

CENTRAL INTERCEPTOR BULLETIN

Māngere Pump Station site, Greenwood Rd, Māngere



Update on construction at Māngere site

Completing the diaphragm walls at Māngere is a major milestone for the project. Pictured above is the crew after the final section of concrete was poured on the diaphragm walls. Excavating the two joined shafts is the next large activity on site.

Once excavation is complete, concrete will be poured to create the base slab which is the launching area for the tunnel boring machine (TBM). Due to the 42 metre depth of these shafts, the walls are lined in approximately 12 sections measuring 3.5m each.

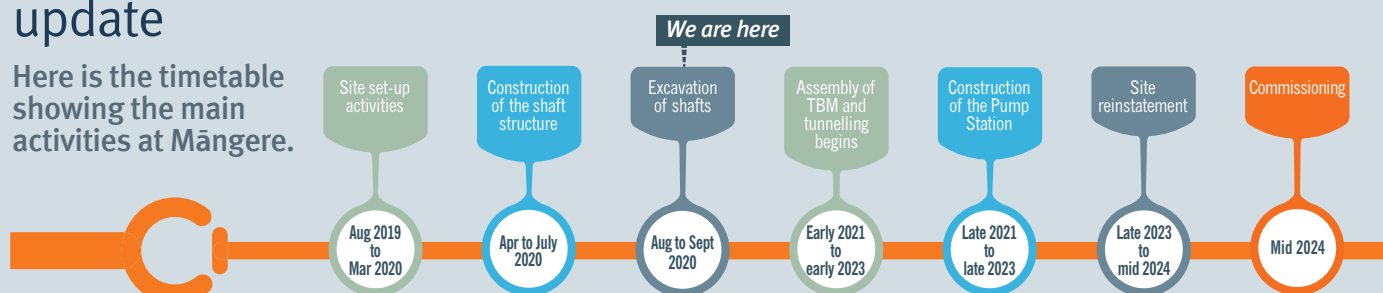
Work is on track to finish in time for the arrival of the TBM when she will be assembled before being launched on her journey to May Road in Mt Roskill.

Installation of the twin rising main, along the coastal walkway, has also started and will continue for the next six months. This consists of two large polyethylene pipes connecting the new Māngere Pump Station to the Māngere Waste Water Treatment Plant. This is now under way but not without its challenges, with the team encountering some difficult ground conditions.

Night works started in early August for excavation of the shaft which is a 24-hour operation. Impact on residents will be very minor as there are no truck movements out of the site during night shift.

Work programme update

Here is the timetable showing the main activities at Māngere.



What is surveying and why do we need it?

Surveyors can be seen wandering about with their wizard sticks, funny cameras and playing with remote control helicopters. What on Earth could they be doing?

Surveyors use various instruments to determine the relative positions of points on, above and below the earth's surface using direction and bearings, horizontal distance and elevation.

There are many important purposes of surveying on the Central Interceptor. Have you ever wondered how the tunnel boring machine (TBM) will get from Māngere to Grey Lynn, making its way through the centre of 17 shafts within millimetres of the design alignment?

Driving a TBM deep underground is complicated and difficult, like driving a car in complete darkness! Somehow the operator needs to know where the TBM is and steer along a "virtual road" in total darkness. Monitoring and updating the exact location and heading of the TBM and providing direction – that's the surveyor's role! They use high accuracy instruments that measure to less than 1mm. When building such a long tunnel, a millimetre in the wrong direction at the start, could mean we miss the finish line by the end!

The GA-JV survey team members can be seen everywhere on mountain tops, in residents' back yards, on site, down shafts and deep inside the tunnel. Their primary role is precision control survey work above and below the ground and with guiding the direction of tunnel construction. They also assist in geological investigation, powerline clearance measurements, condition surveys on properties and checking on ground settlement in the path of the tunnel drive.



Surveyor Rafael Sousa at the May Road site.

Our people

Name: Callum Langford

Background: Born in Auckland. I did my engineering degree at West Virginia Institute of Technology in the United States of America on a golf scholarship.

Position: Site Engineer on the Māngere Pump Station Site

Role on site: Ensure what we do is done safely, accurately and to the high standard that the GAJV maintains.

Previous jobs: Internship at HEB Construction and floor worker at Premier Joinery as a younger man.

Most memorable work moment: I have a few, most of them are related to the milestones like when we first broke down a tank for the demolition or when the first panel was dug. It's hard to single out one moment but I'm sure there will be many more.

Outside of work: I play golf, surf at a below average level, relax with friends and family.



Mayor Phil Goff and Callum (right) during the sod turning event at Māngere earlier this year.

Any questions?

For up to date information please see our website:

 www.centralinterceptor.co.nz

You can also email us at:

 ciproject@water.co.nz

Or phone:

 0800 GAJV 02 (0800425802)



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