

The Central Interceptor

What it is

A new sewer tunnel between Western Springs and the Mangere Wastewater Treatment Plant. The tunnel will be about 13 kilometres in length and will lie between 15 and 110 metres below ground level. It will cross the Manukau Harbour at a depth of about 15 metres below the seabed. The tunnel provides a total storage capacity of about 200,000 cubic metres, and provides estimated cost savings of at least \$500 million over its main alternative solution.

Why it's needed

Provide for future growth of Auckland

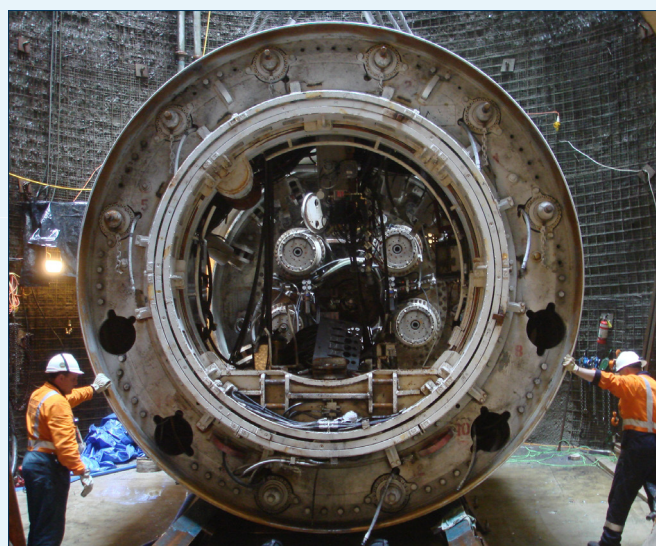
The Central Interceptor is needed to ensure there is sufficient capacity in the network to meet planned population growth and development in Auckland. Without this, more overflows into the waterways and harbours will occur.

Reduced overflows to the Waitemata and Manukau Harbours

During wet weather, the overall wastewater network currently overflows to the Waitemata Harbour at more than 200 points and to the north-eastern part of the Manukau Harbour at 14 points. The Central Interceptor is expected to reduce the annual average overflow volume by 80 per cent.

Reduced environmental risk for the Manukau Harbour

The lower section of the Hillsborough Tunnel and Manukau Siphon is estimated to have a residual life of between 15 and 25 more years. If it fails, it could mean continuous untreated wastewater discharge into the Manukau Harbour for an unknown period of time from over 200,000 customers, including industrial flows presently treated at the Mangere Wastewater Treatment Plant.

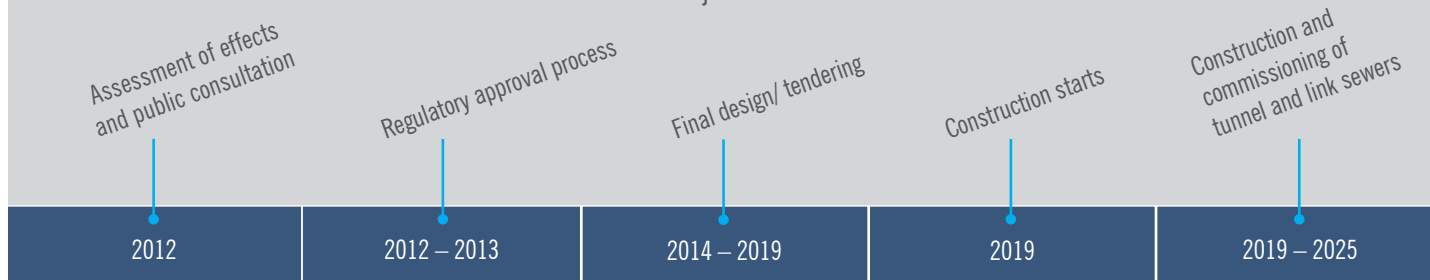


The Central Interceptor will be constructed using a tunnel boring machine. The machine pictured was used on Watercare's Project Hobson.

Timing

An Auckland Council-appointed hearing panel granted Watercare's application for resource consents for the Central Interceptor in November 2013. Construction of the tunnel and link sewers is scheduled to begin in 2019 and is expected to be completed in 2025.

Project timeline



New pump station and emergency pressure relief outfall structure at Mangere

Pump station

The Central Interceptor includes building a new pump station at the Mangere Wastewater Treatment Plant to pump wastewater from the tunnel to the plant. The pump station is an essential component of the project, required to control the delivery of flow from the tunnel into the plant. The pump station will be designed so that the rate of pumping enables the plant to operate within flow limits set by its existing resource consents.

Emergency pressure relief outfall structure

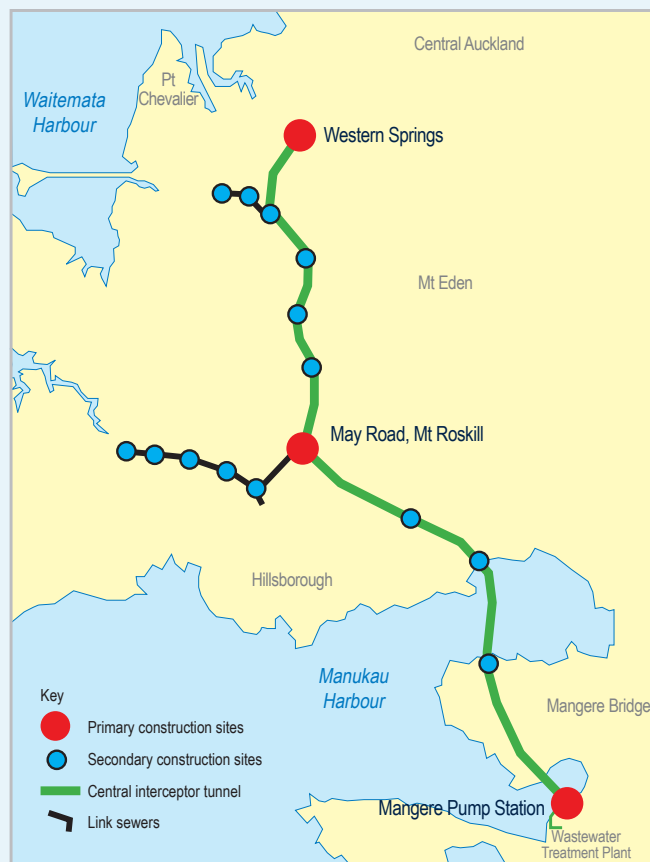
A new emergency pressure relief outfall structure at the new pump station will be designed to discharge only in the low-probability event that the pump station is out of operation for a prolonged period. This could only occur due to a significant mechanical failure or power outage, including failure of a permanent onsite standby generator, combined with a significant storm event (i.e. when storage capacity in the tunnel is fully used before the pump station can be brought back into service). It would be unlikely to activate more than once every 50 years for a one-year storm event.

The emergency outfall structure:

- has no practicable alternatives for discharge mechanisms/locations
- has a very low probability of discharge
- will, if activated, have very localised and short-term ecological, environmental and visual effects on the Manukau Harbour with no adverse cumulative effects
- is essential and represents best practice.

Minimal impact on the Mangere Wastewater Treatment Plant

The completion of the Central Interceptor will have a minimal effect on the Mangere Wastewater Treatment Plant. It has been estimated that the annual volume of treated effluent entering the Manukau Harbour will increase by two per cent and will have no measurable effect on water quality and will be within the consented limits.



Proposed route and construction site locations

