



Waitaki Bridges Replacement Project

NEWS UPDATE

March 2013



Work will begin in March 2013 on building the replacement Waitaki Bridges on State Highway 82 at Kurow. The expected final cost of the project is \$20.1 million.

The two new two-lane bridges are a NZ Transport Agency funded project that is being built by McConnell Dowell Constructors Ltd and are expected to open late in 2014. Funding for these two modern two-lane bridges over the river, linking State Highway 82 with Kurow, on the south bank, and Hakataramea on the north bank, was approved in the 2012-15 National Land Transport Programme.

Originally built as railway bridges, the current single-lane bridges were opened in 1881 with a combined length of 762 metres and one of the largest wooden bridges of its kind in New Zealand.

THE NEW BRIDGES

State Highway 82 is an important freight and tourism route that the local community depend on to access services and for the distribution of supplies to the surrounding rural community. Being built immediately downstream from the existing bridges, the new bridges will ensure that the communities of Kurow and the Hakataramea Valley have a secure transport link over the Waitaki River.

KEY BENEFITS

- An alternative route for SH1 traffic in case of emergencies, such as crashes or floods that close SH1 or make it impassable.
- Provide route security along SH82 between Kurow and Waimate.
- Provide facilities that improve safety for cyclists and pedestrians using the bridges with a separate lane for their use.
- Safeguard a critical link between Kurow and Hakataramea Valley that has existed since the current bridges were opened in 1881.

- Ensure residents in the Hakataramea area have access to essential services and employment in Kurow.
- Increase the capacity for oversized vehicles, such as agricultural machinery and freight, to use SH82 rather than detour to use SH1.

BRIDGE FEATURES

- Two new two-lane steel and concrete composite construction bridges.
- Improved and realigned approaches from both banks.
- A barrier separated walkway for pedestrians and cyclists on the downstream side of the bridges.
- Upgraded river protection works.



The facts and figures

The current bridges

- Bridge No.1 on the Waimate side of the Waitaki River is 256m long.
- Bridge No. 2 on the Kurow side of the Waitaki River is 140m long.

The new bridges

- 206m for Bridge No.1 and 92m Bridge No.2.
- Two 3.5m wide traffic lanes – one in each direction.
- 0.75m wide road shoulders either side of both lanes.
- 1.30m wide pedestrian/cycleway at the same level as the roadway on the southern side of both bridges.
- The bridge piers will consist of single 1.5m diameter reinforced concrete columns above the waterline sitting atop 1.8m diameter steel cased excavated piles terminating approximately 40cm above the normal river level.
- The bridge piers will be positioned regularly along the length of both bridges and piling will be to a depth of 22m to 25m.



Aerial plan of the new bridges



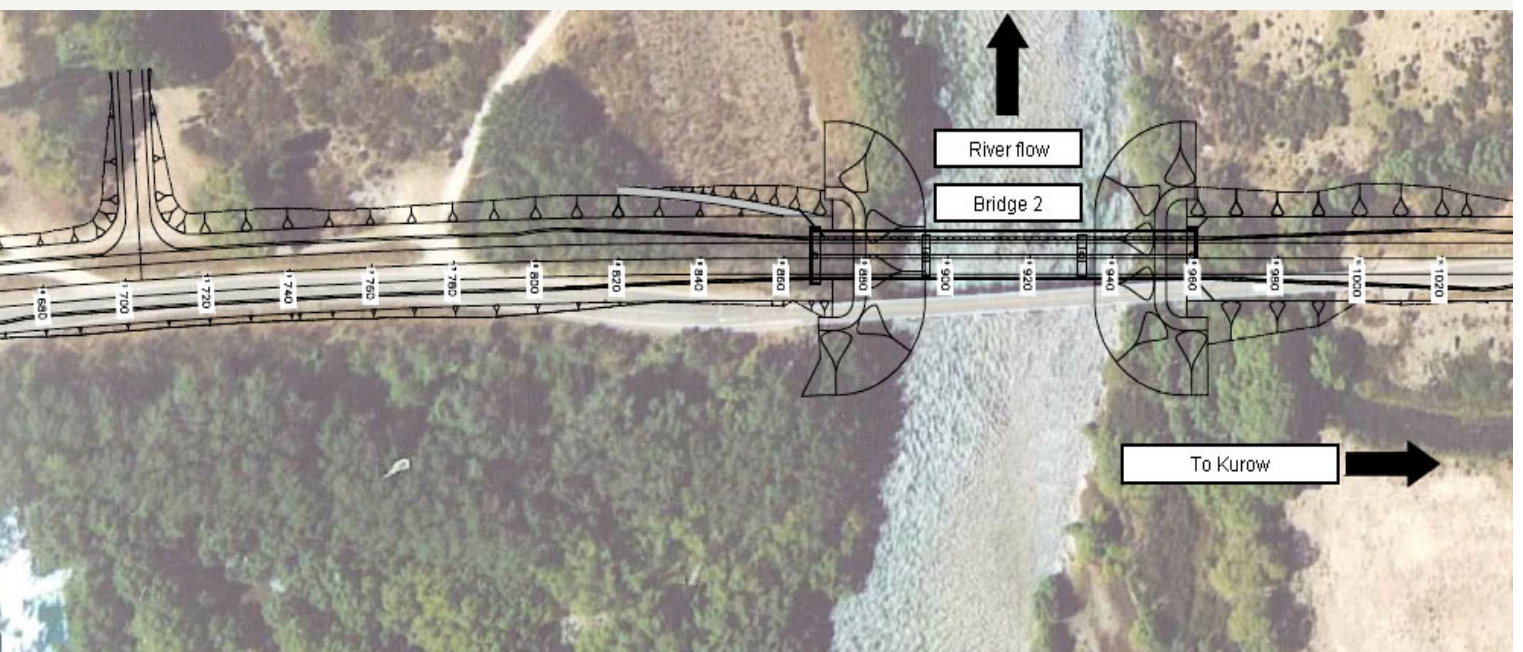
The old bridges

Because of their archaeological and historical significance, the NZTA has worked with various groups and organisations on how to best preserve some tangible evidence of these bridges for future generations.

These discussions involved the New Zealand Historic Places Trust (NZHPT), the Kurow community and both the Waitaki and Waimate councils. It has resulted in an agreement to have two 40ft. spans of the bridges preserved at low level for public display on the 'Kurow Island'. These spans may form part of a wider public leisure and education area being considered on the island by the councils, Kurow Town Enhancement Group and DoC.

An agreement has been reached with the Waitaki District Council to dispose of the remaining bridge parts. Several possible projects where the timber could be used have been suggested with the council to consider the merits of these when deciding where the timber goes.

The construction of the Kurow-Hakataramea Wooden Howe Truss Bridges across the Waitaki River in 1880 was a major engineering achievement. This massive wooden structure was one of the largest of its kind in New Zealand at the time with a total bridge span of 762m. Although the bridges have been repaired and shortened during their life, they remain an important historic structure of the Waitaki Valley. Bridge No. 1 is the longest remaining wooden Howe Truss Bridge in the South Island.



Indicative construction timetable

March 2013

McConnell Dowell Constructors Ltd will start setting their site up including establishing fenced compounds, clearing ground at the bridge abutments and starting earthworks for the rock protection work on bridge 2 on the Kurow side of the river.

April 2013

Piling on bridge 2 will commence with the supply of the steel pile casings, starting at the Kurow end of the bridge and later moving to the island to complete piling of bridge 2. This work is expected to take four months.

The construction of a temporary construction only bridge will also get underway in April parallel to bridge 1. Work will start from the Hakataramea end of the site.

August 2013 onwards

Piling for bridge 1 starts. Steel beams and precast panels that fit on top of the pier cap above the piles are being made offsite and are made of weathering steel rather than conventional steel.

Weathering steel is a high strength low alloy steel which forms protective rust 'patina' over time. The protective layer develops in both wet and dry conditions to create a protective barrier that almost eliminates corrosion. Weathering steel with its earthy tone will blend in naturally with the surrounding landscape for the life of the structure.

The bridge beams are being fabricated by Eastbridge in Napier and will be progressively transported to the site where they will be fitted onto the pier headstocks by site cranes. With the steel beams secured, precast concrete panels will be placed in position and a concrete topping poured to complete the structural deck. This will finally be surfaced with asphalt.

As the bridge construction nears completion road realignment work will be carried out in two sections. The first section will be on the island and the Kurow side, as bridge 2 will be finished ahead of bridge 1, the longer of the twin bridges.

The existing bridges will finally be deconstructed after the new bridges are opened for traffic.

Final sealing of the road and the bridges will be completed after a bedding-in period.



If you require any additional information, please contact:

Steve Proud, Project Manager

NZ Transport Agency

03 964 2892

Email steve.proud@nzta.govt.nz

Greig Larcombe, Team Leader

OPUS

03 363 5546

Email greig.larcombe@opus.co.nz

More information about this project can be found at: www.nzta.govt.nz/network/projects/project.html?ID=113



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WAKA KOTAHI

New Zealand Government