

National War Memorial Park and Underpass

This information sheet marks the transition from Project Phase 1 Site Preparation and Phase 2 Digging the Trench to Phase 3 Constructing the Tunnel and Road for the National War Memorial Park and Underpass.

Milestone marked as tunnel begins

Construction has begun on the tunnel for the National War Memorial Park Underpass in Mount Cook suburb, Wellington.



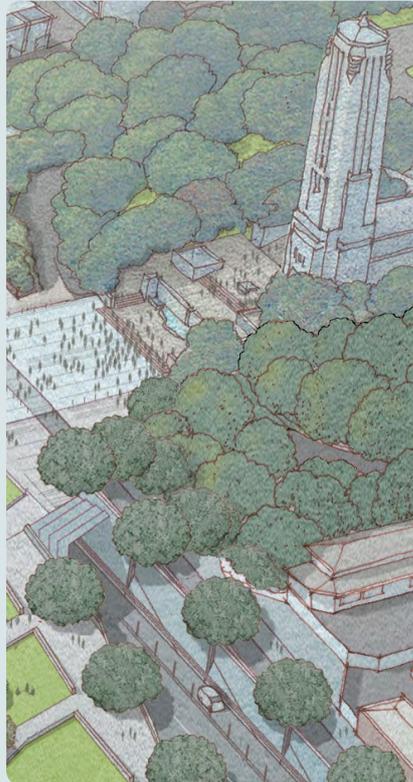
The blessing and laying of the stones ceremony for the underpass was conducted by kaumatua of Te Atiawa iwi Sam Jackson on Thursday 26 September 2013. Willie Alderson of the Memorial Park Alliance placed the three symbolic stones in their holes at the western portal where they will protect the underpass and the travellers passing through.

Since the project started in August 2012, State Highway 1 on Buckle Street has been diverted out of the way and underground services have been relocated. This has allowed the excavation of a 300-metre long trench for a new road and tunnel that will pass underneath the planned park.

The underpass will open in late 2014. The park to be built on top will open on Anzac Day, 25 April 2015, as New Zealand's commemoration of the 100th anniversary of the First World War. It will be a memorial to the more than 300,000 New Zealanders who have served their country in times of war and conflict and the 30,000 who have died.

Huge concrete box anchored in the trench

The tunnel for the underpass will be more than 120 metres long and is being constructed as a huge concrete box in the deepest part of the trench 10 metres below ground level outside the National War Memorial.



Artist's impression

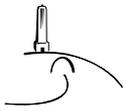


Drilling tool with cutting arms that open to make a bell shape at the bottom of the tunnel's piles

The tunnel will be anchored firmly in place by 95 concrete piles designed with a bell-shape at the bottom that can withstand a 1-in-2,500 year earthquake. The piles for the tunnel will go down a minimum of 10 metres and a maximum of 30 metres depending on the depth of soil over the bedrock.

To manage water flow, 200 metres of stormwater pipe is being installed under the tunnel and will run under State Highway 1 on Sussex Street to join the Cambridge Terrace stormwater system.

Contact us



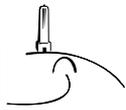
Phase 1, Site Preparation (August 2012 – Early 2013 COMPLETED)

- Designs and planning for construction of the tunnel and the road.
- SH1 on Buckle Street diverted to a temporary position so work can begin.

Underground services

- ① Old underground stormwater, water main, sewage, gas, electricity and telecommunications pipes removed out of the way of trench.
- ② 6.5km of new pipes laid, including new valves and steel pipe connected to 100-year-old water main under Tory Street.
- ③ Specialist machinery used, including vacuum pump to remove soil without damaging tree roots and old pipes.





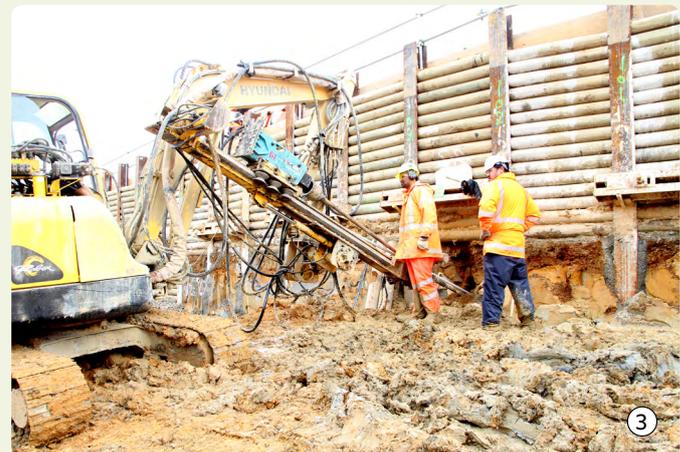
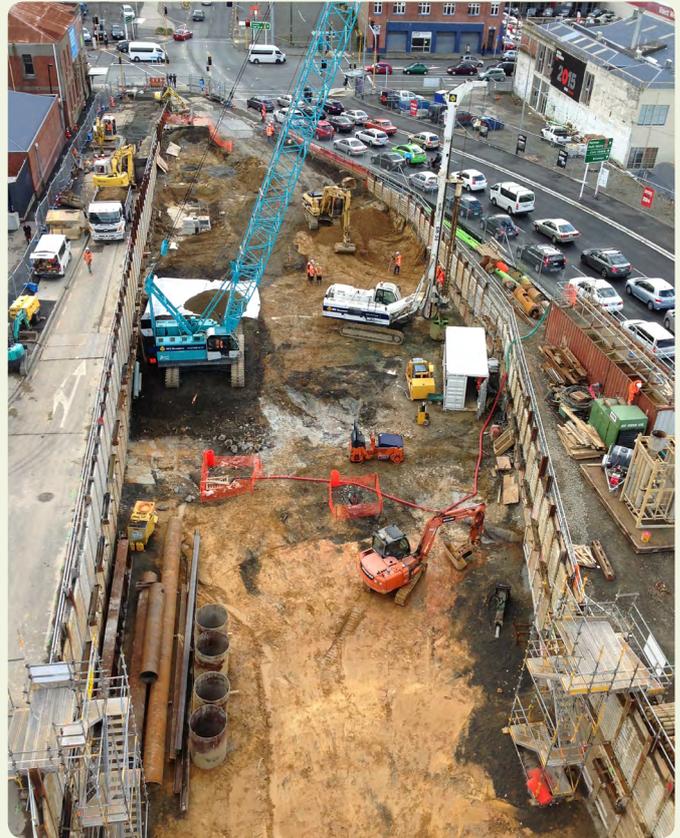
Phase 2, Dig the trench (Early 2013 – Late 2013 COMPLETED)

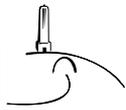
Trench:

- 300 metres long, 18 metres wide; at its deepest point 12m at the side for drainage and 10m in the middle.
- 32,281 cubic metres of soil removed = 3,586 truck and trailer loads.

Retaining walls for trench:

- ① Temporary kingpost and timber walls to protect the ground and the workers in the trench:
 - Kingposts – 285 total, each 15 metres long.
 - Lagging (timber posts slotted between the kingposts) – 14,381 total installed.
- ② Permanent steel sheet pile wall - a 90m long retaining wall installed in front of the Mount Cook Police Barracks and Tasman Gardens Apartments. Function: to protect the foundations of the nearby buildings by preventing ground water loss.
 - Interlocking steel sheet piles – 225 total, each 15 metres long.
- ③ Ground anchors:
 - 558 total, each 13 metres long, installed sideways into the ground and tied into both the kingpost walls and sheet pile walls for added strength.





Progress table

PROJECT PLAN	2012	2013	2014	2015
PREPARE THE SITE				
Temporary road	█			
Services relocation	█	█		
DIG THE TRENCH				
Retaining walls		█		
Earthworks		█		
CONSTRUCT THE TUNNEL				
Form the box			█	
Connect to traffic			█	
BUILD THE PARK				
Landscaping				█
Australian Memorial				█
ANZAC DAY 2015				●



Completed █ On schedule █

Links to video footage and publications

Overview of the park and underpass project and its historical and national significance for the children of Mount Cook School: <http://issuu.com/nztransportagency/docs/right-beside-our-school-online>

Time lapse footage on You Tube capturing footage from each end of the site. These are sped-up images from solar-powered digital cameras that snap a photo every 7.5 minutes from 8am to 8pm:

www.youtube.com/user/memorialparkalliance

Keep in touch with our Memorial Park Alliance project updates:

www.nzta.govt.nz/projects/buckle-st-underpass/publications.html

Contact us

Ph: 0800 020 086

Email: info@ememorialpark.co.nz

www.nzta.govt.nz/memorial-park