



Australian Government

Australian Transport Safety Bureau

Collision between truck and V/Line train 7727

Barwon Terrace level crossing, South Geelong, Victoria on 03 April 2023

ATSB Transport Safety Report
Rail Occurrence Investigation (Defined)
RO-2023-003
[Preliminary – 28 June 2023]

This investigation was conducted under the *Transport Safety Investigation Act 2003 (Cth)* by the **Chief Investigator, Transport Safety (Victoria)** on behalf of the Australian Transport Safety Bureau in accordance with the Collaboration Agreement.

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

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Addendum

Page	Change	Date

Preliminary report

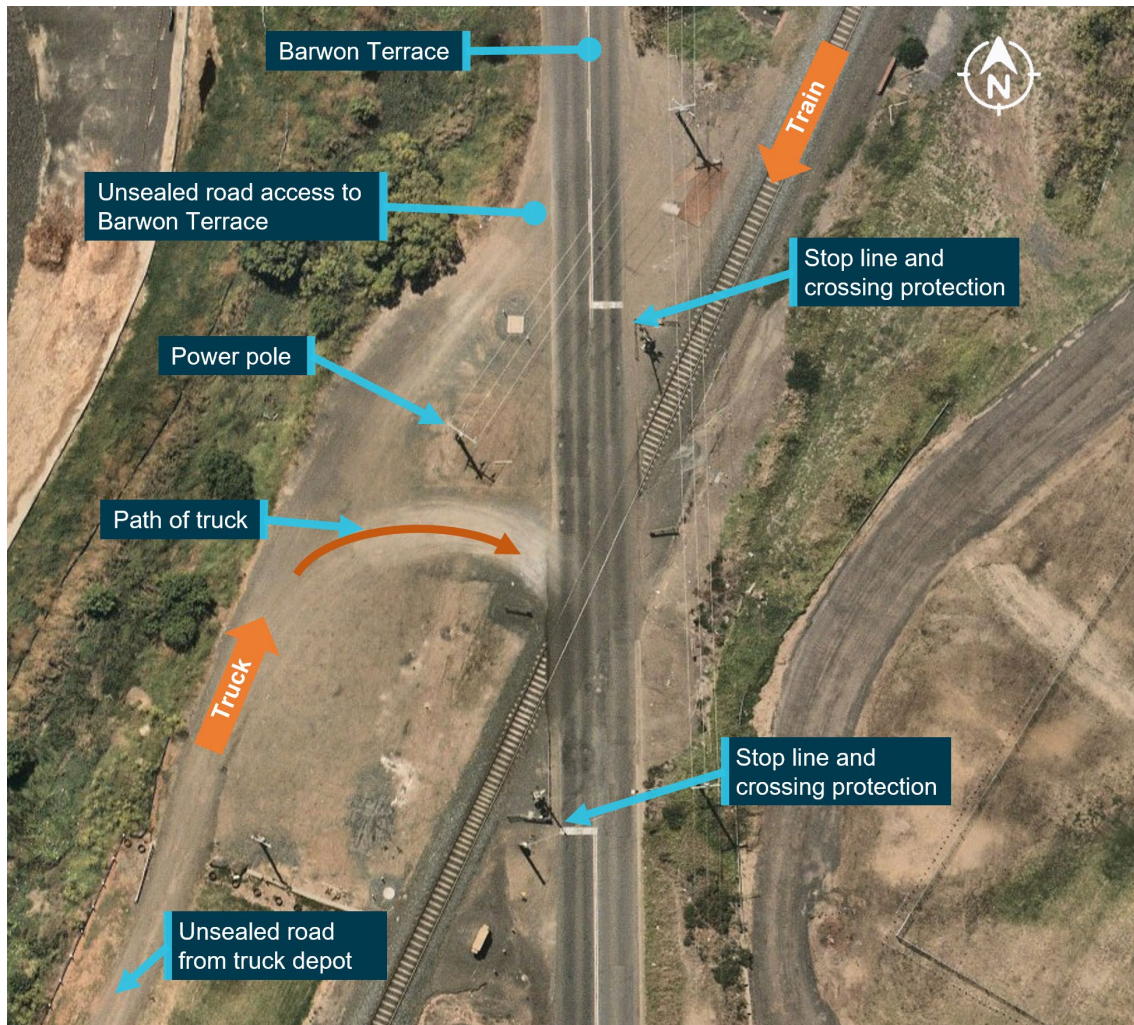
This preliminary report details factual information established in the investigation’s early evidence collection phase and has been prepared to provide timely information to the industry and public. Preliminary reports contain no analysis or findings, which will be detailed in the investigation’s final report. The information contained in this preliminary report is released in accordance with section 25 of the *Transport Safety Investigation Act 2003*.

The occurrence

At about 0600 local time on 3 April 2023, a truck driver arrived at a heavy vehicle depot located about 240 m south of the Barwon Terrace level crossing in South Geelong. They prepared the tipper truck for work in Point Lonsdale and departed the depot at about 0635. The truck proceeded in a north easterly direction from the depot along an unsealed road which ran parallel to the V/Line broad gauge railway track towards Barwon Terrace level crossing.

After travelling along the unsealed road towards Barwon Terrace, the truck proceeded onto the level crossing between the boom barriers and stop lines located on either side of the crossing (Figure 1).

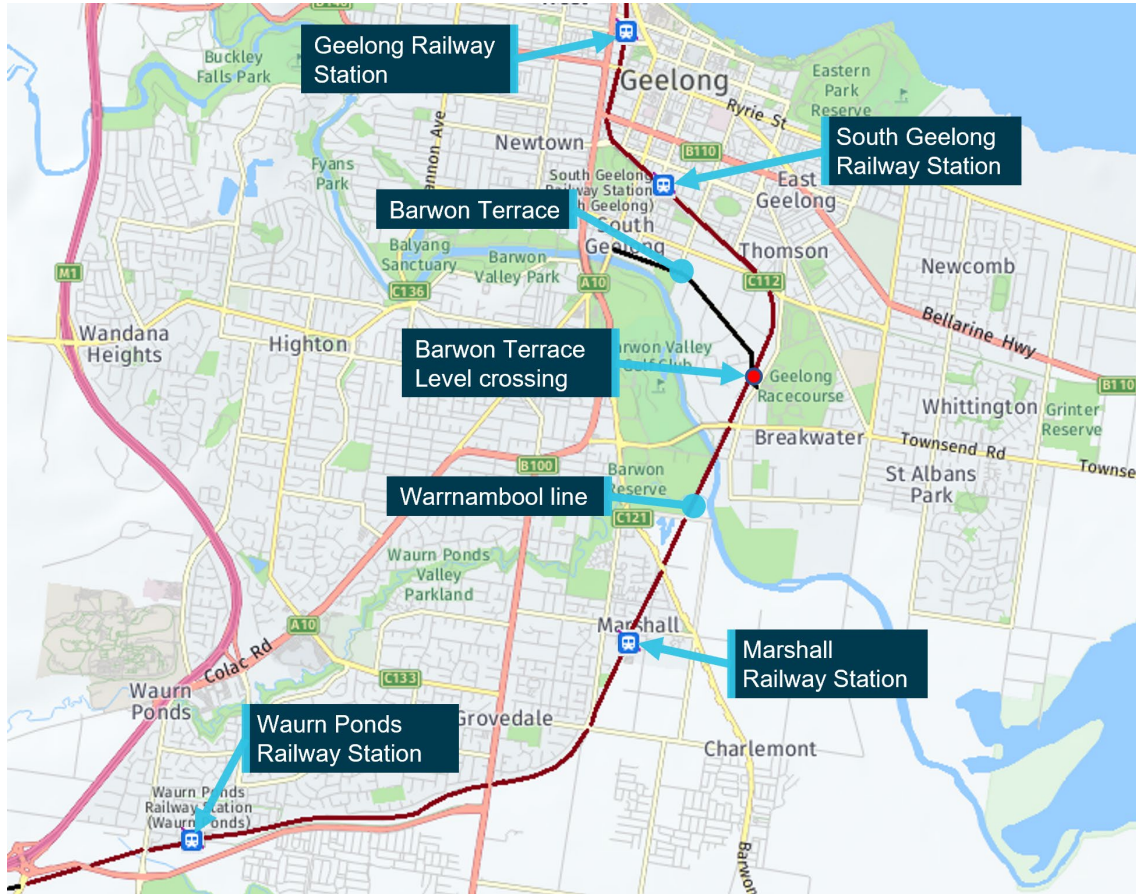
Figure 1: Direction of travel of truck and train and location of level crossing



Source: Imagery © Nearmap annotated by Chief Investigator, Transport Safety (Victoria)

Earlier at about 0631, V/Line train 7727, an empty six-car set with only the driver and a conductor on board, departed Geelong Railway Station towards Waurn Ponds (Figure 2). The train was being taken to Waurn Ponds Railway Station for a passenger service to Melbourne. As the train was being relocated, it did not stop at South Geelong Railway Station.

Figure 2: Train route and location of Barwon Terrace level crossing



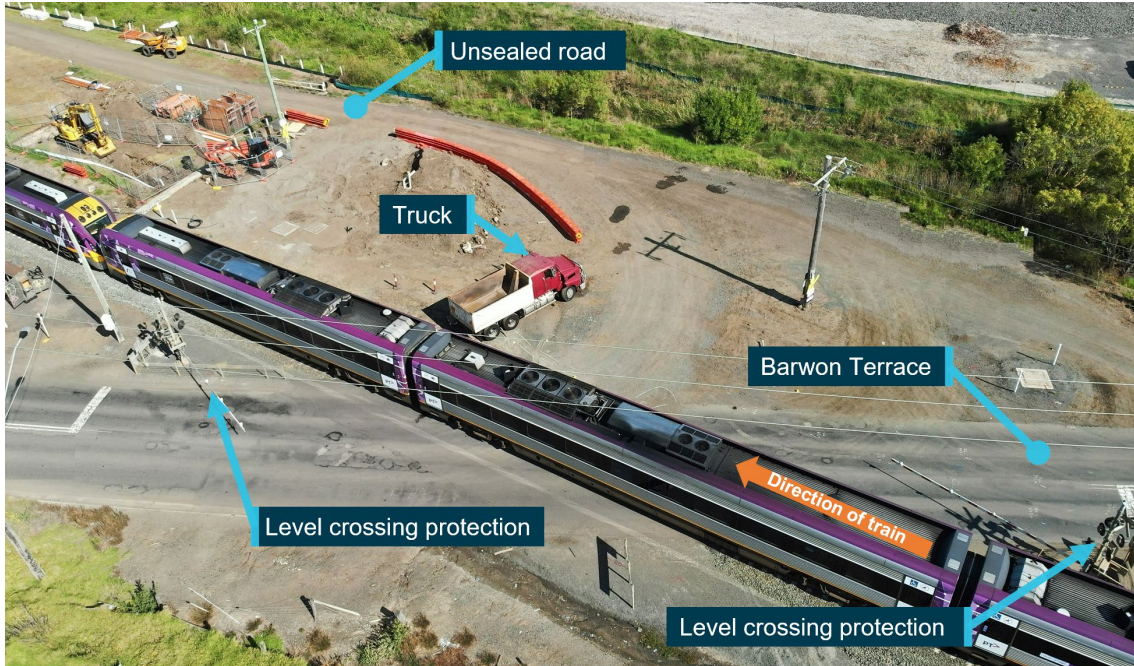
Source: Imagery © Nearmap annotated by Chief Investigator, Transport Safety (Victoria)

At about 0636 just prior to sunrise in overcast and dry conditions, train 7727 approached the Barwon Terrace level crossing from the north. The train driver reported that on observing the truck approaching the level crossing, they sounded the train’s horn and applied the emergency brake. Soon after, the train collided with the truck that was foul of the track. The train was travelling at about 65 km/h at the time of collision.

The force of impact caused the truck to spin around in a clockwise direction (Figure 3) and the driver was fatally injured. The truck sustained substantial damage.

The train sustained minor damage to its front, did not derail and was able to be driven to the Waurn Ponds stabling yard. The train driver and the conductor were not injured.

Figure 3: Location of truck and train after the collision



Source: Victoria Police annotated by Chief Investigator, Transport Safety (Victoria)

Context

Barwon Terrace level crossing

The Barwon Terrace level crossing was located in South Geelong, about 3.5 km from central Geelong. The rail infrastructure and the level crossing were managed by V/Line Corporation. The line in this section was a single bi-directional broad gauge track with a maximum permitted speed of 115 km/h for passenger trains.

Travelling by road in a south easterly direction (away from Geelong), Barwon Terrace intersected the rail line at an angle of about 25 degrees to the road user's left and 155 degrees to the right. The unsealed road intersecting Barwon Terrace near the level crossing provided access to nearby light industry.

The unsealed road used to access the truck depot widened at its intersection with Barwon Terrace. There was evidence of at least two routes being used by road traffic (Figure 1). One route joined Barwon Terrace north of the protecting boom barrier. A second route (taken by the truck on this day) joined Barwon Terrace between the boom barriers. Tyre tracks on the unsealed road indicated that this second route was in regular use.

Level crossing protection

The protection equipment at the level crossing consisted of boom barriers, flashing lights, warning bells and warning signage on each side of the crossing (Figure 4). The warning signage consisted of a Railway Crossing combination sign (R6-25), a Stop on Red Signal sign (R6-9), a Keep Tracks Clear Sign (G9-67-1A) and a Railway crossing with marker assembly sign [RX-9(L)].

The level crossing protection was observed to be working at the time of the collision.

Figure 4 - Level crossing protection equipment at the Barwon Terrace level crossing



*Photograph is taken from the northern approach to the level crossing, facing south.
Source: The Office of the Chief Investigator, Transport Safety (Victoria)*

The level crossing warning lights at the northern end of the crossing consisted of two sets of red flashing lights. One set of lights faced north along Barwon Terrace. A second set of flashing lights faced across Barwon Terrace towards the northern end of the intersecting unsealed road.

The truck and driver

The truck was a 1997 International tip truck and was owned by an earth moving company. The truck was empty at the time of the incident. Truck drivers used the depot daily, departing and returning to the depot regularly.

The truck driver had worked for the earth moving company for approximately one month prior to the incident. The truck driver was fatally injured in the collision.

Further investigation

To date the following investigation activities have been completed:

- inspected the location of the occurrence
- examined train operational information
- examined truck operational information
- interviewed several parties
- commenced collection of other relevant information.

The investigation is continuing and will include review and examination of:

- the operation of the level crossing
- the operation of the truck and train
- the layout of the unsealed road and access to the Barwon Terrace level crossing
- a review of the traffic management in place prior to and at the time of the incident.

Should a critical safety issue be identified during the investigation, the ATSB will immediately notify relevant parties so appropriate and timely safety action can be taken.

A final report will be released at the conclusion of the investigation.

General details

Occurrence details

Date and time:	3 April 2023 – 0637	
Occurrence class:	Serious incident	
Occurrence categories:	Collision	
Location:	South Geelong, about 76 km from Melbourne	
	Latitude: -38.161770	Longitude: 144.362800

Train details

Track operator:	V/Line Corporation	
Train operator:	V/Line Corporation	
Train number:	7727	
Type of operation:	Relocation	
Consist:	Empty six car passenger set	
Departure:	0631 Geelong Station	
Destination:	Waurm Ponds	
Persons on board:	Crew – 2 (driver and conductor)	Passengers – Nil
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Minor damage to the front of the train. Substantial damage to the truck	

Australian Transport Safety Bureau

About the ATSB

The ATSB is an independent Commonwealth Government statutory agency. It is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers.

The ATSB's purpose is to improve the safety of, and public confidence in, aviation, rail and marine transport through:

- independent investigation of transport accidents and other safety occurrences
- safety data recording, analysis and research
- fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia, as well as participating in overseas investigations involving Australian-registered aircraft and ships. It 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.

Rail safety investigations in Victoria

Most transport safety investigations into rail accidents and incidents in Victoria and New South Wales (NSW) are conducted in accordance with the Collaboration Agreement for Rail Safety Investigations and Other Matters between the Commonwealth Government of Australia, the State Government of Victoria and the State Government of New South Wales. Under the Collaboration Agreement, rail safety investigations are conducted and resourced in Victoria by the Chief Investigator, Transport Safety (CITS) and in New South Wales by the Office of Transport Safety Investigations (OTSI), on behalf of the ATSB, under the provisions of the *Transport Safety Investigation Act 2003*.

The Chief Investigator, Transport Safety (CITS) is a statutory position established in 2006 to conduct independent, no-blame investigation of transport safety matters in Victoria. CITS has a broad safety remit that includes the investigation of rail (including tram), marine and bus incidents.

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.

Terminology

An explanation of terminology used in ATSB investigation reports is available on the ATSB website. This includes terms such as occurrence, contributing factor, other factor that increased risk, and safety issue.