

CASE STUDY Sewer Level Monitoring

Citycare Water  | New Zealand



BACKGROUND

PACIFIC TECHNOLOGIES (NZ) Ltd was contracted by Citycare Water in 2019, to install and commission the Metasphere Point Blue RTU and Pulsar Ultrasonic level transmitter to monitor and alarm critical sewer manholes within the Tasman District Council.

Many water utilities have KPI's around reducing the number of sewer blockages and uncontrolled spills of raw sewage which cause public health and environmental issues and, in many cases, to the utility being fined. Better sewer level monitoring fits perfectly with the Tasman District Council strategy.

Additional benefits include the ability to better identify problematic sewer network locations. Early identification of sewers that need cleaning due to blockages over time. The data collected and information provided now allows for predictive and statistical analysis provided by PACIFIC TECHNOLOGIES (NZ) LTD for greater predictive operation, maintenance and management of the sewage network.

STAKEHOLDER

Citycare Water is New Zealand's largest three waters provider, maintaining over 20,000kms of piping networks to over 25% of properties throughout New Zealand.

Their services include future proofed 3 Waters construction and maintenance solutions, long-term asset management and optimization, network management and resilience solutions, and design, construct and maintain solutions for water treatment.



BUSINESS NEEDS

Pacific Technologies (NZ) Ltd were contracted by Citycare Water to provide instrumentation and commissioning services to monitor sewer levels and alarm so co corrective actions can be taken by the Utility. Issues within sewer networks include:

- Finite Capacity
- Legacy Issues
- Dumping Grounds
- Prone to Blockage

These can lead to un controlled discharges which in turn can:

- Health and safety Issues
- Utility Reputation
- Fines from the Regulators



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THE METASPHERE SOLUTION

The solution provided, was a well proven solution, that has over 1000 installation across the UK, Asia and Australasia, the Metasphere Point Blue RTU and Pulsar dBi Ultrasonic level transmitter. Both units are battery powered with hazardous area approvals. The Pulsar being a low powered ultrasonic, combines perfectly with the Point Blue RTU, as this also supplies the power to the Ultrasonic.

Point Blue is a self-contained IEC EX, intrinsically safe RTU with an internal or external battery pack, IP68 unit enclosure, either a 4G (NB-IoT/ CaT-M1) or tri-band 3G modem, and quad band GSM/GPRS fallback, auto-switching internal and external antenna options, software configurable AI, CI, DI, Modbus and SDI-12 communication options, integrated submersion sensor, local diagnostic points and intelligent alarm reporting. It communicates with **Metasphere's** Master Control System, DNP3/ WITS DNP3 Masters or FTPS servers.

The level values are sampled and stored with time-stamps at periodic intervals of 15 minutes. The **Point Blue** RTU is also configured to trend diagnostic information from internal points, such as temperature, battery voltage and signal strength. Once critical levels are reached the RTU's is alarmed to dial in to allow the Utility to take action before an overflow.

The data collected is then communicated to **Palette**, **Metasphere's** data visualisation platform. The platform selected was **Palette** for near real-time data and alarm visualisation and management.



BENEFITS

Proactive management of Sewer level monitoring has benefited the client with a true picture of their sewer network in both the wet and dry seasons. It has also allowed a more targeted maintenance program, as trouble spots were identified.

The project was delivered on budget and ahead of schedule.

FIND OUT MORE!

If you would like to monitor pressure and flow, get in touch to find out how **Point Colour** RTUs transform your operation

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