LEVEL CROSSING REMOVAL PROJECT

FERGUSON STREET
WILLIAMSTOWN

PRELIMINARY DESIGN ASSESSMENT

MARCH 2020

levelcrossings.vic.gov.au

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VICTORIA'S BIG BUILD

VICTORIA State Government

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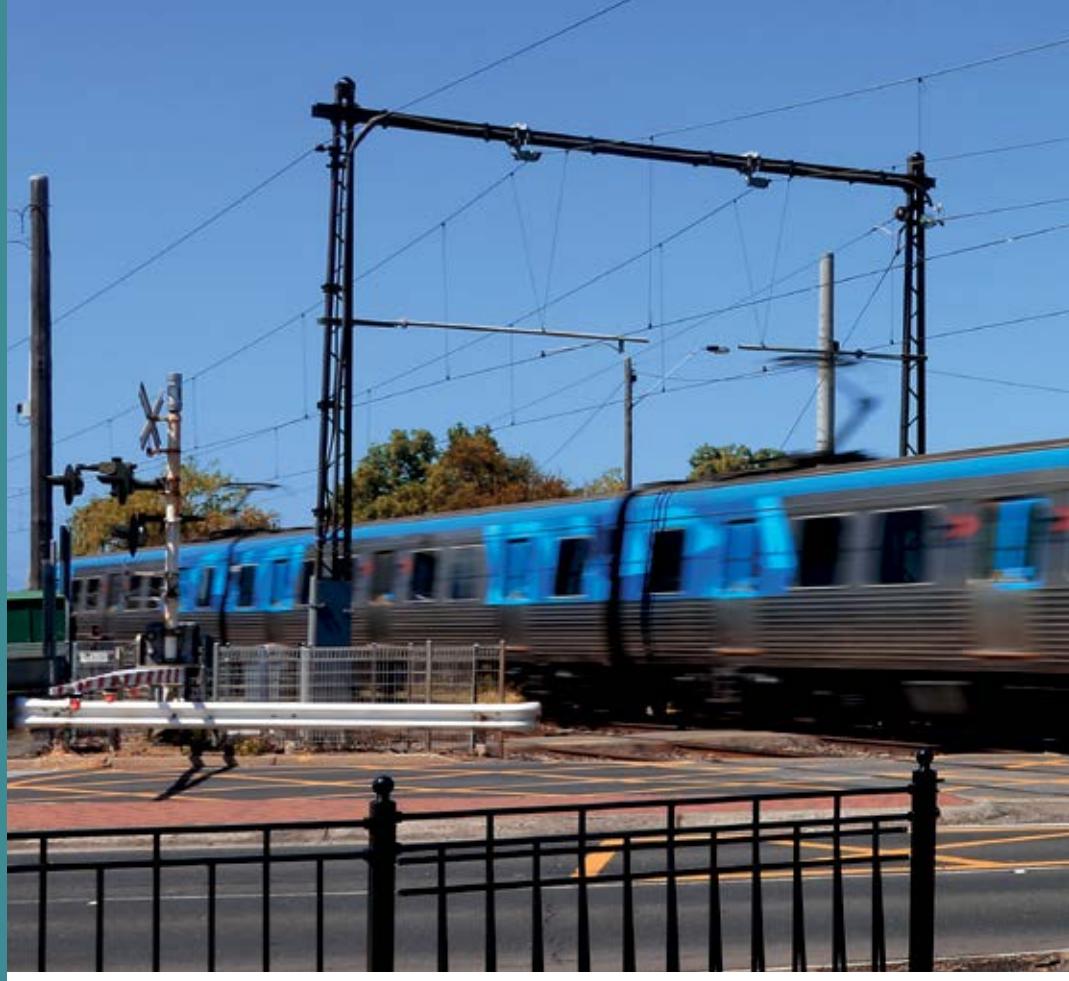


Making Williamstown safer and easier to get around

As part of the Victorian Government's commitment to remove 75 dangerous and congested level crossings, we're removing the level crossing at Ferguson Street in Williamstown.

Ferguson Street is a key east–west link, with about 25,000 vehicles driving through the level crossing and more than 110 trains passing through each weekday.

Removing this level crossing will make the area safer and easier to get around for vehicles, pedestrians and cyclists.

The level crossing will be removed in 2022.

Project benefits

We will deliver many benefits to those who live and travel along the Williamstown line.

Improved safety – By separating rail and road traffic at Ferguson Street.

More reliable roads – By improving traffic flow, particularly on Ferguson Street.

Better connections – By increasing connections and providing opportunities for new pedestrian and cyclists connections.

Boosting the economy – By creating hundreds of jobs during construction.

Unlocking opportunities – By enhancing and creating vibrant areas for the community to enjoy.

What's the plan for the Ferguson Street level crossing?

We investigated potential designs that can be used to remove the Ferguson Street, Williamstown level crossing.

Design A – lower the rail line into a trench and build a new road bridge at the current road level (rail under).
Under active consideration

Design B – raise the rail line over Ferguson Street and retain the existing road level (rail over).
Under active consideration

Design C – lower Ferguson Street under the rail line, with the rail line remaining at its current level (road under).
No longer under consideration

Design D – raise Ferguson Street over the rail line, with the rail line remaining at its current level (road over).
No longer under consideration

Please see pages 8 - 13 to see an explanation and examples of where these designs have been built before.

We undertook initial investigations to determine the practicality of all options, taking into account a range of criteria. Following community consultation, we will continue with detailed investigations to help determine the best design.

While you wait...

More than 25,000 vehicles cross this level crossing each day

More than 110 trains pass through every weekday

About 1350 passengers use North Williamstown Station each weekday

Two fatalities, one collision with a cyclist and at least five near misses at this level crossing

What we heard

The community has provided us with valuable insights on what's important to them for the Ferguson Street level crossing removal.

In November 2019, the first phase of community consultation gathered information and feedback from the Williamstown community on local identity and how people move around the area as drivers, pedestrians and cyclists. We heard valuable local insights through online surveys and three Williamstown Ideas Workshops. Community input from this first phase of consultation will help shape the project.

7400 community updates mailed to residents

3 information pop-ups

Email updates sent to **3311** subscribers

Over 200 community members consulted in person

261 online feedback forms

1300 visits to our online engagement hub

From the feedback collected from both our online engagement and Williamstown Ideas Workshops, key themes emerged from the Williamstown community in the three categories highlighted in our consultation.

Road connections

- High pedestrian activity around the level crossing creates traffic congestion, resulting in 'rat-running' through local streets, especially Station Road and Victoria Street.
- The interaction between traffic lights, roundabouts and boom gates at the level crossing was also recognised as a challenge.
- Community members wish to see reduced congestion through improved pedestrian signals and a reduction in heavy vehicles in the area.

'The boom gates can be down for up to five minutes, movement is severely restricted.'

Pedestrians and cyclists

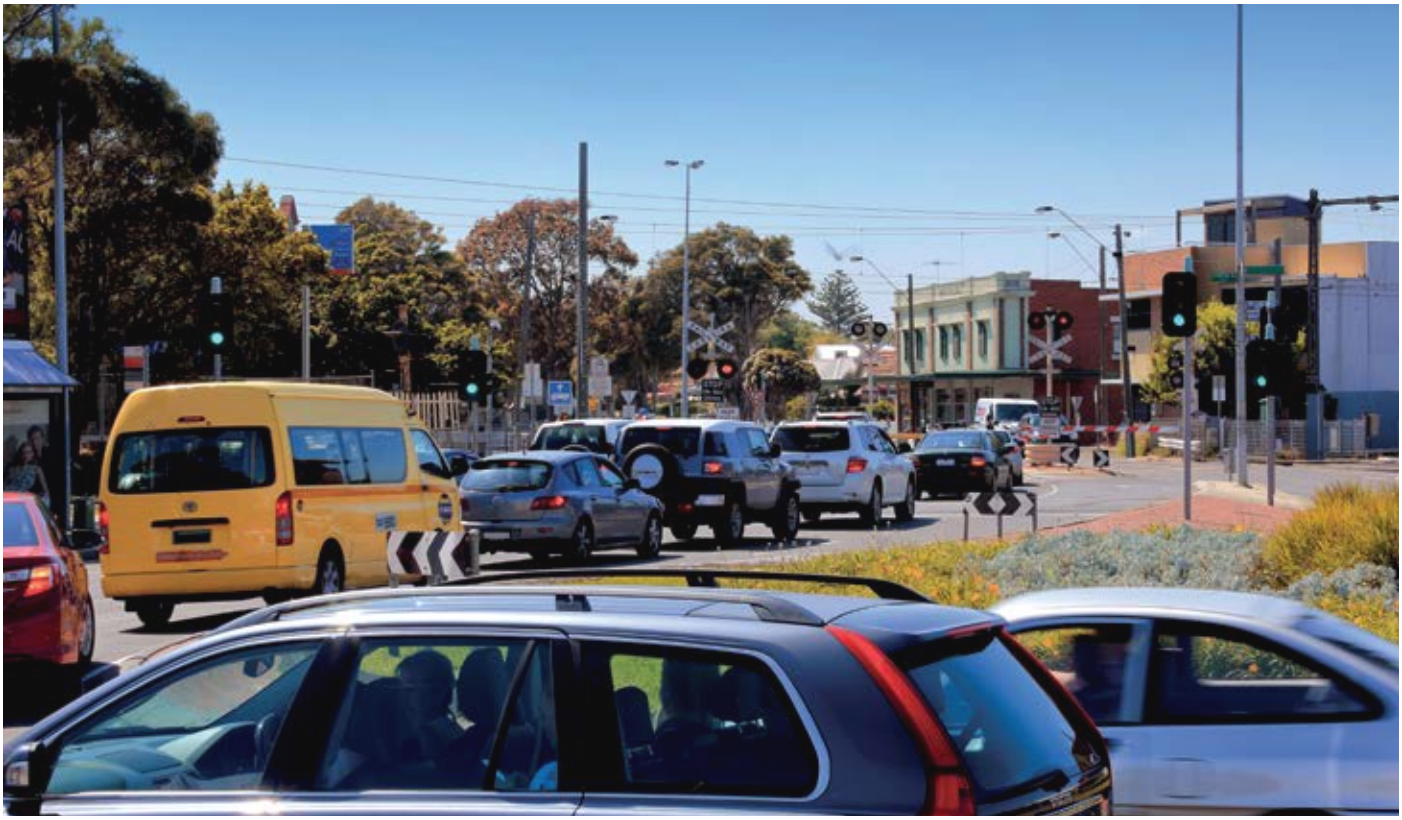
- Pedestrian crossings block vehicles in all directions around the level crossing.
- New designated bike paths, pedestrian islands and grade-separated pedestrian and cyclist crossings were suggested as methods for improvement.

'Road traffic congestion is heavily impacted by both railway and pedestrian crossings stopping traffic.'

Local identity

- History and heritage, particularly maritime, are central to the local character of Williamstown.
- The level crossing acts as a gateway to Williamstown, with the station buildings holding importance as representations of local character.
- The Williamstown community has a 'village feel' and this atmosphere makes people feel safe.
- Community members expressed that they want to see the existing look and feel preserved and to avoid physical divisions in their community.

'Heritage and community feel are two of the main attributes of why we chose to live in Williamstown.'



Understanding the different designs

There are a number of important factors we consider when selecting the best design for a level crossing removal. At each level crossing, experts conduct a range of engineering and other assessments to help determine the best design for each location.

There are several designs for removing a level crossing to separate the road and rail line, also known as grade separation.

Rail under road: lowering the rail line under the road

Rail over road: building a rail bridge over the road

Road under rail: lowering the road under the rail line

Road over rail: building a road bridge over the rail line

Selecting a design

Designs for level crossing removals are assessed and developed by teams of experts including engineers, land and environment experts, construction specialists and urban designers. Community input also helps us assess and refine aspects of the design.

Site characteristics play a critical part when developing a design to remove each level crossing. Site investigations and assessments are used to understand ground conditions and determine what is technically possible to build at each location.

Community feedback

Throughout the development of the design, we seek the views of the community and stakeholders on what is important to them in the local area. Your feedback is used to assess the potential benefits of the design, as well as the likely impacts and how we can mitigate these.

Community and stakeholder feedback helps us refine the design so we can best meet local community needs.

Technical considerations

We conduct a range of engineering and other assessments to determine any technical constraints at each location. See page 14 for details of our required technical investigations.

Other important considerations

We take a range of other factors into account:

- construction and operational safety considerations
- the impacts on residents and other properties, both during construction and after the project is finished
- implications for local businesses
- any potential land acquisition
- temporary and permanent impacts to road and rail operations
- the urban setting and existing land uses, including opportunities to revitalise areas through improved urban design
- overall cost and value for money
- potential development and growth in the area.

We assess all of these factors in detail, and all play a part in which design is chosen. No single factor is decisive in how a design is selected, but all factors are important and need to be balanced in terms of what is best for each site.

Criteria for assessing the designs

Removing a level crossing is complex and we need to consider a number of elements to find the best overall solution to meet the individual needs of each location and community.

In the first instance we evaluated all options against the Victorian Government's Level Crossing Removal Program benefits, then we assessed the key impacts of each design to evaluate all options using a range of desktop studies and preliminary technical investigations. We are now at the first assessment stage.

Key Impact Assessment

Key considerations/ criteria to meet	Design A Rail under the road	Design B Rail over the road	Design C Road under the rail	Design D Road over the rail
Property acquisition	No compulsory private property acquisition	No compulsory private property acquisition	A significant number of homes and businesses would need to be acquired	A significant number of homes and businesses would need to be acquired
Impact to retail near crossing	No long-term negative impacts	No long-term negative impacts	Would have significant negative impact on businesses and shops	Would have significant negative impact on businesses and shops
Ability for the design to comply with design standards	Can comply with design standards	Can comply with design standards	Can comply with design standards	Can comply with design standards
Disruption during construction	Significant rail disruptions	Significant rail disruptions	Significant road disruptions	Significant road disruptions
Visual impact	Lower visual impact	Greater visual impact	Lower visual impact	Greater visual impact
Overall assessment outcome	**Under active consideration**	**Under active consideration**	**No longer under consideration**	**No longer under consideration**

SELECTING THE BEST DESIGN

Each level crossing is unique and needs a design that considers environmental, community and technical factors. A design that works well for one area may not suit another.

Here are the four main ways that the level crossing at Ferguson Street could be removed. It is important for the community to see various possible designs to get an understanding of the short and long-term benefits and impacts of each.

Design A: lower the rail line under Ferguson Street

This design involves lowering the rail line into an open trench under Ferguson Street. The trench would be up to 17 metres wide and 900 metres long. For safety, the border of the trench will have a two-metre-high fence.

Benefits and opportunities

- Typically less visible for homes, businesses and facilities immediately next to the rail line.
- We would build new train station platforms in the open trench, including new facilities for passengers.
- No compulsory or voluntary land acquisition required.
- Maintains privacy for homes near the rail corridor.

Challenges

- To accommodate the rail trench, both train station buildings may need to be removed.
- Safety impacts would need to be addressed, with the inclusion of two-metre-high crash barriers and anti-throw screens.
- Large numbers of trees need to be removed for this design. Limited opportunity to plant additional trees.
- May require temporary land access of residents on the rail line.

A rail under road design at Bentleigh Station

Impacts

- To safely build a new rail trench, lengthy disruptions to the Williamstown line would be required. It is estimated that the line would be closed from Newport Station for up to six months. Buses would replace trains.
- Construction works would occur 24 hours a day especially in the six month rail closure.
- Ferguson Street could be closed for around five weeks while we excavate beneath the road.
- The presence of high-strength basalt rock beneath the surface means excavation would cause prolonged noise, dust and vibration during construction.
- Due to the large volume of soil that would need to be removed from site, there would be a high frequency of trucks on local roads.

Where has a rail under road design been done before?

Over 80 grade separations in Melbourne have been built using this design, including at:

- Main and Furlong roads, St Albans
- McKinnon Road, McKinnon
- Grange Road, Alphington
- Camp Road, Campbellfield
- Burke Road, Glen Iris
- Heatherdale Road, Mitcham.

Artist's impression only.

Artist's impression only.

Design B: a new rail bridge over Ferguson Street

This design involves building an elevated rail bridge using concrete and steel beams. The rail structure would be around 900 metres long with a height of about eight metres when it crosses over the road.

Benefits and opportunities

- A rail bridge would be built within the existing rail reserve and would create new open space below the rail line for the community to enjoy.
- We would build a new train station, including new facilities for train passengers.
- No compulsory land acquisition of private land.

Challenges

- Developing a design that blends in with the existing area and creating public open space while maintaining Williamstown's heritage and local character.
- Ensuring ongoing maintenance and incorporating measures to deter graffiti and enhance safety in the area.
- Both existing train station buildings potentially retained, however it is likely that they would need to be modified to allow for the elevated structure.
- Maintaining privacy for residents directly adjacent to the rail corridor.
- Some properties along the rail corridor may be eligible to have their properties purchased under a Voluntary Purchase Scheme.
- Reducing the amount of vegetation removal needed for the design.

Impacts

- To safely build a new rail bridge, lengthy disruptions to the Williamstown line would be required. It is estimated that the Williamstown line would be closed for up to four months. Buses would replace trains.
- Construction works would occur 24 hours a day during rail closure.
- Minor road disruptions when overhead rail structures are put into position over Ferguson Street.
- The presence of high-strength basalt rock beneath the surface means piling works would cause noise, dust and vibration during construction.

Where has a rail over road design been done before?

A rail over road design is the most common method of separating the road and rail network across Melbourne and in other major international cities.

Over 100 grade separations in Melbourne have been built using this design, including at:

- Murrumbeena Road, Murrumbeena
- Lower Plenty Road, Rosanna
- Clayton Road, Clayton
- Skye-Overton Road, Frankston
- Kororoit Creek Road, Williamstown North
- Abbotts Road, Dandenong South.
- Station Street, Carrum
- High Street, Reservoir

New community space underneath an elevated rail bridge in Carnegie

OPTIONS NO LONGER UNDER CONSIDERATION

Design C: a new road bridge over the rail line

This design involves building a road bridge at Ferguson Street for drivers, pedestrians and cyclists to travel over the rail line. A pedestrian overpass would be built at North Williamstown Station.

It would be challenging to develop a design that blends in with the existing area whilst maintaining Williamstown's heritage and local character.

The road bridge cannot accommodate all current road connections. Traffic would use service lanes and local roads before entering the road bridge.

As the road bridge would be built at the site of the existing level crossing, traffic would need to be moved away from the area during construction. This would cause an increase in traffic and significant delays causing negative impacts on commercial and retail properties on Ferguson Street and Kororoit Creek Road.

To comply with design standards, the road bridge would need to start rising in front of private properties on Ferguson Street, requiring significant land acquisition.

Design D: lower the road under the rail line

This design involves building a road underpass as well as works to reinforce and retain the level of the rail line. A pedestrian underpass would be built at North Williamstown Station.

Lowering the road cannot accommodate all current road connections. Traffic would need to use service lanes and local roads before entering the road trench.

There would be major road and rail disruptions as we would need to close both Ferguson Street and the Williamstown line temporarily.

To comply with design standards, the road bridge would need to start rising in front of private properties on Ferguson Street, requiring significant land acquisition.

Why have these designs been ruled out?

Property acquisition

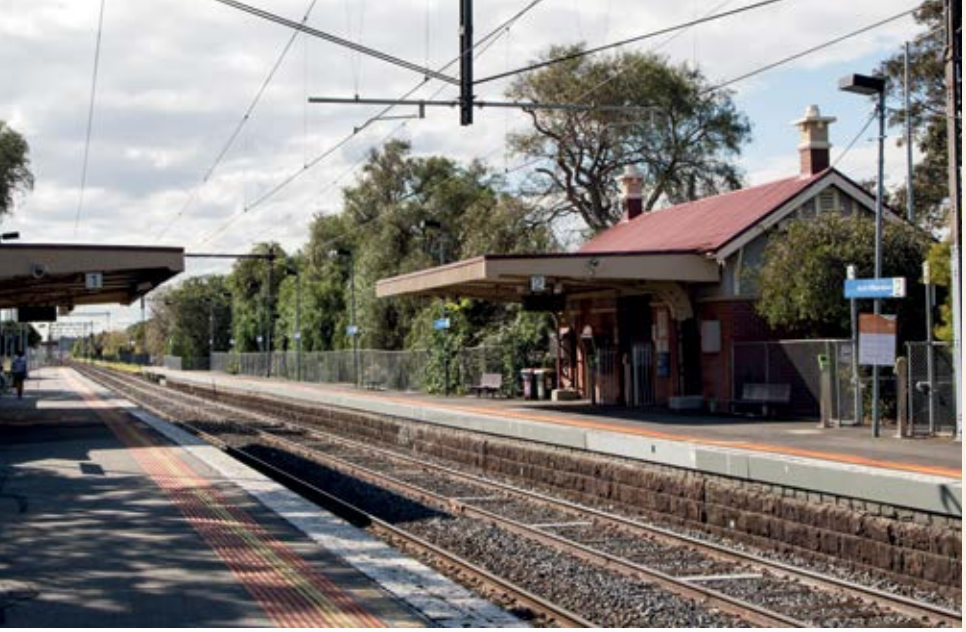
To lower or raise the road would require significant property acquisition on Ferguson Street and Kororoit Creek Road. This would include both homes and businesses.

Community connection

These designs would make it difficult for the Williamstown community to move through the area, especially for pedestrians and cyclists.

Transport impacts

These designs would affect traffic flow in the area. The designs cannot accommodate all current road connections, local streets would see an increase in traffic. Local bus routes will be diverted, and bus stops affected.



Required technical investigations

To fully understand how each design will either benefit or impact the area, we need to undertake many technical investigations. These investigations are still underway and are vital to ensure the best solution is developed for this site.

Noise monitoring – recording existing noise levels, to be used to model predicted noise from a design.

Feature survey – measuring the topography of each area, location of key features and existing ground levels.

Utility services assessment – locating where water, sewerage, electricity, gas, oil and telecommunications service pipes and conduits are.

Traffic study – observing how many vehicles use the area, how traffic flows along local roads, where vehicles come from and travel to and modelling how traffic flows will change. This assessment also studies how pedestrians and cyclists move through the area.

Flora and fauna studies – recording the important plants and animals in each area.

Geotechnical site investigations – sampling what the soil is made up of, its strength and stability and how this will affect design options and the duration of construction.

Hydrology – looking at existing surface waterflows and the potential impacts on drainage and flood risk from removing the level crossing.

Visual assessment – assessing how a design fits within the neighbourhood and landscape.

Post contact heritage – identifying the relevant heritage controls that apply to sites within or immediately adjacent to an investigation area.

Aboriginal cultural heritage – a Cultural Heritage Management Plan will be undertaken for the project area.

What stage are we at?

November 2019

Getting to know the area

Community input at this stage helped us understand what is important to local communities.

Early 2020

Preliminary assessment

Investigations at this stage help us gain an understanding of each area and tell us what additional detailed investigations are needed as we further refine the designs for this site.

March 2020

We explain the potential designs and seek feedback. This helps us determine the preferred design.

Detailed investigations

We undertake detailed investigations at this stage.

Mid 2020

Preferred design recommendation

A preferred design will be selected at this stage.

2021–2022

We will remove the level crossing

We will also seek your feedback on how things are working and if there is anything we can do to make the construction phase easier for the community.

The assessment process

How your feedback fits within the process

Community considerations

At each development stage we ask for your input.

Environmental considerations

For example:

- loss of trees and bushes
- underground water levels

Technical considerations

For example:

- utilities along and below the road and rail line
- ground conditions and natural features
- narrow rail corridor

We consider all of these factors when we are making assessments on the potential solutions at each location and as we move towards a preferred design. Usually, no single factor is decisive in selecting a design, rather there is a combination of factors and an assessment of how each benefits or impacts the local area. We want to find the solution that best meets the needs of this site.

What about station design?

Depending on the final design to remove the level crossing, North Williamstown station may require major modification or a full rebuild as part of this project. We will not have information about station design during this phase of community consultation as this level of detail is yet to be developed.

Pedestrian crossings and local road upgrades

We have heard that the community would like to see better pedestrian crossings and a more streamlined local road network. While these items are not currently within the project scope, we will work closely with Hobsons Bay City Council and other transport agencies on future plans for this precinct.

Next steps

We are happy to talk through any questions you may have. We encourage you to attend a community information session where you can talk with us in person.

We will also be meeting with local schools, traders and special interest groups to ensure that the community is as fully informed as possible about our projects.

We want to know what you think about:

- the designs and the Key Impact Assessment for each
- impacts to the community during construction.

We have a feedback form available online. We will consider your input alongside the further technical and engineering work that we need to do.

Feedback forms are available at our community information sessions and online at **your.levelcrossings.vic.gov.au**

We can also post or email one to you if you prefer.

We understand that not everyone will be able to attend a session. We are also happy to have a telephone conversation with you or answer your questions via email.

Simply call us on 1800 105 105 or send us an email at contact@levelcrossings.vic.gov.au

CONTACT US

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