



Swan River Crossings - Fremantle Traffic Bridge

What is the Swan River Crossings project?

We are replacing the Fremantle Traffic Bridge with a new bridge in the same location.

The new Fremantle Traffic Bridge will become Australia's only extradosed bridge and will make a striking gateway to Walyalup (Fremantle). The new bridge features:

- Two traffic lanes in each direction separated by a median.
- Higher and wider navigational clearances to improved safety for boats, kayaks, and other river users.
- New wider and safer pedestrian and cycling paths (up to four metres wide) on both sides to connect into the existing path network.

Why does the traffic bridge need to be replaced?

The bridge has a high level of corrosion and rot in the structure and is at risk of not being able to sustain the impact of being hit by a large vessel. Since the bridge was opened in 1939, Main Roads has undertaken extensive maintenance and repairs, and many elements have been replaced with steel and concrete. More information is available in our Bridge Condition fact sheet [here](#).

Construction

When will the project be finished?

The new Fremantle Traffic Bridge is expected to be complete in late 2026.

What are the advantages of building in the existing location?

- The construction footprint is smaller.
- Impacts to the surrounding road network and limestone escarpment are minimised.
- The location and heritage of the crossing is maintained and celebrated.

How are you managing construction impacts for the community and businesses?

We are managing construction impacts by:

- Using noise monitoring equipment during works that immediately notify the team if an exceedance occurs, which is then rectified.
- Placing vibration monitoring equipment on land and in the river.
- Using dust monitoring equipment.
- See our Managing Construction Impacts fact sheet at [here](#) which contains further information.

We will continue liaising with businesses and residents to manage key concerns during all construction activities.

Will construction works impact the shared path over the bridge?

Yes. Construction works require various activities that will impact the shared path. For the most up to date information subscribe to receive roadworks updates [here](#) or view the [Main Roads WA Travel Map](#).

How will you be building the new bridge?

The bridge will be built in several stages:

- Temporary jetty installation
- Bridge foundation piling
- Pylon construction
- Bridge edge beam installation
- Removal of existing bridge
- Bridge beam and deck installation

For further information, please view our construction staging fact sheet [here](#) and our bridge construction animation video, available [here](#).

What are the hours of operation for construction activities?

Most works will occur from Monday to Saturday 7am to 7pm (excluding Sundays and public holidays). If construction activities are required outside these times, an Out-of-Hours Noise Management Plan will be prepared in accordance with the Environmental Protection (Noise) Regulations 1997 and reviewed and approved by stakeholders, including Local Government, before Out-of-Hours work can commence.

Piling

What can people in the area expect during piling works?

Piling will generate some loud and consistent noise. Nearby residents may experience some vibration when the piling rigs are operating. We will be:

- Undertaking works during the day.
- Providing respite periods from piling to manage and limit noise impact in surrounding areas.
- Using the quietest equipment available.
- Undertaking noise and vibration monitoring.

How will river users be restricted during piling works?

Underwater noise is magnified, travels a lot further and has the potential to cause damage to human hearing. To maximise river user safety, restrictions are in place for swimmers and passive craft users between Fremantle Traffic Bridge to the east of Stirling Bridge from 7am-7pm Monday to Saturday and re-opening outside of these hours (morning and evening, as well as Sundays). This restriction will be in place until in-river piling is finished, anticipated in the second half of 2025.

How long will in-river piling works continue?

In-river piling works started in September 2024 and are expected to last up to 12 months, subject to weather conditions.

Why do you need to pile in the river for 12 months?

The site's unique geology means that temporary jetty construction and main bridge pier piling can only be delivered by driving piles via hydraulic impact hammers. Vibratory and hammering piling methods drive steel casings into the ground, with approximately 80 piles to be driven into the riverbed. Piling is done in two stages:

- Temporary jetty works: four jetties are built at both ends and each side of the bridge to provide a safe and stable base for the four larger crawler cranes.
- Permanent bridge works: construction of bridge foundations will start once temporary jetty works are complete.

More information can be found in the Construction Staging fact sheet [here](#).

What equipment will be used for piling works?

- Four large crawler cranes – two with a 320 tonne lift capacity and two with a 480 tonne lift capacity - will be placed on the four temporary jetties. These eight to nine metres wide cranes can extend up to 50 metres high. Their primary role is to support the piling hammer.
- Three Junttan piling hammers, each over 11 metres long and weighing around 47,000 kilograms, will be attached to the cranes and used to hammer piles into the riverbed.

Service Relocation

What are the benefits of relocating the new service lines under the river?

Relocating services under the river:

- Minimises surface disturbance.
- Offers faster installation.
- Reduces waste material.
- Protects essential service lines from extreme weather conditions.
- Reduces the risk of interference from external factors.

Why couldn't you put the new service lines in the bridge deck?

The new bridge has a slim deck that helps maximise the navigational clearance without increasing the road height, and also meets stakeholder aspirations for a slender bridge design. The dimensions of the new service pipes mean there is insufficient space for new service lines inside the bridge edge beams. The design would change significantly to allow more space inside the edge beams to anchor the bridge cables and cater for lighting.

Are the service pipes tested before installation?

Vigorous testing is completed on the pipes prior to installation to ensure reliability, with future maintenance being completed by the asset owner (Water Corporation or Telstra).

Traffic

Will Beach Street reopen?

Yes. Beach Street will reopen at project completion. The current closure is required to provide a safe environment for the wider community and our workforce, and enables:

- Safe access and egress for construction vehicles transporting materials and plant to the site, including two cranes eight to nine metres wide and weighing 320-480 tonne.
- Space for the temporary jetties to be constructed on the south-east and south-west of the existing bridge.

Why is a bridge closure needed?

The new bridge will be built in the same location, and works will reach a point where the construction cannot continue without removing the existing bridge. During the closure, the existing bridge will be dismantled, new bridge deck beams installed, and asphalt laid before the new bridge opens.

How long will the bridge be closed?

The Fremantle Traffic Bridge will be closed for 12 months in the second half of 2025. The construction methodology has been refined to reduce the closure time.

Will my journey be affected by the bridge closure?

If you live and/or travel through the Fremantle, North Fremantle and East Fremantle areas, your journeys will be impacted by increasing in congestion in the area. Work is underway to determine how impacts can be mitigated.

How are you planning to mitigate the traffic congestion when the bridge closes?

We are developing a bridge closure management plan with State and Local Government agency involvement, and will be liaising with businesses, community members and stakeholders to discuss how we mitigate network impacts.

Will the speed limit change?

No. The new bridge will retain the existing 60km/h speed limit. This meets current Australian and State Government safety standards for a four-lane main road intersecting with Tydeman Road and Canning Highway, which both have a 60km/h speed limit.

Will freight trucks be able to use new bridge?

Although the new bridge will be built to current safety standards, freight vehicles will continue to use the dedicated freight route on Tydeman Road and Stirling Highway.

Heritage

How is the heritage value of the bridge being considered?

Heritage values are a key consideration. The bridge and surrounding areas have provided a crossing place for First Nations People for thousands of years, and the new bridge will be the fifth built at this location. This provides an opportunity to highlight the Aboriginal and historical heritage significance of the crossing between Fremantle and North Fremantle. As a way of celebrating and recording the heritage of the bridge, we are undertaking a 3D digital capture of the bridge for future generations.

Will you retain any remnant piles of the current bridge?

Yes. At the northern end, four rows of the existing bridge piles will be kept.

How is the project considering Aboriginal culture?

The Project's Whadjuk Elders' Advisory Group was established in early 2021. The group highlighted the importance of minimising the number of piers in the river to maintain flow of water, which has been incorporated in the design. Removing piers renews and enhances the long Aboriginal connection to the area by improving water flows to preserve Aboriginal Songlines and Dreaming Stories. The Spirits then flow out of the river out towards Wadjemup (Rottnest Island). We continue to work closely with Whadjuk Nyongar Elders.

What will happen to the existing bridge timbers?

Over the years, chemicals have been used to preserve the bridge timbers. Where possible, timbers in good condition will be repurposed.

More information will be provided as we progress.

Will the container bow be moved?

No.

What will happen to the Ferry Capstan?

The Ferry Capstan base will undergo some conservation works and be retained, with its surrounding area planted with local species. Seating and signage will be installed to allow reflection on the heritage of the Ferry Capstan.

What will happen to the brass orbs?

Alternative uses for the decorative brass orbs are being investigated in the urban design process.

Environment

What is being done to reduce the construction impact on the local environment and the Swan River?

We will minimise environmental impacts during both construction of the new bridge and removal of the existing bridge. This includes working closely with Regulators, including Department of Biodiversity, Conservation and Attractions.

- The bridge construction methodology minimises sediment disturbance and impacts of in-river works.
- Water quality will be monitored throughout construction, including river water testing and visual monitoring for any sediment plumes.
- Machinery used over the water will have in-built control measures to mitigate the risk of hazardous chemicals reaching the river in the event of equipment failure or spills.

More information can be found in our Managing Environment Impacts fact sheet [here](#).

Has climate change and potential sea level rise been considered?

Yes. Main Roads has a climate change and adaptation guideline that all projects and works near coastal areas consider in the planning, design and construction phases. The project is designed for a 300 mm sea level rise for roads, and a 900 mm sea level rise for bridges (this is required to control changes in navigation clearance requirements as the sea rises).

How are you managing the dolphins in the river during construction?

Managing marine fauna and potential impacts from underwater noise is an important part of our works.

- We are using trained Marine Mammal Observers (MMO) on site during piling.
- Extensive observation and 'shut-down zones' have been established. Piling will stop immediately if marine mammals approach the shut-down zone.
- Soft start piling is undertaken, which involves gradually increasing the piling energy that alerts marine mammals to the activity before noise levels peak.
- Several team members have been trained as Dolphin Watch volunteers.
- The project participated in a recent dolphin study, reporting dolphin numbers and behaviour in the area.

Marine Mammal Observers (MMO) will provide information to the Dolphin Watch Program, which is an important research and education project that provides a better understanding of dolphin ecology in marine and estuarine environments. More information about the program can be found [here](#).

How are you managing sediment and debris in the river during construction works?

We have developed bridge construction methods to minimise sediment disturbance and riverbed impacts. For example, piles will be hollow, which will allow soil to enter the pile, rather than be pushed aside.

Water quality will be monitored throughout construction, including visual monitoring of any sediment plumes. More information is available in the Managing Environmental Impacts fact sheet for details [here](#).

Will the concrete deck of the old Fremantle Traffic Bridge be recycled?

Yes. The asphalt and concrete decks will be separated, removed, and distributed to relevant recycling plants. The material can then be processed and re-used on other WA road projects.

What are you doing to replant trees you remove?

The project has a unique opportunity to restore the area using local, native species at project completion. This includes replanting trees at a three to one ratio (meaning that every tree we remove, we plant three).

How are you managing fauna during vegetation clearing?

Managing fauna is an important step in the vegetation clearing process.

- Before any vegetation is removed, an active search is undertaken by a specially trained fauna handler who is licensed to capture and relocate native fauna by the Department of Biodiversity, Conservation and Attractions (DBCA).
- After successful completion of the search and confirmation that no fauna, burrows, or nests are likely to be impacted, removal of vegetation can proceed under supervision of a licensed fauna handler.
- Vigorous approval processes are met before works start. We are continuing to work with key local and state government key stakeholders regarding environmental management as the project progresses.

Navigational Channel

Will the navigational channel remain open during construction?

Yes. At least one navigational channel will remain open during construction.

Will the new bridge be high enough to allow boats to pass underneath?

The bridge will have a nine metre height clearance (from bottom of bridge deck to the water), which is two metres higher than the existing bridge. The existing rail bridge has an eight metre height clearance, which will be the lowest in this area of the Swan River. Currently, the Fremantle Traffic Bridge has the lowest clearance and narrowest navigation spans of all Swan River bridges up to the Causeway in East Perth.

Design

What is an extradosed bridge?

An extradosed bridge has elements of both cantilever and a cable-stayed bridges. The cables are positioned above the bridge deck but are lower than a typical cable-stayed structure.

Who are the bridge architects?

Internationally renowned architectural firm Dissing + Weitling has been involved in the design of the new Fremantle Traffic Bridge. The Danish based company was established in the 1930s and has had input on major projects in over 40 countries, including Australia.

Why has an extradosed bridge been chosen in this location?

This type of bridge has an innovative construction methodology that allows parts of the new bridge to be built while the existing bridge stays open to traffic. This helps reduce the length of bridge closure from multiple years to only 12 months.

Were any other options considered?

Yes. Different concepts have been investigated and developed since 2020. Diverse feedback and mixed support by stakeholders and community for previous options has resulted in the current Fremantle Bridge design, which was released in November 2023. More information on previous options can be found [here](#).

Is the new bridge designed to current road safety standards?

Yes. The standards include:

- Increased lane width (up to 3.5 metres).
- Median separating northbound and southbound traffic.
- Road barriers protecting pedestrians and cyclists from the road.
- Two new footpaths on each side of the bridge, measuring up to four metres wide each (current single path is 1.7 metres).

Pedestrians and Cyclists

Will the new traffic bridge have paths for cyclists and walkers?

Yes. People walking and cycling will have new and improved paths on both sides of the new bridge. The current path is shared by all walkers and riders and is a sub-standard 1.7 metres wide. The new paths will be up to four metres wide on both sides of the bridge.

What is planned for the under the new bridge at the north end?

At the northern end, the project will improve the current stair connection for pedestrian access from Queen Victoria Street to the foreshore, with a path connecting the two stairwells under the bridge. The gradient at the north end from Queen Victoria Street down to the river is too steep to construct a Disability Discrimination Act (DDA) compliant path without impacting the residential apartments or building into the Swan River and creating environmental impacts.

Creating new path connections from areas outside of the construction area does not form part of the project scope. However, the project does not impede future path development on the Swan River foreshore by other local or state government departments.

What about the Principal Shared Path (PSP) from North Fremantle Station?

Extension of the Fremantle Railway Principal Shared Path (PSP) connecting to North Fremantle train station and across the Swan River to Fremantle was to be delivered as part of the previous Swan River Crossings scope. The PSP was to be constructed in conjunction with the rail bridge, as it was located mainly in the rail reserve. With the omission of the rail bridge in the current design, the PSP construction has now also been deferred.

The Department of Transport and Main Roads are exploring alternative options, with support from other key stakeholders, for a safer crossing at Tydeman Road, to improve connectivity for people of all ages and abilities walking, wheeling and riding between North Fremantle Station and the Swan River.

Further information

For enquiries, please phone 138 138, email enquiries@mainroads.wa.gov.au or click [here](#) or scan the QR code to learn more about the project.



