



Australian Government

Australian Transport Safety Bureau

Level crossing collision between passenger train DB09 and a B-double truck

Runcorn, Queensland, on 14 August 2025



ATSB Transport Safety Report

Rail Occurrence Investigation (Short)

RO-2025-006

Final – 25 June 2026

Cover photo: Queensland Rail (QR)

Released in accordance with section 25 of the *Transport Safety Investigation Act 2003*

Publishing information

Published by: Australian Transport Safety Bureau
Postal address: GPO Box 321, Canberra, ACT 2601
Office: 12 Moore Street, Canberra, ACT 2601
Telephone: 1800 020 616, from overseas +61 2 6257 2463
Accident and incident notification: 1800 011 034 (24 hours)
Email: atsbinfo@atsb.gov.au
Website: atsb.gov.au

© Commonwealth of Australia 2026



Ownership of intellectual property rights in this publication

Unless otherwise noted, copyright (and any other intellectual property rights, if any) in this publication is owned by the Commonwealth of Australia.

Creative Commons licence

With the exception of the Commonwealth Coat of Arms, ATSB logo, and photos and graphics in which a third party holds copyright, this report is licensed under a Creative Commons Attribution 4.0 International licence.

The CC BY 4.0 licence enables you to distribute, remix, adapt, and build upon our material in any medium or format, so long as attribution is given to the Australian Transport Safety Bureau.

Copyright in material used in this report that was obtained from other agencies, private individuals or organisations, belongs to those agencies, individuals or organisations. Where you wish to use their material, you will need to contact them directly.

Acknowledgement of Country and Traditional Owners

The Australian Transport Safety Bureau acknowledges the traditional owners of country throughout Australia, and their continuing connection to land, sea and community. We pay our respects to them and their cultures, and to elders both past and present.

Investigation summary

What happened

On 14 August 2025, Queensland Rail (QR) Citytrain passenger service to Doomben (DB09) was travelling on the Gold Coast/Beenleigh line. Train DB09 was running express towards Altandi Station with about 300 passengers on board. Ahead of DB09, a B-double truck was immobilised on the Bonemill Road level crossing, obstructing the railway tracks. As DB09 approached, the level crossing flashing lights and boom barriers activated, and the train driver was unable to stop the train before it collided with the unloaded rear trailer of the truck.

There was substantial damage to the trailer, front of the train and level crossing equipment. The truck driver, train driver and train guard were physically uninjured. Paramedics attended to 6 passengers with minor injuries.

What the ATSB found

The ATSB found that the truck was immobilised due to a sudden air line failure between the A- and B-trailers. The rear B-trailer had obstructed the Third road and Down southern main lines for 4 minutes and 24 seconds before the level crossing warning equipment activated. The truck also obstructed road traffic.

The driver attempted multiple times to move the truck from the level crossing. Neither the truck driver or witnesses in the area telephoned the signposted QR incident reporting number or triple zero for emergency services. As such, the QR Rail Management Centre personnel were not alerted to the emergency, and they were not prompted to monitor the closed-circuit television (CCTV), which showed the truck was visible on the level crossing. Therefore, the network control officer was unaware of the track obstruction and could not warn the train crew and stop rail traffic.

The colour of the stationary truck meant it was difficult for the train driver to see it against the surroundings. However, on identifying the track obstruction, their actions in applying emergency braking in combination with the truck being empty and stationary at the time, likely reduced the severity of the collision.

What has been done as a result

QR has planned a program of works to update its level crossing strategy for financial year 2026–27. This included:

- an independent review of its current level crossing management methodology benchmarked against other rail operators.
- collaboration with the National Heavy Vehicle Regulator (NHVR) on heavy vehicle compliance activities and communication campaigns.

While not directly related to any findings from the investigation, QR advised that it has relocated the eastern rail approach whistle board from 265 m prior to the level crossing to meet the required specification in accordance with MD-23-67 *Civil – Level Crossing Design*.

Safety message

Accidental obstruction of railway tracks should be treated as an emergency. In the event of a vehicle becoming immobilised on a level crossing, the occupants should immediately move away from the vehicle and railway track. The next priority is to report the emergency, using either the signposted incident reporting number or triple zero. Once alerted to an obstruction, network control centre personnel can take immediate actions to stop rail traffic in the area.

Additionally, rail operators should consider the adoption of available technology for the timely identification of track obstructions that may also reduce the risk from collisions.

The investigation

The ATSB scopes its investigations based on many factors, including the level of safety benefit likely to be obtained from an investigation and the associated resources required. For this occurrence, the ATSB conducted a limited-scope investigation in order to produce a short investigation report, and allow for greater industry awareness of findings that affect safety and potential learning opportunities.

The occurrence

On 14 August 2025, a Wilton's Transport standard B-double¹ truck loaded with cardboard departed Glass House Mountains towards a recycling facility at Bonemill Road, Runcorn, Queensland. At about 0538 local time, closed-circuit television (CCTV) located at the Bonemill Road level crossing recorded the truck turn right from Beenleigh Road onto Bonemill Road, traverse the 3 railway tracks² and continue toward the recycling facility without issue.

At 0601, Queensland Rail (QR) Citytrain passenger service DB09 departed Varsity Lakes Station, Gold Coast for Doomben Station, Brisbane. At 0633, there was a train crew change at Beenleigh Station. Train DB09 then continued towards Doomben Station, travelling express between Loganlea and Altandi Stations on the Third road line. There were about 300 passengers on board.

After unloading, the B-double truck departed the recycling facility towards Rocklea. At about 0643, CCTV footage recorded the B-double truck stop at the stop line, as the Bonemill Road level crossing was active and the traffic signal was at red. After the rail traffic passed at about 0646, the flashing aspects of the level crossing de-activated and the traffic signal turned green.

While the truck was turning left onto Beenleigh Road, the CCTV recorded the second trailer (B-trailer) wheels skidding. At about 0647, the truck came to a sudden stop.

The B-trailer obstructed the Third road line and the Down southern main line.³ The prime mover and A-trailer (first trailer) had cleared the rail corridor but were obstructing road traffic on Beenleigh Road heading east (Figure 1). The CCTV recorded the truck lurching, as the truck driver attempted to move the vehicle. The driver then exited the truck and went to inspect the area between the A- and B-trailer (Figure 2). There were other motor vehicles overtaking the truck, and some pedestrians in the area at that time.

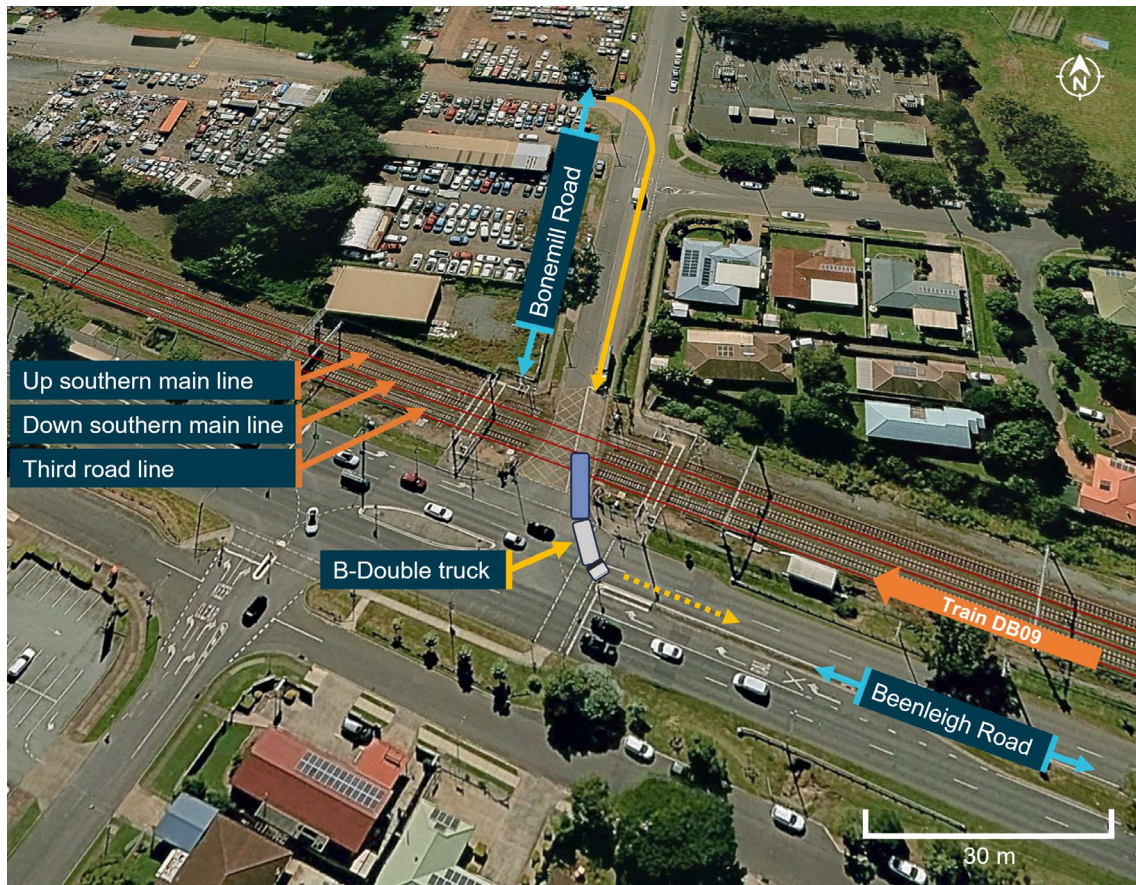
Around the same time, train DB09 was approaching the Oates Avenue level crossing near Trinder Park Station, 5.65 km from Bonemill Road.

¹ A combination consisting of a prime mover towing 2 semitrailers, with one semitrailer supported at the front by, and connected to, the other semitrailer.

² The 3 tracks included the Up southern main line, the Down southern main line and the Third road line.

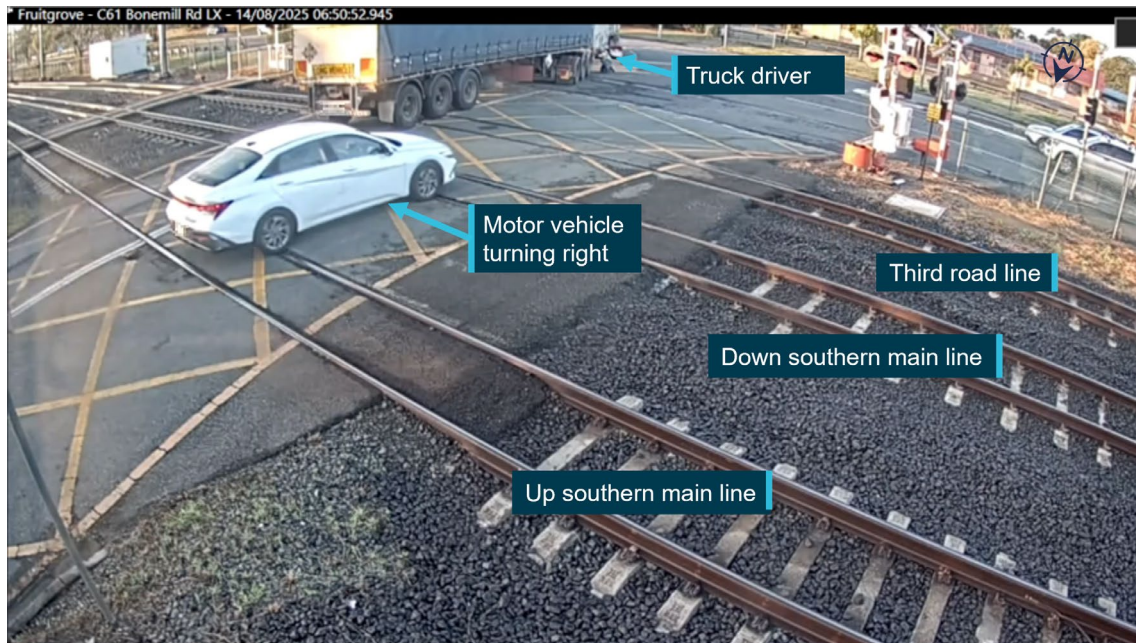
³ Up southern main line: the rail line that facilitated train movements towards Brisbane.

Figure 1: Bonemill Road level crossing and vehicle directions of travel



Source: Google Earth and Digital Atlas of Australia, annotated by the ATSB

Figure 2: Bonemill Road level crossing CCTV at 0650:53



Source: Queensland Rail, annotated and pixelated by the ATSB

While the truck was immobilised, the truck driver said they were focused on moving the vehicle out of the way. As the truck driver continued to inspect the area between the trailers, the level crossing warning equipment activated. The half boom barrier on the southern side of the crossing lowered, and the tip pierced through the right side of the B-trailer curtain, before stopping in the boom down position. At this time, train DB09 was travelling at about 96 km/h, approaching Warrigal Road level crossing, about 990 m away from Bonemill Road.

After passing Fruitgrove Station, the train driver recalled noticing a 'large shadow' on the tracks ahead and activated the country horn.⁴ The train was travelling at about 99 km/h and about 317 m from the level crossing when the driver realised the shadow was a vehicle. The train driver recalled they commenced braking and operated the main circuit breaker emergency trip to lower (disconnect) the pantographs,⁵ before bracing for impact.

At 0652, train DB09 collided with the side of the truck's B-trailer at 41 km/h, pushing it towards Beenleigh Road. The front of train DB09 came to a stop about 52 m past the point of collision. There was substantial damage to the truck, front of the train and level crossing equipment. Train DB09 did not derail, and the adjacent tracks were not fouled. There were other trains in the area at the time of the collision.

The train driver radioed the network control officer (NCO) declaring an emergency. They reported colliding with a truck hanging over the crossing. Additionally, the train guard radioed the NCO to notify them that they were moving from the rear driving compartment towards the train driver. The NCO then protected the site from other train movements by placing track blocks in the area and arranged for emergency services and the QR emergency response unit to attend the site. Queensland Police Service arrived at the accident site at 0702, and the QR incident commander arrived soon after at 0717 to take control of the site from emergency services.

Following their arrival, QR emergency response personnel inspected the train for damage, and the train crew were relieved from duty. Train DB09 had emergency power and passengers remained on the train. No emergency door releases were activated following the collision.

It was determined that the train was able to proceed to the next station for detrainment. At 0808, the QR incident commander confirmed with the NCO that train DB09 was moving towards Runcorn at walking speed. At 0813, the train stopped at Runcorn Station platform 3 and passenger detrainment was completed at 0820. The train driver, train guard and truck driver were physically uninjured. Paramedics attended to 6 passengers with minor injuries.

⁴ The Queensland new generation rollingstock was fitted with a town horn and a louder country horn. Operation of either horn automatically activated the front of train visibility lights alternatively for 20 seconds.

⁵ Pantograph: an apparatus fixed to the roof of electric trains to draw power from the overhead supply.

Context

Train crew information

Train driver

The train driver had about 14 years experience driving Citytrains and was route qualified for the Gold Coast/Beenleigh line. Their most recent Category 1 medical assessment was 3 days prior to the accident, which was approved subject to conditions. The driver's medical assessment required them to wear glasses, and they were wearing prescription sunglasses at the time of the accident.

The train driver stated that they preferred to be rostered for early morning shifts. They were off work the previous day and reported obtaining a good night's sleep before sign-on at Beenleigh Station at 0608. After the collision, the train driver was tested for drugs and alcohol, which returned a negative result.

Train guard

The train guard had about 12 years experience in the position at QR. They were at the rear of the train when the collision occurred. After the collision, they were tested for drugs and alcohol, which returned a negative result.

Train information

Train DB09 was a Queensland new generation rollingstock 6-car consist electrical multiple unit number 728. The train length was 146.7 m, and tare weight was about 438 t. The front motoring unit was DMB 728, which had substantial damage to the nose cone, coupler and air lines from the collision (Figure 3).

Figure 3: Impact damage to Queensland new generation rollingstock DMB 729



Source: Queensland Rail

The total carrying capacity was 1,206 passengers (420 seated, 786 standing with 6 people per 1 m²). The train crew estimated there were about 300 passengers on board train DB09 at the time of the collision.

The train had at least 120 minutes of emergency battery power available for ventilation, diminished lighting and full communication functions. There were 2 toilet modules installed for passenger comfort.

Road vehicle and driver information

Truck driver information

The truck driver was licenced for multi-combination vehicles and had over 40 years experience driving heavy vehicles. They had been employed by Wilton's Transport for over 10 years. The driver had the previous day off work and only worked day shifts. Their most recent medical was about a year ago, which had no restrictions on their licence.

The driver was very familiar with Bonemill Road level crossing and worked trips in the Runcorn area about twice a week.

Heavy vehicle information

The truck was registered and operated by Wilton's Transport. The prime mover was a white 2006 Kenworth K104, coupled to a white heavy trailer (A-trailer – the first trailer) and blue freighter trailer (B-trailer – the second trailer) in a 9-axle standard B-double configuration of 24.94 m long (Figure 4). The unloaded truck weighed about 23 t.

The truck driver stated that the truck was in good condition, and they had performed a daily check before departing Glass House Mountains. They did not identify any defects with the truck during this check. After becoming immobilised on the level crossing, the truck driver stated that they had found an air hose⁶ fractured between the trailers, locking the brakes on. They did not recall seeing an air pressure warning when the truck became immobilised. The operator reported that the sudden air line failure was not attributed to inadequate maintenance or inspection practices.

After the collision, a compliance inspector from the National Heavy Vehicle Regulator (NHVR) conducted an inspection of the B-trailer and noted 'severe' impact damage (Figure 4).

⁶ Heavy vehicles use an air brake system designed to fail-safe (that is, apply the brakes) if air pressure is lost. Air pressure is displayed to the truck driver, with an alarm if the pressure is too low.

Figure 4: B-double truck configuration and damage



Source: National Heavy Vehicle Regulator and Queensland Rail, annotated and pixelated by the ATSB

Heavy vehicle access permit

The NHVR National Network Map⁷ and Queensland Globe⁸ showed that Beenleigh Road and Bonemill Road were not included in the approved routes for B-doubles up to 26 m long. Heavy vehicle access to these roads required a separate permit from the NHVR.

Wilton's Transport was issued a permit by NHVR on 15 June 2021, which was renewed on 8 August 2025, 6 days prior to the accident. The permit allowed standard B-double 9-axle configurations up to 26 m long to carry general freight on the authorised routes. The permit listed the following route:

Start: Approved B-Double Network, Compton Rd, Runcorn QLD 4113
 Persse Rd, Runcorn
 Beenleigh Rd, Runcorn
 Bonemill Rd, Runcorn
 End: 20 Bonemill Rd, Runcorn QLD 4113

Other local council conditions were also listed in the permit, which included travel times. The Brisbane City Council listed the following condition:

Time of travel - Schedule

⁷ National Network Map: <https://www.nhvr.gov.au/road-access/route-planner/national-network-map>

⁸ Queensland Globe: <https://www.tmr.qld.gov.au/business-industry/heavy-vehicles/heavy-vehicle-route-maps-and-restrictions#qld-globe>

The heavy vehicle must not travel on Beenleigh Rd and Persse Rd between 06:00 am and 09:00 am and 03:00 pm and 06:00 pm.

Bonemill Road was not listed in the travel time conditions.

The truck driver stated they were aware of the truck access permit, but unaware of the condition that did not allow access to Beenleigh Road between 0600–0900.

Standard B-double trucks were not required to have an access permit issued by QR for railway crossings such as Bonemill Road, unless they met the requirements for over-dimensional road loads.⁹ The B-double truck involved in the collision was not over-dimensional or over-weight.

Level crossing information

Bonemill Road level crossing

QR was the accredited rail infrastructure manager for the Gold Coast/Beenleigh line, including the Bonemill Road level crossing. Bonemill Road level crossing was located between Fruitgrove and Runcorn stations, at the 19.8 km point on the Gold Coast/Beenleigh line. There were 3 narrow gauge (1,067 mm) bi-directional railway tracks (Down southern main line, Up southern main line and Third road line). The level crossing was actively protected with flashing lights and half boom barriers (see *Layout and active warning assemblies*).

The track grade between Fruitgrove and Bonemill Road was slightly descending toward the road crossing, where the grade was level. The eastern rail approach whistle board¹⁰ was located about 265 m prior to the level crossing.¹¹

The QR *Characteristic Report* for Bonemill Road noted the crossing was approved for B-double trucks. The most recent ALCAM¹² assessment of the level crossing was dated 6 August 2025, which also noted the level crossing was approved for B-double trucks.

Bonemill Road level crossing was located off Beenleigh Road, and surrounded by residential areas, school zones and industrial areas. Rail traffic was busy, with about 204 train movements a day, and high boom down times during peak hour periods. The maximum speed for suburban and freight trains on the corridor was 100 km/h. There were no published speed restrictions that were in place for the Runcorn area.

Road and level crossing inspections and maintenance activities were managed under a safety interface agreement between QR and Brisbane City Council, dated 4 August 2021. The council was not required to notify QR of access permits issued by NHVR.

There were no recorded near misses or incidents involving heavy vehicles at Bonemill Road in the previous 5 years.

⁹ Requirements to obtain written permission from QR to take over-dimensional road loads across QR's railway crossings under the *Transport Infrastructure (Rail) Regulation 2017*:
<https://www.queenslandrail.com.au/forbusiness/overdimensionalloads>

¹⁰ Whistle board: when a train passes a whistle board, the train driver must sound the horn to warn workers and/or members of the public that rail traffic is approaching.

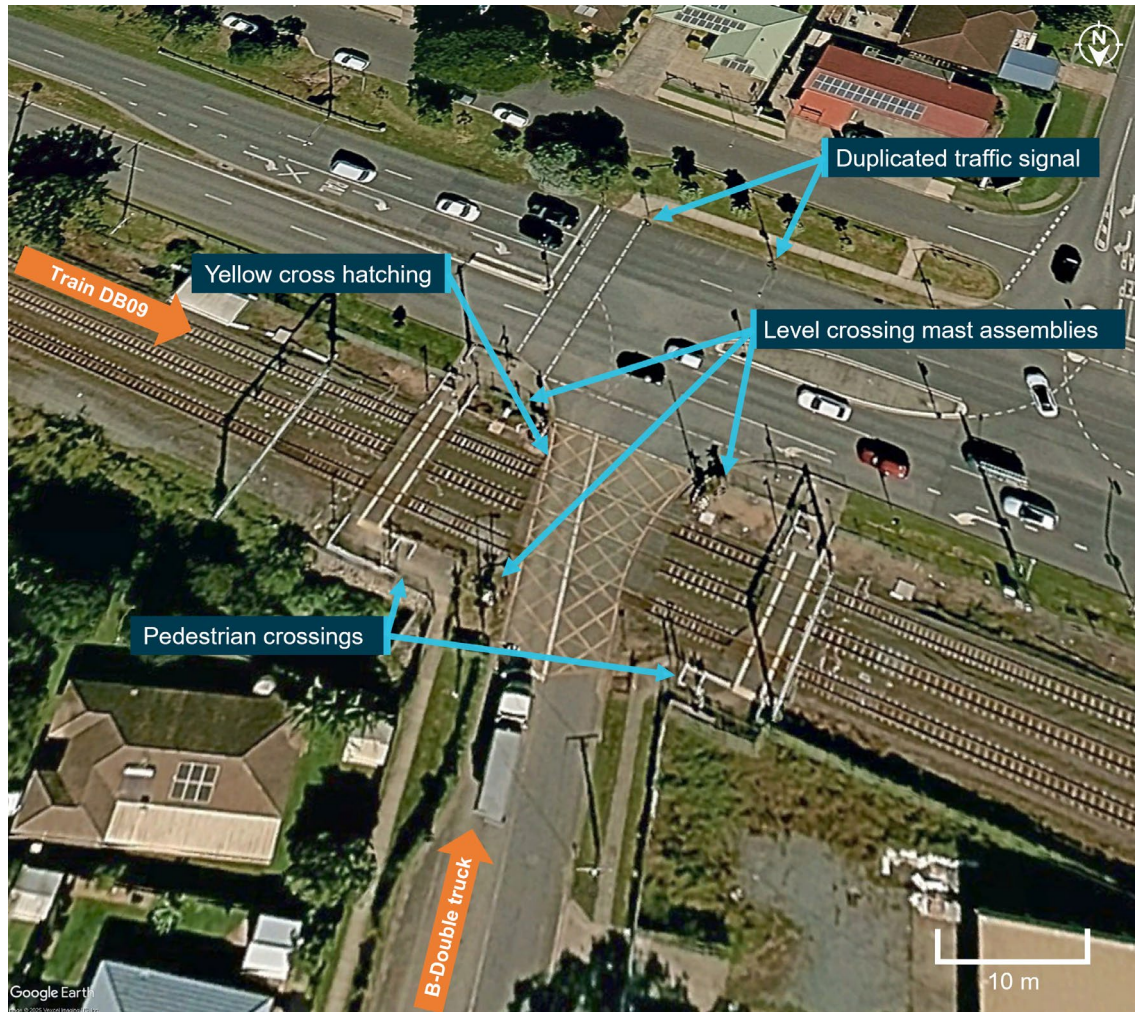
¹¹ QR Specification MD-23-67 *Civil – Level Crossing Design* required the whistle board to be placed 450 m from the level crossing at train speeds of 100 km/h to provide a minimum warning time of 16 seconds.

¹² ALCAM: The Australian Level Crossing Assessment Model. This assessment was based on observed vehicles, including B-double trucks with an access permit for Bonemill Road. Bonemill Road was not a NHVR gazetted B-double route.

Layout and active warning assemblies

Road traffic controls at the interface comprised of level crossing mast assemblies, including flashing lights, audible bells and half boom barriers. Keep clear signage and yellow crosshatch pavement markings were also installed to prevent queuing across the level crossing. Additionally, there were 2 active pedestrian crossings on each side of the road. The level crossing was interfaced with the 3-aspect traffic signals that controlled single lane traffic turning onto, and from, Beenleigh Road (Figure 5).

Figure 5: Bonemill Road level crossing overview and layout



Source: Google Earth, annotated by the ATSB

On the north-east and south-west side of the level crossing, incident reporting signage was installed near the mast assembly, facing inwards to the yellow crosshatch pavement markings (Figure 6). The incident reporting signage included a 24-hour emergency phone number (1800 079 303) for anyone to report a safety incident, such as a track obstruction. This number connected directly to the QR Rail Management Centre. The truck driver recalled they had probably seen the incident reporting numbers before but had not taken any notice.

Figure 6: Bonemill Road level crossing incident reporting signage



Source: Queensland Rail, annotated by the ATSB

Recorded information

Event recorder

The train was fitted with a Hasler Rail Teloc 3000 event recorder and forward-facing CCTV camera (FFCCTV) at the A and B ends of the train. The timestamp on the event recorder and DMB 728 FFCTV were within 1 second of each other.

The ATSB compared the braking performance of train DB09 to the vehicle braking performance standard in QR *MD-10-194 Interface Standard* and track geometry of the area. The deceleration rate of the train was within the allowable rates in the standard. The train stopped within an acceptable distance, based on when the emergency brake was applied.

Figure 7 compares the event recorder train speeds and train driver actions to what was visible to the train driver leading up to the collision. The train driver recalled that, when they first noticed a shadow ahead, it was very difficult to distinguish from the surrounds.

At the point of the collision at 0652:07, train DB09 was travelling at 41.0 km/h.

Figure 7: Comparison of train speeds, train driver actions and DMB 728 FFCCTV



Source: Queensland Rail, annotated by the ATSB

Level crossing recorded events

The QR universal traffic control (UTC)¹³ system recorded the events related to the approach of train DB09 and operation of the level crossing equipment (Table 1). If the boom barriers did not fully deploy to the lowered position, this would present an alarm on the UTC network control panel. There were no relevant UTC alarm messages displayed on the control panel prior to the collision recorded at 0651:46.

¹³ Universal traffic control: a system unique to QR that assists NCOs safely route and monitor the movement of trains.

Table 1: Recorded events for Bonemill Road level crossing

Timestamp	Event
0650:42	Train DB09 was detected approaching the level crossing.
0651:09	Level crossing flashing lights begin to operate.
0651:18	Boom barriers begin to lower (9 seconds after the lights start flashing).
0651:28	Boom barriers detected down (10 seconds after the boom started to lower).
0651:44	Train DB09 detected on the Third road line.
0651:46	Boom barrier down detection lost. UTC alarm 'Bone Mill Rd Level Crossing Failed at KURABY'.

Closed-circuit television

There were 9 CCTV cameras installed at the crossing, with 4 positioned on the north-west side and 5 on the south-east side. While the truck was immobilised, it was visible on 4 of the cameras.

Table 2 summarises the events recorded across the 4 cameras from the time the truck first used the Bonemill Road level crossing and then returned until the collision with train DB09.¹⁴ The truck came to a stop at 0647:07, and the level crossing active warning equipment started for train DB09 at 0651:31.

Table 2: Recorded closed-circuit television events at Bonemill Road level crossing

Timestamps	Event
0538:02 to 0538:18	The B-double truck turned right from Beenleigh Road onto Bonemill Road, and exited the level crossing.
0643:19 to 0646:21	Level crossing activated for the passage of 3 trains. B-double truck returned and stopped at the stop line. Level crossing boom barriers lower.
0646:42 to 0647:07	Level crossing cleared and B-double truck departed stop line on green traffic signal. The left-side wheel on the 6th axle locked, leaving a 17.4 m skid mark, then rotated again. Other wheels on the B-trailer were not gaining traction. B-double truck comes to a sudden stop. No smoke or sparks were evident.
0647:12 to 0650:06	The B-double truck lurched about 15 times.
0647:22 to 0650:53	8 motor vehicles overtook the B-double truck to turn right onto Beenleigh Road.
0648:26 to 0651:34	7 motor vehicles passed the B-double truck to turn left onto Bonemill Road. Other vehicles heading east down Beenleigh Road were blocked by the truck.
0648:49 to 0650:51	3 pedestrians in the vicinity of the truck.
0650:32 to 0651:00	Truck driver walked around the prime mover to the right side and kneeled to inspect the area between the A and B trailer, then walked back.
0651:18 to 0651:28	The truck jolted, and the hazard lights were turned on.
0651:31 to 0651:47	Level crossing flashing lights started. The south-most level crossing boom barrier lowered and pierced the side canvas cover of the truck trailer. Boom barriers were in the down position. The truck driver jogged towards the back of the truck to look between the A and B trailer.
0652:04 to 0652:07	Truck driver walks away from the truck. Collision with train DB09.

¹⁴ There was a variance of about 22 seconds between the UTC and CCTV recorded events. The time clocks were not synchronised between these systems.

Environmental information

The weather at 0652 was fine and clear. The sun had risen and was low in the sky (azimuth 70.79°, elevation 6.19°) in a north-east direction. Therefore, sun glare had a negligible effect on the train driver as they approached the Bonemill Road level crossing.

Network control information

The QR Management Centre (RMC) was located in Mayne, Queensland. The NCO for the Runcorn to Varsity Lakes rail section, which included the area around the Bonemill Road level crossing, was located at workstation UTC 6. The train control leader (TCL) for the southern area of the south-east Queensland network was located behind them at workstation TCL 2. The security monitoring officers were located separately in the centre.

The 24-hour emergency phone number detailed on the incident reporting signage connected to the TCL 2 workstation, and information received would be disseminated to the relevant area within the control centre. Dependant on the length of a call, QR estimated that transfer of emergency information within the centre would typically occur within 30–90 seconds.

The security monitoring team at the RMC were responsible for monitoring more than 12,000 individual CCTV cameras across the south-east Queensland network. Active monitoring of specific locations by the team was dependent on daily priority areas, intelligence reports and reported incidents. In addition to CCTV monitoring, the team were responsible for:

- managing incidents in real time in partnership with Network Control
- deploying resources such as authorised officers and mobile security patrols
- coordinating with the Queensland Police Service, including the Railway Squad
- undertaking CCTV reviews to investigate and validate incidents
- responding to the station emergency help phones and various asset security system alarms
- receiving incident reports from operational staff in the field via telephone and radio including station operations, authorised officers and security officers
- providing remote access control to various facilities.

In the event of a reported incident that impacted train operations, the team would communicate directly with the relevant NCO. QR confirmed that on the day of the accident, there were no priorities in the Runcorn area that would have triggered CCTV monitoring. There were also no automated systems to detect immobilised vehicles or other obstructions on the level crossing.

The first notification to the RMC of the track obstruction was the train driver's emergency radio call after the collision. The first notification to the Queensland Police Service of the emergency was from the RMC requesting police attend the scene. There were no records of triple zero (000) calls reporting the track obstruction.

Emergency procedures for track obstructions

QR procedure *Rail Emergency Response Module EP1-01* covered emergency situations that could impact the QR network. Rail traffic crew were required to:

- Stop the rail traffic.
- Press “Emergency Pan Down” (Big Red) if the incident involves the OHLE [overhead line equipment], whether people are in contact with or within 3 metres of the OHLE and or if the OHLE is down and/or damaged or tangled.
- Warn all rail traffic, secure the rail traffic against movement, and protect adjacent track sections.
- Immediately contact the NCO stating “Emergency, Emergency, Emergency”...

In addition to the module EP1-01 requirements, other requirements for level crossing emergencies were outlined in *Module MD-11-31 Level Crossing Emergency*. Indicators of a level crossing emergency included:

- Obstruction of level crossing (vehicle stalled etc.)
- Collision damage (vehicle wreckage / train stopped across crossing etc.)
- Person struck inside level crossing
- Advice from workers or members of the public
- Remote Monitoring System (RMS) Alarms
- Alarms on UTC screen
- Public Safety Preservation Act 1986 (Qld) - Declaration of emergency situation.

The NCO was required to act in the event of a level crossing emergency, including:

- Obtain contact details for first worker on scene¹⁵ and maintain contact.
- Notify the electrical control officer if the OHLE (overhead line equipment) was impacted and state ‘Emergency, Emergency, Emergency’. Tell them all the information obtained by the first worker on scene.
- If adjacent tracks were fouled, warn rail traffic on adjacent tracks, and immediately protect any rail traffic in danger through emergency calls, placing signals at stop and placing blocks on affected signals and routes.
- Contact emergency services on triple zero if required and inform them of the name, position, contact details and details of emergency.

Related occurrences

The ATSB *Review of level crossing collisions involving trains and heavy road vehicles in Australia* ([RS-2021-001](#)) examined 49 collisions between trains and heavy vehicles at Australian level crossings between July 2014 and August 2022, in which 24 rail or road users were fatally or seriously injured. The safety study identified 3 collisions at boom barrier crossings where the truck stopped on the crossing, and the heavy vehicle driver had been unable to exit the level crossing due to unanticipated events. In one of these collisions, the heavy vehicle reportedly entered the crossing but encountered a mechanical problem and was unable to move. The ATSB investigation ([RO-2021-012](#)),

¹⁵ First worker at the scene: this could also be a member of the public.

into the collision between passenger train C012 and a motor vehicle near the West Dapto Road level crossing in Kembla Grange, New South Wales, on 20 October 2021, undertaken by the Office of Transport Safety Investigations¹⁶. At 0339 local time, the train departed Kiama Station en route to Sydney Central Station. At 0409:06, the train passed the track circuit that activated the West Dapto Road level crossing warning bells and lights. Twenty-six seconds later, the driver made an initial brake application. It was estimated the train was approximately 200 m from the motor vehicle at this time. Three seconds later, the driver applied full braking and within the second after, applied emergency braking when travelling at about 90 km/h. Over the next 4 seconds, the train collided with the vehicle. This resulted in the train derailing and the separation of train carriages, seriously injuring the train driver, train guard and 2 passengers, with 8 minor injuries to passengers.

In this accident, there was an abandoned motor vehicle on the crossing. A member of the public called triple zero, and this information was passed to the Rail Operations Centre. However, information was not communicated to the train driver of C012 in time to stop safely prior to the collision.

Safety analysis

Track obstruction

When traversing the Bonemill Road level crossing, the empty B-trailer of a B-double truck became immobilised across the Third road line and Down southern main line before the active warning equipment started. The truck obstructed 2 of the 3 railway tracks during morning peak hour, before the arrival of train DB09, which was travelling express at about 95 km/h on the Third road line. The train driver did not see the truck until around 317 m prior to the crossing. While the driver immediately applied the emergency braking, there was insufficient distance to stop the train before colliding with the truck at 41 km/h.

Incident reporting

The truck obstructed the tracks for 4 minutes and 24 seconds, which provided an opportunity for an alarm to be raised. Signage located at the level crossing provided an emergency phone number for incident reporting, which connected directly to the Rail Management Centre. While the truck driver reported that they had seen the incident reporting number before, they did not take notice of it. They did not telephone triple zero to raise the alarm. Instead, they were focused on moving the truck off the level crossing and allowing road traffic to pass. There were several bystanders in the vicinity who were aware of the track obstruction, and they also did not attempt to contact network control or emergency services.

There were no UTC alarms at the NCO's workstation and the CCTV at the level crossing was not being actively monitored by the security monitoring team at the time. Therefore, the Rail Management Centre only became aware of the track obstruction when the train driver made an emergency call after the collision.

¹⁶ Under a collaboration agreement, rail safety investigations are conducted and resourced in New South Wales by the Office of Transport Safety Investigations, on behalf of the ATSB, under the provisions of the *Transport Safety Investigation Act 2003*.

There were no automated systems to detect immobilised vehicles or other obstructions on the level crossing. This meant that avoidance of a collision was solely reliant on the train driver seeing the obstruction at a distance sufficient to stop the train. The Office of the National Rail Safety Regulator safety messaging on track obstructions have noted risk controls for rollingstock to detect obstacles on the track, such as mounted sensing and detection equipment (ONRSR, 2025). Additionally, the United Kingdom Rail Safety and Standards Board has documented academic studies of technology used to detect trespassing on the rail corridor, including vehicles on level crossings (RSSB, 2025). These studies identified technologies such as CCTV and video analytics, artificial intelligence approaches, fibre-optic acoustic sensing, lasers and drones, noting strengths and weaknesses with each approach. While rail transport operators must consider various factors, including the likelihood of the hazard and the degree of harm to determine what controls are reasonably practicable to implement, there are technologies available that do not rely on manual monitoring of CCTV or members of the public reporting a track obstruction to prevent a collision.

Truck visibility

The first opportunity for the train driver to sight the obstruction on the Bonemill Road level crossing was as the train approached Fruitgrove Station. However, the obstruction was not immediately identifiable as a stationary truck. The white prime mover and A-trailer were situated outside of the rail corridor and would have been obscured from the driver's view by trackside equipment. The plain blue curtain of the B-trailer did not contrast well with the background environment and the shadows that were present at the time the truck was on the level crossing. As a result, the train driver identified the hazard around 317 m prior to the crossing and while they implemented the emergency procedures, there was insufficient distance to prevent the collision.

Train driver's response

On sighting the track obstruction, the train driver's response of applying emergency braking reduced the train's speed from 98.8 km/h to 41 km/h when the collision occurred, resulting in minor physical injuries. In comparison, the level crossing accident at Kembla Grange occurred at a higher train speed, resulting in significant injuries. Additionally, the train driver operated the main circuit breaker emergency trip to lower the pantographs. This meant that, at the point of impact, the pantograph was disconnected from the overhead line equipment. Overall, the driver's response, in combination with the truck being empty and stationary at the time, likely prevented more serious consequences from the collision.

Findings

ATSB investigation report findings focus on safety factors (that is, events and conditions that increase risk). Safety factors include ‘contributing factors’ and ‘other factors that increased risk’ (that is, factors that did not meet the definition of a contributing factor for this occurrence but were still considered important to include in the report for the purpose of increasing awareness and enhancing safety). In addition ‘other findings’ may be included to provide important information about topics other than safety factors.

These findings should not be read as apportioning blame or liability to any particular organisation or individual.

From the evidence available, the following findings are made with respect to the level crossing collision between passenger train DB09 and a B-double truck at Runcorn, Queensland, on 14 August 2025.

Contributing factors

- A B-double truck became immobilised on the Bonemill Road level crossing before the warning equipment activated, resulting in the B-trailer obstructing 2 of the 3 railway tracks. The driver of train DB09 was not aware of the obstruction in time to stop the train prior to colliding with the truck.
- While the truck was stopped on the crossing for about 4 and a half minutes, neither the driver nor bystanders rang the signposted incident reporting number or emergency services. As a result, the network control officer was not aware of the emergency and was unable to alert DB09 and other trains in the area of the need to stop.

Other factors that increased risk

- The B-trailer of the stationary B-double truck was equipped with a plain dark blue curtain, which had poor contrast with the background environment at the time of the accident. This reduced the conspicuity of the trailer and the train driver's early recognition of the obstruction.

Other findings

- On recognition of an obstruction ahead, the train driver applied emergency braking and the associated emergency procedures. This likely reduced the severity of the collision between the train and stationary truck.

Safety actions

Whether or not the ATSB identifies safety issues in the course of an investigation, relevant organisations may proactively initiate safety action in order to reduce their safety risk. The ATSB has been advised of the following proactive safety action in response to this occurrence

Safety action by Queensland Rail

Queensland Rail is currently updating its level crossing strategy for the 2026–27 financial year. This strategy included a set of initiatives, such as an independent review of its

current level crossing management methodology benchmarked against other rail operators. It also included collaboration with the National Heavy Vehicle Regulator on heavy vehicle compliance activities and communication campaigns.

While not directly related to any findings from the investigation, Queensland Rail also advised that it has relocated the eastern rail approach whistle board from 265 m prior to the level crossing to meet the required specification in accordance with *MD-23-67 Civil – Level Crossing Design*.

General details

Occurrence details

Date and time:	14 August 2025 – 0652 Australian Eastern Standard Time	
Occurrence class:	Accident	
Occurrence categories:	Level crossing – collision with road vehicle	
Location:	Bonemill Road level crossing, Queensland	
	Latitude: 27.5961° S	Longitude: 153.0743° E

Train details

Track operator:	Queensland Rail	
Train operator:	Queensland Rail	
Train number:	DB09	
Type of operation:	Suburban passenger	
Consist:	6-car electrical multiple unit 728	
Departure:	Varsity Lakes Station, Queensland	
Destination:	Doomben Station, Queensland	
Persons on board:	Crew – 2	Passengers – about 300
Injuries:	Crew – 0	Passengers – 6 (minor)
Damage:	Substantial	

Sources and submissions

Sources of information

The sources of information during the investigation included:

- the train driver of train service DB09
- the truck driver of Wilton's Transport
- Queensland Rail
- Queensland Police Service
- Queensland Ambulance Service
- Queensland State Department of Transport and Main Roads
- National Heavy Vehicle Regulator.

References

Department of Transport and Main Roads. (2023). *Heavy vehicle route maps and restrictions*. Retrieved 27 August 2025, from <https://www.tmr.qld.gov.au/business-industry/heavy-vehicles/heavy-vehicle-route-maps-and-restrictions#qld-globe>

National Heavy Vehicle Regulator. (2016). *Glossary of common terms*. <https://www.nhvr.gov.au/files/201612-0062-nhvr-glossary-of-common-terms.pdf>

National Heavy Vehicle Regulator. (2024). *NHVR National Network Factsheet*. <https://www.nhvr.gov.au/document/385/>

Office of the National Rail Safety Regulator. (2025). *Safety Message: Track Obstructions*. Retrieved 28 January 2026, from <https://www.onrsr.com.au/safety-essentials/safety-messages/safety-message-track-obstructions>

Queensland Rail. (2022). *Driving Over-dimensional road loads (ODRL) across Queensland Rail's railway crossings - Application for permits*. Retrieved 19 August 2025, from <https://www.queenslandrail.com.au/forbusiness/overdimensionalloads>

Rail Safety and Standards Board. (2025). *Technologies to tackle trespassing: an update (S389) New developments in technologies that can be used to detect and prevent trespass incidents*. <https://www.rssb.co.uk/research-catalogue/CatalogueItem/S389>

Submissions

Under section 26 of the *Transport Safety Investigation Act 2003*, the ATSB may provide a draft report, on a confidential basis, to any person whom the ATSB considers appropriate. That section allows a person receiving a draft report to make submissions to the ATSB about the draft report.

A draft of this report was provided to the following directly involved parties:

- the train driver of service DB09
- the train guard of train service DB09
- the truck driver of Wilton's Transport
- Queensland Rail

- Wilton's Transport
- Queensland State Department of Transport and Main Roads
- National Heavy Vehicle Regulator
- Office of the National Rail Safety Regulator.

Submissions were received from:

- Queensland Rail
- Wilton's Transport
- Office of the National Rail Safety Regulator.

The submissions were reviewed and, where considered appropriate, the text of the report was amended accordingly.

About the ATSB

The **Australian Transport Safety Bureau** is the national transport safety investigator. Established by the *Transport Safety Investigation Act 2003* (TSI Act), the ATSB is an independent statutory agency of the Australian Government and is governed by a Commission. The ATSB is entirely separate from transport regulators, policy makers and service providers.

The ATSB's function is to improve transport safety in aviation, rail and shipping through:

- the independent investigation of transport accidents and other safety occurrences
- safety data recording, analysis, and research
- influencing safety action.

The ATSB prioritises investigations that have the potential to deliver the greatest public benefit through improvements to transport safety.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, international agreements.

Purpose of safety investigations

The objective of a safety investigation is to enhance transport safety. This is done through:

- identifying safety issues and facilitating safety action to address those issues
- providing information about occurrences and their associated safety factors to facilitate learning within the transport industry.

It is not a function of the ATSB to apportion blame or provide a means for determining liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings.

At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

The ATSB does not investigate for the purpose of taking administrative, regulatory or criminal action.

About ATSB reports

ATSB occurrence investigation reports are organised with regard to international standards or instruments, as applicable, and with ATSB procedures and guidelines.

An explanation of ATSB terminology used in this report is available on the [ATSB website](#).