

CENTRAL INTERCEPTOR BULLETIN

Māngere Pump Station site, Greenwood Road, Māngere

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 Māngere Pump Station (MPS) construction site is the largest on the Central Interceptor (CI) project with many different construction activities happening at the same time. There are two shafts at MPS, the inlet shaft and the pump station shaft. The inlet shaft will receive wastewater when the tunnel is operational. The adjoining pump station shaft will be the final storage for wastewater before pumping to the Wastewater Treatment Plant (WWTP).

The civil construction works continue in the pump station shaft as the team is working to complete the dividing walls above the valve platform. The valve platform is a large slab that sits high in the shaft that holds all the main mechanical pipes and valves. These manage the flows from the shaft and into the pump station.

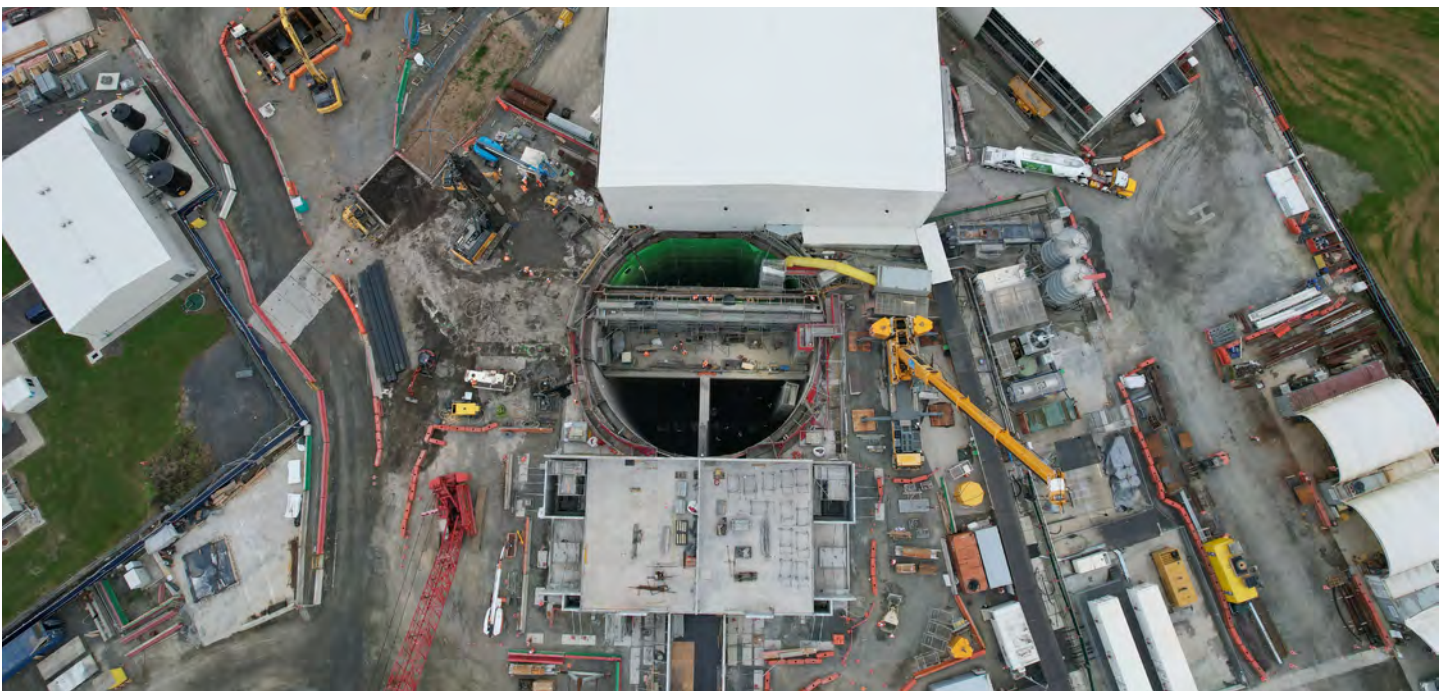
The formwork, which is timber walls used to hold wet concrete in place to construct a wall, is being installed before the final lift. Concrete walls are constructed in stages with specific heights for each stage depending on the activity. These stages are also referred to as 'lifts'.

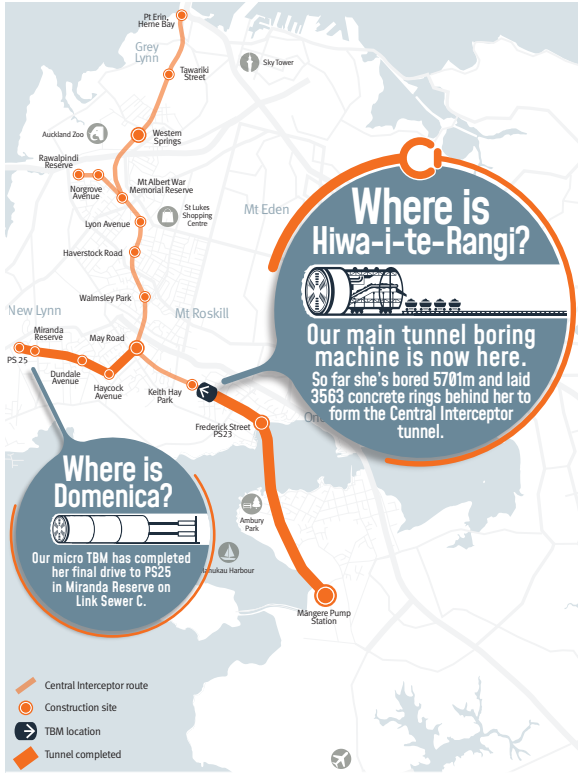
You may have noticed the new pump station building going up as we've completed installing precast panels on the ground floor as well as the block wall on level one and the stair bases. The team is now completing concrete works inside the building for the switch and generator rooms. This building will contain the electrical equipment required to operate the pump station.

The twin rising main is another key body of work at MPS. It is a set of pipes approximately 400 metres long that will transport wastewater from the pump station into the confluence

chamber. The team has almost completed installing the odour ducting on the twin rising main. This reduces the smell from the pipes as the wastewater travels through to the treatment plant.

The confluence chamber is an underground chamber that serves as the connection point within the WWTP that takes flows from all interceptors (including existing wastewater pipes) before starting the treatment process. The team has installed polyethylene (plastic) liners of the internal formwork of the chamber to protect the concrete from chemical erosion. The works on the confluence chamber are particularly difficult as all the existing wastewater pipes are still in operation. At times we have had to undertake night works to temporarily close other interceptors while we carry out chamber works.





Milestone Achievements

Our Tunnel Boring Machine (TBM), Hiwa-i-te-Rangi, is fast approaching the 6000-metre mark of her tunnelling journey. She is now boring towards our May Rd construction site which will be a major milestone for our project when she breaks through there.

Our Mangere site is currently the main hub and starting point for our tunnel crew. This is where they descend into the shaft and ride the electric locomotive up to the TBM to begin work. It is also the site where we remove the spoil that the TBM excavates. Once Hiwa-i-te-Rangi passes our May Road construction site, it becomes our main hub for TBM work. Construction on other activities will continue at Māngere Pump Station but there will be fewer truck movements and fewer staff on site. We expect this to happen in August this year.

At the beginning of December last year, Hiwa-i-te-Rangi, made history as she broke into our Pump Station 23 shaft in Hillsborough after tunnelling 1500 metres across the Manukau harbour. This was a huge achievement as undersea tunnelling is a rarity in New Zealand. This breakthrough marked the end of the longest drive on the project for our TBM measuring more than 4000 metres.

Any questions?

For up to date information please see our website:

www.centralinterceptor.co.nz

You can also email us at:

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Or phone:

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Follow us:

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Coastal Walkway Closure

Our MPS site borders the Māngere Coastal Walkway. We have closed a section of the walkway to enable our team to complete construction works alongside the walkway without compromising the safety of pedestrians and cyclists using the walkway. The walkway is closed where Island Road and Mark Ford Drive meet. You can use Greenwood Road as an alternate route and jump back on the walkway at the Creamery Road entrance.

Charging Ahead in Construction

In March this year, we welcomed three new vehicles to our Central Interceptor fleet. These trucks are special to the project as they are New Zealand's first on-road electric tipper trucks in construction. This purchase was made possible thanks to a co-funding agreement with the Energy Efficiency and Conservation Authority (EECA). We hosted a launch event at our storage facilities in Māngere. Local Board members, Tv One and Maori Television were there to catch the action, which you may have seen on TV. We offered our guests rides in the trucks so they could meet our awesome drivers and hear how quiet our new E-trucks really are.

Our E-trucks run entirely on batteries that can be swapped out for one of our spares in around the same time it takes to fill a diesel truck. Our 180kw battery charger can have a battery fully charged in just 90 minutes. The batteries are Lithium Ferrous Phosphate. Ferrous means they are lighter and less prone to thermal runaway than the more well-known lithium cobalt Al batteries used in early Tesla models. Thermal runaway is when a battery creates more heat than it can disperse which causes damage to the battery and in worst cases, fires or explosions. The batteries on our trucks do not contain cobalt, meaning they are less toxic than traditional lithium batteries.

E-trucks produce 79% less carbon than diesel trucks. This is equivalent to powering 400 homes for an entire year! Our E-trucks are also much quieter than diesel, which is a huge bonus for the Central Interceptor project as many of our sites are in residential areas.

Watch out for our big blue E-trucks on the roads and wave to our awesome drivers.



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