



# Trustpower

July 2021

*Response to the Managed Spectrum Park  
Review and Regional/Non-National Allocation  
Discussion Document*



## Introduction

Trustpower, hereby files comments in response to the Managed Spectrum Park Review and Regional/Non-National Allocation Discussion Document issued in June 2021

Trustpower operate 38 hydro power stations across 19 hydroelectric power schemes. Schemes are geographically spread throughout New Zealand between Whangarei and Dunedin. All power stations are automated and remotely controlled from an operations centre located in Tauranga.

In some cases, due to geographic and environmental challenges our schemes require wireless interconnectivity. As the country's population expands and public frequency's become more common Trustpower will rely on Managed Spectrum Park (MSP) radio spectrum for internal wireless communications.

We understand that the Managed Spectrum Park (MSP) is a block of radio spectrum between 2580-2620 MHz set aside in order to allow users to supply a diverse range of services. Radio Spectrum Management (RSM) grants licences in this spectrum subject to Licence Agreements which comply with the Managed Spectrum Park Rules. Since its establishment, Licensees of the MSP have used it to provide diverse services such as wireless broadband, road traffic monitoring, voice telephony, and the control of traffic signals.



## Question 1: Do you think that co-operation is feasible in the Managed Spectrum Park?

1.1 Co-operation or coordination is feasible if users of the spectrum are required to publish asset list of transmitters and antennas.

1.2 MSP areas are based on Territorial Local Authority (TLA) boundaries, which do not align well with rural coverage demands or geography. Exclusive allocation of spectrum to licensees on a TLA geographical basis could lead to inefficient use of the spectrum. It should be possible for several licensees to operate within a single TLA without interfering with each other.

1.3 New applications to the MSP should not require an existing licensee to reduce their utilisation of the spectrum to less than one contiguous 20 MHz channel across any geographical area.

## Question 2: When considering MSP spectrum allocations, what allocation method(s) would be preferable to you?

2.1 First in, first served should remain as the basis for MSP allocations to eligible applicants where there is no incumbent. An administrative allocation process should be used when a new eligible applicant enters an area where an incumbent is present and claiming the entire 40 MHz allocation.

2.2 Eligibility requirements for applicants should be adjusted to include only existing radio network operators who are not associated parties. The limitation should apply because historic success rates for MSP implementation show that the MSP is insufficiently suited to new entrant organisations.

As illustrated in Appendix A, since inception 4281 MSP licence IDs have been created by 42 applicants. 36 applicants were existing radio network operators, including ISPs, councils, and utility operators. One applicant was a private company. One was a confederation of Maori iwi and hapu. The remaining four applicants, who were new entrant organisations (not existing network operators) at the time of their applications, were responsible for 1,882 license ids, all of which were declined, cancelled, or expired without implementation.

2.3 The definition of associated parties should be amended to exclude commercially unrelated companies who might have a common shareholder.

2.4 Implementation requirements should be met by users within one year of granting of a licence. The equipment required for establishing a fixed or mobile wireless service in the MSP band is now a commodity, available from a large number of manufacturers and distribution channels. Co-siting is available on a commercial basis throughout the country, including subsidised rates on government-funded rural broadband initiative towers. Neither availability or equipment nor co-siting issues mentioned in the discussion document point 16 are valid or legitimate reasons for failure to meet implementation requirements.



## Question 3: What are your thoughts on the level of technical requirements/rules in relation to MSP licences?

3.1 Cooperation and coordination of services requires a level of detail that could be captured by the register of radio frequencies but is not currently required by RSM. Accurate details should be recorded for all existing and future licences and should include, at a minimum, on a per-transmitter basis:

- Transmitter make and model
- Transmitter emission
- Transmitter power level
- TDD synchronization pattern
- Antenna make and model
- Antenna azimuth
- Antenna elevation

3.2 The range and technical characteristics for fixed and mobile services are very different. Mobile antennas are necessarily low gain and omnidirectional, and typically are only used within a few kilometers of a tower. Fixed antennas are typically higher gain and can be used tens of kilometers from a tower.

Receive protection areas should be separately defined for use with either fixed or mobile subscribers. Receiving antennas and receivers accurately defined in either case. In cases where a base station transmitter is used for both fixed and mobile subscribers, separate protection areas should be defined and recorded on the licence, with the expectation that a mobile receive area will be far smaller than a fixed wireless receive area.

3.3 RSM should ensure that licences as granted only cover serviceable geographic areas.



#### **Question 4: What are your thoughts on the best method(s) for future regional/non-national spectrum allocations?**

N/A

#### **Question 5: Should priority be given to incumbents over new entrants?**

N/A

#### **Question 6: Is the market big enough to support sub-regional competition?**

N/A

#### **Question 7: Should spectrum allocation rules be used to limit consolidation (mergers or take-overs) of regional players?**

N/A

#### **Question 8: What are your thoughts on how to protect regional rights for regional use?**

N/A

### **Conclusion**

Trustpower appreciates the opportunity to provide the above input to RSM on the questions raised. This topic is important for the future our industry's digitalisation and ability to operate. We would be happy to discuss further on any further questions or follow up that you may have.

### **Contact Information**

For more information, please feel free to reach out to the following:

- Jonathan Brewer, Telecommunications expert on behalf of Trustpower (jon@telco2.co.nz)
- Graeme Clarke, Trustpower Operational Technology Technician (graeme.clarke@trustpower.co.nz)



## Appendix A

Summary of all licence identifiers issued in MR258, by organisation name and licence status, with a numeric count of each, based on a registry extract made 29th June 2021.

|     | org_name  | status              | n   |
|-----|---|---------------------|-----|
| 1:  | AMURI NET LIMITED                               | Current             | 157 |
| 2:  | BLUE DOOR CORPORATION LIMITED                   | Declined            | 6   |
| 3:  | BLUE DOOR CORPORATION LIMITED                   | Planned             | 6   |
| 4:  | BWA4U LIMITED                                   | Cancelled           | 24  |
| 5:  | BWA4U LIMITED                                   | Certificate Expired | 4   |
| 6:  | BWA4U LIMITED                                   | Declined            | 12  |
| 7:  | CHORUS NEW ZEALAND LIMITED                      | Expired             | 20  |
| 8:  | CHRISTCHURCH CITY COUNCIL                       | Cancelled           | 8   |
| 9:  | CHRISTCHURCH CITY COUNCIL                       | Current             | 24  |
| 10: | CHRISTCHURCH CITY COUNCIL                       | Expired             | 22  |
| 11: | COMPASS COMMUNICATIONS LIMITED                  | Cancelled           | 142 |
| 12: | COMPASS COMMUNICATIONS LIMITED                  | Current             | 26  |
| 13: | COMPASS COMMUNICATIONS LIMITED                  | Declined            | 3   |
| 14: | DELTA UTILITY SERVICES LIMITED                  | Cancelled           | 6   |
| 15: | DELTA UTILITY SERVICES LIMITED                  | Certificate Expired | 4   |
| 16: | Downer EDI Works Ltd                            | Certificate Expired | 38  |
| 17: | ENHANCED SOLUTIONS LIMITED                      | Cancelled           | 10  |
| 18: | ENHANCED SOLUTIONS LIMITED                      | Current             | 154 |
| 19: | ENHANCED SOLUTIONS LIMITED                      | Declined            | 37  |
| 20: | GISBORNE.NET.N.Z. LIMITED                       | Cancelled           | 6   |
| 21: | GISBORNE.NET.N.Z. LIMITED                       | Current             | 18  |
| 22: | HAMILTON CITY COUNCIL                           | Certificate Expired | 2   |
| 23: | HAURAKI DISTRICT COUNCIL                        | Cancelled           | 6   |
| 24: | INSOMNIA SECURITY GROUP LIMITED                 | Expired             | 4   |
| 25: | INSPIRE NET LIMITED                             | Cancelled           | 2   |
| 26: | INSPIRE NET LIMITED                             | Certificate Expired | 2   |
| 27: | INSPIRE NET LIMITED                             | Declined            | 2   |
| 28: | KIWIMAX LIMITED                                 | Cancelled           | 317 |
| 29: | KIWIMAX LIMITED                                 | Certificate Expired | 30  |
| 30: | KIWIMAX LIMITED                                 | Declined            | 63  |
| 31: | KORDERAS LIMITED                                | Cancelled           | 752 |
| 32: | KORDERAS LIMITED                                | Certificate Expired | 6   |
| 33: | KORDERAS LIMITED                                | Declined            | 614 |
| 34: | LIGHTSPEED TECHNOLOGY GROUP LIMITED             | Certificate Expired | 2   |
| 35: | LIGHTSPEED TECHNOLOGY GROUP LIMITED             | Current             | 8   |
| 36: | LIGHTSPEED TECHNOLOGY GROUP LIMITED             | Declined            | 2   |
| 37: | LIGHTWIRE LIMITED                               | Cancelled           | 112 |
| 38: | LIGHTWIRE LIMITED                               | Current             | 146 |
| 39: | LIGHTWIRE LIMITED                               | Declined            | 6   |
| 40: | MARLBOROUGH DISTRICT COUNCIL                    | Cancelled           | 22  |
| 41: | MARLBOROUGH DISTRICT COUNCIL                    | Current             | 8   |
| 42: | MOUNT CAMPBELL NETWORKS LTD                     | Cancelled           | 20  |
| 43: | NETSMART LIMITED                                | Cancelled           | 158 |
| 44: | NETSMART LIMITED                                | Certificate Expired | 70  |
| 45: | NETSMART LIMITED                                | Declined            | 36  |
| 46: | NEW ZEALAND TECHNOLOGY GROUP HAWKES BAY LIMITED | Current             | 60  |
| 47: | New Zealand Transport Agency                    | Cancelled           | 12  |
| 48: | New Zealand Transport Agency                    | Expired             | 24  |
| 49: | NORTHPOWER LIMITED                              | Certificate Expired | 6   |
| 50: | PRIMOWIRELESS LIMITED                           | Cancelled           | 44  |



|     |                                      |                     |     |
|-----|--------------------------------------|---------------------|-----|
| 51: | PRIMOWIRELESS LIMITED                | Current             | 62  |
| 52: | QUEENSTOWN LAKES DISTRICT COUNCIL    | Certificate Expired | 4   |
| 53: | SMARTLINX 3 LIMITED                  | Cancelled           | 8   |
| 54: | SMARTLINX 3 LIMITED                  | Certificate Expired | 2   |
| 55: | SMARTLINX 3 LIMITED                  | Declined            | 4   |
| 56: | TE RUNANGA O NGATI WHATUA            | Declined            | 4   |
| 57: | THEPACIFIC.NET LIMITED               | Cancelled           | 30  |
| 58: | THEPACIFIC.NET LIMITED               | Certificate Expired | 38  |
| 59: | THEPACIFIC.NET LIMITED               | Current             | 14  |
| 60: | THEPACIFIC.NET LIMITED               | Declined            | 2   |
| 61: | THEPACIFIC.NET LIMITED               | Expired             | 4   |
| 62: | THEPACIFIC.NET LIMITED               | Planned             | 6   |
| 63: | TRAVEL NETWORK LIMITED               | Cancelled           | 40  |
| 64: | TRAVEL NETWORK LIMITED               | Certificate Expired | 20  |
| 65: | TRUSTPOWER LIMITED                   | Planned             | 2   |
| 66: | Uber Group Ltd                       | Cancelled           | 12  |
| 67: | Uber Group Ltd                       | Current             | 42  |
| 68: | Uber Group Ltd                       | Declined            | 20  |
| 69: | UBER NETWORKS LIMITED                | Declined            | 40  |
| 70: | ULTIMATE MOBILE LIMITED              | Current             | 198 |
| 71: | ULTIMATE MOBILE LIMITED              | Expired             | 28  |
| 72: | ULTIMATE MOBILE LIMITED              | Planned             | 2   |
| 73: | Unifone New Zealand Limited          | Current             | 40  |
| 74: | Unifone New Zealand Limited          | Declined            | 24  |
| 75: | VELOCITYNET LIMITED                  | Cancelled           | 4   |
| 76: | VELOCITYNET LIMITED                  | Current             | 18  |
| 77: | VELOCITYNET LIMITED                  | Declined            | 2   |
| 78: | VITAL LIMITED                        | Cancelled           | 186 |
| 79: | VITAL LIMITED                        | Certificate Expired | 4   |
| 80: | VITAL LIMITED                        | Declined            | 41  |
| 81: | WASP NEW ZEALAND LIMITED             | Cancelled           | 4   |
| 82: | WELLINGTON INTERNATIONAL AIRPORT LTD | Current             | 8   |
| 83: | WELLINGTON REGIONAL COUNCIL          | Declined            | 10  |
| 84: | WIZWIRELESS LIMITED                  | Cancelled           | 36  |
| 85: | WIZWIRELESS LIMITED                  | Certificate Expired | 2   |
| 86: | WIZWIRELESS LIMITED                  | Current             | 22  |
| 87: | WIZWIRELESS LIMITED                  | Declined            | 11  |
| 88: | ZELAN LIMITED                        | Current             | 24  |