Issue 4 | August 2024

CENTRAL INTERCEPTOR BULLETIN

Lyon Avenue site, Roy Clements Treeway, Mount Albert

We're building the Central Interceptor, a super-sized wastewater tunnel to reduce overflows, creating a better environment for you to enjoy.

Project milestones

Hiwa-i-te-Rangi, our main Tunnel Boring Machine (TBM), passed through the 47m-deep shaft at our Lyon Ave construction site in late April. This breakthrough is the sixth out of ten on her journey north. Lately, she's been making excellent progress at some 550-600m a month.

Domenica, our micro-TBM, has completed her second drive (300m) on the 1.1km, 2.4m-diameter, Link Sewer C. This ends her time on the Central Interceptor project and she has been relocated to our warehouse in Māngere for refurbishment, before being sent off to her next project.

Construction update

We have now completed the excavation of the shaft (6m wide, 47m deep). We are currently busy installing the 25 tonne cascade shelves of which there are 22 in total. Because of their size, they are being delivered individually at night (so as not to cause traffic disruptions) over a period of the next six months. We have brought a 160 tonne crane to site in order to lift and place the shelves.

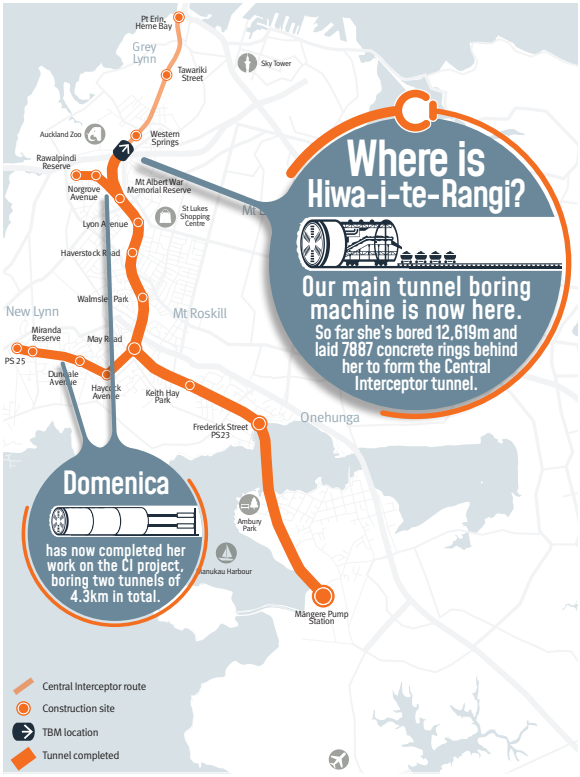
Once commissioned, the cascade shaft will redirect flows from the Edendale branch sewer, significantly reducing wet weather overflows into Meola Creek.

We are also close to completing installation of steel beams to support excavation of two chambers. One is the control chamber, with radio-controlled gates to regulate the flows into the tunnel. The second is the bifurcation chamber, which splits one flow into several, directing them into downstream pipes.

Tunnel progress

Check out our website which now has a weekly update of the TBM's progress. **https://www.watercare.co.nz/Central-interceptor/Constructing-the-Central-Interceptor.**

You can also follow us on Facebook, or Instagram.



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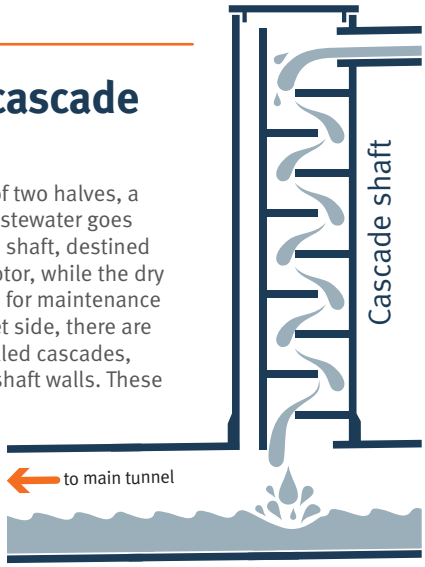
What's next for Lyon Ave construction site

Our focus into the new year will be to complete the shelf installation and construction of the two chambers. We have also set the end construction period for Lyon Ave to mid-2026. With the CI tunnel now extending a further 1.53km to Point Erin in Herne Bay, we need to set the site up as a further emergency exit for the tunnel workforce, hence the extended time on site.

What is a cascade shaft?

The shaft is made up of two halves, a wet and a dry side. Wastewater goes into the wet half of the shaft, destined for the Central Interceptor, while the dry side is used for access for maintenance and repairs. On the wet side, there are a series of shelves, called cascades, that are built into the shaft walls. These shelves help control the flow and energy of the wastewater as it drops into the tunnel below.



Who it takes to build the Central Interceptor

CI stretches across 17 sites from Māngere to Herne Bay. Each of these sites has a team of people working on various activities and construction stages. There is a wide range of jobs on this project, each requiring different skills, backgrounds, experience, and qualifications. This regular feature will give some insight into one of our many important roles.

Andy Schmidt, Ventilation Mine Officer. (Unofficially "The Oracle")

What is a VMO? Describe some of your daily activities:

I started on CI in 2019 as TBM Tunnel Safety Advisor and Ventilation Officer. Initially the role was to design the ventilation systems for the shafts and tunnels, working out the best arrangements and suppliers. And getting everything planned and ready, such electrical, mechanical, people and documentation.

I have a lot of day-to-day involvement with each site:

I assist the tunnelling and civils teams with gas monitoring. This involves checking maintaining, calibrating equipment, fixing faults with gas monitors. Ventilation surveys including long term studies especially once drives or tunnel sections are complete to determine the natural ventilation pressures.

Mine regulation work also takes up my time, particularly assisting with the emergency management plan: exercises and organising all the emergency equipment for sites, such as stretchers, trauma kits, oxygen therapy. I manage the self-rescuers for all sites, forecasting the numbers required and conducting monthly checks. I am a First Responder, a NZ Mines Rescue team member with bimonthly training.

One role I enjoy is to present at site pre-starts on subjects such as air quality, Occupational Health surveys and Mine Regulations compliance.

What is your background (work!)

I qualified as a Mining Engineer (Otago), worked as a coal miner for a few years, then a tunnel shift engineer on the Channel Tunnel), followed by mining engineer roles here and Australia. I've since had 23 years as a safety manager, including at Manapouri and the Waihi Gold Mine.

What qualifications do you need for your job?

I have a Certificate of Competence (CoC) as Ventilation Officer and hold A Grade Quarry and A Grade Tunnel Manager CoCs. My engineering degree gives me the technical ability to calculate and solve problems.

What are the challenges of your role?

On this project, is the changing dynamics and number of project work areas. At times it can get a stretched, so I keep a field note-book for action items. There is a lot of working with people: there's a big focus ensuring a safe working environment, both daily and in an emergency, so that comes down to personal interaction.

Any questions?

For up to date information please see our website:
www.centralinterceptor.co.nz

You can also email us at:
ciproject@ga-jv.com

Or phone:
0800 GAJV 02 (0800425802)

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We encourage you to receive these updates electronically - send us your email, your current mailing address and quote "Sign me up: Lyon site bulletin" to ciproject@water.co.nz

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