



Level Crossing Technology Trial

Frequently Asked Questions

July 2023



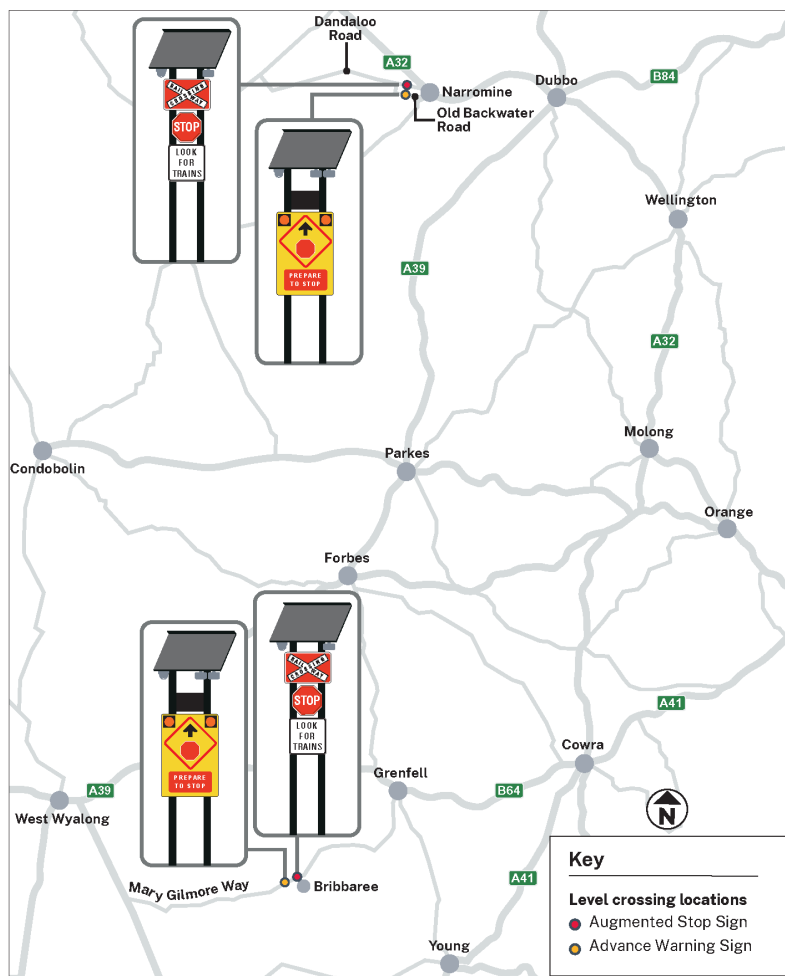
What is the Level Crossing Trial?

The Level Crossing Technology Trial is designed to improve safety by using smart technology and new LED lights to alert drivers to the railway level crossing and its risk.

The regional level crossing trial at three sites in Narromine and Bribbaree, is being delivered by Transport for NSW.

What is being trialled at the Level Crossing Trial locations?

1. Mary Gilmore Way, Bribbaree, LX1130 - Augmented Stop Sign and Advance Warning Sign systems, both with LED lights
2. Dandaloo Road, Narromine, LX1109 - Augmented Stop Signs with LED lights
3. Old Backwater Road, Narromine, LX1108 - Advance Warning Signs with LED lights



What is the Advance Warning Sign? How does it work?



The Advance Warning Sign with orange 'wig wag' lights will flash if an approaching motorist is not slowing down to prepare to stop at the level crossing.

This sign system uses solar and battery power to provide reliability and resilience in regional conditions.

What is the Augmented Stop Sign? How does it work?



The Augmented Stop Sign has LED red lights constantly illuminated in daylight to increase driver awareness of the stop sign at the level crossing.

The Augmented Stop Sign lights will flash during daylight if an approaching motorist is not slowing down to prepare to stop at the level crossing.

As part of the trial, the sign lights will only operate in daylight.

This sign system uses solar and battery power to provide reliability and resilience in regional conditions.

What are the types of level crossings?

Passive level crossings - have a stop or give way sign. Drivers should not drive through until it is safe.

Active level crossings - have a signal. Drivers must stop if the red signal lights are flashing, and must stop if the boom gate is closed, or is opening or closing.

[See more information about railway level crossing safety](#)

What is the aim of the trial?

The trial aims to ensure drivers are aware of the level crossing and its stop sign. The performance of the trialled technology is also being assessed to see whether this technology provides a safer, reliable and resilient solution to level crossing risks.

What is the Safety at all Level Crossings' petition?

A petition launched by Maddie Bott with more than 21,000 signatures was presented in NSW Parliament on 11 November 2021, calling for all level crossings to be made safer, including making warning lights mandatory.

The petition followed the tragic deaths of her fiancé, Ethan Hunter aged 27 and his friend Mark Fenton aged 50, at a passively controlled level crossing in the state's central west.

The Emerging Technologies branch of Transport for NSW was directed by the NSW Government to develop technology trials to improve level crossing safety.

How many crashes happen at level crossings in NSW?

Between 2001 to 2020, there were 154 crashes between trains and vehicles at level crossings in NSW, with 14 fatalities and 24 serious injuries.

There has been a crash at a NSW level crossing approximately every six weeks between 2001 to 2020.

How do drivers safely approach level crossings

Motorists must:

- Adhere to the sign posted speed limit
- Obey **stop, give way** and other signs and signals
- Keep clear of the train tracks and not enter the crossing unless there is room for the vehicle on the other side of the tracks
- Not stop on an area painted with yellow criss-cross lines.

If a level crossing has boom gates and/or flashing lights, a motorist must not start to cross until the signals have stopped flashing and the gates or booms are fully open.

How many level crossings are in NSW?

Around 2700 level crossings are operational in NSW, of these:

- 1307 level crossings are on public roads
- Around 1400 level crossings are on private property

Of the 1307 level crossings on public roads:

- 435 level crossings have a signal as 'active controls' which use flashing red lights to direct a motorist to stop when a train is detected.
- 858 level crossings have a stop or give way sign as 'passive controls' where a motorist is required to obey the sign control and determine when it is safe to proceed.

How many level crossings have been upgraded?

The Transport for NSW Level Crossing Improvement Program has upgraded 71 level crossings from 2011 to 2023 including:

- 42 passive to active upgrades: from stop signs to new high intensity LED flashing lights, bells and retro-reflective boom gates, with new signage and line marking for both the rail and roadway
- 29 active to active upgrades: from flashing lights to new high intensity LED flashing lights, bells and retro-reflective boom gates, with new signage and line marking for both the rail and roadway

How were these locations chosen?

Transport for NSW reviewed the 858 NSW passive level crossings for road and rail activity. Locations have been selected with characteristics typical of many regional level crossings to ensure a representative trial in our varied rural conditions.

Sites were selected based on the following criteria which included sites with:

1. a high-risk rating across all instances in ALCAM (Australian Level Crossing Assessment Model);
2. at least 100 road vehicles passing through per day;¹
3. approximately ten per cent minimum heavy vehicle road traffic;
4. a regional or remote location; and,
5. give way or stop signs as passive controls.

¹ With approx. 10 percent deviation under for some instances where heavy vehicle or risk rating warranted lower vehicle volumes

How will the signs be monitored?	The trial signs will be monitored through remote sensors and CCTV to assess performance.
What information will be captured and how will this be used?	Information will be used for research purposes only. The focus of the research is to assess level crossing safety benefits, system performance and traffic flow.
What happens after the trial is complete?	<p>Transport for NSW will provide a report to the NSW Government on trial outcomes.</p> <p>The report will assess safety benefits, driver behaviour and system performance including reliability, resilience and maintenance during the 24 month trial.</p>
Who is delivering the trial?	<p>The technology trial has been developed by the Transport for NSW Emerging Technologies branch and Sage Automation in partnership with ARTC, Weddin and Narromine Shire Councils.</p> <p>Transport for NSW thanks and acknowledges the stakeholders who have supported the trial planning and delivery.</p>
How long is the trial?	The trial is expected to operate for 24 months at the three locations.

Contact us

If you have any questions or would like more information on the trial, please contact our project team:



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