

New Brooking Channel Bridge



Construction of the New Brooking Channel Bridge

Building the New Brooking Channel Bridge

The Fitzroy Bridge Alliance, working in partnership with Main Roads, is replacing the Brooking Channel Bridge, maintaining a focus on maximising opportunities for local employment and investment.

Initial works started in April 2024, with the 127m long New Brooking Channel Bridge on track to open ahead of the wet season in late-2024.

Demolition works

The old Brooking Channel Bridge was demolished in June 2024 marking a significant milestone in the project timeline. The demolition took place over four days, clearing the way for the construction of the new bridge to begin.

Piling works

Once demolition was complete, the installation of 18 bridge piles, varying between 5 to 14 metres in depth began. To install each pile, a temporary pile case is bored into the riverbed. Once in place, the material within the casing is removed. A steel reinforcement cage is then installed into the casing, and concrete is poured before the temporary casing is removed.



Piling machine

Pier construction

Once the piles are installed, the team cuts the piles to ground level and formwork is put in place to mould the reinforcement steel and concrete, which forms the pile cap. Concrete shells are then stacked on top of the pile cap and filled with reinforcement steel and concrete to construct the pier. Each pier comprises of two to three concrete shells. Due to the hot weather conditions, ice is added to the water during the concrete pours to keep the core temperature low.



A pre-cast shell unit being moved to the work site

Did you know that the concrete pier shells were made on site in Fitzroy Crossing to support local jobs?

Bridge segments

The bridge deck will be constructed in segments on a temporary concrete casting bed, with 18m steel bridge beams planned to arrive on-site during July and August.



Temporary concrete casting bay

The bridge beams will arrive in pairs and will be connected into one module on top of the temporary plinths, with 3 modules, or 6 beams, making up the width of the bridge. Once the beams are installed, steel plates are welded onto the top of the beams, followed by steel reinforcement ahead of concrete being poured to form the bridge deck.

Launching the bridge

Once the bridge deck has been assembled, the bridge will be launched.

The team have built a long launch bay to build the entire bridge prior to launching, meaning the bridge can be launched in only a few days. By comparison, the New Fitzroy River Bridge was launched in increments over a series of weeks.

Building the bridge deck offline has allowed the team to work closely with the local employees who are currently undertaking their Certificate II in Civil Construction. Areas of focus have included formwork, steel fixing and concreting.

Road asphalt and bridge completion

Once the bridge is launched, finishing works will include earthworks and asphaltting of the bridge deck and the approaches.

Building capability in the Valley

Currently the project has more than 120 local workers, some who are taking part in construction, hospitality and security training. On-the-ground training has focused on mentoring and learning, allowing for creating an inclusive culture that gives the team the skills to work in a number of different construction and hospitality positions.



Local training - steel fixing

Scan the QR code to see similar construction methodology undertaken on the New Fitzroy River Bridge.



Further information

For further information, please call 138 138, email enquiries@mainroads.wa.gov.au or visit www.mainroads.wa.gov.au/brooking-c-bridge/