

How we'll build the rail bridges

We're removing the Maddox Road and Champion Road level crossings to make Newport level crossing free in 2026 – improving safety and creating more reliable travel times.

The Maddox Road level crossing will be removed by building passenger and freight rail bridges over the road. The rail bridges will start to rise near Blenheim Road and return to ground near Challis Street.

We'll close Champion Road at the level crossing. A new link road, connecting Maddox Road to Champion Road via Akuna Drive, will open before the Champion Road level crossing is closed in 2026.

To keep the community connected we'll also build a pedestrian and cycling bridge over the rail line at Champion Road.



Did you know?

We've removed **87 level crossings** across metropolitan Melbourne. This has resulted in:

- **80%** drop in the number of train and driver collisions and near misses since 2018
- **55 hours** of boom gate down time saved everyday weekday morning.

Why these level crossings need to go



Up to **48 trains** run in the morning peak (7am to 9am)



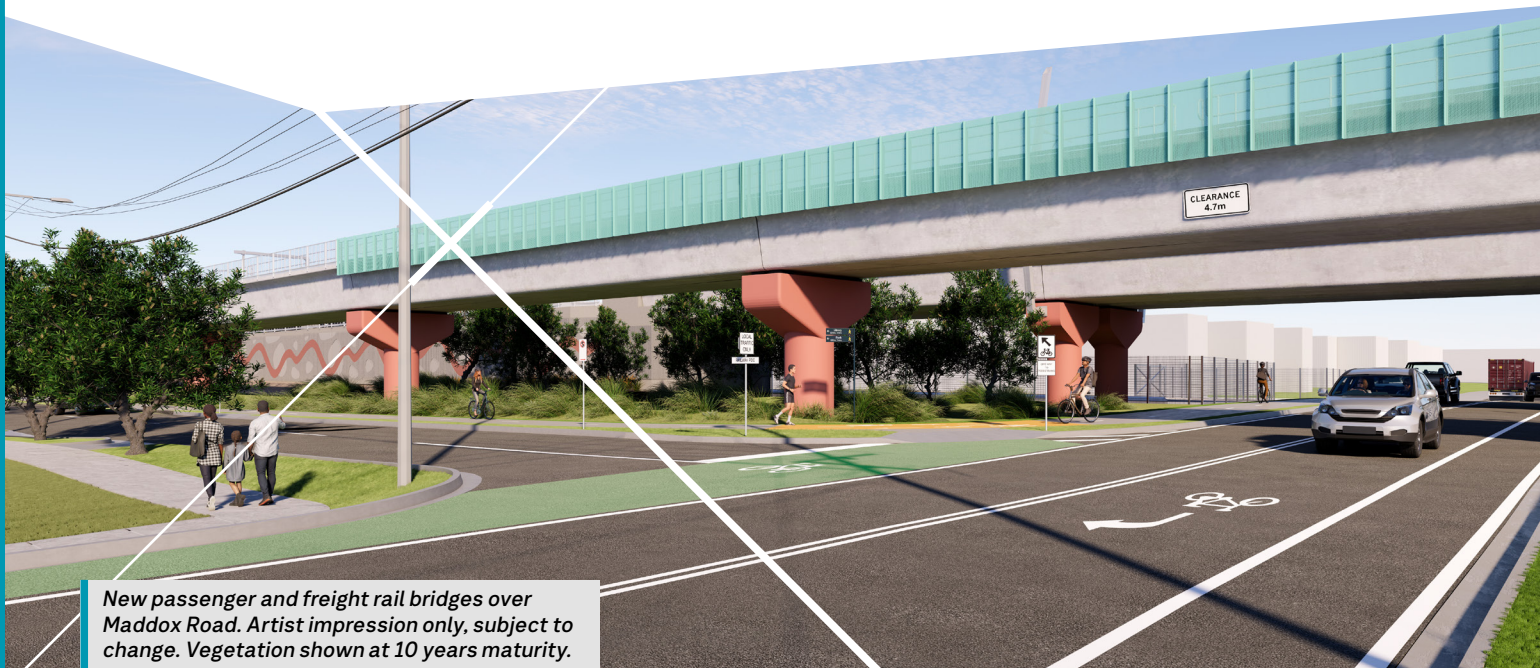
Boom gates are down for around **50 minutes** during the morning peak (7am to 9am)



More trains will run on the busy Werribee Line thanks to the Metro Tunnel, with **additional services to run during peak hour** in the morning and evening



Improved safety for drivers, bike riders and pedestrians



New passenger and freight rail bridges over Maddox Road. Artist impression only, subject to change. Vegetation shown at 10 years maturity.

Building the rail bridges, one step at a time

The rail corridor between Maddox Road and Champion Road is quite narrow, meaning there is not enough space to build both the passenger and freight rail bridges at the same time.

To remove the level crossings safely and minimise disruption for passengers and freight services, we will take a staged approach to building the rail bridges.

First, we'll build the two passenger rail bridges – one for citybound trains and the other for Werribee bound trains.

Once the passenger rail bridges are built and trains are running on them, there will be enough space for us to safely build the freight rail bridge. To keep freight trains operating during construction, we'll temporarily move them to one of the former passenger train tracks in the centre of the project area.

What to expect



Deliveries and installation of concrete beams during night times



Excavation and construction machinery on site



An increase in noise, dust and vibration in the area



Lane and road closures



Detours in the area



Traffic management

What makes up the rail bridge?

Piles

Piles are deep underground foundations. Piling rigs drill holes into the ground that are then reinforced with steel and filled with concrete to support the rail bridges. The piles at Newport will be up to 1.2 metres in diameter and up to 17 metres deep. Once piling is complete, the rest of the bridge and elevated structure will take shape above ground for the community to see.

Did you know?

The piling rigs, which are needed to drill the piles, creating the foundations for the rail and pedestrian bridges, weigh 133 tonnes. This is equivalent to the weight of twenty elephants.



Piers, crossheads and headstocks

Bridge piers are the upright concrete columns that hold up the bridge structure. Crossheads are the beams that sit on top of the piers, supporting the rail tracks.

At Newport, you will see 16 piers and 16 crossheads installed to support the structure of the rail bridges.

Headstocks sit between the crossheads and the L-beams, transferring the bridge load to the pier below.

L-beams and U-troughs

Two L-beams will be lifted by large cranes into place on top of the crossheads and connected with concrete to form a U-trough. This will form the base where we lay the train tracks and ballast to enable trains to travel over the bridge. The L-beams at Newport will be 27 metres long.

Retaining walls

Retaining walls hold compacted soil in place to support the rail line as it rises from the ground at each end of the bridge. At Newport, we'll build the rail bridge retaining walls using reinforced concrete wall panels.

Abutments

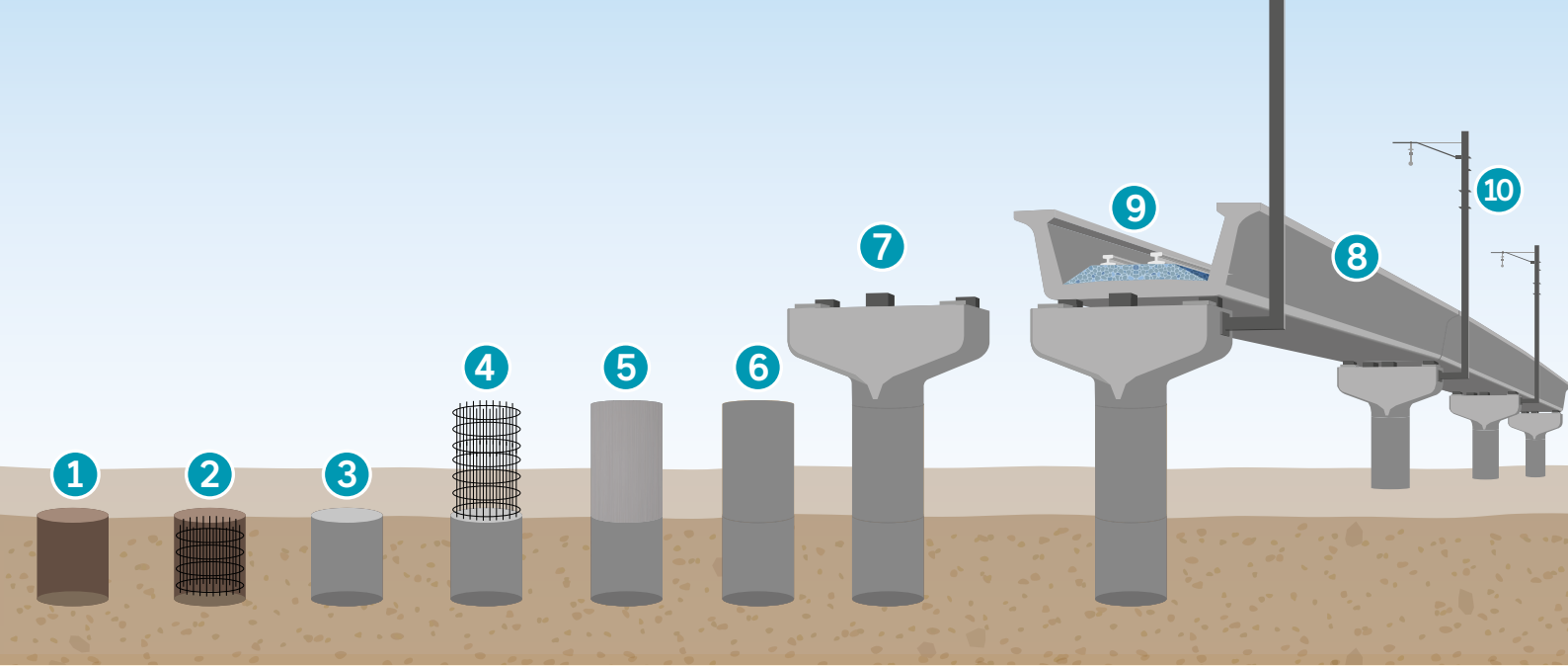
The rail bridges will have a support structure at each end near Blenheim Road and Challis Street, known as an abutment. The abutments will support the load of the bridge horizontally and vertically as it returns to ground level and also act as retaining walls. They will be made from concrete.

We will install 12 piles at each end of the rail bridges to support the abutments. They will play an integral role in ensuring the walls surrounding the rail infrastructure are solid and secure.

Did you know?

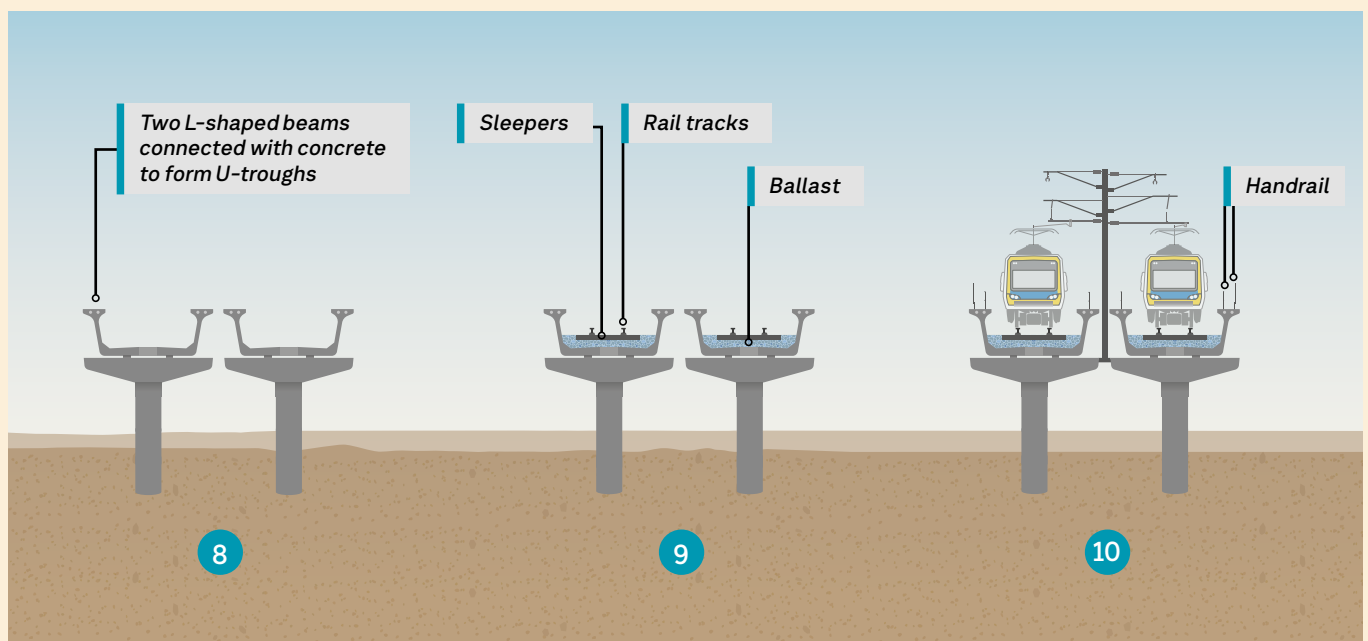
Enclosing the rail within an innovative U-trough bridge beam design acts as a barrier to reduce noise, as the U shape contains the wheel rail interface within the bridge structure.





Passenger rail bridges

- 1 Piling rigs drill holes up to 17 metres deep. These holes are filled with concrete to prevent them from collapsing.
- 2 A cylindrical, steel reinforcement cage is inserted into each hole.
- 3 The reinforcement cage is filled with concrete and left to set.
- 4 A steel reinforcement cage is placed on top of each pile.
- 5 A mould is placed around the reinforcement cage, with additional prefabricated reinforcement placed inside.
- 6 Concrete is poured into the mould and around the reinforcement cages. This forms the pier column and crosshead segments.
- 7 Pre-cast crossheads are delivered to site and installed on top of each pier. Headstocks support the bridge spans and transfer the bridge load to the pier below.
- 8 Long L-shaped beams are lifted on top of the headstocks. Each pair of L-beams is joined together with concrete to form a U-trough. These concrete beams will be delivered to Newport and installed into place during the night throughout 2026.
- 9 The rail tracks, sleepers and ballast are laid within the U-trough to enable trains to travel over the bridge.
- 10 Signalling, communications and overhead power equipment are attached to the rail bridge to control and power the trains as they travel over the rail bridge.





Track inspection works in Newport

Works are on,
traders are open

It's important to support
local traders, and that's
why we encourage the
community and our
workforce to shop locally
as much as possible.



Keeping in touch

Read more about the project at levelcrossings.vic.gov.au/newport

Call us on **1800 105 105** (anytime) or email us at levelcrossings@bigbuild.vic.gov.au

Text **NEWPORT** to **0429 839 892** for SMS updates

Subscribe to receive email updates by visiting levelcrossings.vic.gov.au/subscribe
and under Werribee-Williamstown Line, select 'Newport level crossings'

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Project timeline



Late 2022

- Project announced



2023

- Vision and values engagement
- Early site investigations and planning



Early 2024

- Planning consultation and community surveys
- Stakeholder Liaison Group established
- Continue site investigations and planning



Late 2024

- Designs released
- Early works begin



Early 2025

- Updated designs released



Late 2025

- Major works begin
- Final designs released



2026

- New link road opens
- Champion Road level crossing closed
- Maddox Road level crossing removed
- Newport level crossing free






** Timeline subject to change.*

levelcrossings.vic.gov.au

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English, please call 9209 0147.

1800 105 105 (call anytime)     

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