NO. 93-130

TRAIN 630

COLLISION WITH PEDESTRIAN

HERETAUNGA STREET HASTINGS

24 DECEMBER 1993

ABSTRACT

This report relates to the collision between Train 630 and a pedestrian in Hastings on 24 December 1993. The safety issues identified by this investigation were the lack of effective protection for pedestrians on either of two footpaths which crossed the track in the area of this accident which is a mid-city park.

TRANSPORT ACCIDENT INVESTIGATION COMMISSION

RAIL ACCIDENT REPORT NO. 93-130

Train Type and Number:	Freight, 630
Locomotives:	DC 4409 and DC 4110
Date and Time:	24 December 1993, 0353 hours
Type of Occurrence:	Collision with pedestrian
Location:	Heretaunga Street, Hastings 159.06 km on the Palmerston North Gisborne line
Persons on Board:	Crew: 1 Passengers: Nil
Injuries:	Crew: Nil Passengers: Nil Others#: 1 fatal
Nature of Damage:	Nil
Information Source:	Transport Accident Investigation Commission field investigation
Investigator in Charge:	R Chippindale

Pedestrian on track

1. NARRATIVE

1.1 Train 630 was a New Zealand Rail Limited freight service from Wellington to Napier. As it approached Hastings the train including the locomotives had a total weight of 600 tonnes.

1.2 At 0350 hours on 24 December 1993 the train was nearing Hastings on a straight approach which involved three level crossings at 100 m intervals before crossing the two footpaths at Heretaunga Street at a steady 68 km/h.

1.3 The weather was overcast with light rain but good night time visibility.

1.4 The Locomotive Engineer, the sole occupant of the cab, was seated in his normal position on the right hand side.

1.5 As the train approached Heretaunga Street the Locomotive Engineer saw two persons crossing the line ahead at the further pedestrian crossing. Although the train's horn had been sounded at each of the previous crossings neither person appeared to be aware of the train's approach so the engineer sounded the horn to draw their attention to it. The lead locomotive's headlight was on full.

1.6 The first person got across the line but the second, who was leaning forward and walking more slowly, was struck by the locomotive.

1.7 The Locomotive Engineer applied the emergency braking and when the train came to a stop he notified Train Control and requested the attendance of the emergency services.

1.8 The victim's partner, his fiance, had already contacted a nearby Police patrol who responded to the accident immediately.

1.9 The incident occurred in the vicinity of a large fountain in a park setting. The track passed across a 50 m diameter low profile fountain, in this area, which operated throughout the night. The ambient noise from the fountain was dominant in the early hours of the morning on a still night.

1.10 A footpath on either side of the fountain crossed the rail track to provide pedestrian access to the east and west sections of the Heretaunga Street shopping mall. In hot weather small children used the annular moat around the fountain for a cooling paddle, sometimes playing within two metres of the active rail track (see illustrations).

1.11 Pedestrians on each of the paths around the fountain were dissuaded from crossing the track as a train approached by barriers on either side of the track which extended to a point some 800 mm short of the full path width. There were 50 mm diameter, 12 volt red lights on these barriers and one warning bell at each footpath crossing. These bells could be heard clearly above the noise of the fountain and operated for every train which crossed the area as they were not time switched.

1.12 The victim's fiance could not remember hearing the warning bells nor being aware of the train until it passed between the couple. A subsequent check established the warning devices to have been operating properly immediately after the accident.

1.13 The couple had been to a party and were walking towards a restaurant in deference to their lack of fitness to drive.

1.14 The barrier arms were cut short deliberately to allow an escape route for any pedestrian caught on the track as the arms came down. This truncation paradoxically provided access to the track for anyone not noticing the arms or wishing to by-pass them.

1.15 The lights on the arm by-passed by the victim had clean clear lenses.

1.16 In the park setting the track was fenced on either side by wrought iron railings which were an effective barrier to trespassers. However they interrupted the sighting of a train until it was less than 50 m from the pathways.

1.17 The passage of a freight train at 80 km/h through the centre of a play area and shopping mall had a high potential for a pedestrian accident. Trains passed through the area during business hours when the ambient daytime noise level was high and parents with their children about them crossed the line continuously.

1.18 While this accident involved an adult the investigation of the occurrence revealed a serious threat to the younger citizens, from the intrusion of a railway into such an environment. In the vicinity of the Heretaunga


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Street fountain pedestrian level crossings, children played at a distance from their parents in close proximity to the rail track. In this area no effective barrier to trespass on the rail existed. Further the public was encouraged to cross the line by the provision of two wide pathways which facilitated passage between two sections of a shopping mall on either side of the rail track.

1.19 The sounding of a bell and lowering two short barriers, each carrying two small 12 volt red lights, across the footpaths did not form an effective barrier to children in this area, particularly as their area of play extended into the fountain which gave unimpeded access to the rail track.

2. FINDINGS

2.1 The train was being operated normally prior to the accident.

2.2 The Locomotive Engineer was keeping an appropriate lookout and took the appropriate action when he sighted the pedestrians.

2.3 The pedestrian's situational awareness was reduced by the consumption of alcohol.

2.4 The warning devices on the pedestrian crossing were operating.

2.5 The track in the area of the occurrence was well fenced on either side to the immediate vicinity of the authorised crossings.

2.6 There were no signs to draw the attention of the public to the hazards of leaving children unattended near the track.

2.7 The obvious success in blending the railway track into the park environment detracted from the effectiveness of the crossing barriers and bells.

2.8 While aesthetically unwelcome an urgent need for improved pedestrian safety existed particularly in respect of safeguarding children.

3. SAFETY RECOMMENDATIONS

3.1 It was recommended to the Hastings District Council that:

They design and construct an underpass in an adjacent but discreet location so that the use of the Heretaunga Street pedestrian level crossings can be discontinued and an effective barrier erected to prevent access to the rail track by young children (008/94) and,

until such time as improved safety measures can be introduced they erect conspicuous warning signs to encourage the closer supervision of children playing in the railway/fountain environment (009/94).

Hastings District Council responded:

".....Constructing an underpass as per your recommendation would not prevent people crossing the rail track unless there was a permanent barrier preventing all pedestrian access. This would effectively split the town in half and would be totally unacceptable to the community and the businesses involved in retailing on both sides of Heretaunga Street. Furthermore, we believe an underpass would be a rather dangerous place which would harbour undesirable elements of our society, with many people not wishing to use it anyway if they could possibly avoid doing so. We have

major problems in the inner city areas at present with vandalism, urinating in shop doorways, and other filth, which shopkeepers have to often face when they open up in the mornings. We therefore consider that an underpass is not a realistic proposal.

We do acknowledge that children sometimes do play in the vicinity of the rail tracks, although the water areas are at lower levels, and no problems have occurred since the water feature was constructed about four years ago. We have, therefore decided to investigate the possibility of a continuation of the type of wrought iron fence, which goes along either side of the railway track, being constructed along both sides of the track across the diameter of the water feature with swinging gates at each end. This would prevent any person actually getting onto the track at any time, unless some adult took considerable effort to scale the fence for no real purpose. We would envisage the swinging gates opening as trains approached, thereby closing against the pedestrian path on either side of the water feature effectively blocking any possible access to the track. The action of the gates would shepherd any people who might be about to cross, out of the way.

The great danger with such a barrier, however, is still the risk of a person being trapped inside the track area. This is why the barrier arms are short enough to provide an escape route. It may therefore be necessary to have an escape route with any system.

We will also examine the possibility of an iron fence blocking the tracks from the water feature and curving away at each end to prevent any child getting from the water directly on to the track.

..... We will investigate the question of signage in the area although with the approach of winter, it is most unlikely that any children will play in the water feature. Free-standing signs will only lead to vandalism and we will have to assess the feasibility of fixed signs being put in place on a temporary basis. Whether the erection of signs aimed at encouraging the closer supervision of children will have any effect is somewhat debatable."

3.2 It was recommended to New Zealand Rail Limited that:

Until more effective protection for the public is provided at the Heretaunga Street pedestrian level crossing area in Hastings they restrict the speed of trains in that area to 40 km/h (010/94).

New Zealand Rail Limited responded:

"All level crossings have an inherent hazard to the public who use them and to the rail service vehicle operator.

If the level crossing layout and warning system following TAIC investigation is not considered effective in this location, then surely the crossing must be closed to eliminate the hazard.

NZRL will not accept your recommendation 010/94 to restrict speeds of trains in Hastings to 40 km/h."

3 May 1994

M F Dunphy
Chief Commissioner