

OLD MĀNGERE BRIDGE REPLACEMENT PROJECT



Bridge deck taking shape across the Manukau Harbour

In April we celebrated another major milestone when we completed the first span of the base of the new bridge deck between the northern abutment and pier one.

“The first span, together with the two completed piers is allowing us to see the great progress the team is making, and over the coming months the bridge will really start to take shape,” says Waka Kotahi NZ Transport Agency National Manager Infrastructure Delivery Andrew Thackwray.

To build this first span, it required seven beams up to 21m in length and weighing about 30 tonnes. Due to their size, only one beam can be loaded onto a truck each time so this is a time-consuming process. In total, 71 concrete beams are needed for the project.

The beams are being constructed in Tauranga using a mould and reinforced steel bars which act like a skeleton before the moulds are then filled with concrete. Each beam is left to cure (dry) which takes around two days before they are then transported to Auckland.

The team will be working on installing the additional beams throughout the rest of this year and all beams are planned to be in place by early 2022.

Onsite Update

Construction of the Old Māngere Bridge Replacement is well underway. With the first bridge span completed, the team have moved onto the second span and at time of going to print, we have placed two of the seven concrete beams. We are now removing the temporary works around our largest pier (pier two) which includes the scaffolding, formworks and the sheet piles which created the cofferdam. Due to the size and scale of this pier, this work will be completed around the end of June.

Another team is working on the second large pier (pier 3), which supports the other side of the central steel deck and arch. The pile cap and plinth (base) have already been completed and the team is now forming the four 14m tall 'v' shaped columns which the bridge deck will sit on.

We also have two more small piers (pier four and seven) located on the southern side underway.



Two of the seven concrete beams placed on pier two

Fun FACTS

Learn about some key facts and stats about the concrete beams which shape the deck of the new bridge.

EACH BEAM WEIGHS ABOUT

30 tonnes

which is nearly

15 TIMES HEAVIER

than the Guinness Book of World Records entry for the 'greatest weight ever lifted by a human being'



The base of the bridge deck will weigh approximately

2,000 TONNES



1,500 times HEAVIER THAN A MEDIUM CAR

PLACED END TO END, ALL 71 CONCRETE BEAMS ARE ABOUT

1.5km long

This is the same distance as walking from the southern abutment to the base of Māngere Mountain ...

or just over THREE SKY TOWERS PLACED ON TOP OF EACH OTHER





Lifting out one of the old bridge beams

DECONSTRUCTION OF THE OLD BRIDGE RESUMES

Over the course of the last three months, work on the western side of the Old Māngere Bridge has focused on building a second temporary work platform which is needed to enable us to restart deconstruction of the old bridge.

The deconstruction work is being undertaken by a kiwi owned family business which specialises in concrete cutting and deconstruction and at time of going to print, we've removed eighth spans from the old bridge with nine spans left to go.

By mid-2021, this second temporary work platform will extend much closer to the public boat ramp at the end of Coronation Road in Māngere Bridge. While access to the boat ramp will be maintained, we ask users to please take extra care when navigating around the area.

Don't forget to check out the notice board with some helpful user guidelines before you head into the water so everyone can stay safe whilst enjoying the Manukau Harbour.

Arrival of the arch and centre deck pieces on site

It was an exciting day on site when we took delivery of one of the first end sections of the steel arch (see photos right and below). In total there are 18 steel pieces which are being made in Napier and the team will weld these together to create three larger pieces which will then be craned onto site to create the central span and arch of the new bridge.



A deck section with the arch was delivered on site



Old anchor found on site

In early March, our team discovered an old sailing anchor which was an exciting find! It's most likely to have been buried in marine sediments and uncovered when the mud was excavated during construction.

We had an archaeologist examine the anchor and they've told us that it does not have any features that modern boat anchors have and looks to be a type that was still popular in the mid-20th Century but has now largely gone out of use. Weighing less than 5kg, it's believed to be commercially produced and most likely was used as a small mullet net anchor.

To prevent further damage from the natural environment, it's currently being stored in fresh water while we look into a long-term place the anchor can call home.



GUIDING GIRLS INTO A CONSTRUCTION CAREER

We recently held an event with the local GirlGuiding NZ Rangers group. The aim of the evening was to show the wide range of career opportunities that the construction industry offers, provide the chance to meet some of our talented women project team members and to enjoy a tour of the construction site.

After a short presentation and health and safety briefing, we headed out on site which was the highlight of the evening. The Guides kept the project team on their toes by asking many questions.

We received great feedback from the group, and (fingers crossed) we may see more young women in the industry in the future.



MEET THE PROJECT TEAM



Suzanne Armour

Frontline reception

What is your role and responsibility in this project?

I control visitor access as well as all machinery movements through the main gates to ensure that community are kept safe. As I'm based in the small office outside the main site, I meet a lot of people who ask questions about the project and I help answer these - or find someone in the team who can! It's been great to get to know the community in which we're working. With the increased health and safety procedures in place during COVID-19, I also record the temperatures for those working on site to help keep us all safe.

What do you enjoy about working on this project?

I really enjoy the interaction with community as well as being part of a great team. I feel privileged to contribute to the project and hope that sharing a smile and greeting everyone makes a difference in a small way. I'm also currently learning Te Reo Māori at the local Te Puea Marae, located at Māngere Bridge.

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

A majestic bridge that will become iconic and part of the history of the area. I'm looking forward in revisiting the bridge in years to come and feel proud knowing that I was associated with the team who built it! The awesome relationship I have made with community along the way will be part of the memories I cherish for a long time.



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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