



# Supporting the Dandenong Ranges Community Sewerage Scheme

The Dandenong Ranges are synonymous with picturesque, leafy landscapes where locals and visitors alike enjoy beautiful gardens, farm-gate produce and treetop walks.

Yarra Valley Water and Yarra Ranges Shire Council identified that some septic systems in the towns of Kallista, The Patch, Sherbrooke, Monbulk, Ferny Creek Olinda, Menzies Creek and Sassafras presented a risk to the environment and public health – ultimately compromising the pristine environment – and that they needed to be replaced.

“The Dandenong Ranges is a heavily forested, hilly area. Past experience told us there would be access issues and widespread shallow rock and boulders, which complicate construction, drilling and planning in the area,” explained Yarra Valley Water’s David Errey, Divisional Manager Asset Creation.

“We also wanted to avoid removing significant mature native trees and native vegetation – so replacing the septic systems with a traditional gravity sewer network wasn’t feasible,” he said.

## A smarter sewer

Yarra Valley Water engaged Iota, the commercial arm of South East Water, to design a smart sewer system that would be operated by its patented OneBox® platform.

Developed and proven within the South East Water network, OneBox® is an internet-of-things platform that monitors the levels of the wastewater tank at the home and pushes the contents into the sewer network.

OneBox® reduces the peak-and-trough flow cycle that traditional networks experience which reduces the need to for large pipes and sewer infrastructure – making it ideal for the Yarra Ranges.

## Little box, big benefits

Iota designed a smart hydraulic sewer network using OneBox<sup>®</sup>, based on South East Water's learnings from installing a similar network in the Mornington Peninsula.

The design is currently being tested in a pilot program which has the potential to be expanded to thousands of properties – both residential and commercial – in the Dandenong Ranges. Construction of the pilot network, will service 150 properties in parts of Kallista and The Patch, is currently underway, with the first systems to be operating early in 2020.

One of the benefits of the design is its reduced construction footprint, a result of the smaller pipes and minimal excavation required to install the OneBox<sup>®</sup> units.

"The normal planning process for a major infrastructure project like this would be up to 12 months," explained Iota's Solutions Design Manager, Eamon Casey.

"Because we were able to avoid significant tree removal, planning approval was granted within just 10 weeks, which meant we could get the pilot underway very quickly."

David Errey agreed, commenting that the speed of the project's approval had exceeded their expectations.

"Although we're still in the early stages of construction, we're confident we'll be able to complete the system upgrade with minimal disruption, and far more quickly than we ever thought possible", David said.

## Beyond the pilot

Yarra Valley Water will work with their design partner, Jacobs, to manage the ongoing design and implementation of the Dandenong Ranges Community Sewerage Scheme.

If the pilot is successful, thousands of properties could be transferred from septic systems to a smart pressure sewer network on the OneBox<sup>®</sup> platform, with the roll-out completed progressively over the next 10 years.

For more information on Yarra Valley Water's Community Sewerage Program, refer to [yvw.com.au/faults-works/community-sewerage-program](http://yvw.com.au/faults-works/community-sewerage-program)

## Who's behind OneBox<sup>®</sup> ?

OneBox<sup>®</sup> was developed by and for industry leaders.

We're Iota, owned by South East Water, an Australian water utility. We develop and commercialise innovations proven within the South East Water network, so we can bring them to like-minded organisations.

We work in partnership with clients that include water and wastewater providers, both at home and abroad. And we're committed to bringing positive change to the communities and environments in which our clients operate.



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