

HOW WE'LL BUILD THE RAIL BRIDGE



Pier and headstock installation during construction at the Reservoir Level Crossing Removal Project

We're removing the dangerous and congested level crossing at Keon Parade by building a rail bridge over the road and building a new station at Keon Park.

Removing this level crossing will ease delays for the 18,000 vehicles that pass through every day. Pedestrians, bike riders and drivers will no longer be delayed waiting for the boom gates, which can be down for up to 41 minutes of the morning peak.

Major construction started in 2023. In 2025 trains will run on the new rail bridge to the new Keon Park Station and Keon Parade will be boom gate free.

To build a rail bridge, specialised machinery is needed. As with any major construction this can result in noise and vibration.

Read on for more information on how we'll build the new elevated rail and what to expect.

Did you know?

We're removing six level crossings and building seven new stations as part of a \$2 billion investment to upgrade the Mernda Line.

We've already removed five crossings on the Mernda Line, significantly improving safety and congestion. The brand-new Preston and Bell stations opened in September 2022.

BRIDGE BUILDING



There are different stages in the construction of the rail bridge at Keon Parade. The initial stage of preparing the foundations will include large piling rigs on site, and then as the above ground works begin, you will see the bridge begin to take shape.

Piling

Piling is the term we use for laying the bridge foundations. The monopiling that we are using for the Keon Parade rail bridge will involve a deep hole that is reinforced with concrete. There will be 30 piles at Keon Parade that are approximately 2.1m wide and 10 to 12 metres deep.

When piling works end the rest of the bridge and elevated structure will take shape above.

Piers

Bridge piers are the upright support for a structure. At Keon Parade, you will see 30 piers at approximately 1.7 metre in diameter installed to support the structure of the rail bridge.

U-troughs

The bridge sections, known as U-troughs, are made up of two L-shaped beams installed on top of the headstocks. The two beams are joined with concrete to form a U-shape and installed on top of the headstocks.

Headstocks sit on top of the piers and support the horizontal bridge sections, transferring the bridge load to the pier below.

At Keon Parade, 64 individual L-beams will be joined to form 32 U-troughs. This will become the base where we lay the train tracks and ballast. The graphic on the next page shows how we will build the rail bridge.

What to expect

Safety is our number one priority, and during the construction of the rail bridge and new station, we will need to close the rail line at times. There will also be road closures to allow our works to be carried out safely. But we will always notify the community in advance.

To stay informed, look at the "more information" box above and get updates sent directly to your inbox or phone.

To view our disruptions online visit levelcrossings.vic.gov.au/disruptions

More Information

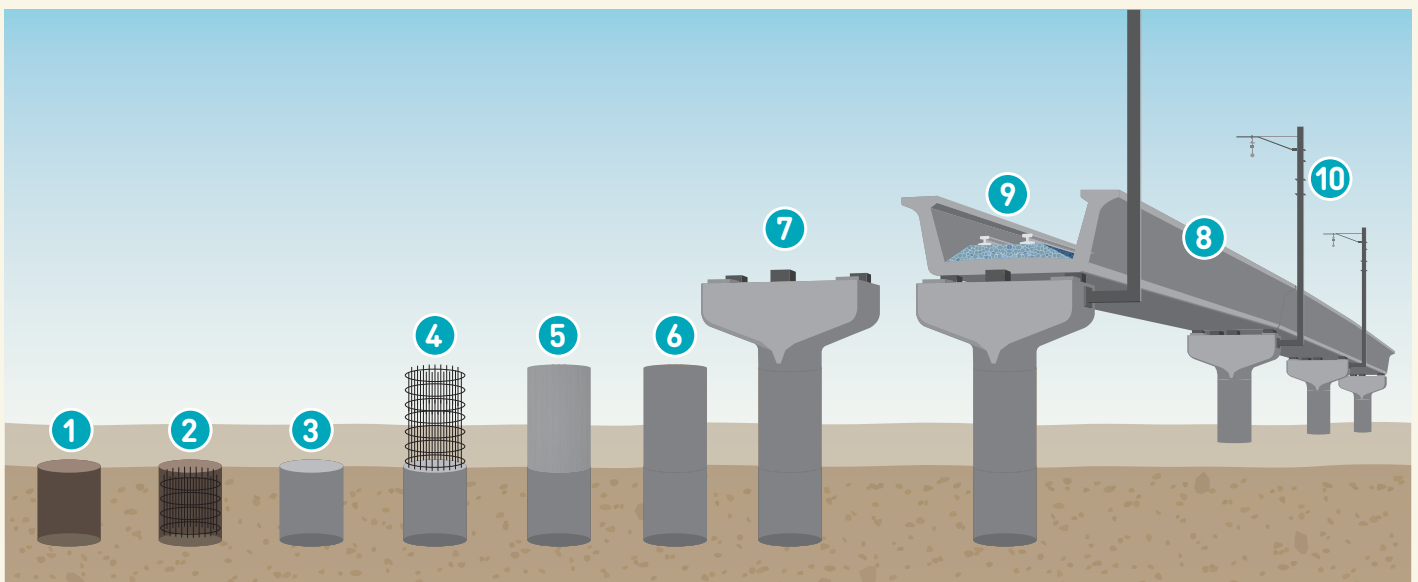
While construction is underway, there will be changes to the way you travel. Sign up for regular project updates at levelcrossings.vic.gov.au/subscribe and select Keon Parade or text **KEON** on **0428 581 917**.



L-beam installation on the Reservoir Level Crossing Removal Project

Bridge construction at Keon Parade

- 1 Pilling rigs drill holes up to 12 metres deep.
- 2 A cylindrical, steel reinforcement cage is inserted into the hole.
- 3 Each hole is filled with concrete to form a deep foundation called a pile.
- 4 A steel reinforcement cage is placed on top of the pile.
- 5 A steel mould is placed around the cage.
- 6 Concrete is poured into the mould and cured to create a pier.
- 7 Pre-cast headstocks are delivered to site or poured on site and installed on top of each pier.
- 8 U-troughs are installed on top of the headstocks. Two L-beams are joined with concrete to form a U-shape.
- 9 Train tracks and ballast are laid.
- 10 Signalling, communications and overhead power equipment is installed.



FAQS

Will the works be noisy?

To build the rail bridge, specialised machinery is needed. As with any major construction, this can result in noise and vibration.

We'll monitor noise and vibration levels to make sure they are within the Environment Protection Authority (EPA) noise control guidelines.

Will there be 24 hours works during construction?

Yes. At times we'll need to work during the night. When 24-hour work is anticipated, we'll provide you with plenty of notice.

What are the respite and relocation options?

Our relocation team will work individually with impacted residents to provide detailed information about the relocation process and to discuss their needs.

If you believe the works are too noisy and affecting your ability to sleep, please call a member of the project team on **1800 105 105**.

L-beam installation on the Preston Level Crossing Removal Project

Will the Mernda line be closed during construction?

At times we will close sections of the Mernda line, with buses replacing trains. The closures will be no longer than 12 consecutive days. We'll provide you with plenty of notice before any closures.

Will there be any further refinements of the rail bridge design?

Yes. There are some elements of the rail bridge that are being finalised. We will share this information with the community as soon as it is confirmed.



Keeping in touch

To stay up to date, subscribe to email updates at levelcrossings.vic.gov.au/subscribe and select **Keon Parade**.

For more information about the Keon Parade Level Crossing Removal Project visit levelcrossings.vic.gov.au

If you have any questions or would like more information, call **1800 105 105** or email contact@levelcrossings.vic.gov.au 24 hours a day, seven days a week.



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