February 2019

Grey Lynn wastewater tunnel
Project overview

Grey Lynn and surrounding areas have some of the oldest wastewater pipe networks in Auckland with many, such as the Orakei main sewer, built early last century. As Auckland continues to grow, our networks are under increased pressure. As a result, diluted wastewater overflows into local waterways in the Cox's Bay and Grey Lynn catchments almost every time it rains.

Project overview

The Grey Lynn Tunnel is designed to intercept and divert overflows from local networks in Grey Lynn and the Orakei main sewer. Once completed, the wastewater flows will be transported through the proposed Grey Lynn tunnel via the Central Interceptor to our largest wastewater plant in Mangere for treatment.

The tunnel will extend from an existing Central Interceptor shaft at Western Springs to a new shaft site at Tawariki Street. The new tunnel will be built by tunnel boring machine at up to 60 metres underground which will minimise disruption along the pipeline route. The shaft site at Tawariki Street will be used to extract the tunnel machine and divert in the wastewater flows once the tunnel is formed.

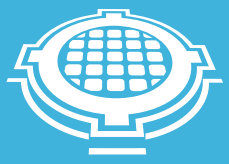
A view from the walkway through Cox's Bay Reserve.

The proposed tunnel will:

- reduce diluted wastewater overflows, resulting in better water quality and surrounding environment
- cater for the growing Auckland population, now and for the next 100 years
- enable future connections and continued improvements to the wastewater system in the area
- be constructed by tunnel boring machine underground to limit effects on residents along the pipeline route
- be 4.5 metres in diameter, large enough for a double decker bus to travel through.

Fast facts

Reducing
overflows



Catering for population
growth

Works start in
2023

The tunnel will be built by
Tunnel Boring Machine (TBM)

Watercare
An Auckland Council Organisation

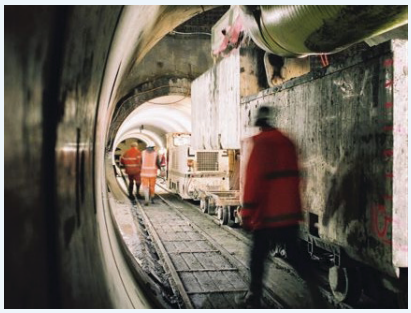
What is tunnel boring?

Underground pipelines and tunnels were once constructed by hand. Today they can be successfully built using modern tunnel boring machines (TBM) designed to be constructed deep underground in developed areas while minimising the impact on people and property at the surface. Tunnel boring machines have been successfully used to develop projects like Watercare's Hobson Bay tunnel and NZTAs Waterview transport tunnel. Tunnelling machines will also be used for the Central Interceptor and Grey Lynn Tunnel projects.

Infrastructure constructed by tunnelling is simple, strong and reliable allowing excavation through a variety of ground conditions. Tunnelling does however require shafts to be built along the tunnel route in order to insert and remove machinery and equipment and also take out the rock and dirt from where the tunnel is excavated. The Grey Lynn Tunnel will be built between two shafts, from a Central Interceptor site at Western Springs and ending at a new shaft site at Tawariki Street. Construction activity will be much more visible around these sites.

Early tunnels were once constructed by hand. (Orākei main sewer 1910.)

The tunnel boring machine used in the project Hobson Bay tunnel.



Tunnelling typically occurs deep below ground.

How will this affect my property?

In most instances tunnelling occurs very deep underground where noise and vibration will not be noticed by properties which are situated above the tunnel route. In projects such as the Grey Lynn Tunnel, the tunnel boring machine will pass under properties from between 15 to 60 metres. We are keeping property owners in the community near the tunnel route and sites aware of our plans and we will contact property owners directly if there are any specific effects of construction. We will also be contacting those around the shaft sites and will work with them to ensure all effects of construction are managed.

Resource consents will be required for the works to occur and we will notify properties that the tunnel passes directly below. All property rights will be respected and the tunnel route will not be recorded on the property LIM.

What happens next?

Resource consent applications for the proposal are due to be lodged with the Auckland Council in early 2019. Decisions made regarding wastewater servicing are important, not just for the current communities but for future generations too. Watercare has undertaken various technical and environmental assessments to inform the resource consent application and designation of the proposed tunnel shaft and site.

Construction is proposed to start at the Tawariki Street shaft site in 2023. The details of the works will be confirmed after the consents are obtained and a contractor is engaged. We will then be able to provide further details on how they intend to do the required work and specific timings.

Keeping you informed

If you would like to receive updates on the project, please contact:

greylynntunnel@water.co.nz

www.watercare.co.nz/About-us/Projects-around-Auckland