

Rural Broadband Initiative Phase 1

August 2016



Minister's Foreword

Connectivity is a necessity. It's an essential part of New Zealand's growing economic and social infrastructure, and even more integral for our rural communities.

As phase one of the Government's Rural Broadband Initiative (RBI) comes to a close, we have the opportunity to reflect on how it's improved the way rural New Zealanders conduct business, keep in touch with their family and friends, and learn.

The objective of the first phase of the RBI was to deliver faster broadband to priority users and communities outside of Ultra-Fast Broadband (UFB) areas.

Around 300,000 New Zealand households and businesses will have improved broadband thanks to RBI. Rural hospitals and integrated family centres are able to access peak speeds of 100Mbps under the RBI. All New Zealand state and state-integrated schools are able to connect under UFB or RBI, or the Remote Schools Broadband Initiative.

Before the project began in 2011, only one in five rural homes and businesses had access to peak broadband speeds of at least 5Mbps.

By June 2017, 90 per cent of those outside of UFB areas will have access to the original target of at least 5Mbps, and most are in fact operating speeds well in excess of this.

Rural communities are already accessing faster broadband, with uptake of wireless or fixed line services at nearly 40 per cent currently. Under phase one, 154 new cell sites have been built, and 387 have been or will be upgraded to offer RBI services by June 2017. A total of 1242 cabinets have been upgraded and over 110,000 households and businesses are able to access new or improved fixed line broadband.

As these towers are further upgraded to 4G services, they are delivering broadband capable of fibre-like speeds of up to 100Mbps.

These increased speeds and access mean incredible opportunities for small businesses, schools, hospitals and health centres, and tourists. There are few places in the world where connectivity has become so vital. The potential for connected New Zealanders is limitless.

The Government remains committed to the rollout of faster and more reliable internet access for New Zealanders. That's why we announced rural broadband connectivity targets that by 2025, 99 per cent of New Zealanders will have access to at least 50Mbps peak speeds, and the remaining one per cent will have access to at least 10 Mbps.

I would like to take the opportunity to extend my gratitude to the Government's RBI partners for their assistance in the project.

Hon Amy Adams

Minister for Communications

August 2016

Thanks to Government's partners who helped deliver the first phase of the Rural Broadband Initiative, including Chorus, Vodafone, Enable, Araneo, TeamTalk, Inspire.net, Gisborne.net, Network Tasman and Ultrafast Fibre.







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154 new towers are live

All new towers allow for co-location by competing operators. 84% have more than one operator (as at June 2016).

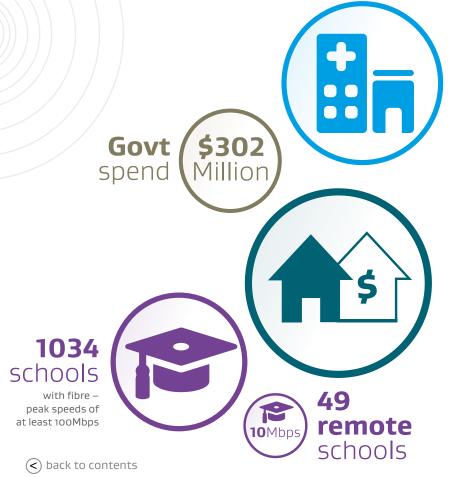
387 upgraded cell towers

By contractual completion date of 30 June 2017. As at June 2016, 355 have been upgraded.



Rural broadband initiative highlights





39

hospitals & health centres are able to connect

Urban hospitals are able to connect under the Ultra-Fast Broadband programme.

more than 300k

rural households & businesses able to access RBI by June 2017.

Over 293k able to access RBI at June 2016.

This number will increase once the remaining towers are upgraded by June 2017.

Rural households





Speed



Average 0.25Mbps

Rural schools with fibre



Most rural cabinets



Internet uses



NOW

Rural households*





Speed



Average 10-40Mbps. Some capable of up to 100Mbps

Rural schools with fibre



Majority rural cabinets



Internet uses



*Households outside of UFB areas.



and businesses will be able to choose between the two services).

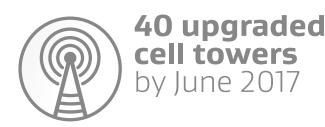
Schools, hospitals and integrated family health centres have been prioritised to receive faster broadband of 100Mbps.

The first phase of UFB covers Whangarei. The second phase will go even further.



13 new cell towers are live

in Baylys Beach, Paparoa, Maungakaramea, One Tree Point, Ruatangata West, Karikari Central, Matapouri, Houhoura Central, Taupo Bay, Taheke West, Pataua, Te Kao and Waipu.





212 cabinets upgraded

17,000 households and businesses with new or improved fixed line broadband.



31,000 households & businesses*

have access to new or improved broadband services under the RBI.



All Northland schools

now have access to fast broadband capable of 100Mbps.



Hokianga hospital

has access to fast 100Mbps broadband

Please note:

Remote schools in Northland have access to fast wireless broadband capable of 10Mbps: Mangamuka School and TKKM o Ngaringa o Matariki School. All schools refers to all state and state-integrated schools.

*This number will increase once one remaining tower is upgraded by June 2017.

For further information, see www.broadband.govt.nz









5Mbps. This is through fixed wireless and improved copper services (some rural homes and businesses will be able to choose between the two services).

Schools, hospitals and integrated family health centres have been prioritised to receive faster broadband of 100Mbps.

The first phase of UFB covers urban communities in the Auckland region, including Auckland, Pukekohe, Waiheke Island and Waiuku. The second phase will go even further.



10 new cell towers are live

Waitakere Village, Kumeu Township, Claris, Kingseat, Clarks Beach Central, Awhitu North, Kaiaua, Port Waikato, Orere Point and Ahuroa.





167 cabinets upgraded

19,000 households and businesses with new or improved fixed line broadband.



33,000 households & businesses*

have access to new or improved broadband services under the RRI.



All Auckland schools

now have access to fast broadband capable of 100Mbps.



4 hospitals & health centres

have access to fast 100Mbps broadband, including Helensville Health Trust, Warkworth Birthing Centre, Warkworth Hospital and Wellsford Birthing Unit.

Please note:

Remote schools in the Auckland region have access to fast wireless broadband capable of 10Mbps: Okiwi School, Kaitoke School and Mulberry Grove School. All schools refers to all state and state-integrated schools.

*This number will increase once one remaining tower is upgraded by June 2017.

For further information, see www.broadband.govt.nz









The first phase of UFB covers urban communities in the Waikato region, including Cambridge, Hamilton, Taupo, Te Awamutu and Tokoroa. The second phase will go even further.



29 new cell towers are live

Puketaha, Eureka, Mystery Events Centre, Ngahinapouri, Manawaru, Tatuanui, Pukemiro, Karangahake, Wharepapa South, Turua, Preece Point, Te Kowhai West, Te Miro, Omori, Mangakino Central, Maihiihi, Otewa, Whatawhata West, Ngongotaha North, Reporoa, Kauaeranga Valley, Te Uku, Benneydale, Newstead Central, Manaia, Aria, Te Puru, Lake Okareka and Glen Massey



183 cabinets upgraded

18,000 households and businesses with new or improved fixed line broadband.



All **Waikato** schools

now have access to fast broadband capable of 100Mbps .





New Zealand Government



70 upgraded cell towers by June 2017



53,000households & businesses*

have access to new or improved broadband services under the RBI.



8 hospitals & health centres

have access to fast 100Mbps broadband, including Birthcare Huntly, Pihanga Health, Pohlen Hospital, Tamahere Hospital and Healing Centre, Te Aroha Hospital, Thames Birthing Unit, Thames Hospital and Te Kuiti Hospital.

Please note:

Two remote schools in Waikato have access to fast wireless broadband capable of 10Mbps: Waikaretu School and Whareorino School. All schools refers to all state and state-integrated schools.

*This number will increase once six remaining towers are upgraded by June 2017.

For further information, see www.broadband.govt.nz





The first phase of UFB covers urban communities in the Bay of Plenty, including Rotorua, Tauranga, and Whakatane. The second phase will go even further.



11 new cell towers are live

Manawahe, Nukuhou North, Waimana, Oropi, Whakatane West, Aongatete, Ruatoki, Thornton, Maketu, Paengoroa and Te Ranga South.





112 cabinets upgraded

14,000 households and businesses with new or improved fixed line broadband.



23,000 households & businesses*

have access to new or improved broadband services under the RRI



All **Bay of Plenty** schools

now have access to fast broadband capable of 100Mbps.

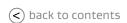


Please note:

One remote school in the Bay of Plenty has access to fast wireless broadband capable of 10Mbps: Te Kura Mana Maori o Matahi. All schools refers to all state and state-integrated schools.

*This number will increase once two remaining towers are upgraded by June 2017.

For further information, see www.broadband.govt.nz









The first phase of UFB covers Gisborne city. The second phase will go even further.



1 new cell tower is live

in Makaraka



7 upgraded towers



7 cabinets upgraded

1000 households and businesses with new or improved fixed line broadband.



4,000 households & businesses

have access to new or improved broadband services under the RBI



All **Gisborne** schools

now have access to fast broadband capable of 100Mbps.

Please note:

Remote schools in Gisborne have access to fast wireless broadband capable of 10Mbps: Whatatutu School, Ngatapa School, Motu School, Rere School, Waerenga-O-Kuri School, Tiniroto School, Ruakituri School, Mata School, Ohuka School, Putere School and Matawai School. All schools refers to all state and state-integrated schools.

For further information, see www.broadband.govt.nz

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5Mbps. This is through fixed wireless and improved copper services (some rural homes and businesses will be able to choose between the two services).

Schools, hospitals and integrated family health centres have been prioritised to receive faster broadband of 100Mbps.

The first phase of UFB covers Napier and Hastings.

The second phase will go even further.



6 new cell towers are live

in Sherenden, Maraekakaho North, Porangahau, Patoka, Raupunga and Takapau.



upgraded towers



45 cabinets upgraded

3000 households and businesses with new or improved fixed line broadband.



11,000 households & businesses*

have access to new or improved broadband services under the RBI.



All Hawke's Bay schools

now have access to fast broadband capable of 100Mbps.



Wairoa hospital

and Central Hawke's Bay Health Centre have access to fast 100Mbps broadband under the RBI.

Please note:

Remote schools in Hawke's Bay have access to fast wireless broadband capable of 10Mbps: Kereru School, Waimarama School, Sherwood School, Mangorapa School. All schools refers to all state and state-integrated schools.

*This number will increase once three remaining towers are upgraded by June 2017.

For further information, see www.broadband.govt.nz









(some rural homes and businesses will be able to choose between the two services).

Schools, hospitals and integrated family health centres have been prioritised to receive faster broadband of 100Mbps.

The first phase of UFB covers Hawera and New Plymouth. The second phase will go even further.



8 new cell towers are live

Auroa, Midhurst, Carrington Road, Urenui, Normanby, Oakura, Kaponga and Hurworth.



upgraded towers



31 cabinets upgraded

2000 households and businesses with new or improved fixed line broadband.



11,000 households & businesses

have access to new or improved broadband services under the RBI.



All Taranaki schools

now have access to fast broadband capable of 100Mbps.



Elizabeth R hospital

and Patea District Community Medical have access to fast 100Mbps broadband under the RBI.

Please note:

Remote schools in Taranaki have access to fast wireless broadband capable of 10Mbps: Makahu School, Marco School, Huiakama School, Ratapiko School, Ngamatapouri School and Hawera Christian School. All schools refers to all state and state-integrated schools.

For further information, see www.broadband.govt.nz









Across New Zealand 90 per cent of homes and businesses outside of the Ultra-Fast

Broadband (UFB) phase 1 areas can now connect to broadband at peak speeds of at least 5Mbps. This is through fixed wireless and improved copper services (some rural homes and businesses will be able to choose between the two services).

Schools, hospitals and integrated family health centres have been prioritised to receive faster broadband of 100Mbps.

The first phase of UFB covers urban communities in the region, including Feilding, Levin, Palmerston North and Whanganui. The second phase will go even further.



16 new cell towers are live

Marton Central, Bunnythorpe, Kimbolton, Sanson, Apiti, Feilding East, Ashhurst, Himatangi Beach, Akitio, Shannon, Levin South, Raetihi, Kai Iwi, Upokongaro, Ohura and Waitarere.



31 upgraded cell towers by June 2017



79 cabinets upgraded

8000 households and businesses with new or improved fixed line broadband.



22,000 households & businesses*

have access to new or improved broadband services under the RBI.



All Manawatu/ Wanganui schools

now have access to fast broadband capable of 100Mbps.



Taumaranui hospital

and Taihape Health Limited have access to fast 100Mbps broadband under the RBI.

Please note:

Remote schools in Manawatu/Whanganui have access to fast wireless broadband capable of 10Mbps: Tokirima School, Kaitieke School, Aberfeldy School, Kakatahi School, Mangamahu School, Ngamatea School, Orautoha School, Papanui Junction School, Pukeokahu School, Te Wainui a Rua School, Upokongaro School and Makuri School. All schools refers to all state and state-integrated schools.

*This number will increase once four remaining towers are upgraded by June 2017.

For further information, see www.broadband.govt.nz









5Mbps. This is through fixed wireless and improved copper services (some rural homes and businesses will be able to choose between the two services).

Schools, hospitals and integrated family health centres have been prioritised to receive faster broadband of 100Mbps.

The first phase of UFB covers Wellington, Kapiti and Masterton. The second phase will go even further.



9 new cell towers are live

in Riversdale Beach, Castle Point, Opaki, Nikau Valley, Otaki Beach, Carterton Central, Reikorangi, Blue Mountains and Palliser Bay.



14 upgraded cell towers by June 2017



49 cabinets upgraded

5000 households and businesses with new or improved fixed line broadband.



11,000 households & businesses*

have access to new or improved broadband services under the RBI.



All **Wellington** schools

now have access to fast broadband capable of 100Mbps.



MidCentral

/Otaki Health Centre has access to fast 100Mbps broadband under the RBI.

Please note:

All schools refers to all state and state-integrated schools.

*This number will increase once one remaining tower is upgraded by June 2017.

For further information, see www.broadband.govt.nz

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The first phase of UFB covers Blenheim. The second phase will go even further.



2 new cell towers are live

in Hira and Rai Valley.





29 cabinets upgraded

2000 households and businesses with new or improved fixed line broadband.



5,000 households & businesses*

have access to new or improved broadband services under the RBI.



All **Nelson/ Marlborough**schools

now have access to fast broadband capable of 100Mbps.

Please note

One remote school in Marlborough has access to fast wireless broadband capable of 10Mbps: Waitaria Bay School. All schools refers to all state and state-integrated schools.

*This number will increase once two remaining towers are upgraded by June 2017.

For further information, see www.broadband.govt.nz

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4 new cell towers are live

in Motueka Township, Takaka, Tapawera and Tasman.



6 upgraded towers



31 cabinets upgraded

2000 households and businesses with new or improved fixed line broadband.



8,000 households & businesses

have access to new or improved broadband services under the RBI.



All **Tasman** schools

now have access to fast broadband capable of 100Mbps.



3 hospitals & health centres

have access to fast 100Mbps broadband, including Murchison Community Hospital, Golden Bay Community Hospital and Motueka Maternity Unit.

Please note:

All schools refers to all state and state-integrated schools.

For further information, see www.broadband.govt.nz

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The first phase of UFB covers Greymouth.

The second phase will go even further.



11 new cell towers are live

in Lake Brunner, Kumara Township, Ross, Camerons, Dobson, Blackball, Barrytown, Kaniere, Karamea, Gladstone and Hector.



5 upgraded cell towers by June 2017



36 cabinets upgraded

2000 households and businesses with new or improved fixed line broadband.



5,000 households & businesses*

have access to new or improved broadband services under the RBI.



All **West Coast** schools

now have access to fast broadband capable of 100Mbps.



Reefton Hospital

and West Coast DHB Hokitika Health Centre have access to fast 100Mbps broadband under the RBI.

Please note:

One remote school in the West Coast has access to fast wireless broadband capable of 10Mbps: Haast School. All schools refers to all state and state-integrated schools.

*This number will increase once three remaining towers are upgraded by June 2017.

For further information, see www.broadband.govt.nz

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The first phase of UFB covers Christchurch, Ashburton and Timaru. The second phase will go even further.



17 new cell towers are live

in Yaldhurst, Ohoka, Leithfield, Springfield Central, Waiau, Southbridge, Glentunnel, St Andrews, Kainga, Bankside, Swannanoa Central, Cust, Castle Hill, Waikuku Beach, Fernside, West Melton Central and Clarkville.



47 upgraded cell towers by June 2017



121 cabinets upgraded

9000 households and businesses with new or improved fixed line broadband



39,000 households & businesses*

have access to new or improved broadband services under the RBI.



All **Canterbury** schools

now have access to fast broadband capable of 100Mbps.



6 hospitals

have access to fast 100Mbps broadband including Darfield Hospital, Ellesmere Hospital, Kaikoura Hospital, Oxford Hospital, Rangiora Hospital and Waikari Hospital.

Please note:

Remote schools in Canterbury have access to fast wireless broadband capable of 10Mbps: Okains Bay School and Timaru South School. All schools refers to all state and state-integrated schools.

*This number will increase once three remaining towers are upgraded by June 2017.

For further information, see www.broadband.govt.nz

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and businesses will be able to choose between the two services).

Schools, hospitals and integrated family health centres have been prioritised to receive faster broadband of 100Mbps.

The first phase of UFB covers Dunedin, Oamaru and Queenstown. The second phase will go even further.



8 new cell towers are live

in Kaitangata, Evansdale East, Ophir, Owaka, Maheno, Weston, Naseby and Maungatua.



29 upgraded cell towers by June 2017



94 cabinets upgraded

6000 households and businesses with new or improved fixed line broadband.



20,000 households & businesses*

have access to new or improved broadband services under the RBI.



All Otago schools

now have access to fast broadband capable of 100Mbps.



3 hospitals & health centres

have access to fast 100Mbps broadband including Charlotte Jean Maternity Hospital. Dunstan Hospital and Maniototo Hospital.

Please note:

Remote schools in Otago have access to fast wireless broadband capable of 10Mbps: Makarora School and Tahakopa School. All schools refers to all state and state-integrated schools.

*This number will increase once four remaining towers are upgraded by June 2017.

For further information, see www.broadband.govt.nz









5Mbps. This is through fixed wireless and improved copper services (some rural homes and businesses will be able to choose between the two services).

Schools, hospitals and integrated family health centres have been prioritised to receive faster broadband of 100Mbps.

The first phase of UFB covers Invercargill. The second phase will go even further.



9 new cell towers are live

in Tokanui, Waimahaka, Nightcaps, Lorneville, Lumsden Central, Stewart Island, Centre Hill, Mt Prospect and Waikaia.



upgraded towers



46 cabinets upgraded



16,000 households & businesses*

have access to new or improved broadband services under the RBI.



All Southland schools

now have access to fast broadband capable of 100Mbps.



4 hospitals & health centres

have access to fast 100Mbps broadband, including Gore Health Limited, Lumsden Maternity Centre, Tuatapere Maternity Hospital and Winton Maternity Centre.

Please note:

One remote school in Southland has access to fast wireless broadband capable of 10Mbps: Macraes Moonlight School. All schools refers to all state and state-integrated schools.

*This number will increase once two remaining towers are upgraded by June 2017.

For further information, see www.broadband.govt.nz

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CASE STUDIES



Wired Marae offers opportunities for the future

Having fibre installed has helped revitalise a Northland marae. Matihetihe Marae was the first marae in the country to be connected to fibre broadband, as part of the Government's Rural Broadband Initiative.

Marae co-ordinator Andrew Kendall says broadband is the key to the sustainability of the marae – our history, culture and language.

Matihetihe Marae sits in Mitimiti, about 10kms north of the Hokianga Harbour.

"This environment is very harsh and lots of our people no longer live here. Fast broadband is a way to connect us to whānau – we are able to help them out and they can also help us out. It's bringing people onto the marae. Whānau can now stay longer on the marae because they are able to keep in touch with their families and work.

"We are currently building a website and database, and playing around with live streaming. I'm really optimistic about where connectivity will take us. The next step will be to explore how we can use broadband to leverage economic development and business opportunities for whānau," says Andrew.

Mitimiti deploys fibre, cell phone coverage, internet and WiFi as part of the government's Rural Broadband Initiative.

As well as being the first marae in the country to be connected to fibre broadband, Matihetihe Marae was also the first deployment of the 2km range femtocell, a localised cell phone coverage device where the cell phone signal can be accessed in any unobscured direction for up to 2kms.

It was also the first marae to pilot remote internet and WiFi management with a view to a building a remote management system for other marae in future.



Viblock keeps customers happy

Keith Millar has run the successful concrete masonry business Viblock out of Alexandra for the past ten years. In that time he has seen a lot of great technology changes—both in masonry and with his own business operations.

However in the past few years Keith has struggled to take full advantage of digital innovations such as cloud computing and mobile connectivity.

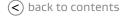
At more than 7kms away from his nearest exchange, the internet connection that served him well in the early years was now failing to keep up with some basic demands of Keith's business, leaving him frustrated.

When the Rural Broadband Initiative arrived in Alexandra, Keith quickly connected his business to the high speed wireless broadband and voice calling service.

Since then, Keith has introduced a range of digital solutions that have saved him time and money, and increased customer satisfaction and staff productivity.

"After we switched to Vodafone's rural broadband, everything just worked. We've been able to introduce technology that simply makes the businesses more efficient, and stay better connected to our customers.

"I would recommend that every rural business checks to see if they are on the best connection possible and if they can upgrade – do it, the benefits are huge and you won't regret it," says Keith.







CASE STUDIES



Fast broadband in Pukeatua

Waikato Farmer Chris Lewis and his family have been on their South Waikato, Pukeatua farm for eight years.

With a growing family and innovation in the agriculture sector evolving constantly, the Lewis family required faster broadband and more data to meet their needs. Their previous dial-up service added extra time to simple tasks like paperwork and accounts – leaving them frustrated.

"If they've got fast broadband in the city, they expect me to have it in the country. It's as simple as that," says Chris.

When the Rural Broadband Initiative arrived in Pukeatua, Chris was quick to connect to Vodafone's rural broadband service – delivering fast broadband to the house and the cowshed. It has enabled Chris and his family to have real-time conversations with the people, colleagues and suppliers that matter. And with 1100 cows, the Lewis farm is no small operation.

"A highly automated cowshed lets a technician in Hamilton check on the computers in my shed, which run my milking machines and backwash. If I have a problem, they can dial-in remotely and often fix it online," says Chris.

"They can see real-time processing of the cows getting milked, how many litres they're producing, what they weigh and how much meal they're getting fed. The technician can then recommend changes remotely or just go ahead and make them.

"Rural broadband makes things go faster. It lets us get our jobs done, so we can spend more time with the family," says Chris.



UFB - Kura hooks up neighbours

Tolaga Bay Area School and local business WiFi Connect have paired up to provide the local community with wireless broadband at a reduced cost.

The kura has agreed to share its fibre connection with retail service provider WiFi Connect, who then provides a commercial public internet service to the community.

Ivan Lomax, one of the owners of WiFi Connect said instead of being charged about \$100 a month for an internet service, residents that join the scheme get unlimited data broadband for \$40 a month.

He says providing affordable internet has made a real difference to low income families and means cost is no longer a barrier to having internet services.

"It's been really successful. Everyone is rapt with the service. On average we are connecting one family a week, with 32 rural families now connected. Being connected to broadband makes a real difference to people living in remote areas like Tolaga Bay.

"For example there's no bank in Tolaga Bay. Having an internet service means families can now do their banking online and do business transactions from home. By sharing its fibre connection the kura has extended learning opportunities beyond the school gate to the whole community," says Ivan.



