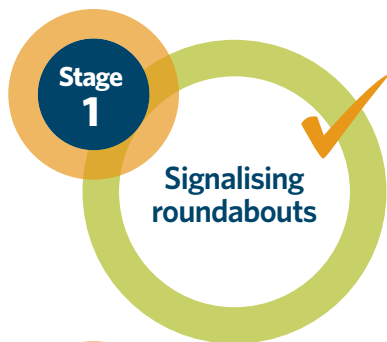


About the Hairini Link project

At the beginning of the project, the Transport Agency and Tauranga City Council identified four possible solutions to improve traffic flow and safety for motorists, pedestrians and cyclists. Three of the four stages have been carried out.



The first stage of the process was to signalise the Maungatapu and Hairini roundabouts.

This was completed in December 2008.



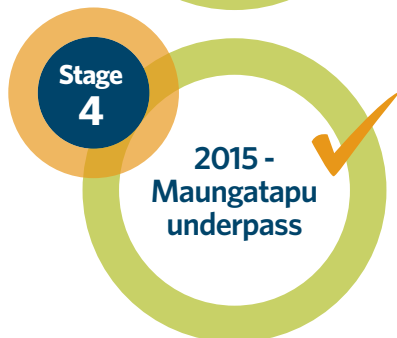
The second stage was improving pedestrian and cyclist safety and intersection traffic flows.

The upgrade was completed in March 2011.



After intensive investigations it was identified that this stage was not required before 2020.

TCC is looking to carry out four-laning in 2021.



The Maungatapu underpass was identified as the best solution to relieve traffic congestion, improve safety and separate local and state highway traffic. Work began in September 2015 and is expected to be completed in June 2018.

About the Maungatapu underpass project

The Maungatapu underpass will be a two-lane link that allows SH29A traffic to travel above Welcome Bay traffic going to and from the City. It will improve traffic flow around the Maungatapu and Hairini roundabouts, and make travel safer for people walking and cycling.

The underpass includes a separated dual cycleway through the underpass and a new pedestrian cycle bridge over the new link road, both of which connect to existing cycleways.

It also links with the SH29A Poike Road cycleway, and will eventually link with a new cycleway on 15th Avenue.

The Maungatapu underpass project began in September 2015 and is expected to be completed in June 2018.

Every effort has been made throughout the delivery of the project to minimise disruption to people's journeys and to surrounding neighbours.

The Maungatapu underpass is brought to you by:

[New Zealand Government](#)



Major components of the project



Major components of the project

Pedestrian overbridge



The pedestrian overbridge was built in one piece

The new “waka-inspired” overbridge connects into the existing pedestrian underpass to allow safe crossing of the Maungatapu roundabout. The 36m long and 4.9m wide bridge was opened in 2016.

The underpass



The underpass was built using top-down construction

The Maungatapu underpass was built using a top-down construction method, meaning the structure was built first and the earth beneath was then dug out. The underpass is 120m long and 15m wide.

Eastern and western bridges



Maungatapu eastern and western bridges

There are concrete bridges on the eastern and western sides of the Maungatapu roundabout, above the underpass. The western bridge is 17m long and 12m wide. The eastern bridge is 22m long and 12m wide.

Kaitemako Stream culvert



The Kaitemako culvert has environmental benefits to the area

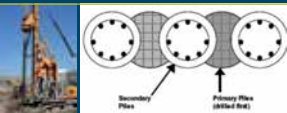
The new culvert for the Kaitemako Stream was a major part of the project from both a construction and environmental point of view. It is 12m long and 36m wide.


Top-down construction





Top-down construction means the structure was built first and the earth beneath was then dug out. It was designed this way to reduce disruption during construction. Here's how the underpass was constructed:


- 1 The underpass walls were constructed first using 210 intersecting concrete piles. To create the piles, holes were drilled 16m deep, reinforcing caging installed, then concrete poured.



- 2 Next, concrete bridge beams were placed across the top and connected to the walls to provide support.


- 3 The earth beneath the bridge was excavated to reveal the concrete piles.


- 4 The side walls were installed after the excavation.


- 5 Once the excavation was complete, the floor was constructed and the road surface laid.


- 6 Finishing touches made to the underpass walls, including installing the artwork.



Maungatapu underpass artwork



The artwork, titled *Kai te Mako - Partaking of the Makomako Leaves*, on the Maungatapu underpass represents the connection between local hapū Ngāi Te Ahi, Ngāti He and Ngāti Ruahine. The kowhaiwhai-inspired artwork tells the story of the Makomako leaves.

During an epidemic in the 1920s a Rongoa, an expert in traditional Māori medicine, advised local Māori to locate the leaves of the Makomako tree, or wineberry (*Aristotelia serrata*), that were abundant on the slopes of the Kaitemako hills. The leaves were collected daily, shared and consumed for their medicinal healing.

The small black and red triangles represent the Makomako leaves; and the bare triangles represent the barren hills of Kaitemako after the Makomako trees stopped growing.

Kai te Mako - Partaking of the Makomako Leaves

"Anei tetahi korero mo te ingoa a kaitemako na Rangiteaorere Heke-Kaiawha i korero mai"

Kaitemako Stream culvert



The new culvert for the Kaitemako Stream was a major part of the project from both a construction and environmental point of view.

There is an active fish life in the stream and this was a major consideration when the culvert was designed and constructed.

The concrete bottom has been roughened with cobbles and small stones, and this, along with rock protection work up and down the stream, helps to enhance fish passage through the culvert.

More than 1200 fish, including Red Fin Bully, Banded Kokopu, whitebait and eels, were relocated upstream during the stream diversion works.

The culvert has three sections – normal stream flow is through the centre section, and the sections on either side are at a higher level and for flooding only.

The culvert is designed to withstand 100-year flood events and provide access across to Welcome Bay in the event of a major earthquake, improving the resilience for the area.

Fish hotels



There are six fish hotels in the stream



Fish can rest in the hotels



Stream diversion



Giant Bulli

The Kaitemako Stream culvert includes fish hotels. Yes, you read that correctly!

There are six 400mm diameter pipes embedded in the banks of the Kaitemako Stream for fish to rest in.

The fish also need to get to the nearby wetland to spawn, so a rope ladder is in place in the culvert to allow fish to reach the wetland from the stream. The passage is also a place for fish to rest.

Before the stream diversion happened, great efforts were taken to rehouse the different species of fish living in the water. Over six nights in March 2016, 1143 native freshwater fish, ranging from large eels (up to 800mm long) to small whitebait and Giant Bulli species, were caught and released further up the stream in a new wetland area.

Local hapū and tangata whenua were actively involved in the relocation of the fish.

Pedestrian overbridge



The new shared overbridge for people walking and cycling connects into the existing pedestrian underpass to allow safe crossing of the Maungatapu roundabout.

The 36m-long steel bridge was built and lowered in place as one piece, so that it can be lifted out for maintenance. This forward thinking approach will reduce disruption to traffic compared with doing maintenance work if the bridge was in situ.

The bridge is painted in Resene “Pohutukawa red” - appropriate because of the Pohutukawa trees in the area. It is 4.9 metres wide and weighs 34 tonne.



Poike Road overbridge and shared path



The Poike Road overbridge, north of the SH29A and Poike Road roundabout, provides a safe crossing over the busy four-lane highway.

The overbridge spans the entire width of the state highway at 45.5m.

The new shared path from the overbridge to the Hairini roundabout, parallel to SH29A, links with the cycling and pedestrian networks in Hairini and the Maungatapu underpass. It provides a link to Toi Ohomai Institute of Technology and the University of Waikato Windermere campuses.

The 2km path goes past the new Scout and Girl Guides hall which the Transport Agency funded as part of the Maungatapu underpass project.

The Transport Agency has partnered with local hapū to restore the Tongaparaoa wetlands area near Ila Park.



Be in to WIN an e-bike! Go further and faster with an e-bike

electrify.nz



Enter the draw
to win a Magnum
electric bike valued
at \$2799 from
electrify.nz*

There are two ways to enter

- 1 Like our NZTAWaikatoBOP Facebook page

Take a selfie at the community day

Post it on the NZTAWaikatoBOP Facebook page and tag yourself.
Your photo must be uploaded before 11.59pm on 27 May 2018.

- 2 Write your details on the entry form located at the event HQ
marquee info desk.

*See www.nzta.govt.nz/hairinilink for full Terms and Conditions.
The draw will be held on 5 June 2018. There is one winner.
Competition closes 11.59pm on 27 May 2018.

Terms and Conditions

1. There are two ways to enter the Competition:
 - a. Upload a photo taken at the Maungatapu underpass community day (Sunday 27 May 2018) to the NZTAWaikatoBOP Facebook page and tag yourself, or
 - b. Complete the entry form at the Maungatapu underpass community day.
2. Only one entry per person is permitted for this Competition. There is one Prize consisting of an electric bike from the Magnum 48 volt range Peak Metro or Metro+ and a helmet to the value of \$2,799NZD (including GST) from electrify.nz (Durham Street, Tauranga).
3. The Competition closes at 11.59pm on Sunday 27 May 2018. All entries will go into an electronic Prize draw when one Prize winner will be selected.
4. The electronic Prize draw will be held at 11am on Wednesday 5 June 2018.
5. The Prize winner will be notified through Facebook Messenger or by telephone, and their name will be published on the Promoter's Facebook Page once contacted.
6. All personal details provided to participate in this Competition will be held and used by the Promoter for the purpose of this Competition.
7. If requested, the Prize winner must provide the Promoter with proof of identity, residency and age. In the event that the Prize winner cannot provide suitable proof, the Prize will be forfeited and no substitute will be offered.
8. If a Prize winner is under the age of 16 years the Prize will be awarded to the winner's parent/guardian on their behalf.
9. Full terms and conditions can be found at www.nzta.govt.nz/hairinilink

Protecting the environment



The Transport Agency, Bay of Plenty Regional Council and tangata whenua have worked together to ensure the environmental impacts are minimised. Strict environmental conditions were put in place and maintained throughout construction.

Careful consideration was given to surrounding areas such as wetlands, waterways, neighbouring cultural and residential areas, and the wider community.

Two permanent sediment control ponds were built to capture the run-off from the road. The ponds allow sediment to settle before the water enters the Kaitemako Stream.

Reeds have also been planted in the swale to support the natural sedimentation process.

During construction of the culvert, Fulton Hogan ensured the run-off water from the concrete pours did not enter the Kaitemako Stream, so the water was captured in a tank and reused for dust control on the site.



Landscaping and wetlands restoration



More than 60,000 plants have been planted in the area. Twenty different varieties of plants have been used, the majority of which are native grasses and shrubs, including Teasel Sedge, Taupata Toetoe, Manuka and Harakeke Oioi.

The landscaping of the new embankments, wetland planting, and more plants in the Kaitemako Stream area, complement the existing mature native shrubs and trees.

The storm water pond in the Hammond Street gully has been planted in native wetland grasses and flaxes.

Coconut matting has been used on top of weed cloth and top soil to help ensure there is no sediment run-off into the Kaitemako Stream and the Waimapu Estuary. Being a natural fibre, the coconut matting will eventually decompose.

The Transport Agency has partnered with local hapū to restore the Te Pahou wetland area adjacent to the underpass, and the Tongaparaoa wetlands area behind Ila Park. More than 180,000 grasses and shrubs – most of which will come from the nursery on Matakana Island – will be planted during the next three years. This was part of the consent condition to offset the wetland area that was used for the underpass.



What's next: Opening the underpass to traffic



All going to plan, the Maungatapu underpass is scheduled to open to traffic in June 2018.

There is still work to do to connect Welcome Bay Road, Hairini Road and Turret Road to the underpass, in order to complete the project.

Tauranga City Council, Bay of Plenty Regional Council and the Transport Agency are working on a range of initiatives to help improve the reliability of bus trips for the Welcome Bay community into the City, and looking to give buses more priority on the roads in this area. Exactly what this will look like is yet to be determined.

Tauranga City Council plans to widen 15th Avenue and Turret Road to four lanes in 2021, with priority lanes for buses, motorcycles and High Occupancy Vehicles (T3).

Key facts



2500m³ concrete used in the structures (about 420 truck and trailer loads)

The underpass is 120m long

210 concrete piles form the underpass walls. They are 750mm diameter and 450mm apart

400 truck and trailer loads of earth removed from underpass

700 eels and Banded Kokopu were relocated from the site to the Te Pahou wetland

170,000m³ earth brought on site – 8500 truck loads

Pavement in civil engineering terms is the make-up of the road

450 truck and trailer loads of sub base and 300 truck loads of base course was used

The asphalt – the smooth stuff on top – is 45mm thick



Thank you and acknowledgement

The Transport Agency would like to say a huge thank you to everyone involved in the Maungatapu underpass project including:

Fulton Hogan (Contractors)

Beca (Principal's agent)

Partners Tauranga City Council, Bay of Plenty Regional Council and the Maungatapu Hapū Advisory Group

the Welcome Bay, Ohauti, Maungatapu, Hairini and Poike communities, and everyone who has contributed to the community day.

He aha te mea nui o te ao.

What is the most important thing in the world?

He tāngata, he tāngata, he tāngata

It is people, it is people, it is people.



Thank you Keith Campbell

The Transport Agency would like to especially acknowledge Fulton Hogan's Safety, Stakeholder and Environment Manager Keith Campbell for his commitment, knowledge and hard work on the Maungatapu underpass project.

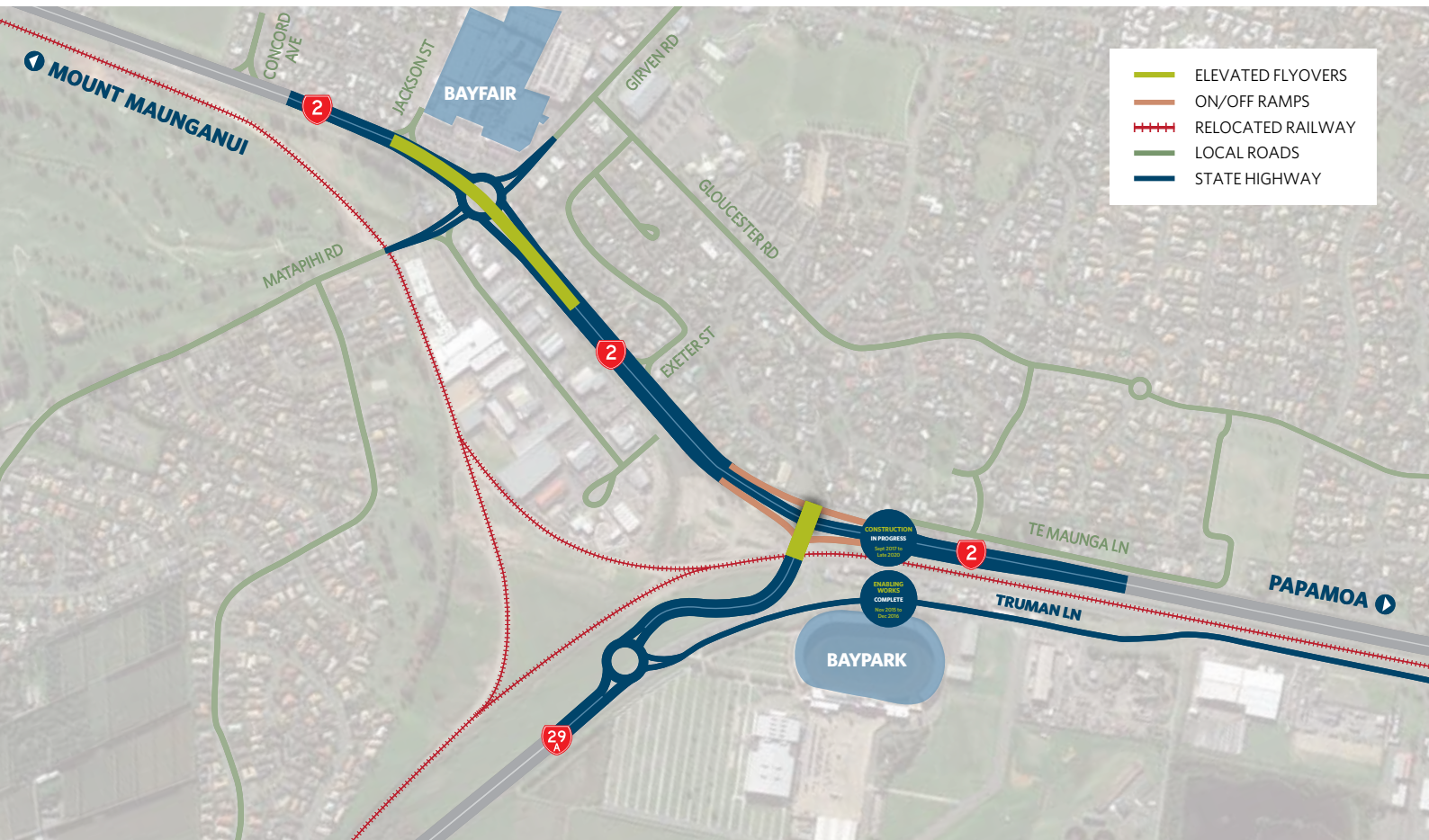
Keith will be a familiar face to many. He has inducted more than 530 people onto the site, and hosted dozens of community groups, schools and hapū and whanau during the past three years.

Keith has worked for Fulton Hogan since 1975, 17 years of this time as Regional Manager for the Bay of Plenty. He was a key part of the Tauranga Eastern Link project team, and prior to this played an integral part on the Harbour Link Stage 1 project - the four-laning of Hewletts Road from the old toll plaza to Jean Batten Drive.

On behalf of the Transport Agency and the Beca team, we wish Keith well for his future projects.



Baypark to Bayfair Link



The \$120 million Baypark to Bayfair Link is designed to reduce congestion and improve safety by separating local and state highway traffic. It will also support economic growth in the region by providing efficient freight access to the Port of Tauranga.

Bay Link key features

The Bay Link project includes the construction of two flyovers, and improvements to the roundabout at the State Highway 29A and Truman Lane intersection, and the State Highway 2/Maunganui-Girven Roads intersection. It will also include improved walking and cycling connections, which will encourage more people to bike and walk, ultimately easing pressure on our roads.

- Construction of flyover to take State Highway 29A over the railway line and the Te Maunga intersection
- Construction of flyover to take State Highway 2 traffic up and over the Maunganui-Girven Road intersection

- Improvements to the State Highway 29A/ Truman Lane roundabout at Baypark
- New signalised roundabout at the State Highway 2/ Maunganui-Girven Roads intersection
- Improved walking and cycling connections

Preliminary earthworks and the relocation of the East Coast Main Trunk railway line were completed in December 2016. The construction stage began in September 2017 and is expected to be complete in late 2020.

Sign up for updates at www.nzta.govt.nz/baylink

Tangata Whenua and community involvement



Local hapū, an important partner in the Maungatapu underpass project, saw progress on the project first hand.



Transport Agency Project Team Leader John McCarthy talking about the project on a local hapū and whanau bus tour.



Local hapū blessed the start of the artwork in the underpass.



Maungatapu School students were regular visitors to the site throughout the project.



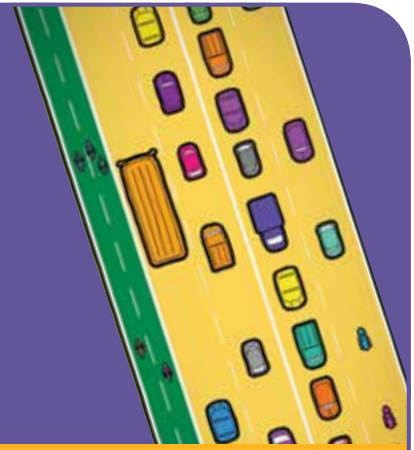
Oropi School visited the site and made concrete as part of a science project.



The demolition of the old Scout hall was exciting to watch for these local children.

We want to make 15th Avenue safer and easier:

- for people who live, work and go to school in the Avenues
- for people who commute along Turret Road and 15th Avenue each day.



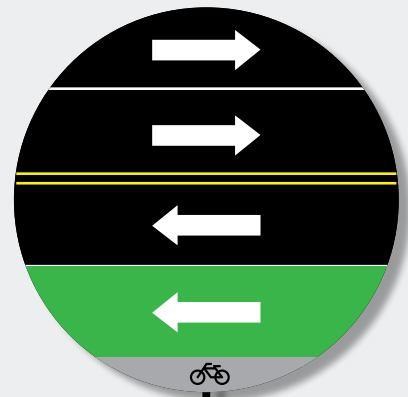
The challenge of 15th Avenue

- More people move across 15th Avenue each day than along 15th Avenue.
- Thousands of people travel every day to schools, jobs, medical centres, social services and shopping centres between 11th Avenue and 18th Avenue.
- The biggest disruption to travel times for people who are moving along 15th Avenue comes from the side roads and intersections.

To make better use of the travel space, our plans include:

- widen 15th Avenue
- create a new lane for buses, car pooling and people who are riding motorbikes and scooters
- build a separated cycleway that links from the Maungatapu underpass so more people can bike safely between the outer suburbs and the city
- put traffic lights at surrounding intersections to manage the number of vehicles arriving at 15th Avenue at any one time.

Four lanes with a bus/car pool lane, plus a bike lane



Most trips in Tauranga are made by people in cars with no other passengers. As bus trips get more reliable and biking options get safer, it will make a big difference to the number of vehicles on the roads.

Timing

2018: We'll add an extra lane for people driving from Fraser Street to Burrows Street. We'll also put traffic lights at Burrows and close the Turret slip lane to manage the side roads.

From 2021: The rest of project will be a lengthy and disruptive piece of work as we'll need to shift a lot of underground services. We need to time this work carefully so that it doesn't clash with the NZ Transport Agency's Baylink project. Having two major construction projects underway at the same time along two major transport routes will create more disruption than people are seeing now.

What about the Turret Road bridge?

We've been investigating the bridge structure to see what sort of extra loading it can take. Whether we upgrade the existing bridge or build a new bridge, the cost will be significant, possibly in the region of \$50 million. It is the most expensive project for the least amount of gain. We're looking at all the options, but in the meantime everyone will see more immediate benefits from the 15th Avenue improvements.

