

# From a contractor's point of view

**Alan Titchall** talks to Tim Gibson, the executive general manager Citycare Water, about the council-owned company's national maintenance division that was formed in 2010. The cornerstone of the division's success to date has been its three waters maintenance business that has 'quietly' taken some 60 percent of the local authority contract base for three waters maintenance in this sector.

## **Tim – tell us about Citycare and its business.**

Citycare Group is owned by Christchurch City Council, but we have been operating in Auckland and other regions around the country for over a decade now. The business has just been through a significant transformation to push our focus on the key market sectors we operate in – water, property and civil.

Our main focus is on long-term asset management and optimisation but, in spite of being council-owned, even in Christchurch we are treated no differently to any other contractors and we need to compete on the same commercial and service terms as, for example, a Downer or a Fulton Hogan.

Citycare Water itself has over 500 full-time employees spread across the country, with major depots in Auckland, Christchurch, Wellington and Dunedin and we carry out a range of three waters maintenance services depending on the make-up of each regional contract.

Citycare Property and Citycare Civil are each similar sized operations and their focus is in property and open spaces maintenance, and civil construction and roading maintenance respectively.

## **Can you provide some detail of the three waters work?**

We currently maintain over 19,000 kilometres of piping networks, so we estimate about 1.5 million people are served by the networks we are looking after for the four key metropolitan councils – Auckland, Wellington, Christchurch and Dunedin – as well as in areas like Banks Peninsula, Hawkes Bay, New Plymouth, Masterton, South Wairarapa, Timaru and Waikato District.

It's probably the metro/regional blend of our business that puts us in a strong, you might even say unique, position. We're keen not just to be seen as another contractor, but to actually be part of the nation's conversation about three waters.

In Auckland, we manage the maintenance and asset optimisation requirements for the southern network, on behalf of Watercare. If there is a burst water main or blocked sewer, for example, we are the guys who go in and fix it, but we work closely with all our clients to make sure there is a strong balance between the proactive and reactive maintenance of the assets and we collect an enormous amount of data on our customers' assets too, which helps

## **BioGill above ground bioreactors**

Apex Environmental, a subsidiary of Citycare, is the distributor for BioGill bioreactors which are said to 'turbo charge' nutrient removal from sewage.

The technology is designed to supplement underperforming systems or to substitute biological treatment in decentralised and municipal sewage systems, and is based on a premise of concentrating and maximising microbiology to remove solids, especially, in the biological secondary stage of the sewage treatment train.

At the technology's core is a uniquely designed nano ceramic membrane, or 'gill', that provides the support media to grow

a thick treating biomass. As the biomass on the membrane is suspended, with one side receiving the high nutrient waste-stream and the other an abundant air supply, growth and metabolic performance is said to be maximised.

The patented membranes are arranged in multiple, suspended vertical loops with water delivered to the top of each loop. wastewater flows down the surface of the gills where the metabolic activity of the bacteria generates a convective air flow, moving upward in the air side between each set of loops. No blowers or aerators are used to provide oxygen for the biomass. BioGill membranes can achieve biomass density as high as 50,000mg/L or better.



Tim Gibson.

both us and them with planning and forecasting to stay on top of the network challenges.

We have a similar relationship with Wellington Water and with other clients around the country and we are also starting to grow our construction business in Auckland, having enjoyed strong success in that area in Christchurch through our inclusion in the SCIRT alliance.

We maintained Christchurch City Council's network before the earthquake, so as soon as it hit, we were directly involved in the initial response.

We provided hundreds of people and 30 to 40 tankers around the city supplying water. We've been a part of the Christchurch fabric from the initial first-response, through its recovery and then into the rebuild.

### **Following Havelock North, 'water' has been very much in the public face this year.**

As you will know from attending the Water New Zealand conference, there are a number of urgent and inherent challenges associated with three waters network management – resilience, especially in light of the ageing asset base: funding challenges; the whole 'safe water' issue brought into the spotlight by the Havelock North incident; not to mention the impact that technology will inevitably have, noting that it's been termed 'disruptive' technology for a reason.

The Havelock North incident has obviously stirred things up considerably, with the topic of safe drinking water becoming a political hand ball in the recent election, but more importantly, the impact that has had on public trust in their water supply... and that erosion of trust, will necessarily have an impact on water maintenance in the short term.

We are right in the thick of all of this and it's both very exciting and very daunting at the same time.

### **Does innovation play a part in the water division's success?**

Innovation has an increasingly important part to play in any asset maintenance operation.

Data is foundational to understanding pressures on networks, the likely timing and cost of future investment and expected future service needs. The right kind of data, such as maintenance trends, spend patterns, event correlations, all needs to be collected in a consistent and comparable way so that infrastructure condition and performance can be meaningfully compared and benchmarked, and infrastructure providers can better understand network inter-dependencies and critical service pinch-points.

For Citycare Water innovation has to be built around driving technology that better enables 24/7 'real-time' field service diagnostic and scheduling capability and closes the gap between reactive asset servicing and proactive asset management.

We need to help our customers understand how the proactive use of smart asset condition data informs the capital works programme for that asset or network of assets and significantly reduces the long-term cost of asset ownership, through less disruption to service and the ability to reduce unscheduled maintenance.

### **Can you provide a specific innovative technology?**

There are lots, but if I could single two areas out where we think we have a technology solution that puts us into a better space than many of our competitors, it would be our proprietary EventManager technology and our major shareholding in a water treatment specialist business called Apex Environmental.

EventManager is just a data-collecting beast. We have over 3000 current users, all able to use the technology to help manage their asset data, tasks and events in real time, as well as being used by our teams in the field for workflow management, data collection and electronic time sheeting.

Apex is a treatment plant design build company run by two exceptionally smart design engineers who are always looking to bring new and useful technologies into the country, like BioGill, which is the product we promoted at the 2017 Water Conference (see side story).

### **Where do you think the chlorinated debate will end up?**

It's difficult to say. The keynote speaker's presentation (Dr Steve Hrudehy) at the Water New Zealand conference clearly showed that it doesn't take much to inadvertently poison a whole lot of people. He showed case studies in Canada and Europe where water supplies got infected and caused deaths and Havelock North is our own example of this.

We don't have a regulator in this country, so the responsibility lies in the hands of the local councils and they each currently have different opinions on chlorination.

In Christchurch, for example, the water comes from really good quality and secured aquifers, so they don't chlorinate – although they did disinfect in some areas as a precaution after the earthquakes. And there are a number of other councils around the country that don't currently disinfect their water.

You need robust Water Safety Plans ... and probably a good maintenance contractor! [WNZ](#)