

Kopu Bridge Replacement



The Kopu Bridge construction site, viewed from the west bank of the Waihou River during flood flows in late January

Construction of the five remaining bridge piers for the NZ Transport Agency's Kopu Bridge Replacement Project is under way from a temporary work platform extending from the eastern bank of the Waihou River. The project remains on target for completion in mid-2012.

Settlement rates are critical

The settlement rate of soft subsoils under the bridge approach roads is expected to be the critical factor affecting the opening date. Settlement rates to date are in line with what the project team expected. If this continues, the approach roads will be built in the summer of 2011/12.

Construction of 2.5km of approach roads cannot begin until the subsoils have settled enough to bear the weight of the new approach roads and traffic.

Bridge progressing well

Construction of the bridge piers, beams and decks from the western bank of the Waihou River is progressing well.



The bridge beams and most of the concrete decks are now in place between the 10 completed bridge piers. The western bridge abutment is now under construction. When this is complete, beams will be laid between the abutment and the first pier on the western side, followed by deck construction. This will be the final section of deck to be completed on the western side.

Metal handrails are currently being installed along the northern side of the bridge deck, where the combined walk/cycleway will be located.

On the eastern bank, a second temporary work platform now extends into the river to provide access to build the remaining five bridge piers. The first pier is under construction.

Prior to designing the new bridge, 15 bores were drilled into the riverbed on the proposed bridge alignment to find out the ground conditions in the area. Now, before each set of piles is driven, a drilling rig on the work platform collects soil samples in what are called 'proving bores'. The rig drills down 60m deep in the actual pile position to confirm and test the subsoils below. The results are then analysed by Beca geotechnical engineers and the contractor is advised how deep to drive the piles.

Deck construction

To build the concrete decks, formwork needs to be placed and braced in between the bridge beams to provide a mould for the concrete. Once the deck concrete is poured and set, removing the formwork from under the deck presents some challenges.

To provide access under the bridge, contractor HEB Structures has developed a number of innovative temporary works techniques. A purpose-made access platform has been built to speed the construction process. It also minimises the health and safety risks to the construction crew, who would otherwise need to work at long reach in cherry pickers.



The platform for the removal of concrete formwork

Queues cause headaches for truckies

Norm Tomsett is looking forward to the day when his trucks can drive in and out of his courier depot without being held up by Kopu Bridge traffic.

And that day will come in mid-2012 when the new two-lane Kopu Bridge opens.



Norm Tomsett says, '...the biggest problem we have is just turning out of our driveway'

existing Kopu Bridge where traffic queues for the bridge and trucks travelling off the bridge can wait up to 10 minutes before the traffic queued to get onto the bridge is able to provide a gap for them to get across the road to their depot. Manager, Dave Malanaphy says 'With 30 to 40 truck-and-trailer movements over the bridge each day, those holdups cost us time and fuel we can't recover. The new bridge will be great. We'll have a slip lane off the bridge that heads straight to our depot.'

The new bridge will increase traffic capacity, reduce costs and improve travel times for all road users.

Norm runs Coromandel Peninsula Couriers from a depot in Kopu Road - located just west of the Kopu Tavern.

'Hold-ups getting over the bridge are a pain, but the biggest problem we have is just turning out of our driveway. Sometimes we just want to drive a truck across the road to our mechanic and it's impossible.'

The courier depot is affected by traffic queued to turn out of Kopu Road (SH25) onto the Ngati Maru Highway (SH26), and also traffic queued waiting to get onto the existing one-way Kopu Bridge.

'It's either queues coming off the bridge or queues getting on, or both. A truck needs a big gap in the traffic, and if it has a trailer, it needs a really big gap.'

'When the new bridge is open, everything will flow freely for the first time.'

Down the road at Linfox Logistics, trucks sometimes have trouble turning into their depot. The depot is located just east of the



For more information

For more information, go to www.nzta.govt.nz/kopubridge