Issue 7 | June 2023

CENTRAL INTERCEPTOR BULLETIN

May Road site, 54 Roma Road and 105 May Road

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

Site update

Our May Road construction site is about to become a lot busier as we await the arrival of our Tunnel Boring Machine (TBM), Hiwa-i-te-Rangi in August. Once the TBM passes underneath the site on its way towards Walmsley Park, our May Road site will become our main hub for tunnelling activities. Previously, our Māngere Pump Station construction site was where our workers would descend the shaft into the Central Interceptor tunnel and then ride in electric locomotives up to the TBM to begin work.

Once we have moved all the required services and materials from Mangere Pump Station, May Road will become the main hub where we remove the spoil excavated by the TBM and bring in the shaft liners and where workers access the tunnel and the TBM.

Milestone achievement

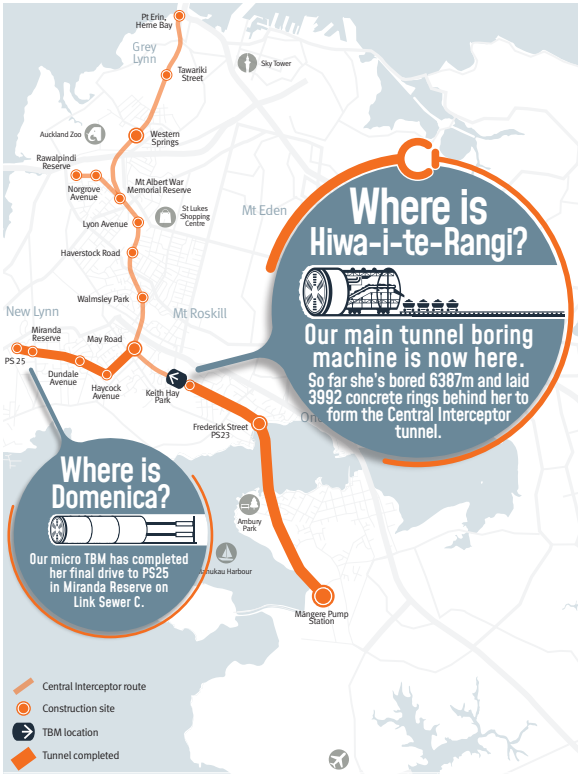
At the end of May Hiwa-i-te-Rangi reached the second shaft on the tunnel route after breaking through our Keith Hay Park shaft. This is a huge achievement as it marks the completion of the deepest section of tunnelling. At some points, she was 110 metres below the ground. She still has 1600 metres left to tunnel before she reaches our May Road shaft.

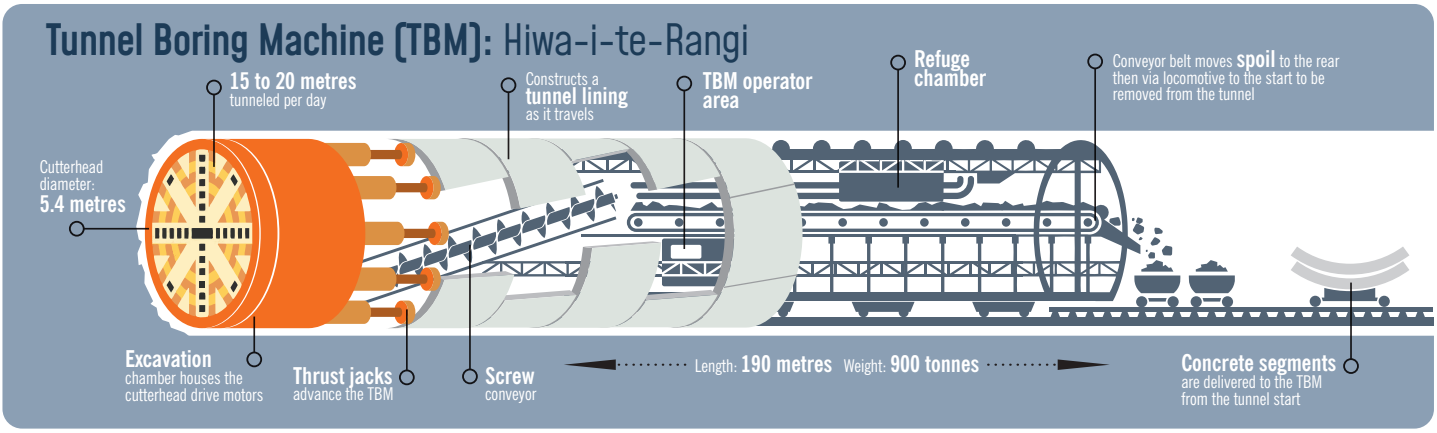
Hiwa-i-te-Rangi can travel anywhere between 15 and 20 metres per day, depending on the type of earth she is boring through. Once she passes through May Road, she will bore another 1119 metres to our Walmsley Park construction site.

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.

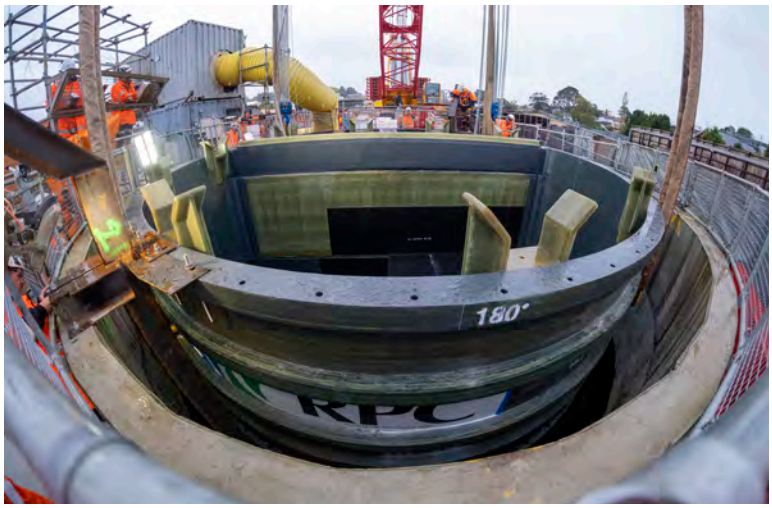




How we line our deep shafts

In May the team on site began installing the first of 22 total glass-reinforced plastic (GRP) liners into Shaft A. These liners are nearly eight metres wide to fit the width of the shaft. They are so large that we must deliver them to site via pilot vehicles and lift them with multiple cranes. We install these liners to stabilise the walls of the shaft. We installed two guide rail brackets bolted at each side of the shaft to lower and position the GRP modules into place at the base slab. This was done using a 600T crane to hold and lower the 80T stacked module into the shaft.

Inside the liners is a cascade system, which creates mini waterfalls inside the shaft, reducing the energy of the falling wastewater. Lining a 73m deep shaft takes time, so we are installing the liners in a phased approach. The first phase is complete, and the second and third phases will be completed by September and October.



Sustainability win – May Road

Dimitrios Zavlangas, Mark Boules and Ismail Khalil, three of our TBM Engineers, were crowned as the latest Central Interceptor's Sustainability Champions. On our project, we encourage our teams to improve the systems, processes and designs they work with daily.

We are currently working on moving our TBM crew to our May Road site, this involves removing materials from our old hub site, Mangere Pump Station (MPS). The three saw an opportunity to repurpose as many materials as possible from MPS. This aligns with our project's commitment to sustainability whilst also saving money and time on materials and labour.

The spoil pit was redesigned to utilise the steel frame and concrete slabs from the TBM's initial launch platform. This resulted in a saving of 123m^3 of concrete and almost 20 tonnes of steel for a cost saving of $256,000.

The TBM's thrust blocks were also repurposed to form the foundations of the spoil shed at May Road by changing the design. This redesign saved us 11m^3 of concrete and 2.9 tonnes of steel which would otherwise cost around $10,000.

They used steel that was otherwise going to be scrap to construct the new wheel wash at May Road. This saved 1.41 tonnes of steel and around $3,200.

Finally, they repurposed the MPS spoil shed sheet metal and reinforced concrete barriers to build a covered walkway for staff to use to safely move around the site. This saved the project buying 720m^2 of roofing panels, 40m3 of concrete and 600kg of steel and will save the project approximately $29,000.

Collectively, these initiatives will save 174m^3 of concrete, 24 tonnes of steel, 720m^2 of roofing panels and approximately $300,000. This is all estimated to save 186 tonnes of CO_2. What an awesome achievement from our latest Sustainability Champions.

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

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

Central Interceptor | Watercare