

# District-Wide Connectivity Pays Dividends



## Challenge

**THE OTOROHANGA DISTRICT IN NEW ZEALAND IS** host to over 900,000 tourists every year. It is known for its many beautiful landscapes, from bewildering caves to stunning coastal views.



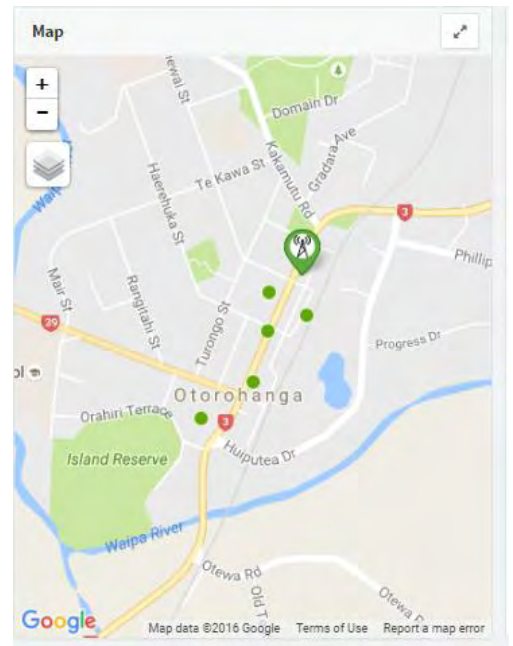
“The ePMP 1000™ network solution that we implemented exceeded our expectations in regard to simplicity, robustness, end-user experience, and cost-effectiveness.”

- ZARIF ALI, PREMIUM SERVICE MANAGER, WIRELESS NATION

The Otorohanga District Council has worked to provide basic free WiFi services to the exponentially increasing number of tourists along with local businesses and rural residents. However, the Council noted limited connectivity that serviced only a handful of locations around the district. Additionally, the range of these networks was very restricted and not user friendly. The Council also wished to provide connectivity for young adults and children to assist in their schooling and development, as it had been identified that 30% of these children had no Internet connectivity in their home.

The Council also saw district-wide connectivity as a proactive business opportunity. “The potential economic return to local retailers by encouraging people to stop and connect in the town would be tremendous,” says Mike Wanden, IT manager, Otorohanga District Council. “The proposition made sense for the community in so many ways.”

The District Council had several stipulations for their network. It would need to be able to provide a service to the end user that was robust, seamless, and of a standard that one would expect of a strong Internet connection. In addition, the network would need to be able to withstand a varied and difficult climate. The final stipulation regarded budget. “We are a small rural council with a limited budget. We knew it would be difficult to find a product that would both fill our various requirements and fall within our price range,” says Wanden. “However, we were confident that Wireless Nation would produce the perfect solution.”



## Solution

WITH HELP FROM WIRELESS NATION'S ENGINEERS, A detailed plan was developed.

An ePMP 1000 wireless broadband access network was used to provide backhaul to all of the access points based at strategic locations. One ePMP Access Point (AP) and a 90-degree sector was installed on the Council building. Five ePMP Subscriber Modules (SM) with integrated antennas were installed in various locations around the town for backhaul links.



“The installation was very simple and straightforward,” says Zariff Ali, Premium Service Manager, Wireless Nation. “The subscriber modules were mounted on poles on top of buildings with a direct line of sight to the access point at the Council building.”

Additionally, the Council used Cambium’s LINKPlanner to facilitate the installation process even further. Ali states, “We also used LINKPlanner to simulate the network to ensure that all the SMs would be able to achieve the required bandwidth.”

ePMP 1000 Distribution Network Solution	
Frequency	2.4 and 5 GHz
Throughput	100 Mbps in a 20 MHz channel

## Results

“THE EPMP 1000 NETWORK SOLUTION THAT WE IMPLEMENTED EXCEEDED OUR EXPECTATIONS IN REGARD TO simplicity, robustness, end-user experience, and cost-effectiveness,” reiterates Ali. “At peak, we have had 200 subscribers connected to the WiFi network, and on average, we have approximately 50 users connected at a time.”

In addition to using LINKPlanner for installation, Wireless Nation uses Cambium’s *cnMaestro*™ user-friendly management system for their network. “*cnMaestro* makes monitoring and managing our network very easy and efficient. Cambium also provided very good after-sales service and support to answer questions.”

3	6 ePMP Device(s) Created by: Zariff Created on: Tue Jun 21 2016 16:07	2.6.2	Completed	Status: 100%	Delete
Success: 6 Failed: 0 Skipped: 0					
Show Less Details ^					
Devices	Status	Mode	Original Version	Update Status	
100%	Up	SM	2.6.1	Successfully updated the device version to 2.6.2	
Beattie Home Village	Up	SM	2.6.1	Successfully updated the device version to 2.6.2	
Otorohanga Club	Up	SM	2.6.1	Successfully updated the device version to 2.6.2	
Origin Coffee	Up	SM	2.6.1	Successfully updated the device version to 2.6.2	

The Council was also very excited to see how the expanded and improved connectivity has positively affected people within the community. “Knowing that more children in rural areas will have access to WiFi is extremely gratifying. We have also seen a slight spike in tourism that has brought more revenue to local businesses. We believe that at the six-month point, the ongoing costs associated with providing the free WiFi will be self-funded through advertising through the landing page.”

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## Next Steps

### **THE OTOROHANGA COMMUNITY IS VERY SATISFIED BY THE PROACTIVE APPROACH OF THE DISTRICT COUNCIL.**

With all of the positive results within the community, the District Council is excited to improve their network even further. “We expect that the Council would like to eventually upgrade the network to the new ePMP 2000 with beam-forming technology to increase throughput and connectivity even more. We will also potentially swap the current WiFi gear for *cnPilot™* E500 outdoor hotspots to provide connectivity in public gathering areas. Cambium has been crucial toward achieving this step forward for the Otorohanga community,” says Ali, “and we look forward to future applications of Cambium’s products.”