RAIL INCIDENT FINDINGS
LEVEL CROSSING COLLISION
NARROMINE
27 February 2012
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NARROMINE, NSW

27 FEBRUARY 2012
THE OFFICE OF TRANSPORT SAFETY INVESTIGATIONS

The Office of Transport Safety Investigations (OTSI) is an independent NSW agency whose purpose is to improve transport safety through the investigation of accidents and incidents in the rail, bus and ferry industries. OTSI investigations are independent of regulatory, operator or other external entities.

Established on 1 January 2004 by the Transport Administration Act 1988, and confirmed by amending legislation as an independent statutory office on 1 July 2005, OTSI is responsible for determining the causes and contributing factors of accidents and to make recommendations for the implementation of remedial safety action to prevent recurrence. Importantly, however, OTSI does not confine itself to the consideration of just those matters that caused or contributed to a particular accident; it also seeks to identify any transport safety matters which, if left unaddressed, might contribute to other accidents.

OTSI’s investigations are conducted under powers conferred by the Rail Safety Act 2008 and the Passenger Transport Act 1990. OTSI investigators normally seek to obtain information cooperatively when conducting an accident investigation. However, where it is necessary to do so, OTSI investigators may exercise statutory powers to interview persons, enter premises and examine and retain physical and documentary evidence.

It is not within OTSI’s jurisdiction, nor an object of its investigations, to apportion blame or determine liability. At all times, OTSI’s investigation reports strive to reflect a “Just Culture” approach to the investigative process by balancing the presentation of potentially judgemental material in a manner that properly explains what happened, and why, in a fair and unbiased manner.
The Incident

At 4:07pm\(^1\) on Monday 27 February 2012, two locomotives designated D843N travelling from Parkes to Narromine collided with a motor vehicle at the railway crossing on Old Backwater Road, Narromine. As a result of the collision, the driver of the motor vehicle received head and leg injuries and was conveyed to hospital. Neither member of the crew of D843N was injured. The utility was destroyed and the lead locomotive sustained light damage.

D843N

D843N consisted of two locomotives, RL306 leading and RL301 trailing, and was being operated by P&O Trans Australia (POTA) under the accreditation of South Spur Rail Services.\(^2\) It had a crew of two appropriately qualified drivers and was travelling from Parkes to Narromine to haul a train.

The Motor Vehicle and Driver

The motor vehicle involved was a 1997 Ford “Longreach” utility bearing current NSW registration. The sole occupant was a 72 year old licensed driver who resides in the local area.

The Level Crossing

The level crossing is a passive crossing displaying “D” type signage in accordance with Australian Standard AS 1742.7-2007, Manual of uniform traffic control devices, Part 7: Railway Crossings. Old Backwater Road runs east - west and intersects the single rail line running north - south at right angles. The road surface is sealed and is 5.9 metres wide at the intersection. There is no centre line marking on the road surface. The permissible road speed is 100kph.

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\(^1\) Times shown throughout are Eastern Daylight Saving Time, 11 hours ahead of Coordinated Universal Time.

\(^2\) POTA acquired South Spur Rail Services in May 2010. POTA changed its name to Qube Logistics with effect March 2012.
The road signage at the crossing consists of a “Railway Crossing” sign and a “Stop” sign with an “X” above the stop sign. Although one would suffice, there are two white lines painted on the bitumen road surface indicating the position for road vehicles to stop. The nearest to the crossing is 5.2 metres from the rail line and the second is 6.5 metres from the rail line.

On the approach to the crossing travelling from the west, at a distance of 240 metres, there is a road sign displaying a silhouette of a steam train (see Photograph 1). At a distance of between 225 and 207 metres, “RAIL X” is clearly painted in white on the road surface. There is a further roadside sign 106.9 metres from the crossing displaying a red “stop” symbol on a yellow background indicating a “STOP” sign ahead (see Photograph 2).

Photograph 1: Roadside sign and road surface marking
Photograph 2: Third warning sign and temporary crossing signage

The only obstruction to a driver’s view of the train track on approach to the level crossing travelling east is a clump of trees on the south-western corner. However, this line of trees is well west of the track and does not obstruct the view of the track from a distance of 330 metres from the level crossing stop markings on the road. All grass on either side of the road was sufficiently low as to not impede visibility to any driver travelling from either direction.

The rail line on the approach side to the crossing travelling from the south is straight for approximately 238 metres after a left hand curve with good visibility of the crossing. Track speed for trains on this section and through the crossing is 90kph.

The Collision

D843N departed Goobang Junction on the outskirts of Parkes at 2:11pm. At approximately 4:07pm it was approaching the Old Backwater Road level crossing on
the outskirts of Narromine, travelling at 68kph. The Driver of D843N sounded the horn at 450 metres from the crossing with the crossing being clear at that time. The locomotive’s lights were on. He sounded the horn again at 110 metres from the crossing. At this time he observed a white Ford utility, which was travelling from west to east, approach the crossing and stop with the front of the vehicle just fouling the line. He observed the sole occupant of the utility looking to his left hand side (north). At no time was the occupant seen to look to his right (south), the direction from which D843N was approaching.

At a distance of 58 metres from the crossing, the Driver of D843N again sounded the horn and applied the locomotives’ brakes, then applied the emergency brakes. However, the left front of the lead locomotive collided with the right front of the utility. As a result, the utility was spun around and came to rest on its roof 5.1 metres clear of the track and 12.1 metres from the road on the north-western side of the crossing. In the process it struck three metal poles supporting the roadside warning signs on the north-western side of the crossing adjacent to the white lines marked on the road surface. D843N travelled a further 265 metres before coming to a stand.

The crew immediately notified the Australian Rail Track Corporation’s Network Control Centre North by radio and requested emergency services be called to attend. They secured the locomotives then assisted the utility driver until the emergency services arrived.

**Damage**

The utility was destroyed as a result of the collision and the subsequent striking of the steel road sign supports and roll-over (see Photograph 3).

The lead locomotive suffered minor damage to the left front ‘cow catcher’ (see Photograph 4). A minor secondary impact on the right hand side diesel fuel tank was evident but the fuel tank was not breached. The roadside warning signs situated on the north-western side of the approach to the level crossing, the “Railway Crossing” and “STOP” signs, were demolished by the utility as it spun away due to the impact of the collision.
Photograph 3: The utility at the scene

Photograph 4: Damage to RL306
Emergency Services

Narromine Police arrived at the scene at 4:20pm. The Ambulance arrived at 4:25pm and transported the utility driver to Narromine Hospital. He was later transferred to Dubbo Hospital. Other emergency services arrived at 4:40pm. The crew of D843N was breath tested by Narromine Police at 4:30pm, both members returning a negative result. Narromine Police released the site at 7:10pm.

Investigation

Two OTSI Investigators deployed to the scene on 28 February 2012. Locomotive RL306 was inspected and photographed. All the lights and horn were tested and found to be in good working order. The driver’s window was clean and without any obstructions or impediments to a clear line of sight from a seated position (see *Photograph 5*).

*Photograph 5: View from the driving position of RL306*
The utility was examined at a holding yard in Dubbo to which it had been towed by a contractor to the NSW Police (see Photograph 6). The examination showed that at the time of the collision both the driver’s and passenger’s side windows were closed. Both were dirty. Due to the front windscreen having been shattered, investigators were unable to determine whether or not it was dirty at the time of the collision. Due to the damage caused both in the collision and during the recovery of the vehicle, it could not to be determined if the radio was on at the time of the collision.

![Photograph 6: Recovered vehicle showing point of impact with RL306](image)

The level crossing was inspected and measurements taken (see Diagram 1). All road signage remaining was in good serviceable condition. All road markings and road signs were clearly visible and all conformed to Australian Standard AS 1742.7-2007.
Findings

Although the driver of the utility came to a complete stop on the approach of D843N, he did so foul of the line instead of at a safe distance and in accordance with the road markings leading up to the level crossing. This was the cause of the collision.

The crew of D843N controlled the locomotives in a safe and proper manner. They approached the level crossing at a lower speed than the designated track speed and gave warning of their approach by use of the locomotive’s horn and lights.
Immediately after the collision they assisted the driver of the utility until emergency services arrived.

There were no safety issues identified with the level crossing. All warning signs complied with Australian Standard AS 1742.7-2007 and were in good condition and clearly visible.

**Conclusion**

Since the examination of the circumstances of the incident has established that there is no requirement for any remedial safety action associated with rail operations or the level crossing, the Chief Investigator has determined that the incident does not require further OTSI investigation as provided by the provisions of Section 67 (2) of the *Rail Safety Act 2008*.

**Acknowledgements**

OTSI would like to acknowledge the cooperation received from representatives of the following organisations:

- Australian Rail Track Corporation
- NSW Police
- Qube Logistics Rail Services

The Cover Photograph and Photograph 3 were supplied courtesy of Qube Logistics. Diagram 1 was sourced from *Google Earth*. 