

OLD MĀNGERE BRIDGE REPLACEMENT PROJECT

AUCKLAND CONSTRUCTION PROJECTS RESTART

With the recent move to alert level 3, the team are able to return to site and work in small groups or 'bubbles'. This newsletter shares updates of what took place on site before the move to alert level 4.



Deconstruction of the Old Māngere Bridge nears completion

Nearly 80% of the 280-metre-long Old Māngere Bridge has been removed with full deconstruction due to be completed by the end of the year.

To safely remove the bridge, we're using a cut and crane method. The bridge is cut into sections which are then lifted by a large crane onto trucks and transported to a disposal facility

where the concrete and steel rebars are separated and recycled. The bridge has 17 spans and 60 piles which total more than 6,000 tonnes of concrete and steel to be removed.

Onsite Update

Five of the seven piers as well as the northern abutment have now been built. The last two piers (pier five and six) and the southern abutment are currently under construction and this work is due to be completed by the end of the year.

The two large piers (pier two and three) which will hold up the architectural arch have also been built. While pier three is still sitting within its cofferdam, the sheet piles around pier two have been removed so it's now surrounded by the water of the Manukau Harbour.

Removing the large cofferdam for pier two meant the team had to take out 54 sheet piles that reached 20 metres in height and were driven ten metres into the seabed.

The base for the new bridge deck is well underway and 28 beams across three spans have been installed.

In preparation for the start of the installation of the central deck and arch, in our yard, at the back of the site office we've been welding the 21 small steel sections into three large pieces so they can be transported by crane on site.

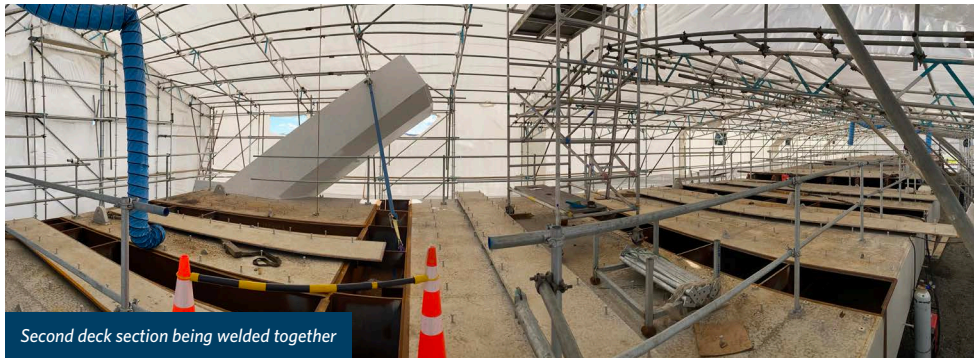
In November, the temporary working platform will be closer to the boat ramp at the end of Coronation Road. While access to the boat ramp will be mostly maintained, there will be less space than usual for approximately two months.

When the team needs to transport the central deck and arch sections on site, the end of Coronation Road road and the boat ramp will be temporarily closed for safety. Both will reopen as soon as the sections are on site. For more information, see over on page 3.

Please take extra care when navigating around the area.



Construction of the new bridge in progress



Second deck section being welded together

FASCIA PANELS APPEAR ALONG THE BRIDGE

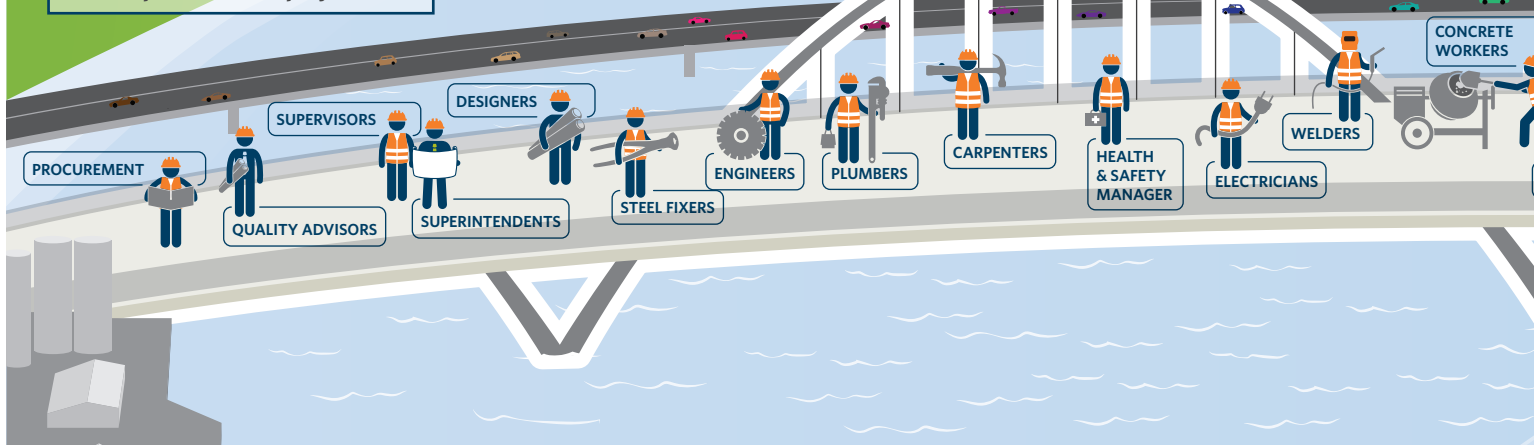
The new bridge has been designed to reflect a waka travelling south in acknowledgement of the passage along the Ōtāhuhu portage. As on the hull of the waka, a pattern will feature on the side of the bridge and a Puhoro design has been chosen to symbolise the movement through water. There will be 272 of these two-metre-long concrete panels running the length of the bridge on either side and so far, we've installed 64.



The artwork on and around the bridge abutments will also help tell the stories of the area and provide greater context around Kaitiakitanga (guardianship) of the harbour. We'll share more on the design of the new bridge in future updates.

Fun Facts

Nearly 500 people have been working on site since construction began and each person brings their expertise to the project.



Planned temporary road and boat ramp closure

When and where will the closure take place

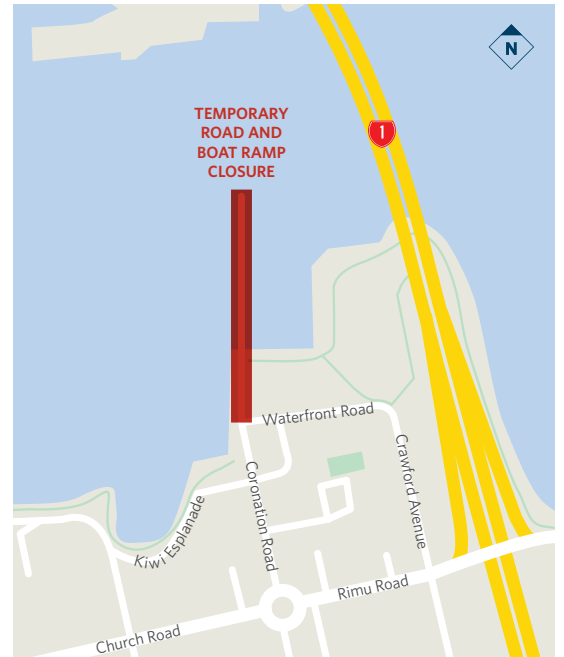
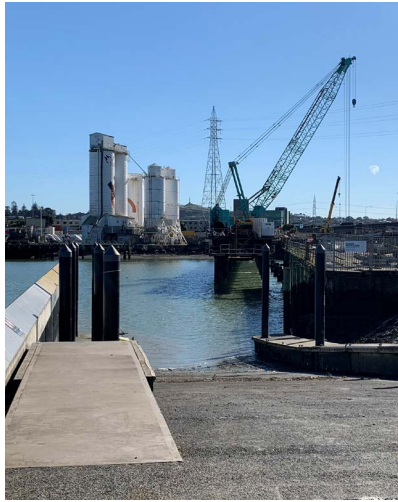
Over two days in November, the public boat ramp and end of Coronation Road from the corner with Waterfront Road will be closed (see map to the right).

The exact dates will be confirmed closer to the time and a digital sign will be in place in the local area a week before to keep you updated.

What work we will be doing

We need to temporarily close the area so that we can safely transport the central steel deck and arch sections from our yard to site.

We apologise in advance for any inconvenience this may cause and thank you for your patience.



PROTECTING MARINE MAMMALS

The Manukau Harbour is home to some of New Zealand's most important marine mammals including species like the Māui dolphin which number less than 100, making them one of the rarest in the world.

It's really important we keep marine mammals safe while we're working. To help with this, we developed a plan to manage the effects of our construction activities.

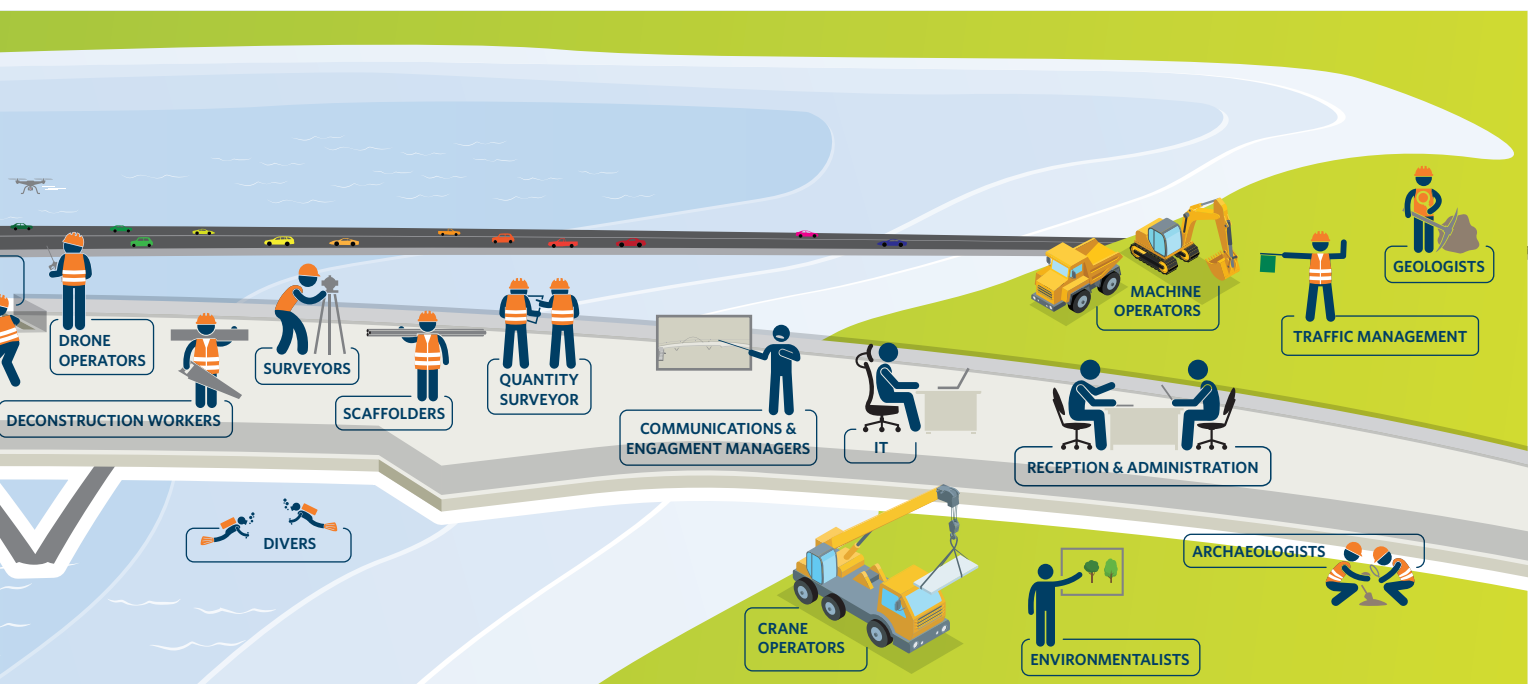
To help us understand how much noise and vibration we could potentially cause, and ensure we stay within our allowed limits, acoustic specialists conducted underwater noise monitoring. We used a hydrophone

which is an underwater microphone attached to the rope of a sub-surface buoy to collect data over several days while we undertook a variety of construction activities.

From analysing the data captured, we changed our methods to reduce the possible impact on marine mammals such as machinery that generates lower levels of noise, gradually increasing the intensity of vibration piling as well as having a spotter before and during work. The spotter ensures that no mammals swim within 50 metres of the work site and if they do, we put down tools and stop till they swim away.

"We take the protection of the environment and especially marine mammals as a top priority, especially when working in such a sensitive coastal area. Our strong environmental controls are applied onsite every day to prevent pollution or harm to aquatic life. It's great to be able to use technology onsite to monitor our performance and show our commitment to the environment."

Philip Alcock
Environmental Advisor



Keeping the community informed

Before the move to alert level 4, we were able to get out and about to update community. Check out some of the events we attended. We look forward to being able to meet again in person.



June: Māngere Bridge Residents & Ratepayers Association group



June: Updating the Māngere Bridge Walkers Group



August: Māngere-Ōtāhuhu Local Board site visit



July: Careers evening at the Epsom Girls Grammar School

MEET THE PROJECT TEAM



Selina Abercrombie

Commercial Diver

What is your role and responsibility in this project?

I'm Selina, 31 years old and of Māori and English descent. I'm from Te Tai Tokerau Northland and live in Tāmaki Makaurau Auckland.

I've been a commercial diver for five years and am one of the few females working as a commercial diver in Aotearoa. I really enjoy my job because there's always something new to learn and I get to work on unique projects such as this one.

It's my responsibility to ensure the sheet piles below the water line are sealed so the cofferdams keep the water out. This creates a safe and dry environment for the team working inside so they can build the piers of the new bridge.

What do you enjoy about working on this project?

I'm really enjoying the challenges that come with this job. There is a lot of tidal current within the Manukau Harbour which makes the task more difficult and it can be tricky at times to see the gaps in the sheet piles which need to be sealed. This means it can take a while to find the spot I need to seal so I've got a lot more patience now than when I started.

What is the outcome you'd like to see at the end of construction?

Seeing the local community using and enjoying this bridge for many years to come, will be a great outcome. I'm also excited to tell my children and in the future, my grandchildren that I was part of the team who built the bridge.



For more information on the project or to sign up to newsletter updates, please scan the QR code or visit www.nzta.govt.nz/omb

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