landowner on location;
  - b. Placement of the COW on site up to 3 weeks before the event;
  - c. Radiofrequency testing to ensure compliance with NESTF stated radiofrequency standards and integration with the existing cell sites;
  - d. Close down and removal of the COW up to week after the event
- 7.4 To provide greater clarification in regard to the duration that a COW can be on site to support an event I support the amendments for temporary activities in the evidence of Tom Anderson.

### **Lifeline Utilities and Natural hazards**

- 7.5 The telecommunication networks are located across New Zealand and basically wherever New Zealanders live and work. New Zealand is exposed to a wide range of natural hazards including earthworks, flooding, climate change and unstable soil conditions. It is common for the places New Zealanders have settled in to be exposed to natural hazards. The telecommunication industry needs provide its networks to connect to dwellings and buildings via fixed line or have cell phone masts in close proximity so that customer's phones can connect.

As a consequence the networks will always be located in areas of natural hazards.

7.6 The provision of resilient telecommunication networks during emergencies is critical, as has been highlighted in the case of the Canterbury earthquakes. Telecommunications are recognised as Essential Infrastructure i.e. the whole network and a critical lifeline utility under the Civil Defence Emergency Management Act 2002 (CDEM Act 2002). As a lifeline utility the companies are required to plan for and manage the range of emergency impacts on the networks. Under section 59 CDEM Act 2002 a lifeline utility is required to take “all necessary steps to undertake civil defence emergency management” and be able, under section 60, to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency. Resilience comes from a variety of sources:

- multiple networks (different providers offering alternative networks);
- multiple technologies (fibre fixed networks available alongside mobile networks);
- telecommunication facilities such as cabinets and masts are exempt from the Building Act. However the facilities are designed and certified by certified professional engineers; and
- providers building their own networks with resilience in mind (building redundancy into their networks so that network component failures have a minimum impact).

7.7 Council and the government provide and should continue to provide public information on actual and potential natural hazards. This information is essential for our engineers to analysis when designing the proposed structure to meet the local conditions e.g. flood plains or geotechnical soil conditions.

7.8 We are not aware of any situations where our networks have been assessed by a Council as contributing to flooding or any other natural hazard situation. We have no evidence or information related to masts failing structurally during a flood event.

7.9 Council has the opportunity to comment and request information when a network utility is proposing to work in the road under the National Code of Practice for Utility Operators' Access to Transport Corridors (the Code) under the Utilities



Access Act 2010. It is recognised that telecommunications is probably the most complex of the lifeline utilities given that users have access multiple networks including the mobile networks of Spark, Vodafone and 2 Degrees and the fixed line copper network of Chorus plus the new fibre network, still under construction. The experience of the telecommunications industry during an emergency is that it is extremely rare for customers to have no access to telecommunications when there is access to multiple telecommunication services.

- 7.10 It is therefore considered that in relation to network utilities operators there is no need for rules or a requirement for resource consent to be placed on the telecommunication facilities in natural hazard areas. The existing regulatory and industry engineering requirements will ensure that the infrastructure is resilient. The NESTF 20106 under Regulation 57 precludes any natural hazard rules from applying to regulated activities under the NESTF. This significant change in the NESTF needs to be recognised in regard to the setback from the Flood Channel zone requirement under 3A4.2 and during the natural hazard proposed plan change.

## **8. NES TELECOMMUNICATION FACILITIES**

- 8.1 The existing Resource Management (National Environmental Standards for Telecommunications Facilities) Regulations 2008 came into effect on 28 October 2008. The NESTF provides for certain low impact equipment in roads (i.e. telecommunications cabinets and antennas on existing and replacement poles in roads, and radio frequency exposures in all locations reasonably accessible to the public both inside and outside of roads), as permitted activities subject to standards. These provisions override any more stringent controls in district plans. In certain circumstances where district plans include provisions for protected trees, visual amenity values, heritage values and equipment in roads adjacent to the Coastal Marine Area (CMA), more stringent district plan rules prevail.
- 8.2 In recognition of the significant role telecommunications, broadband and digital services play in New Zealand's economic performance and growth, and to support the ongoing UFB and RBI programmes, the Government in 2013 determined that it would undertake a comprehensive revision of the NESTF. The purpose was to broaden its scope and to make improvements to some of the existing regulations to bring it up to speed with ongoing rapid development in the telecommunications sector. Following public consultation in 2014, development of amendments to the



NESTF via the Technical Advisory Group which included representative's local government, telecommunications industry, MfE and MBIE, Cabinet in November 2016 approved the new NESTF 2016.

- 8.3 Therefore after 3 years of review the NESTF 2008 will be replaced by the NESTF 2016 with its significantly expanded provisions from 1 January 2017. The Council should recognise the NESTF 2016 as part of the decisions on Proposed Plan Change 55 where this is in the scope of submissions. It is my understanding that the Reporting Planners supports appropriate changes to give recognition of the NESTF 2016. The evidence of Tom Anderson recommends changes that I support. Given that the NESTF 2016 only became public on Thursday 24 November 2016 and the scope of the NESTF is significantly expanded I have provided the following:

- a. An overview of the changes;
- b. Summary of the standards for permitted activities in comparison to the activities and rules in 3A.4 in Appendix C

#### **Background and Overview NESTF 2016**

- 8.4 The introductory paragraph on page 5 of the MFE discussion document dated March 2015 states:

*There are significant technological developments and innovations occurring across the economy that rely on fast, reliable broadband. Many activities in New Zealand, including education, health care and business, would benefit greatly from modern communications technologies. The ability for New Zealand to remain competitive internationally depends on investment in new communications infrastructure. Because of this, the Government is making significant investments in upgrading the national telecommunications network.*

Public submissions were received on the proposed amendments including from a number of territorial authorities.

- 8.5 The objectives of the NESTF are to:
1. *Assist in network and equipment design and equipment sourcing for national network deployment*
  2. *Reduce compliance costs and timeframes for service providers*

3. *Reduce the timeframe and lower the costs for the availability of new services to consumers*
4. *Contribute to a reduced council workload in processing and determining consent applications*
5. *Set an appropriate balance between local participation in community planning and cost-effective national infrastructure investment.*

8.6 NESTF provides for the following as permitted activities:

1. **Facility** – means an antenna, cabinet, telecommunication line or small cell operated by network operator under the Telecommunication act or the Crown or a Crown agent.
2. **Pole** – pole, mast, lattice tower, or similar structure, of a kind that is able to be used (with or without modification) to support antennas
3. **Ancillary equipment** means telecommunications, radiocommunications, electrical or similar equipment it is necessary to install with a facility to enable the facility to operate as intended, but not a self-contained power unit or a lightning rod
4. **Customer connection line** means a telecommunication line that connects a telecommunications distribution network to a premises for the purpose of enabling a facility operator to provide telecommunication services to a customer
5. **Lightning rods** may extend beyond the height of the antenna and poles
6. **Facility** undertaken over rivers and lakes subject to complying with any relevant Regional Plan
7. **Earthworks associated with all facilities/poles only standards allow as follows:**
  - a. New rural pole - 450m<sup>3</sup> with a management plan
  - b. Tracks in rural zones subject to district or regional plan rules
  - c. Earthworks associated with subpart 5 requirement
  - d. Regional earthwork rules except in relation to Aerial Lines

**Natural hazards** - A territorial authority cannot make a natural hazard rule that applies to a regulated activity

**Radiofrequency** - Updated the radiofrequency measurement standard by the remove the existing reference to the out of date 1990 radio-frequency

measurement standard and revised with AS/NZS 2772.2:2016 radio-frequency measurement standard.

### Key definitions

**Telecommunication line** means a wire, or conductor of any other kind (including a fibre optic cable), referred to in paragraph (a) of the definition of line in section 5 of the Telecommunications Act 2001

**Antenna** means a device that receives or transmits radiocommunication or telecommunication signals, but not a small cell unit

**Small cell** means a device -

- a. that receives or transmits radiocommunication or telecommunication signals; and
- b. the volume of which (including any ancillary equipment, but not including any cabling) is not more than 0.11 m<sup>3</sup>

8.7 The following table references which regulation applies to the regulated activities.

Activity	Relevant Regulation
<b>Cabinets</b>	<ul style="list-style-type: none"> <li>Requirements for cabinets including groups of cabinets (regulations 19-25)</li> </ul>
<b>Antennas</b>	<ul style="list-style-type: none"> <li>Antennas on existing poles in road reserve (regulations 26 &amp; 27)</li> <li>Antennas on new poles in the road reserve (regulations 28 &amp; 29)</li> <li>Antennas on existing pole outside road reserve and in residential zones (regulations 30 &amp; 31)</li> <li>Antennas on existing pole outside road reserve and not in a residential zone (regulations 32 &amp; 33)</li> <li>Antennas on new poles outside road reserve and in rural zones (regulations 34 &amp; 35)</li> <li>Antennas on buildings (regulations 36 &amp; 37)</li> </ul>
<b>Small cell units</b>	<ul style="list-style-type: none"> <li>Installation of new small-cell units in the road reserve or on structures (regulations 38)</li> </ul>
<b>Telecommunication lines -</b>	<ul style="list-style-type: none"> <li>Customer connection lines (regulations 39 &amp; 40) including surface mounted lines</li> <li>Aerial and underground telecommunication lines (regulations 41 and 43)</li> </ul>
<b>Earthworks</b>	<ul style="list-style-type: none"> <li>Earthworks for permitted for regulated activities without standards unless stated (regulations 53-54)</li> </ul>



Activity	Relevant Regulation
	<ul style="list-style-type: none"> <li>Standards for earthworks associated with the installation and operation of telecommunication facilities in the rural zone (regulations 53-54)</li> </ul>
<b>Radio-frequency fields</b>	<ul style="list-style-type: none"> <li>Requirements for facilities that generate radio-frequency fields (regulation 55)</li> </ul>
<b>Natural hazards</b>	<ul style="list-style-type: none"> <li>Regulated activities are exempt from district plan natural hazard rules (regulation 57)</li> </ul>

8.8 NESTF regulated activities are permitted in the following locations:

**Road reserves** - means a formed legal road and any land next to it up to the legal boundary of the adjoining land

- Deploy telecommunications lines (underground and on existing telecommunication and electricity poles)<sup>N3</sup>
- Customer connection lines<sup>N2</sup>
- Erect new poles and antennas<sup>N1, N4</sup>
- Upgrading and replacement of existing poles and antennas<sup>N1, N4</sup>
- Cabinets including groups of cabinets<sup>N1, N4</sup>
- Erect small-cell units on any structure<sup>N1, N4</sup>

**Rural zones (not in the road reserve)** - means an area identified in a district plan or proposed district plan as being zoned primarily for rural activities, including an area zoned for rural/residential or countryside living activities (however described).

- Erect new poles and antennas<sup>N1, N4</sup>
- Upgrading and replacement of existing poles and antennas<sup>N1, N4</sup>
- Cabinets<sup>N1, N4</sup>
- Erect small-cell units on any structure<sup>N1, N4</sup>
- Deploy telecommunications lines outside the road (underground and on existing telecommunication and electricity poles)
- Customer connection lines<sup>N2</sup>

#### **Across the City or District**

- Erect small-cell units on any structure<sup>N1, N4</sup>
- Upgrading and replacement of existing poles and antennas<sup>N1, N4</sup>
- Antennas on buildings (in residential zone the building has to be 15m above in height)<sup>N1, N4</sup>
- Cabinets<sup>N1, N4</sup>

- q. Customer connection lines<sup>N2</sup>
- r. Deploy telecommunications lines (underground and on existing telecommunication and electricity poles)<sup>N3</sup>

#### Notes

- <sup>N1</sup> Regulated activity subject to subpart 5 - District Plan rules that are more stringent than the NESTF when in the following areas:
  - Trees and vegetation in road reserve
  - Significant trees
  - Historic heritage values
  - Visual amenity landscapes
  - Significant habitats for indigenous vegetation
  - Significant habitats for indigenous fauna
  - Outstanding natural features or landscapes
- <sup>N2</sup> Regulated activity subject to subpart 5 as in <sup>N1</sup> above but in only in regard to surface mounted customer connection lines
- <sup>N3</sup> Regulated activity subject to subpart 5 only when in road reserve related to Trees and vegetation in road reserve and Significant trees
- <sup>N4</sup> Regulated activity subject to subpart 5 in relation to coastal protection rules in places adjoining the coastal marine area.

8.9 The submissions by Spark and Chorus highlighted that the references to the NESTF 2008 should be updated to NESTF 2016 given that it was likely to be in effect before the decisions on proposed Plan Change 55 were made. The NESTF 2016 has immediate effect from 1 January 2017. At some point Council will need to consider a plan change to give effect to the NESTF 2016 where relevant. In the meantime I support any changes to replace the NESTF 2008 reference to NESTF 2016 and those proposed in the evidence of Tom Anderson. Generally the chapter 3A.4 activities and rules do not require amendment. There are a number of rules that the NESTF overrides which a plan change would alter, refer to appendix c for the details, including the following:

1. Potentially align the definitions and activities
2. In regard to *rule 3A.4.2.b* will probably require amendment to recognise that existing poles within 20m of Residential or Village zoned sites can be altered under the NESTF 2016
3. Remove the setback requirements for rural masts from a road or flood

channel – rule 3A.4.2c.

4. Remove or alter rule 3A.4.2d as the NESTF has no setbacks from any site boundary. Note in roads masts and cabinets are always going to be closer than 5.0m to a site boundary.
5. Align the titles of special areas/zones/overlays with subpart 5 NESTF
6. In regard to 3A.4.2f alter reflect the standards of the NESTF
7. Provide for a cascade from permitted to discretionary activities that reflects the NESTF 2016

8.10 Under s43B of the RMA, a rule in a district plan may not be more lenient (permissive) than a national environmental standard. Accordingly, where a district plan permits an activity that would otherwise not comply with the permitted standards of the NESTF, than a resource consent as a controlled activity is required. Changes to s43B as part of the next round of RMA reforms are being considered which could result in district plans having more permissive provisions than the current permitted standards in the NESTF to enable rules to be developed that meet the requirements of local communities. Accordingly, the telecommunications companies will continue to pursue and support rules in district plans that are more lenient than the NESTF in appropriate circumstances. In the situation where the District Plan permitted standards are more permissive than the NESTF a controlled activity resource consent will be required to be applied for. A telecommunication facility that does not comply with the permitted NESTF activity standards will need to obtain a resource consent from council. The activity status defaults to that provided for in the district plan.

8.11 While the amendments to the NESTF significantly increases the comprehensiveness of the matters provided for, district plans still need to make provision for telecommunications in residential, business and industrial areas plus heritage and significant natural areas. Natural areas are defined as outstanding natural features or landscapes, coastal marine, significant indigenous vegetation or significant habitats of indigenous fauna.

8.12 It should be recognised that Telecommunication facilities continue to be subject to other legislation and regulations which need to be considered alongside the NESTF. Relevant legislation and regulations include:



- Telecommunication Act 2001;
- Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011;
- Utilities Access Act 2010, and the *National Code of Practice for Utility Operators' Access to Transport Corridors*; and
- Heritage New Zealand (Pouhere Taonga) Act 2014.

8.13 The industry expects to continue to work with local councils during the development of district plans and plan changes to give effect to the NESTF 2016 and make submissions in support of the following type of provisions. District Plan network utility/infrastructure chapter will continue to need to provide for telecommunications in regard to the following for example:

1. Definitions
2. Objective and policies framework for network utilities which includes telecommunication facilities
3. Cascade of activities from permitted to non-complying as appropriate (probably covering the following)
  - a. **Permitted activities** will probably cover for example:
    - New facilities in all zones not permitted by NESTF 2016
    - New rural poles established under regulations 34 & 35 to a height of 30m for a 1 provider and 35m maximum for 2 or more providers
    - Antenna (non-dish antenna) including dipole types or similar—face area of 1.5m<sup>2</sup>
    - Guy wired poles 30m for a 1 provider and 35m maximum for 2 or more providers in rural zones
    - Ancillary equipment
    - Small cell units/antennas that do not exceed a volumetric dimension of 0.25m<sup>3</sup>
    - Communication hubs (replacement for the telephone boxes)
    - Minor telecommunication buildings
    - Earthworks
    - Access tracks
    - Self-contained power units
    - New aerial telecommunication lines in rural and other appropriate zones

- Temporary activities
- Noise of cabinets outside the road
- Telephone exchanges
- Antennas that do not exceed the following dimensions:  
GPS Antennas:
  - 300mm high and 130mm in diameter
 Omni-directional antennas:
  - 650mm high; and
  - 60mm in diameter
 Note Omni antenna, gps unit and lightning poles to be exempt from maximum height of pole and antenna
- Installation and operation of telecommunication equipment inside existing telephone exchanges and buildings
- Operation, maintenance and repair of network utilities and electricity generation facilities in existence on 30 September 2013 or which have been lawfully established or granted resource consent
- Minor utility structure
- Facilities in special areas (defined in NESTF subpart 5) as appropriate

**Controlled activities** will probably cover for example:

- Cabinet exceeding the height and area under regulation 21 NESTF 2016 not more than height 2.5m and footprint per provider 5m<sup>2</sup> N<sup>5</sup>
- Antennas no more than 900mm in diameter for existing and new poles in road reserves under regulations 26, 27 28 and 29 NESTF 2016 not adjoining a residential zone N<sup>5</sup>
- Antennas on buildings in non-residential zones exceed standards under 37 NESTF 2016 panel antenna not more 1.8m<sup>2</sup> and dish antenna 1.5m in diameter and 3.0m diameter in rural zones as defined under the NESTF 2016. N<sup>5</sup>
- Small cells exceeding the permitted standard and regulation 38 NESTF 2016
- Facilities in special areas (defined in NESTF subpart 5) as appropriate

**Restricted Discretionary activities** will probably cover for example:

- Group of cabinets in road reserve under regulation 22 NESTF 2016<sup>N5</sup>
- Antennas exceeding standards for existing and new poles in road reserves under regulations 26, 27 28, 29 and exceeding controlled activities standard<sup>N5</sup>
- Headframes, pole width and height exceeding standards of regulations 26, 27 28, 29, 32, 33, 34, and 35 under NESTF 2016
- Antenna on residential buildings
- Facilities in special areas (defined in NESTF subpart 5) as appropriate exceeding the permitted and controlled standards

**Discretionary** will probably cover for example:

- Antennas, headframes, pole width and height exceeding standards of regulations 26, 27 28, 29, 30, and 31 under NESTF 2016 in road reserves adjoining residential and in residential zones
- Network utilities not a permitted, controlled or non-complying or exceeding the relevant activity standards for permitted or controlled activities are deemed to be discretionary activities
- Facilities in special areas (defined in NESTF subpart 5) as appropriate exceeding the permitted, controlled and restrict discretionary standards

#### Notes

<sup>N5</sup> Non-notified and no affected parties

## 9. CONCLUSIONS

- 9.1 Telecommunications infrastructure is essential for shaping and enabling the future of Manawatu by ensuring that residents and businesses have the opportunity to be connected internationally and across New Zealand. Changes in the way people access and use telecommunications and data networks is rapidly evolving. The pace of change in technology to meet demand and growth means that critical that the regulatory framework enables efficient roll out of current and future technology.
- 9.2 New telecommunication facilities such as cell sites will be required in new growth areas and high mobile traffic areas to service demand and to future proof the network for future growth. It is now common place for taller masts that provide



the opportunity for co-location by multiple providers the rules in the rural and CBD edge and industrial zones need to accommodate these sites. The benefit of colocation of multiple providers on a single site is that some existing sites can be removed. Telecommunications networks are undergoing continual upgrading, reconfiguration and new technologies are introduced. Proposed Plan Change 55 in combination with NESTF 2016 significantly enables the opportunity to support the upgrading and development of new telecommunication facilities in the Manawatu.

- 9.3 Telecommunications networks unlike any other utility undergo continual upgrading, reconfiguration and new technologies are introduced. The proposed District Plan change provisions require minor change in relation to telecommunications to enable the community and tourists to access the level of service they demand while recognising the significance natural environment. The changes recommended in this evidence, that of Tom Anderson and Mary Barton and combined with NESTF 2016 amendments provide for the reasonable on-going investment in the digital networks so critical to the success of Manawatu district. Reasonable on-going investment in the digital networks is critical to the on-going success of Manawatu. The Manawatu Plan is a critical regulatory document that should recognise that infrastructure including telecommunications is essential to the Manawatu.








**Graeme Ian McCarrison**

**7 December 2016**

## Appendix A

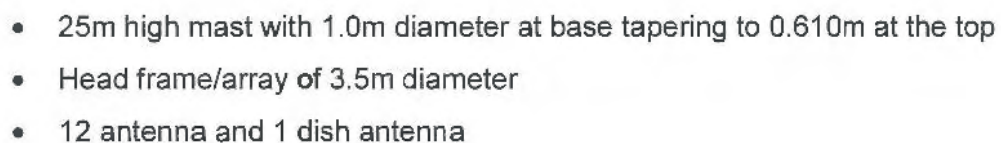
### Cell Site Examples

Cell sites	Descriptions	Photos
Rural (RBI)	<p>Monopoles/Lattice</p> <ul style="list-style-type: none"> <li>• Provide outdoor wide-area coverage</li> <li>• Higher transmit power and high capacity</li> </ul> <p>Typically 25 m plus high masts</p>	
Urban cells	<p>Monopoles/lamppost</p> <ul style="list-style-type: none"> <li>• Provide outdoor wide-area coverage</li> <li>• Higher transmit power and high capacity</li> </ul> <p>Typically 15-25 m high masts</p>	
Urban cells	<p>Monopoles/lamppost</p> <ul style="list-style-type: none"> <li>• up to 15 m high masts</li> </ul>	

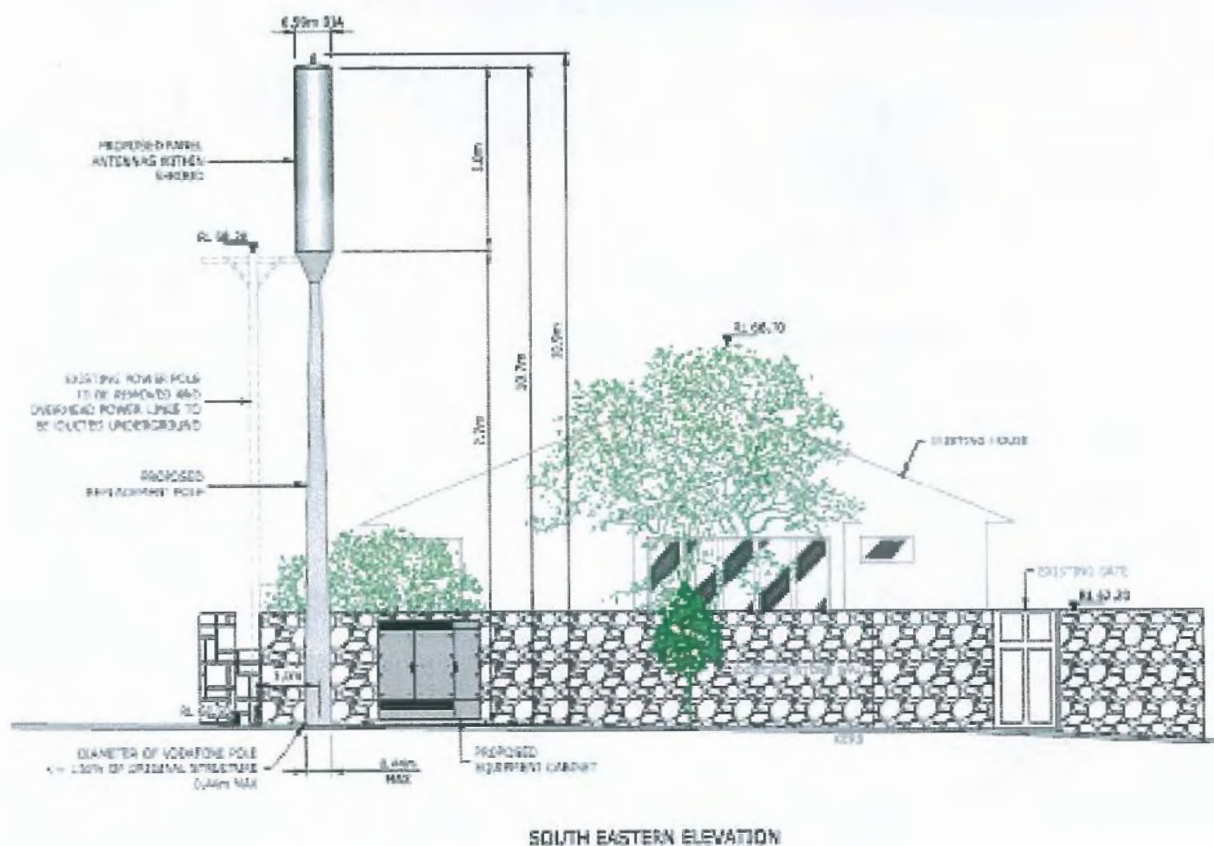
On building	<p>Rooftop</p> <ul style="list-style-type: none"> <li>• Provide outdoor wide-area coverage</li> <li>• Higher transmit power and high capacity</li> <li>• Antennas attached to rooftops/walls on highrise buildings</li> </ul>	
Micro cells	<p>Small cells</p> <ul style="list-style-type: none"> <li>• Provide small area outdoor/indoor coverage</li> <li>• Medium transmit power and medium capacity for localised, high concentration of outdoor/ indoor traffic</li> <li>• Antennas attached to street furniture (e.g., lamp post, bus stops) and sides of buildings</li> <li>• Typically mounted 5-10 m high</li> </ul>	



**44 Timaru Street Dunedin – CoC issued 30 October 2015**

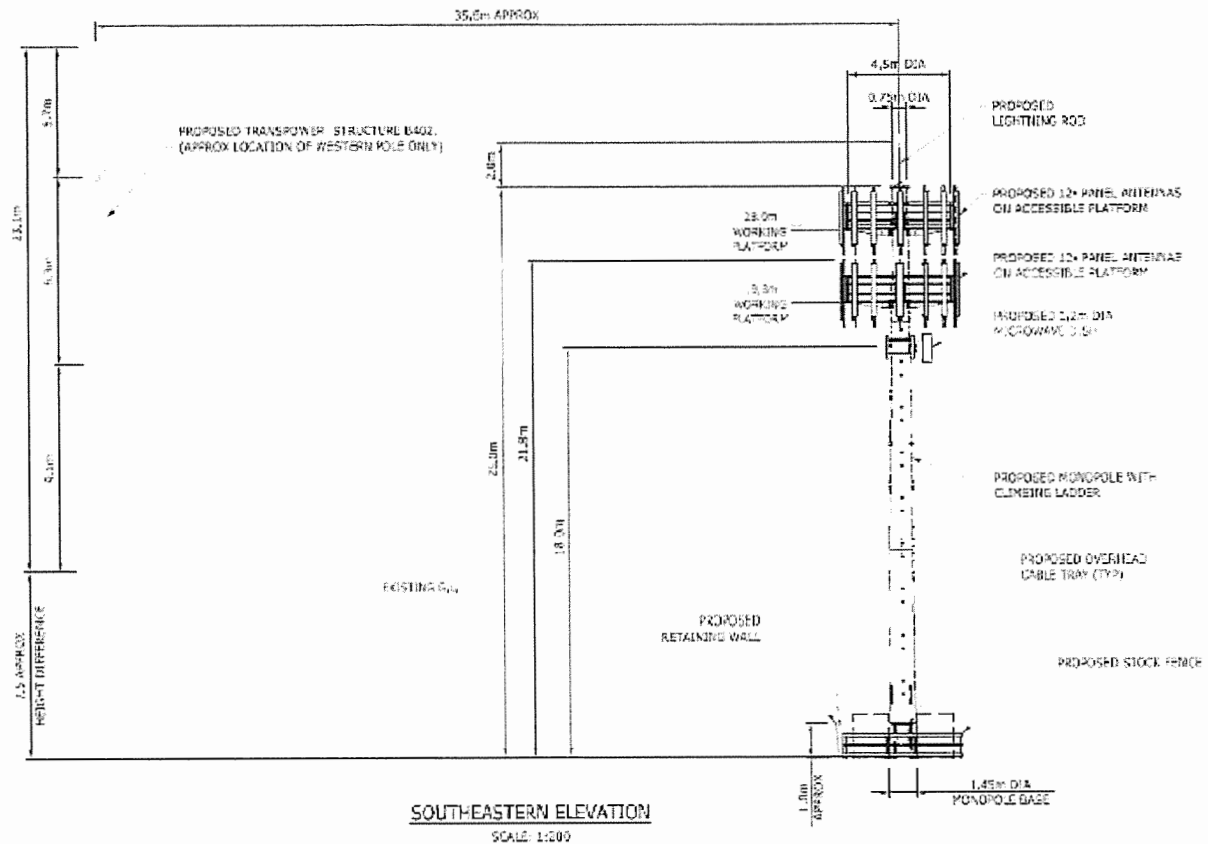


## Road reserve example



- Installation of single monopole mast with a total height of 10.7m.
- Three (3) 2.5m panel antennas. The panel antennas will be attached to a support at the top of the monopole mast. The proposed antennas will be located within a cover having a total length of 3.0m and width of 0.59mø diameter.
- One equipment cabinet (to replace existing), approximately 1.62m wide, 0.86m deep and 1.6m high when measured from the top of the concrete plinth. Covering a total area of 1.39m<sup>2</sup>.
- All equipment is finished in a recessive "grey" colour.

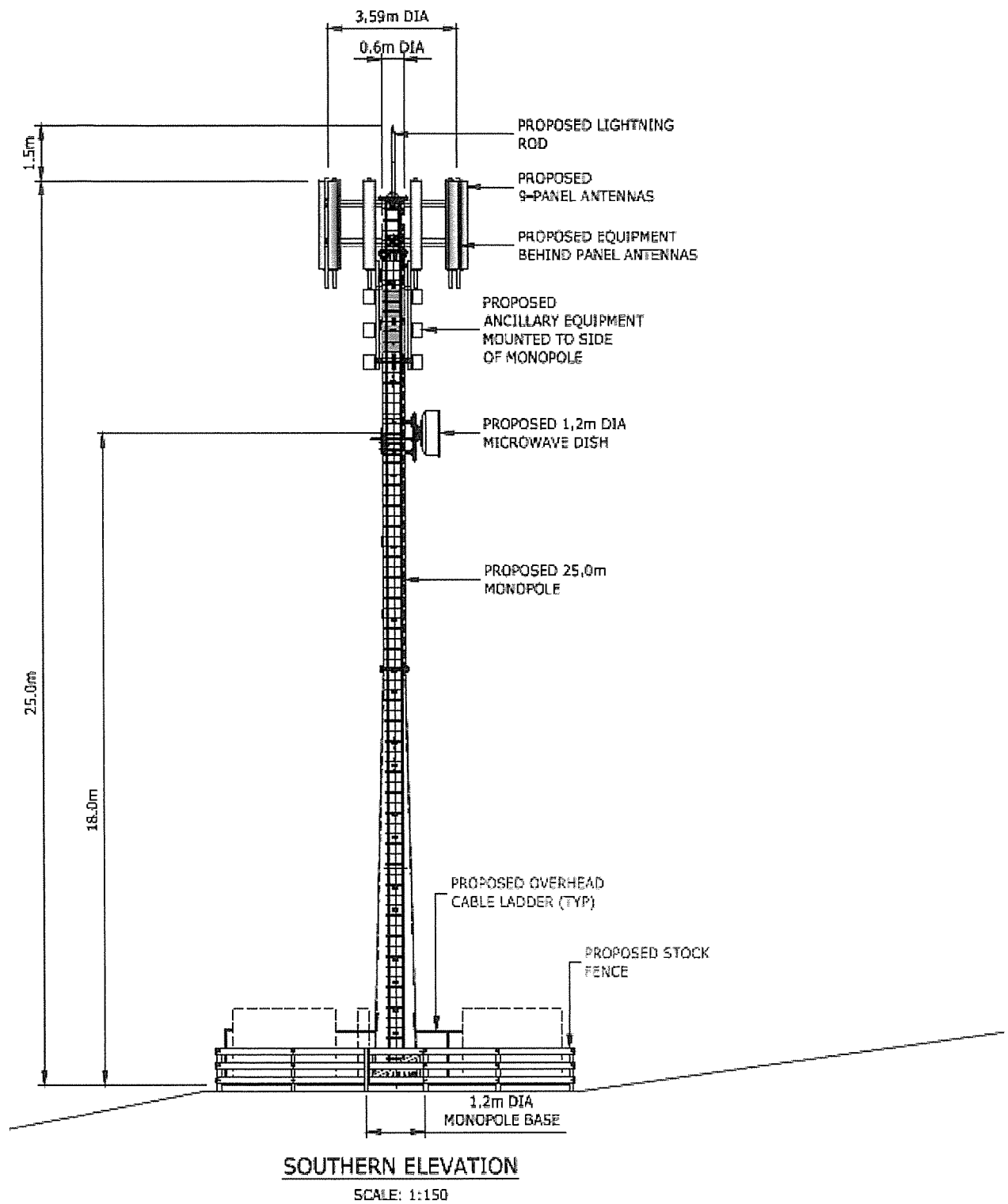
## Rural example (RBI)



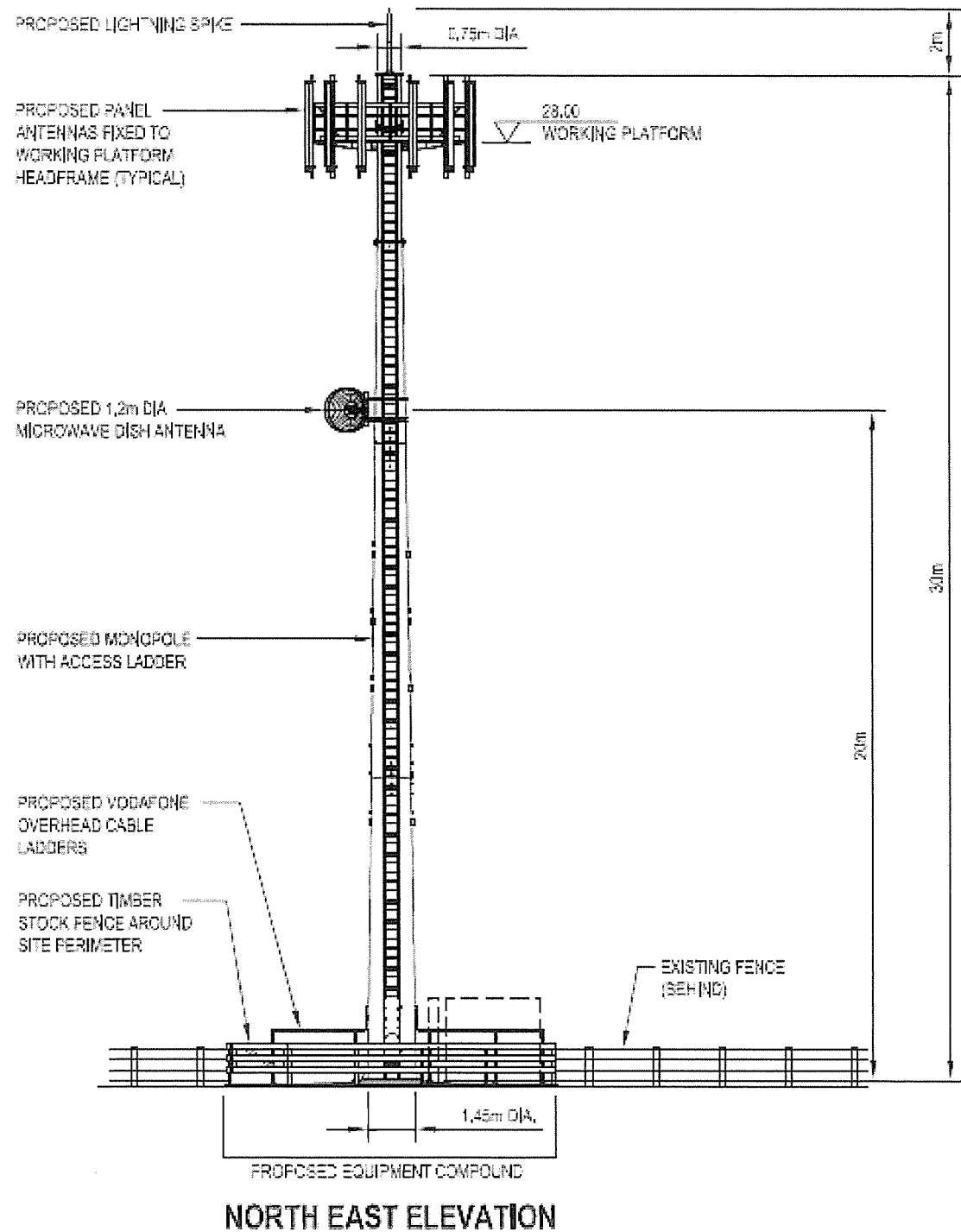
- A 25m monopole with two (2) working platforms attached at the respective height of 19.8m and 23m from ground level.
- Up to a maximum of twenty four (24) panel antennas approximately 2.6m in length, attached to a single antenna platform (head frame/array) with a total diameter of 4.5m
- All equipment is finished in a recessive "grey" colour.



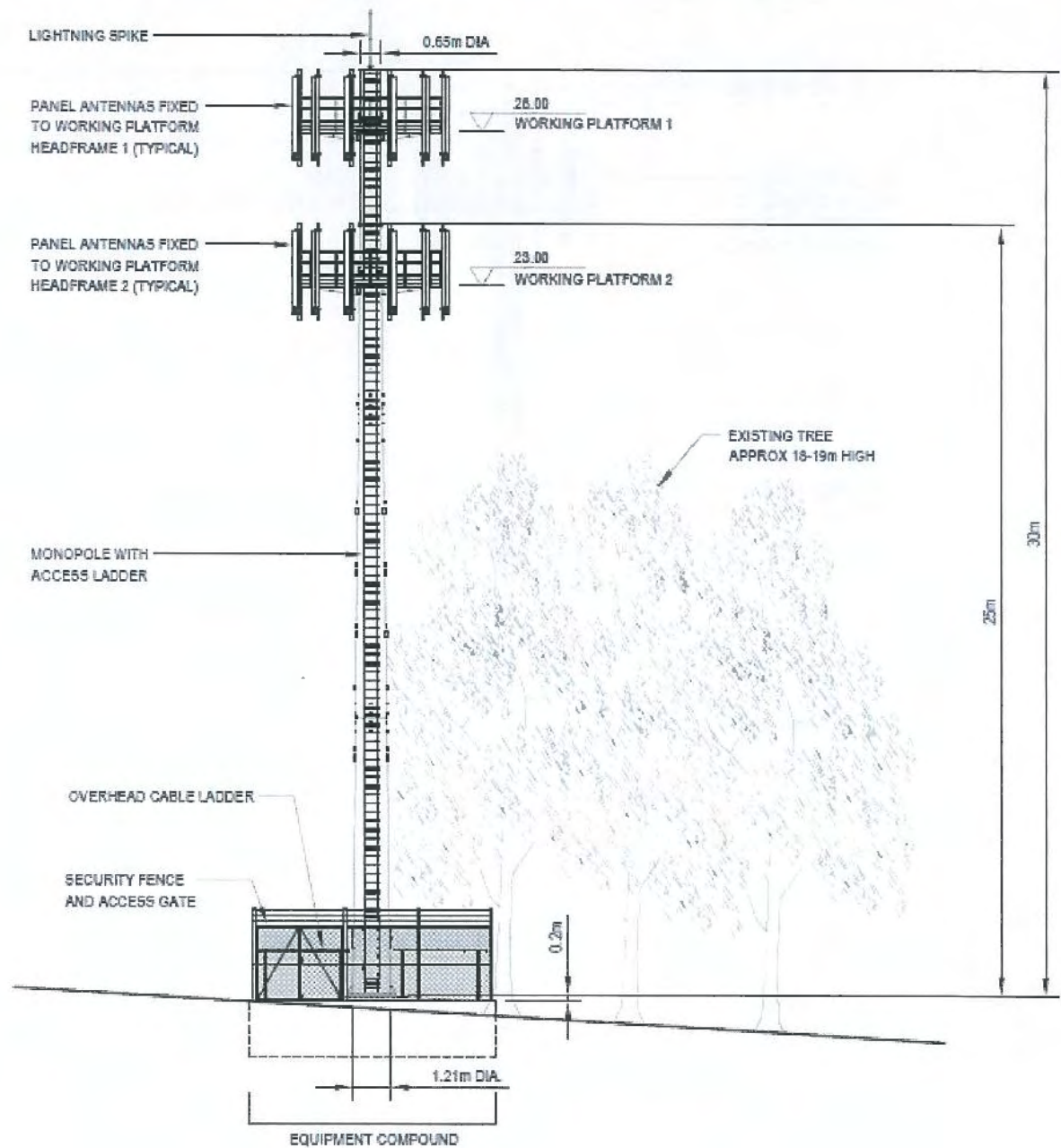
# Co-locatable RBI Monopole Mast 25m Height (9 panel antennas)



**Co-locatable RBI Monopole Mast 30m Height (12 panel antennas)**



## Co-locatable RBI Monopole Mast 30m Height (24 panel antennas)





## **Appendix B**

### **Relevant extracts Auckland Unitary Plan evidence related to Panel Recommendations on Infrastructure**

## **E26.2. Network utilities and electricity generation – All zones and roads**

### **E26.2.1. Objectives [rcp/rp/dp]**

- (1) The benefits of infrastructure are recognised.
- (2) The value of investment in infrastructure is recognised.
- (3) Safe, efficient and secure infrastructure is enabled, to service the needs of existing and authorised proposed subdivision, use and development.
- (4) Development, operation, maintenance, repair, replacement, renewal, upgrading and removal of infrastructure is enabled.
- (5) The resilience of infrastructure is improved and continuity of service is enabled.
- (6) Infrastructure is appropriately protected from incompatible subdivision, use and development, and reverse sensitivity effects.
- (7) The national significance of the National Grid is recognised and provided for and its effective development, operation, maintenance, repairs, upgrading and removal is enabled.
- (8) The use and development of renewable electricity generation is enabled.

### **E26.2.2. Policies [rcp/rp/dp]**

- (1) Recognise the social, economic, cultural and environmental benefits that infrastructure provides, including:
  - (a) enabling enhancement of the quality of life and standard of living for people and communities;
  - (b) providing for public health and safety;
  - (c) enabling the functioning of businesses;
  - (d) enabling economic growth;
  - (e) enabling growth and development;
  - (f) protecting and enhancing the environment;
  - (g) enabling the transportation of freight, goods, people; and
  - (h) enabling interaction and communication.
- (2) Provide for the development, operation, maintenance, repair, upgrade and removal of infrastructure throughout Auckland by recognising:
  - (a) functional and operational needs;
  - (b) location, route and design needs and constraints;
  - (c) the complexity and interconnectedness of infrastructure services;

- (d) the benefits of infrastructure to communities with in Auckland and beyond;
- (e) the need to quickly restore disrupted services; and
- (f) its role in servicing existing, consented and planned development.

*Adverse effects on infrastructure*

- (3) Avoid where practicable, or otherwise remedy or mitigate adverse effects on infrastructure from subdivision, use and development, including reverse sensitivity effects, which may compromise the operation and capacity of existing, consented and planned infrastructure.

*Adverse effects of infrastructure*

- (4) Require the development, operation, maintenance, repair, upgrading and removal of infrastructure to avoid, remedy or mitigate adverse effects, including, on the:
  - (a) health, well-being and safety of people and communities, including nuisance from noise, vibration, dust and odour emissions and light spill;
  - (b) safe and efficient operation of other infrastructure;
  - (c) amenity values of the streetscape and adjoining properties;
  - (d) environment from temporary and ongoing discharges; and
  - (e) values for which a site has been scheduled or incorporated in an overlay.
- (5) Consider the following matters when assessing the effects of infrastructure:
  - (a) the degree to which the environment has already been modified;
  - (b) the nature, duration, timing and frequency of the adverse effects;
  - (c) the impact on the network and levels of service if the work is not undertaken;
  - (d) the need for the infrastructure in the context of the wider network; and
  - (e) the benefits provided by the infrastructure to the communities within Auckland and beyond.
- (6) Consider the following matters where new infrastructure or major upgrades to infrastructure are proposed within areas that have been scheduled in the Plan in relation to natural heritage, Mana Whenua, natural resources, coastal environment, historic heritage and special character:
  - (a) the economic, cultural and social benefits derived from infrastructure and the adverse effects of not providing the infrastructure;
  - (b) whether the infrastructure has a functional or operational need to be located in or traverse the proposed location;



- (c) the need for utility connections across or through such areas to enable an effective and efficient network;
  - (d) whether there are any practicable alternative locations, routes or designs, which would avoid, or reduce adverse effects on the values of those places, while having regard to E28.2.2(6)(a) - (c);
  - (e) the extent of existing adverse effects and potential cumulative adverse effects;
  - (f) how the proposed infrastructure contributes to the strategic form or function, or enables the planned growth and intensification, of Auckland;
  - (g) the type, scale and extent of adverse effects on the identified values of the area or feature, taking into account:
    - (i) scheduled sites and places of significance and value to Mana Whenua;
    - (ii) significant public open space areas, including harbours;
    - (iii) hilltops and high points that are publicly accessible scenic lookouts;
    - (iv) high-use recreation areas;
    - (v) natural ecosystems and habitats; and
    - (vi) the extent to which the proposed infrastructure or upgrade can avoid adverse effects on the values of the area, and where these adverse effects cannot practicably be avoided, then the extent to which adverse effects on the values of the area can be appropriately remedied or mitigated.
  - (h) whether adverse effects on the identified values of the area or feature must be avoided pursuant to any national policy statement, national environmental standard, or regional policy statement.
- (7) Enable the following activities within natural heritage, historic heritage, historic character and Mana Whenua cultural heritage overlays:
- (a) the use and operation of existing infrastructure; and
  - (b) the minor upgrading, maintenance and repair of existing infrastructure, while ensuring that the adverse effects on the values of the area are avoided and where those effects cannot practicably be avoided, minimise any such effects and ensure they are appropriately remedied or mitigated.
- (8) Encourage new linear infrastructure to be located in roads, and where practicable within the road reserve adjacent to the carriage way.
- Undergrounding of infrastructure in urban areas*
- (9) Require new or major upgrades to electricity and telecommunications lines to be located underground in urban areas unless:

- (a) there are significant operational, functional, technical or economic reasons that require an aboveground network; or
  - (b) the additional lines are part of minor upgrading to the network or are service connections.
- (10) Enable the coordinated undergrounding of existing electricity and telecommunications lines in the road, particularly where the opportunity exists when network improvements are undertaken.

*New technologies*

- (11) Provide flexibility for infrastructure operators to use new technological advances that:
- (a) improve access to, and efficient use of services;
  - (b) allow for the re-use of redundant services and structures where appropriate;
  - (c) result in environmental benefits and enhancements; and
  - (d) utilise renewable sources.

*Renewable electricity generation*

- (12) Provide for renewable electricity generation activities to occur at different scales and from different sources, including small and community-scale renewable electricity generation activities.

*National Grid*

- (13) Have regard to the extent to which actual and potential effects have been avoided, remedied or mitigated by the route, site and method selected when assessing the development of the National Grid.

*Road network*

- (14) Require road network activities to:
- (a) avoid, remedy or mitigate adverse effects on residential or other sensitive activities, including effects of vibration, noise, glare and vehicle emissions;
  - (b) avoid, remedy or mitigate adverse effects on amenity values of adjoining properties and the streetscape; and
  - (c) maintain or enhance the safety and efficiency of the transport network.
- (15) Ensure roads are designed, located and constructed to:
- (a) provide for the needs of all road users and modes of transport;
  - (b) avoid, remedy or mitigate adverse effects on amenity values of adjoining properties;

- (c) avoid, remedy or mitigate adverse construction effects including effects of vibration, noise, and dust;
- (d) avoid, remedy or mitigate adverse operational effects particularly on residential or other sensitive activities, including effects of vibration, noise, glare and vehicle emissions;
- (e) minimise severance effects and changes to drainage patterns; and
- (f) maintain or enhance the safety and efficiency of the transport network.



## **Appendix C**

### **NESTF 2016 In Relation to Proposed Plan Change 55**

#### **Manawatu District Plan**



## NESTF 2016 In Relation to Proposed Plan Change 55 Manawatu District Plan

### Summary of the provision under the NESTF 2016

The purpose of the following document is provide a summary and overview of the background to the changes between the 2008 NESTF and 2016 NESTF which comes into full effect on 1 January 2016. This document is a very general overview please refer to the NESTF 2016 for the detail. A full copy of the NESTF is available on the Ministry for the Environment website. <http://www.mfe.govt.nz/ima/legislative-tools/national-environmental-standards/nestf-telecommunication-facilities/about>

### Overview of the NESTF 2016

The objectives of the NESTF are to:

1. Assist in network and equipment design and equipment sourcing for national network deployment
2. Reduce compliance costs and timeframes for service providers
3. Reduce the timeframe and lower the costs for the availability of new services to consumers
4. Contribute to a reduced council workload in processing and determining consent applications
5. Set an appropriate balance between local participation in community planning and cost-effective national infrastructure investment.

### General scope of the NESTF 2016

The NESTF 2016 is effective from 1 January 2017.

The scope of NESTF 2017 is expanded to the following new permitted activities, subject to certain conditions:

- Deploy telecommunications lines (both underground and aerial on existing electricity or telecommunications structures)
- Customer connection lines including provision for surface mounted and aerial
- Erect small-cell units on any structure in the road reserve or all other zones
- Erect new poles and antennas in the road reserve
- Erect new poles and antennas in rural areas
- Upgrading and replacement of existing poles and antennas in road reserve
- Upgrading and replacement and co-location of existing poles antennas outside road reserve and residential zones and non-residential zones
- Locate antennas on buildings (above a permitted height in residential areas)
- Updating of the notional envelope for antenna on poles in the road reserve
- Updating of the cabinet provisions to include cabinets for antenna on buildings, existing poles in residential, rural and other zones
- Updating the range of special protection areas with identified special values (trees and vegetation, historic heritage, visual amenity, outstanding landscapes and features, indigenous fauna, habitats of indigenous vegetation, coastal marine areas) that local authorities retain the ability to manage through more stringent rules in their district plans.



- Update the radiofrequency measurement standard by the remove the existing reference to the 1990 radio-frequency measurement standard and replace it with the revised AS/NZS 2772.2:2016 radio-frequency measurement standard.
- Ancillary equipment which includes all telecommunications, radiocommunications, electrical or similar equipment it is necessary to install with a facility to enable the facility to operate
- Lightning rods may extend beyond the height of the antenna and poles

It worth noting some changes in terms commonly used in district plans are described differently in the NESTF 2016, these include:

NESTF 2016	Commonly described in district plans
Poles	Masts – guyed wire; monopole; lattice
Non-dish antenna	Antenna
Dish antenna	Dish antenna
Lines	Lines or cables
Self-contained power unit	Solar power etc
Residential (refer to the expanded definition)	Residential or similar
Rural (refer to the expanded definition includes rural residential and other primarily rural purpose zones	Rural

#### When District and Regional Plan rules prevail over the NESTF 2016

Section 43B(1) states that a rule may be more stringent than an NES if the NES expressly states this. The 2008 NESTF allowed for more stringent rules to prevail over the NES if the activity was located in an areas of identified historic heritage or visual amenity value, adjacent to the coastal marine areas, and in the dripline of trees or other vegetation protected under the proposed or operative district plan.

As the NESTF 2016 permit a wider range of telecommunication facilities in a wider range of areas, the types of areas where more stringent district plan rules prevail over the NESTF have also been expanded. This is a key component of the NESTF 2016 to ensure significant adverse environmental effects are avoided. The areas with identified values where district plan rules will continue apply under the NESTF 2016 include:

- within the dripline of a tree or other vegetation;
- in areas identified in the relevant district plan for their historic heritage or visual amenity value;
- places adjoining the coastal marine area;
- the protection of significant indigenous vegetation;

- in areas identified in the relevant district plan for the protection of significant habitats of indigenous fauna; and
- in areas identified as outstanding natural landscapes or features as identified in the district plan.

### Key NESTF 2016 Definitions

**Ancillary equipment** means telecommunications, radiocommunications, electrical or similar equipment it is necessary to install with a facility to enable the facility to operate as intended, but not a self-contained power unit or a lightning rod

**Antenna** means a device that receives or transmits radiocommunication or telecommunication signals, but not a small cell unit

- Dish antenna
- Non-dish antenna - means an antenna that is not a dish antenna

**Cabinet** means a casing around equipment that is necessary to operate a telecommunication network, but not any of the following:

- a casing around an antenna, a small cell unit, ancillary equipment, or any part of a telecommunication line;
- a casing that is wholly underground;
- a casing that is inside a building;
- a building

**Customer connection line** means a telecommunication line that connects a telecommunications distribution network to a premises for the purpose of enabling a facility operator to provide telecommunication services to a customer

**Earthworks** means a disturbance of soil, earth, or substrate land surfaces (including by blading, boring, contouring, cutting, drilling, excavating, filling, moving, piling, placing, removing, replacing, ripping, thrusting, or trenching)

**Facility** means an antenna, cabinet, telecommunication line, or small cell unit

**Pole** means a pole, mast, lattice tower, or similar structure, of a kind that is able to be used (with or without modification) to support antennas

**Residential zone** means an area identified in a district plan or proposed district plan as being zoned primarily for residential activities, but not an area zoned for rural/residential or countryside living activities (however described)

**Rural zone** means an area identified in a district plan or proposed district plan as being zoned primarily for rural activities, including an area zoned for rural/residential or countryside living activities (however described)

**Road reserve** means a formed legal road and any land next to it up to the legal boundary of the adjoining land purpose of generating power for that facility (such as solar panels), including cables connecting the equipment to the facility

**Self-contained power unit** means equipment installed with a facility for the purpose of generating power for that facility (such as solar panels), including cables connecting the equipment to the facility

**Small cell unit** means a device—

- that receives or transmits radiocommunication or telecommunication signals; and
- the volume of which (including any ancillary equipment, but not including any cabling) is not more than 0.11 m<sup>3</sup>

**Surface-mounted line** means a telecommunication line that is mounted on the surface of a structure (such as a wall, fence, or paving)

**Telecommunication line** means a wire, or conductor of any other kind (including a fibre optic cable), referred to in paragraph (a) of the definition of line in section 5 of the Telecommunications Act 2001.

## Summary of the NESTF 2016 key regulations and related conditions

Regulation		Proposed permitted activity	Conditions	NESTF 2008	Manawatu PC55
1.	10	A regulated activity – clarify what the NESTF 2016 covers	<ul style="list-style-type: none"> <li>is carried out in accordance with the standard (and is therefore a permitted activity); or</li> <li>is allowed by a resource consent. Note that this includes a CoC.</li> </ul>	Consistent with existing NESTF but changed to recognise the expanded telecommunication facilities covered under the NESTF 2016	Replace NESTF 2008 with NESTF 2016 in the various places in Chapter 3A including the introduction and guidance notes.
2.	20	Cabinet not servicing antenna on building – include provisions for <ul style="list-style-type: none"> <li>Existing facilities in the road</li> <li>New cabinets in the road</li> <li>Existing facilities outside the road</li> <li>New cabinets for new facilities in the rural zone</li> <li>Replacement telecommunications cabinets</li> </ul>	Subject to conditions controlling size and placement. <ul style="list-style-type: none"> <li>Cabinet sizes in or adjoining residential               <ul style="list-style-type: none"> <li>height not be more than 1.8m;</li> <li>the footprint not be more than 1.4m<sup>2</sup></li> </ul> </li> <li>Cabinet sizes in road non-residential               <ul style="list-style-type: none"> <li>height not be more than 2.0m;</li> <li>the footprint not be more than 2.0m<sup>2</sup></li> </ul> </li> <li>Cabinet sizes a non-residential zone               <ul style="list-style-type: none"> <li>height not be more than 2.5m;</li> <li>the footprint not be more than 5.0m<sup>2</sup></li> </ul> </li> </ul>	Currently only related to cabinets in the road	Except in regard to noise see regulation 25 cabinets outside the road reserve the NESTF 2016 cabinet standards prevail eg <i>rule 3A.4.2.d</i> the requirement to be 5m from any site boundary. It is noted that <i>rule 3A.4.2.e</i> provides for larger cabinets no change in the rule is required to amend the size.
3.	21	Cabinets servicing antennas on buildings	Subject to conditions controlling size and placement. <ul style="list-style-type: none"> <li>Cabinet sizes if cabinet is on the building               <ul style="list-style-type: none"> <li>height not be more than 2.0m;</li> <li>the footprint not be more than 2.0m<sup>2</sup></li> </ul> </li> <li>Cabinet sizes in residential               <ul style="list-style-type: none"> <li>height not be more than 1.8m;</li> <li>the footprint not be more than 1.4m<sup>2</sup></li> </ul> </li> <li>Cabinet sizes a non-residential zone               <ul style="list-style-type: none"> <li>height not be more than 2.5m;</li> <li>the footprint not be more than 5.0m<sup>2</sup></li> </ul> </li> </ul>	Not in current NESTF.	Except in regard to noise see regulation 25 cabinets outside the road reserve the NESTF 2016 cabinet standards prevail e.g. <i>rule 3A.4.2.d</i> the requirement to be 5m from any site boundary. It is noted that <i>rule 3A.4.2.e</i> provides for larger cabinets no change in the rule is required to amend the size.
4.	22	Group rules for cabinets in road reserves	Subject to conditions controlling size (based on district plan zone) and proximity from other cabinets. Group rules include: <ul style="list-style-type: none"> <li>the total footprint per operator of cabinets in a group must not be more than 2m<sup>2</sup></li> <li>each cabinet or group of cabinets must be at least 30m away from the nearest group or cabinet on the same side of the road</li> </ul>	Consistent with existing NESTF	Recognise that NESTF 2016 cabinet standards prevail over e.g. <i>rule 3A.4.2.d</i> the requirement to be 5m from any site boundary



Regulation		Proposed permitted activity	Conditions	NESTF 2008	Manawatu PC55
5.	23	Temporary contravention of group rules	<p>The placement of cabinets which exceed the maximum footprint per site is permitted, subject to the condition that one cabinet is removed no later than 3 months:</p> <ul style="list-style-type: none"> <li>• where a cabinet is being installed to replace a cabinet, following installation of the other cabinet</li> <li>• where a cabinet is being installed for a different type of service to replace a current service, following the discontinuation of the old service</li> </ul>	Not in current NESTF.	Rule 3F.4.1 could be updated
6.	24	Noise limits for cabinet in road reserve	No change	Consistent with existing NESTF 2008	No change
7.	25	Noise limits for cabinet not in road reserve	District Plan noise rules apply	Not in current NESTF.	District Plan zones noise standards apply.
8.	27	Antenna on existing pole in road reserve	<p>Replacing an antenna with another antenna, including any necessary ancillary equipment is permitted, subject to the following conditions:</p> <ul style="list-style-type: none"> <li>• the total height of the pole and antenna is increased by no more than 3.5 m over the height of the existing pole</li> <li>• the diameter of any panel antenna is no more than 0.7 m</li> <li>• the diameter of any replacement pole is no more than 30 per cent greater than the diameter of the existing pole</li> <li>• the existing replacement utility structure was lawfully established (i.e., authorised by a regulation, plan or consent under the RMA)</li> <li>• A replacement utility structure may be moved to within a 5 m radius of the location of the original utility structure, provided the structure is still located on the road reserve.</li> </ul>	Existing NESTF with the provisions updated to meet changing technology requirements. Enables the replacement and upgrading of antennas and the pole.	Generally rules for antenna exceed (no change is required) the permitted standards of the NESTF 2016 e.g. rule 3A.4.2.a additional 5.0m height for multiple providers on a rural zoned mast; antenna sizes in rule 3A.4.2.i exceed the NESTF

Regulation	Proposed permitted activity	Conditions	NESTF 2008	Manawatu PC55
9. 29	Antenna on new pole in the road reserve	<p>Subject to conditions ensuring the size of the mast is in keeping with other infrastructure in the area.</p> <p>new antenna placed on an existing utility structure in the road reserve, including any necessary ancillary equipment, is a permitted activity, subject to the following conditions:</p> <ul style="list-style-type: none"> <li>the total height of the structure including the antenna must be no more than 3.5 m higher than the average height of the neighbouring utility structure/s within 100m. Note there has to be at least 1 neighbouring pole</li> <li>antennas must fit within the dimensions of a cylindrical shape (notional envelope) that, when measured along the centre line of the utility structure, is not more than 0.7 m in diameter, including the shroud</li> <li>replacement utility structures must not have a diameter that is more than 100 per cent wider than the original utility structure's diameter at its widest point</li> <li>(from NESTF Regulations 2008) up to two dish antenna may be installed and must have diameter not exceeding 0.38m and protrusion distance not exceeding 0.6m</li> </ul>	<p>Not in current NESTF.</p> <p>Permits establish of new pole and antennas in the road reserve without the need to be an existing structure e.g. lightpole.</p> <p>Height of pole is consistent with surrounding utility poles.</p>	<p>Recognise that NESTF 2016 antenna and pole standards prevail over e.g. rule 3A.4.2.d the requirement to be 5m from any site boundary.</p>

Regulation	Proposed permitted activity	Conditions	NESTF 2008	Manawatu PC55
10. 31	Antenna on existing pole with antenna not in road reserve and is in a residential zone	<p>Subject to conditions controlling size of the replacement antenna to reduce visual impact. Replacing an antenna with another antenna, including any necessary ancillary equipment is permitted, subject to the following conditions:</p> <ul style="list-style-type: none"> <li>• Pole can be relocated within 5m of existing pole position</li> <li>• the diameter of any replacement pole is no more than 30 per cent greater than the diameter of the existing pole</li> <li>• no more than 2 dish antenna with a dia of no more than 0.38m unless that existing pole had more</li> <li>• replacement for an existing dish antenna the diameter of which was more than 0.38m, the diameter of the replaced antenna</li> <li>• replacement for an existing dish antenna the protrusion distance of which was more than 0.6m, the protrusion distance of the replaced antenna; or otherwise 0.6m.</li> <li>• the width of any non-dish antenna is no more than 0.7 m or wider than the existing non-dish antenna if more than 0.7m</li> <li>• the headframe width is the existing headframe if more than 6m; or <ul style="list-style-type: none"> <li>◦ is the lesser of 6m; or</li> <li>◦ double the width of the headframe</li> </ul> </li> <li>• the total height of the pole and antenna is increased by no more than 3.5m over the height of the existing pole</li> </ul>	Not in current NESTF. Enables the replacement and upgrading of antennas and the pole including the headframe.	Generally rules for antenna exceed (no change is required) the permitted standards of the NESTF 2016 e.g; antenna sizes in <i>rule 3A.4.2.i</i> exceed the NESTF; no restrictions on pole width. However in regard to <i>rule 3A.4.2.b</i> will probably require amendment to recognise that existing poles within 20m of Residential or Village zoned sites can be altered under the NESTF 2016



Regulation	Proposed permitted activity	Conditions	NESTF 2008	Manawatu PC55
11. 33	Antenna on existing pole with antenna not in road reserve and not in residential zone	<p>Subject to conditions controlling size of the replacement antenna to reduce visual impact.</p> <p>Associated increase in diameter of the replacement utility structure to support larger antenna permitted subject to the following conditions:</p> <ul style="list-style-type: none"> <li>• Pole can be relocated within 5m of existing pole position. Not on to residential zone land or road reserve.</li> <li>• than the diameter of the existing pole</li> <li>• New dish antenna with a dia of not more than 1.2m</li> <li>• replacement for an existing dish antenna the diameter of which was more than 1.2m, the diameter of the replaced antenna</li> <li>• replacement for an existing dish antenna the protrusion distance of which was more than 0.6m, the protrusion distance of the replaced antenna; or otherwise 0.6m.</li> <li>• the width of any non-dish antenna is no more than 0.7 m or wider than the existing non-dish antenna if more than 0.7m</li> <li>• If pole is in rural zone and has a width more than 6m the new pole is permitted to a width up to that width; or otherwise, the lesser of: <ul style="list-style-type: none"> <li>(i) 6 m; and</li> <li>(ii) the width of pole D on date D (work to new installation work start) —</li> </ul> </li> </ul> <p>(A) if the number of antennas attached to the final pole is more than the number that were attached to pole D on date D, multiplied by 2; or</p> <p>(B) otherwise, multiplied by 1.3.</p> <ul style="list-style-type: none"> <li>• the headframe width is the existing headframe if more than 6m; or otherwise 6m;</li> <li>• the height of the pole can increased by no more than 3.5m over the height of the existing pole or 5m if the facility is for multiple operators.</li> <li>• Note if the facility was established under regulation 34 related to new rural pole the height is restricted 25m</li> </ul>	Not in current NESTF. Permits replacement and upgrading of antennas and the pole including the headframe.	Generally rules for antenna exceed (no change is required) the permitted standards of the NESTF 2016 e.g. rule 3A.4.2.a additional 5.0m height for multiple providers on a rural zoned mast; antenna sizes in rule 3A.4.2.i exceed the NESTF. However in regard to rule 3A.4.2.b will probably require amendment to recognise that existing poles within 20m of Residential or Village zoned sites can be altered under the NESTF 2016

Regulation		Proposed permitted activity		Conditions		NESTF 2008		Manawatu PC55	
12.	35	Antenna on new Rural zoned pole not in road reserve		<p>The placement of a pole and antenna in an area zoned rural in the relevant district plan is permitted, including any necessary ancillary equipment, subject to the following conditions:</p> <ul style="list-style-type: none"><li>the total height (of the pole and antenna) does not exceed 25m</li><li>the diameter of the pole, antenna, and any headframe at its widest point (excluding the concrete plinth) does not exceed 6m</li><li>the antenna is not located closer than 50m from the closest external wall of a dwelling, residential home, or educational facility</li><li>if antenna is a dish antenna, diameter must not exceed 1.2m</li><li>Lightning rods may extend beyond the height of the antenna</li></ul>	Not in current NESTF. Permits establish of new pole and antennas on rural zoned land.	Generally rules for antenna exceed (no change is required) the permitted standards of the NESTF 2016 e.g. <i>rule 3A.4.2.a</i> additional 5.0m height for multiple providers on a rural zoned mast; antenna sizes in <i>rule 3A.4.2.i</i> exceed the NESTF. However in regard to <i>rule 3A.4.2.b</i> will probably require amendment to recognise that existing poles within 20m of Residential or Village zoned sites can be altered under the NESTF 2016. Regulation 35 stops a mast being closer than 50m for a residential home or educational facility.	Generally rules for antenna exceed (no change is required) the permitted standards of the NESTF 2016 e.g. <i>rule 3A.4.2.a</i> additional 5.0m height for multiple providers on a rural zoned mast; antenna sizes in <i>rule 3A.4.2.i</i> exceed the NESTF	As part of any future Plan Change or District Plan review give consideration as to a larger permitted volumetric size and in which special areas these will be permitted.	
13.	37	Antennas on buildings		<p>Subject to conditions controlling antenna size, and building height in residential areas, to reduce visual impact.</p> <p>The placement and replacement of antennas and necessary ancillary equipment on the roof or side of a building in is permitted, subject to the following conditions:</p> <ul style="list-style-type: none"><li>in a residential area, the part of the building to which the antenna is attached is not less than 15m high</li><li>antennas do not extend 5m above the highest part of the building to which they are attached</li><li>the maximum area of the face of a non-dish antenna is 1.5m<sup>2</sup></li><li>the maximum diameter of a dish antenna is 1.2m</li><li>associated cabinets are permitted</li><li>Lightning rods may extend beyond the height of the antennas</li></ul>	Not in current NESTF.				
14.	38	Small cell units on existing structures (e.g. buildings, bus stops, light poles).		<p>The installation of a small-cell unit on an existing structure including any necessary ancillary equipment is permitted, provided that each small-cell unit and the ancillary equipment do not exceed a total volumetric dimension of 0.11m<sup>3</sup>, excluding any cabling</p>	Not in current NESTF.				

Regulation		Proposed permitted activity	Conditions	NESTF 2008	Manawatu PC55
15.	40	Customer connection line	<p>Customer connections – permits the placement of telecommunications lines by a telecommunications operator to a customer and enable this via a range of methods subject to the following conditions provided, if.</p> <ul style="list-style-type: none"> <li>• Compliance with regulation 44 (trees and vegetation in road) and 45 (significant trees)</li> <li>• If outside the road reserve and involves earthworks <ul style="list-style-type: none"> <li>◦ Subject to subpart 5 – district and regional rules if applicable</li> <li>◦ Regulation 54 regional earthworks</li> </ul> </li> <li>• Surface-mounted placement: <ul style="list-style-type: none"> <li>◦ surface mounted line must be solely supported on existing structures, and</li> <li>◦ must be enclosed in a conduit with a diameter not more than 32mm</li> <li>◦ diameter of the line is not more than 30mm</li> </ul> </li> <li>• Aerial lines <ul style="list-style-type: none"> <li>◦ must be supported by existing structures; and</li> <li>◦ have a diameter not more than 30mm</li> </ul> </li> </ul>	Not in current NESTF.	No change but recognition for surface mounted customer connection lines as permitted in special areas could be considered
16.	42	Aerial telecommunication line along same route as existing telecommunication or power line	<p>Provision of aerial lines by an operator is permitted, including any necessary ancillary equipment, subject to conditions:</p> <ul style="list-style-type: none"> <li>• no additional poles are installed</li> <li>• the total diameter of the line does not exceed 30mm</li> <li>• ancillary equipment does not exceed a total volumetric dimension of 0.4m<sup>3</sup>, excluding auxiliary cables.</li> <li>• Relocation and/or replacement poles where necessary for structural or safety reasons may be up to 3 m from the original location.</li> <li>• Width of replacement structure must not exceed 1.5 times original structure width,</li> <li>• height must not exceed height of original structure plus 1m.</li> <li>• provision to increase structure height to minimum road clearance requirement. Support structure can be permitted to that necessary to support the lines</li> </ul>	Not in current NESTF.	No change required



Regulation		Proposed permitted activity		Conditions		NESTF 2008		Manawatu PC55	
17.	43	Underground telecommunications lines excluding a customer connection line	Underground telecommunications cables and any necessary underground ancillary equipment by a telecommunications operator is permitted. There are installation conditions except for: <ul style="list-style-type: none"><li>• Compliance with regulation 44 (trees and vegetation in road)</li><li>• If outside the road reserve and involves earthworks then subject to compliance with<ul style="list-style-type: none"><li>o Regulation 45 to 51</li><li>o Regulation 54 regional earthworks</li></ul></li></ul>	When a facility is in the road reserve allows district plan tree protection rules to prevail if: <ul style="list-style-type: none"><li>• works are within the drip line of a tree or other vegetation;</li><li>• works would require a resource consent if not for the NESTF</li></ul>	Consistent with NESTF 2008 but expanded to regulate the a wider range of telecommunication facilities permitted under the NESTF 2016	No change	No change required		
18.	44	Trees and vegetation in road reserve							
19.	45	Significant trees	When a facility is outside the road reserve allows district plan or proposed plan significant tree protection rules to prevail if: <ul style="list-style-type: none"><li>• works are within the drip line of a tree or group of trees</li><li>• tree protection rules means the protection of trees that are identified in that plan as being of special significance (however described). Such protected trees would include those listed by property address, description of species and/or defined on a map or GIS system.</li></ul>	Consistent with NESTF 2008 but expanded to regulate the a wider range of telecommunication facilities permitted under the NESTF 2016	Amend the recognition for telecommunication objective 3 and policies as recommended by Tom Anderson				
20.	46	Historic heritage values	Regulation 46 aligns with section 6 of the RMA is to ensure that these are appropriately protected by the NESTF by allowing the district plan or proposed plan rules to prevail in relation to the following section matters: <ul style="list-style-type: none"><li>(e) <i>the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:</i></li><li>(f) <i>the protection of historic heritage from inappropriate subdivision, use, and development:</i></li></ul> Regulation 46(3) defines 'historic heritage rules' as 'the district rules about the protection of historic heritage values (however described). It is considered that historic heritage rules' are rules that apply to specifically identified areas or sites in a district plan rather have whole zones	Consistent with NESTF 2008 but expanded to regulate the a wider range of telecommunication facilities permitted under the NESTF 2016	Amend the recognition for telecommunication objective 3 and policies as recommended by Tom Anderson				

Regulation		Proposed permitted activity	Conditions		NESTF 2008	Manawatu PC55
21.	47	Visual amenity landscapes	Visual amenity landscape rules as defined in the district plans or proposed plans in relation to the protection of landscape features (such as view shafts or ridge lines) identified as having special visual amenity values (however described). It is considered that defined areas or features in district plans identified as having visual amenity values will still receive an adequate level of protection from the visual impact of telecommunication facilities and activities through the district plan visual amenity rules prevailing over the NESTF.	Visual amenity landscape rules as defined in the district plans or proposed plans in relation to the protection of landscape features (such as view shafts or ridge lines) identified as having special visual amenity values (however described). It is considered that defined areas or features in district plans identified as having visual amenity values will still receive an adequate level of protection from the visual impact of telecommunication facilities and activities through the district plan visual amenity rules prevailing over the NESTF.	Previously regulated "visual amenity" in the NESTF 2008. Regulation 47 expanded to regulate the a wider range of telecommunication facilities permitted under the NESTF 2016	Amend the recognition for telecommunication objective 3 and policies as recommended by Tom Anderson
22.	48	Significant habitats for indigenous vegetation	Under this regulation district plan or proposed plan rules will prevail if a plan specifically identifies an area for protection because it is an area of significant habitat for indigenous vegetation significant vegetation rules as <i>'the district rules about the protection of significant habitats for indigenous vegetation (however described)'</i> . This regulation covers areas of indigenous vegetation on a wider scale than Regulations 44 and 45, i.e. protecting more than just one tree or a group of trees.	Under this regulation district plan or proposed plan rules will prevail if a plan specifically identifies an area for protection because it is an area of significant habitat for indigenous vegetation significant vegetation rules as <i>'the district rules about the protection of significant habitats for indigenous vegetation (however described)'</i> . This regulation covers areas of indigenous vegetation on a wider scale than Regulations 44 and 45, i.e. protecting more than just one tree or a group of trees.	Not in current NESTF.	Amend the recognition for telecommunication objective 3 and policies as recommended by Tom Anderson
23.	49	Significant habitats for indigenous fauna	Under this regulation district plan or proposed plan rules will prevail if a plan specifically identifies an area for protection of significant habitats for indigenous fauna. Significant fauna rules are <i>about the protection of significant habitats for indigenous fauna (however described)</i> and covers other sorts of habitats that are not related to vegetation, e.g. aquatic habitats or habitats of a particular indigenous species.	Under this regulation district plan or proposed plan rules will prevail if a plan specifically identifies an area for protection of significant habitats for indigenous fauna. Significant fauna rules are <i>about the protection of significant habitats for indigenous fauna (however described)</i> and covers other sorts of habitats that are not related to vegetation, e.g. aquatic habitats or habitats of a particular indigenous species.	Not in current NESTF.	Amend the recognition for telecommunication objective 3 and policies as recommended by Tom Anderson
24.	50	Outstanding natural features or landscapes	The regulation provides alignment between the NESTF and section 6(b) of the RMA by recognising that outstanding natural features and landscapes. Outstanding natural features or landscapes are those that <i>there district plan and proposed plan rules about the protection of outstanding natural features or landscapes (however described)</i> . These features are usually defined spatially on planning maps or well described in a district plan schedule.	The regulation provides alignment between the NESTF and section 6(b) of the RMA by recognising that outstanding natural features and landscapes. Outstanding natural features or landscapes are those that <i>there district plan and proposed plan rules about the protection of outstanding natural features or landscapes (however described)</i> . These features are usually defined spatially on planning maps or well described in a district plan schedule.	Consistent with NESTF 2008 but expanded to regulate the a wider range of telecommunication facilities permitted under the NESTF 2016	Amend the recognition for telecommunication objective 3 and policies as recommended by Tom Anderson

Regulation		Proposed permitted activity	Conditions	NESTF 2008	Manawatu PC55
25.	51	Places adjoining coastal marine area	<p>The regulation provides alignment with section 6(a) of the RMA by recognising that the coastal marine area requires protection from telecommunication facilities. Coastal protection rules' as the district rules that regulate the carrying out of activities in places adjoining coastal marine areas for the purpose of protecting the coastal marine area. The relevant rules must:</p> <ul style="list-style-type: none"> <li>• adjoin the coastal marine area (as defined in Part 2 of the RMA), i.e. the protected area must be physically next to the coastal marine area;</li> <li>• be designed to protect the coastal marine area in some way. These may be rules related to visual amenity, a coastal protection yard or coastal setback rule, or an overlay for specific parts of the coastal edge area, earthworks rules or vegetation rules provided that the intention of the rules is to protect the coastal marine area from adverse environmental effects.</li> </ul>	The policy intent of Regulation 51 is the same as that of Regulation 6(4) of the previous 2008 NESTF, except that the protections for the coastal marine area have been expanded to include activities both inside and outside the road reserve.	No part of this PC 55
26.	53	Earthworks required for installing telecommunication facilities in the NESTF. The provisions relate to non-telecommunication facilities and limited situations for telecommunication lines, outside road reserves	<p>Activities involving earthworks under:</p> <ul style="list-style-type: none"> <li>• Regulation 30 – existing outside the road reserve and in residential zone</li> <li>• Regulation 32 – existing poles outside the road reserve and residential zone</li> <li>• Regulation 34 – new rural poles</li> </ul> <p>are permitted subject to conditions including:</p> <ul style="list-style-type: none"> <li>o all special place (in relation to regulations 45 to 51) earthworks are carried out in accordance with the district rules about earthworks that apply to earthworks carried out at that place</li> <li>o Earthworks for a new pole under regulation 34 in rural zone (not including track works) are a permitted activity, subject to the following conditions: <ul style="list-style-type: none"> <li>o volumetric limit of 450m<sup>3</sup> per installation activity</li> <li>o preparation of reasonable and proportionate management plan designed to control, manage and mitigate adverse environmental effects of earthworks</li> </ul> </li> </ul>	Not in current NESTF.	No change
27.	54	Earthworks – regional rules apply	Under regulation 5(1)(d) regulated activities are required to comply with applicable regional rules for earthworks	Not in current NESTF.	NA



Regulation		Proposed permitted activity	Conditions		NESTF 2008	Manawatu PC55
28.	55	Radiofrequency	As the 2008 NESTF specifies assessment methods for radiofrequency fields (NZS 6609.2:1990) have been superseded with a new Australia/New Zealand standard (AS/NZS 2772.2:2016) the reference to NZS 6609.2:1990 Radiofrequency Radiation – Principles and Methods of Measurement – 300 kHz to 100 GHz has been updated to reference to AS/NZS 2772.2:2016 Radiofrequency Fields Part 2: Principles and Methods of Measurement and Computation – 3 kHz to 300 GHz.	A territorial authority cannot make a natural hazard rule that applies to a regulated activity	Consistent with existing NESTF but with updated reference to new AS/NZS standards.	Rule 3A.4.2.h - No change required as there is no reference to AS/NZS 2772.2:2016 Radiofrequency Fields Part 2: Principles and Methods of Measurement and Computation – 3 kHz to 300 GHz
29.	57	Natural hazard rule – exemption			Not in current NESTF.	Rule 3A.4.2.e in relation to cabinets in the flood channel zone requires amendment to remove that part of the rule as it relates to a natural hazard protection requirement.

### Background to the NESTF 2016 amendments

The background to the NESTF 2016 review is addressed in the various documents prepared for the Ministry for the Environment and the Ministry of Business, Innovation and Employment including:

1. Ministry for the Environment 2013 evaluation of the performance of the NESTF 2008
2. Jacobs SKM (2014) Environmental Effects of Implementing Ultra-Fast Broadband and Mobile Infrastructure
3. Regulatory Impact Statement (RIS) November 2016 by the Ministry for the Environment and the Ministry of Business, Innovation and Employment
4. Evaluation under section 32 of the RMA 1991 of the proposed amendments to NESTF2016 November 2016

NESTF was evaluated by the MfE in 2013. The evaluation determined that, overall, the NESTF has achieved its objectives. For example:

- it has assisted the telecommunications industry in designing and sourcing equipment for rollouts.
- it has reduced compliance costs. Industry estimates that \$3.2 million in direct costs had been saved and that over \$10 million may be saved over the duration of the fourth generation rollout.
- it has reduced the timeframe and lowering costs for the availability of new services to consumers in the mobile market. Industry considers that the entry of the third mobile provider, 2Degrees Mobile, was accelerated because of the NESTF. This has increased competition in this sector.
- However, the review also noted that the telecommunications landscape was, and is, evolving rapidly.

The Regulatory Impact Statement (RIS) November 2016 highlights the following reasons for supporting the scope on change in NESTF 2016:

- As the telecommunications landscape has evolved, emerging activities are not treated consistently across district plans, creating the same issues of time delays, cost, and uncertainty that brought about the NESTF in the first place.
- Extending the NESTF to classify deployment of telecommunications cables and a wider range of mobile network infrastructure as a permitted activity (subject to conditions) could eliminate most of these costs and delays. However, there is a limited window within which such a change could be made to realise the greatest benefits.
- The Government's Ultra-Fast Broadband (UFB), Rural Broadband Initiative (RBI) and Mobile Black Spot Fund (MBSF) programmes involve large-scale deployment of new infrastructure nationally. This includes installation of fibre-optic cabling, placement of new masts and antennas which provide fixed wireless broadband to rural areas, and installation of new masts and antennas to improve coverage along main highways and tourist locations. The UFB and RBI programmes are already halfway through their nine-year timeframe, with the MBSF programme scheduled to commence in 2016.
- Resource consent applications for these infrastructure builds are generally applied for early in the build schedule to create certainty for project timelines and reduce costs. While many of the consents required for the initial phase of the UFB build will likely be in place before the NESTF amendments, the expansions to the UFB project mean there is still significant opportunity to achieve efficiencies in this area.
- In addition, the increasing uptake of new mobile technologies (e.g. smartphones and tablets) means that mobile infrastructure needs to be upgraded to maintain current levels of service. New technology is likely to be deployed in different ways to those activities permitted by the existing NESTF. Particular trends are:
  - fourth generation<sup>1</sup> mobile technology, which generally requires antennas that are taller and wider than the limits specified in the NESTF
  - the rollout of small cell units<sup>2</sup> which service smaller areas and fill in gaps in the coverage of larger antennas
  - co-location of different operators' equipment on the same mast, which requires higher structures as the equipment needs to be sufficiently spaced to avoid interference. Co-location would result in fewer individual structures in an area.
- Both telecommunications cabling and mobile infrastructure are subject to significant inconsistency in district plan rules across the country; however the infrastructure and the environmental effects are largely the same across all districts. Regional variation under the RMA creates uncertainty for providers, drives up compliance costs, and delays the installation of new telecommunication facilities. This ultimately impedes the delivery of new and improved telecommunications services to communities.
- The variation between plans places costs on telecommunications operators. A significant number of person-hours are involved for industry in understanding and complying with district plan rules for a national infrastructure project. Local variation in plan rules may mean variations are needed in equipment requirements; for example, it creates an inability to bulk purchase cellular masts because of differences in height allowances between districts. Local planning rules may also inadvertently incentivise the placement of multiple cell phone towers in the same area, rather than co-location (i.e. multiple operators having antennas on the same tower).
- District plan processes mean that, in order to take into account new technologies, councils may have to bring in technical experts to create rules for these activities where they do not already exist. This can result in increased workload and costs associated with plan development and review, and is duplicated across councils.
- There are costs to the community if new technologies are not rolled out or are deferred by resource consenting issues. Broadband improvements can increase economic activity and productivity. A study into the economic benefits of broadband demonstrates that the majority of cost savings will accrue in the first 6 years when

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<sup>1</sup> Fourth generation (4G) Long-Term Evolution is a mobile broadband service that is capable of speeds up to ten times faster than 3G mobile data networks.

<sup>2</sup> Small cell units can include microcells, picocells, femtocells, and Wi-Fi

the major investments are made and consumer uptake is maximised<sup>3</sup>. Being able to deliver on this broadband infrastructure faster and with minimal regulatory delays will therefore result in economic benefit to New Zealand sooner.

- A report commissioned in 2014 by the Ministry of Business, Innovation and Employment (MBIE) by environmental planners at Jacobs SKM reviewed the 73 district plans in relation to telecommunications cables and 54 in relation to mobile infrastructure<sup>4</sup>. The report found that there is inconsistent treatment of these activities.
- A high level analysis of councils that require consent for mobile and broadband structures and installation activities is set out in **Annex A**. Examples of rules for permitted activities and rules for activities that are controlled (allowed but only if conditions are applied) or discretionary (may or may not be allowed) is set out in **Annex B**. For example:
  - out of 73 district plans that mentioned masts and antennas, 41 required resource consent for a 25 metre mast and antenna in rural areas, 22 permitted the activity with controls and 10 permitted the activity.
  - out of 54 district plans that mentioned aerial cabling, 21 required resource consent, 11 permitted the activity with controls and 22 permitted the activity.
- Where there were controls on the activities, these primarily related to visual amenity. However the methods to address these impacts varied considerably, even though the infrastructure and environmental effects are largely the same.

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<sup>3</sup> Alcatel-Lucent, 2012. *Building the benefits of broadband*. <http://www.nbr.co.nz/sites/default/files/images/BellLabsWhitePaper.pdf>

<sup>4</sup> Jacobs SKM (2014) *Environmental Effects of Implementing Ultra-Fast Broadband and Mobile Infrastructure* <https://www.mfe.govt.nz/publications/rma/environmental-effects-implementing-ultra-fast-broadband-and-mobile-infrastructure>