Issue 4 | November 2023

CENTRAL INTERCEPTOR BULLETIN

Walmsley Park site, 727-761 Sandringham Rd Extension, Mt Roskill

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

Site update

We completed drilling the 63m-deep shaft at our Walmsley Park site in November 2022. The Walmsley Park shaft is one of only three drilled shafts on the project. After this we closed the site for a bit while we waited for the arrival of our GRP cascade liners in November 2022. These reinforced fibreglass liners are pre-assembled as much as possible at the manufacturing plant and then shipped to site overnight as oversized loads. Once the team was ready, the liners were lifted and lowered into place.

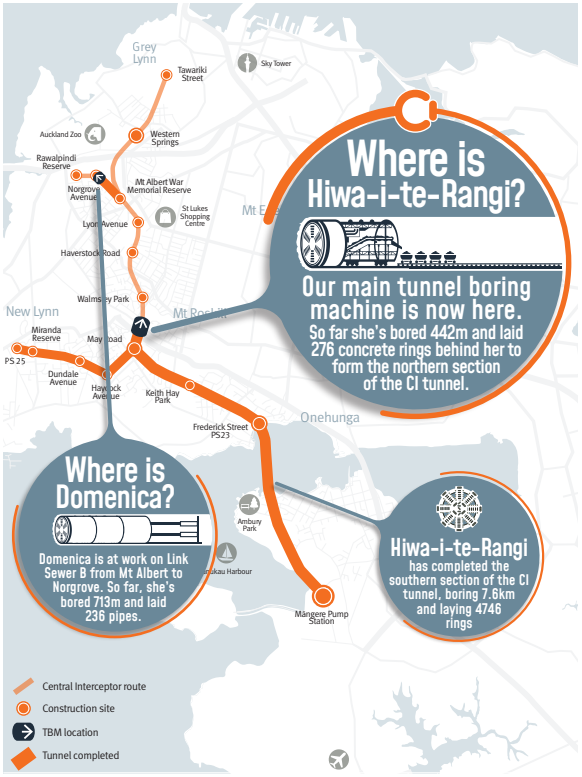
Each liner is made up of two halves, a wet and a dry side. Wastewater goes into the wet half of the shaft, destined for the Central Interceptor, while the dry side is used for access for maintenance and repairs. On the wet side, there are a series of shelves, called cascades, that are built into the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

Our main tunnel boring machine, Hiwa-i-te-Rangi, has now begun boring the northern section of the CI tunnel. She will arrive at Walmsley Park in early 2024.

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 is next

We will keep on excavating the chambers: one will be used to collect the local wastewater network and divert it to the main shaft and into the central interceptor. The other chamber is part of Watercare's efforts to future-proof the wastewater network.

This second, round, chamber will be used to increase capacity on the wastewater network and will be connected when Watercare needs it. This chamber will be 10m deep when completed. To excavate down to 10m below ground level, the ground needs to be supported to prevent it caving in. For the round chamber, a secant bored pile wall was constructed to stabilise the ground and prevent it caving in.

This method was chosen due to the large amount of basalt about 8m below the surface that we had to get through to reach the bottom of the chamber. It took us nearly four months to deal with the basalt. This chamber will be 10m deep when completed.

The rectangular chamber closest to the creek is a diversion chamber which will divert the existing wastewater through the chamber and into the shaft. We were able to use sheet piles here as there was no basalt.

Sheet piles are large interlocking metal sheets that are pushed into the ground to form a retaining wall around the area to be excavated. Steel is the most common form of sheet piles as it has good resistance to high driving stresses, excellent water-tightness and can be increased in length either by welding or bolting. This chamber will be 7m deep when finished.

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)

Follow us:
@gajv_nz @GAJV

Who it takes to build the Central Interceptor

The Central Interceptor project stretches across 16 sites from Māngere to Grey Lynn. Each of these sites has a team of people working on various activities and construction stages. There are numerous jobs on this project, each requiring different skills, backgrounds, experience and qualifications. This regular feature will give some insight into one of the many important roles on the project.

Technical Engineer

What is a technical engineer?

A technical engineer is responsible for coordinating and managing the completion and delivery of designs that are required for the lifetime of a construction project.

What are the daily activities of this role?

The designs need to be completed on time and need to take into consideration a wide array of factors such as constructability, cost, geology and other site constraints to name a few. A typical day includes liaising with the construction team, the client, subcontractors and CAD drafters in order to facilitate a smooth design process and to produce coordinated design that works and satisfies the needs of all parties. Design changes and technical queries are also managed by the technical engineer.

What qualifications do you need?

A Bachelor of Engineering (Honours) degree.

What is one of the challenges of being a technical engineer on the project?

Due to the size of this project and having all 16 sites open now, it can mean juggling up to 20 different designs in parallel, all of which will be at different stages of design, with different complexities of their own and competing demands.

Is there anything about the job that might surprise people?

Construction is such a dynamic and fast-paced environment, so sometimes you turn up to work and end up doing something completely different than what you had planned due to urgent and unforeseen work that comes your way.

Joey Tong, Assistant Design Manager for CI project

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

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