

## Measures to reduce collisions at level crossings

### Improving train visibility

#### Australian Standard 7531 – conspicuity standard

- 3.1 The 2004 *Train Illumination* report recommended that Australian locomotives and rolling stock should be fitted with reflective strips or paint, and that all trains be fitted with rotating beacon lights. As mentioned in Chapter 1, the Government accepted this recommendation in part, supporting the improvement of train conspicuity through low cost measures such as reflective strips or paint, but remained uncertain about auxiliary lighting measures.
- 3.2 Australian Standard 7531 has since been established by the Rail Industry Safety and Standards Board (RISSB). The standard, put in place in 2007, sets mandatory and recommended requirements with respect to lighting, livery and reflectors, for new rolling stock and rolling stock undergoing maintenance. The ARA surveyed rail operators to determine compliance levels and found that 83% of commercial rail operators and 52% of heritage rail operators comply with the standard.
- 3.3 It was also noted by ARA in its submission, that the percentages of commercial rail operators complying with the Standard will increase

as their stock undergo maintenance, and that many heritage rail operators often do not encounter level crossings on their routes.<sup>1</sup>

- 3.4 In their submission to the inquiry, the Australian Rail Track Corporation stated its belief that with the introduction of this new standard, the issue of train illumination is now much less significant with regards to the causes of level crossing crashes. The submission states:
- ... the adoption by industry of the new train conspicuity standard means this issue [of illumination] is now satisfactorily dealt with.
- 3.5 In a supplementary submission to the Victorian Parliamentary Committee on Road Safety's 2008 inquiry into improving safety at level crossings, Mr Patrick McKay, a former engineer with the Victorian Railways and Public Transport Corporation and current consultant to MainCo, advised the Committee of his experience inspecting rolling stock in North Melbourne in April 2008. While most were compliant with the Standard for reflective delineators, few were effectively maintained. He stated that they were often missing, damaged and 'all were dirty enough to be virtually useless.'<sup>2</sup>
- 3.6 The Committee believes that improving safety at level crossings is of utmost importance, and that increasing train illumination will go some way to achieving this goal but does not, however, represent the most significant strategy for improving level crossing safety.
- 3.7 The Committee strongly supports the introduction of the Australian Standard which sets mandatory and recommended requirements for ensuring train visibility. The Committee believes however, that it is imperative that these requirements are enforced, and that regular maintenance of reflective delineators be required.

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1 ARA, *Submission no. 10*, pp. 20-21.

2 Mr P McKay, *Submission to the Victorian Road Safety Committee's Inquiry into Improving Safety at Level Crossings*, 28 April, p. 1, cited in the Parliament of Victoria Road Safety Committee Report *Inquiry into Improving Safety at Level Crossings*, December 2008, p. 69.

## Recommendation 1

- 3.8 **The Committee recommends that Australian Standard 7531 be adapted to include a mandatory requirement for on going maintenance of retro-reflective materials on locomotives, as well as stricter enforcement of the standard's requirements.**

### Auxiliary lighting on trains

- 3.9 The 2004 *Train Illumination* report recommended that all locomotives be fitted with rotating beacon lights. There continues to be debate amongst experts as to the effectiveness of auxiliary lighting for locomotives in improving conspicuity, particularly as data shows that 94% of level crossing crashes occur in daylight hours.<sup>3</sup> The Australasian Railway Association states categorically in its submission that it does not support the installation of additional lights on trains for a number of reasons. Of particular significance is their conclusion, from a contract report by Cairney et al,<sup>4</sup> that:

...research shows that additional lights, such as strobe lights, have no significant effect on the detection of trains or of a road user being able to estimate the time of arrival of a train at a crossing.<sup>5</sup>

- 3.10 Also, as the Victorian Road Safety Committee reports:

...a study conducted for the Western Australian Government Railways indicated that a single strobe light did not improve detection when added to locomotives already fitted with headlights and crossing lights.<sup>6</sup>

- 3.11 However, Dr Wigglesworth, in his submission, to the Victorian Parliamentary Committee's inquiry, noted that certain caveats of that study undermine the reliability of the results.

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3 ARA, *Submission no. 10*, p. 7.

4 Cairney P, Cornwell D, Mabott N, *Contract report; Conspicuity of Enhanced Lighting Treatments for Railway Locomotives*, December 2003 p. 3.

5 ARA, *Submission no. 10*, p. 25.

6 Parliament of Victoria Road Safety Committee, December 2008, p. 68.

A more scientific experiment is required to determine the effectiveness of supplementary lighting. My preference would be for this to be carried out in the laboratory, preferably in a University Department of Optometry, Psychology or Visual Science.<sup>7</sup>

- 3.12 Further, in their submission to the Victorian inquiry the Australian Road Research Board (ARRB) advised of evidence that when compared to the use of train headlights alone, *all* auxiliary lighting is effective and increases detectability of trains or improves motor vehicle drivers' capacity to predict the time of arrival of a train.<sup>8</sup>
- 3.13 Finally, the *Level Crossings Research Database* report states that:
- Although the majority of vehicle–train collisions in Australia occur during daylight hours, when normalised for differences in traffic volume between day and night periods, collision rates are most likely to be substantially higher at night than during the day.<sup>9</sup>
- 3.14 It is clear to the Committee therefore that there is still a pressing need for effective and rigorous research to establish how effective auxiliary lighting on trains is in improving train conspicuity.

## Recommendation 2

- 3.15 **The Committee recommends that the Department of Infrastructure, Transport, Regional Development and Local Government undertake rigorous scientific research into the efficacy of auxiliary lighting on trains as a measure to improve train conspicuity. The results of the research should be made public as soon as available.**

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7 Dr E Wigglesworth, Submission to Parliament of Victoria Road Safety Committee Report *Inquiry into Improving Safety at Level Crossings*, December 2008, p. 44.

8 ARRB, *Submission to the Victorian Road Safety Committee's Inquiry into Improving Safety at Level Crossings*, cited in Parliament of Victoria Road Safety Committee Report *Inquiry into Improving Safety at Level Crossings*, December 2008, p. 67. The Committee is advised by the Deputy Chair that rotating beacon lighting is used extensively and effectively on trains in the sugar industry.

9 Cooperative Research Centre for Rail Innovation, 2008, p. 33.

## Other measures to improve safety at level crossings

- 3.16 As noted earlier, it is the opinion of the Committee that the need to improve level crossing safety goes beyond the issue of train illumination. As such, the Committee has also assessed methods of combating the other causes of level crossing crashes.

## The 3 E's – Education, Enforcement and Engineering

- 3.17 The 'Three E's' – *education, enforcement and engineering*, are promoted by the rail industry as three areas in which the safety of level crossings could be improved. The policy is outlined in 'Zero Deaths at Level Crossings – The Rail Agenda'.<sup>10</sup> The Committee has received evidence of a number of improvements and policy changes across the States and Territories in these three areas that have been implemented since the publication of its 2004 report.<sup>11</sup> Due to the significance of motor vehicle driver behaviour, including heavy vehicle driver behaviour, as a factor leading to level crossing crashes, the Committee particularly welcomes the advances in educating drivers on the dangers of level crossings and enforcing the road rules at these particularly dangerous intersections.

### Education

- 3.18 As discussed in the previous chapter, the results of the National Road Users Survey demonstrated that high numbers of motor vehicle drivers are exhibiting considerably reckless behaviour at level crossings. It is therefore important that significant emphasis be placed on the education of motor vehicle drivers, making them aware of the dangers of level crossings.
- 3.19 The use of intensive road safety publicity campaigns is practiced in all states and territories in Australia.<sup>12</sup> These campaigns would normally reach the public using television, radio, print media, press conferences and/or displays and target issues of concern such as speeding or drink-driving. Campaigns may also be used to:

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10 ARA, *Zero Deaths at Level Crossings – The Rail Agenda*, December 2007, p. 1.

11 Victorian Department of Transport, *Submission no. 14*; South Australian Department for Transport, Energy and Infrastructure, *Submission no. 7*.

12 Cooperative Research Centre for Rail Innovation, 2008, p. 50.

- Raise awareness of new laws;
- Change attitudes (e.g. to improve public acceptance of road safety countermeasures); and
- Change behaviour, as part of a package of measures (e.g. engineering and/or enforcement related to speeding).<sup>13</sup>

3.20 Campaigns which have been run in Australia since the *Train Illumination* report was published include:

- In South Australia, the 'Don't Play with Trains' safety campaign which was begun in 2004, has continued to be promoted into 2009. The campaign aims to inform all road users that their behaviour is the key factor in collisions at level crossings. The campaign uses two different television and radio commercials: one for motor vehicle drivers and the other for pedestrians. Both demonstrated that risk taking at level crossings is hazardous for both motor vehicle drivers and pedestrians.<sup>14</sup>
- In Western Australia, in its 2006/2007 Annual Report, the Public Transport Authority reported that as part of its *National level crossing behaviour review* it was working with the Australasian Railway Association (ARA) on a review of various level crossing safety education campaigns to evaluate their effectiveness.<sup>15</sup>
- In Queensland, the 'Rail Smart' campaign was launched in July 2006. Bringing together a number of safety related activities that QR conducts on an ongoing basis, the campaign was broadcast using television and other media and railway outlets.
- In Victoria, a \$1 million advertising campaign was launched in November 2005, including television, radio and outdoor advertising. The campaign used slightly different messages for metropolitan and regional motor vehicle drivers. In the metropolitan area, motor vehicle drivers were told: 'Don't risk it. Always keep the crossing clear', while in regional Victoria, the campaign was 'Don't risk it. Slow down and be prepared to stop'.<sup>16</sup>

13 Global Road Safety Partnership website accessed on 12 December 2008  
<<http://www.grsproadsafety.org/?pageid=110>>

14 DTEI, *Submission no. 7*, p. 2; also: DTEI website accessed on 22 December 2008  
<[www.transport.sa.gov.au/safety/rail/advertising\\_campaign.asp](http://www.transport.sa.gov.au/safety/rail/advertising_campaign.asp)>

15 Government of Western Australia, Public Transport Authority website accessed on 22 December 2008.  
<[http://www.pta.wa.gov.au/annualreports/2007/audited\\_indicators\\_007.html](http://www.pta.wa.gov.au/annualreports/2007/audited_indicators_007.html)>

16 Cooperative Research Centre for Rail Innovation, 2008, p. 54.

- In NSW, the RTA launched a community education campaign in June 2004, the same month that the *Train Illumination* report was published (June 2004). The campaign included outdoor billboards and press advertisements.<sup>17</sup>
- 3.21 The existence of awareness campaigns in several States in the last four years is welcomed by the Committee, as motor vehicle drivers behaviour has been shown to be a primary factor in causing level crossing crashes. However, as was demonstrated by the results of the 2008 *National Road Users Survey*, motor vehicle driver behaviour is still consistently problematic at level crossings. As such, The Committee believes that there is still more to do in educating motor vehicle drivers of the dangers at level crossings.

## Enforcement

- 3.22 Historically, fines for violating road rules at level crossings have been very low in most jurisdictions in Australia. In the last two years, several States have reassessed and increased fines for risky driving or disobeying road rules at level crossings, for example:
- In March 2007, Queensland Transport raised the existing fine for risky driving or disobeying road rules at level crossings from \$45 to \$225 and 3 demerit points.
  - In New South Wales the current fine for disobeying road rules at level crossings is \$300 and 3 demerit points.
  - In Victoria, following the Kerang train disaster in 2007, the Government raised penalties for infringements at level crossings. In its submission to the inquiry, the Victorian Department of Transport outlined the tightening of enforcement measures to encourage motor vehicle drivers to comply with road rules at level crossings. Noting:
    - Penalties for level crossing infringements have been toughened, rising from \$177 and three demerit points to \$430 and four demerit points. A new offence has been introduced for speeding to beat a train, crossing tracks when lights and bells are operating, or weaving in between lowered boom gates. It carries a fine of 30 penalty units, a (\$3,304) infringement, four demerit points and automatic three month licence suspension.

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17 Level Crossing Strategy Council website accessed on 15 December 2008  
<<http://www.levelcrossings.nsw.gov.au/campaigns.htm>>

- Trials of red light/speed enforcement cameras at one metropolitan and one regional railway crossing.<sup>18</sup>
- 3.23 The Victorian Government is leading the way in better enforcing road rules at level crossings. Red light cameras have been introduced at a selection of dangerous level crossings, and will be trialled for 12 months. Those crossings fitted with cameras will also have a yellow box to indicate the potential area of danger. The cameras were installed from 2007 – 2008, with the hope of expanding the trial to more level crossings, if successful.<sup>19</sup> South Australia also plans to introduce red light/speed cameras at high incident level crossings in that State.<sup>20</sup>
- 3.24 Victoria has decreased speed limits at a number of level crossings, from 100 to 80 kilometres per hour, in most cases. A measure that has been supported by the ARA. In evidence to the Committee, Ms Pettiford, Project Officer, explained:
- ...we do not have traffic lights in the middle of a 100 kilometre per hour highway; therefore, whether it is a passive or an active crossing, why should we expect drivers on a 100 or 110 kilometre per hour road to be able to stop suddenly at a level crossing, when a train is within sighting distance? They need to reduce that speed limit to 80 kilometres per hour.<sup>21</sup>
- 3.25 Submissions from the Victorian Department of Transport and Department of Transport Energy and Industry in South Australia, both noted toughening of penalties for level crossing infringements in the two states.<sup>22</sup> The Committee supports these measures to encourage motor vehicle drivers to engage in safer behaviour at level crossings. It would like to see, however, greater consistency with regard to the penalties for improper motor vehicle driver behaviour at level crossings across the States and Territories. The Committee believes the National Road Safety Council, recently established to advise the new National Transport Policy on road safety, including safety at level crossings, (as will be discussed in Chapter 4 of this

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18 Victorian Department of Transport, *Submission no. 14*, p. 5.

19 Victorian Department of Transport website accessed on 12 March 2009.  
<<http://www.transport.vic.gov.au/DOI/Internet/transport.nsf/AllDocs/8EE1EDA7067A3EE1CA2571AF0005EEFC?OpenDocument>>

20 DTEI, *Submission no. 7*, p. 2.

21 Ms Pettiford, Australasian Railways Association, *Transcript of Evidence*, 13 March 2009, p. 12.

22 Victorian Department of Transport, *Submission no. 14*, p. 5. DTEI, *Submission no. 7*, p. 2.



report) should aim to establish consistency in these penalties across all jurisdictions. In particular, the Committee would like to see implementation *across Australia* of reduced speed limits at level crossings on major highways.

### **Recommendation 3**

- 3.26 **The Committee recommends that the Government, through the National Road Safety Council, set consistent penalties across Australia for motor vehicle driving offences at level crossings.**

### **Recommendation 4**

- 3.27 **The Committee recommends that the Australian Government seek, via the Australian Transport Council, the reduction of speed limits to 80 kilometres per hour at level crossings on all major highways with a current speed limit of 100 kilometres per hour, or more.**

## **Engineering**

- 3.28 Aside from promoting safer behaviour in motor vehicle drivers through education and enforcement, improvements can also be made to the engineering of level crossings to improve safety.
- 3.29 In their submission to the inquiry, the Australian Trucking Association emphasises the importance of the 'Safe Systems' approach to road safety. It explains:

The approach recognises there are collective responsibilities on all parties in improving road safety, including infrastructure providers, infrastructure managers, transport regulators and road users.

Importantly, the approach recognises that human error is inevitable and that road users will make mistakes or fail to respond appropriately to prevailing conditions.

A safe transport system should make allowances for human error and seek to minimise the consequences in the event of an incident.<sup>23</sup>

- 3.30 The approach encourages the design and engineering of road systems to provide the best possible protection in times of human error. The Committee supports this approach and as such encourages engineering solutions to level crossing safety, as well as solutions designed to effect improvements in driver behaviour.

## Rumble strips

- 3.31 One predominant engineering solution which was supported in the Committee's *Train Illumination* report is the installation of rumble strips at the approach to particularly dangerous level crossings. Rumble strips can either be *passive*, if they are permanently in situ; or *active*, if they are triggered by the approach of a train. The *Train Illumination* report recommended that passive rumble strips should be installed at all high accident risk level crossings across Australia, and that the Government should invest in greater research into the efficacy of active rumble strips.
- 3.32 As outlined in the submission to the inquiry by the Victorian Department of Transport, VicRoads have installed passive rumble strips at over 200 level crossings at high speed, sealed roads.<sup>24</sup> The Victorian Parliamentary Road Safety Committee's recent report into level crossing safety points out that these rumble strips have been installed at level crossings which have low rail traffic volume, which is understood to lead to reduced motor vehicle driver vigilance, as they are not expecting to see a train. Australian Road Research Board (ARRB) has been commissioned to conduct before and after evaluation which is still underway.<sup>25</sup>
- 3.33 Passive rumble strips have also been trialled in Western Australia, where, in 2004, Main Roads Western Australia produced a report titled *Effects of Rumble Strips in Driver Speed and Behaviour at Approaches to Passively Controlled Railway Level Crossings*. The report concluded that rumble strips trialled in WA had significantly beneficial effects at

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23 ATA, *Submission no. 9*, p. 3.

24 Victorian Department of Transport, *Submission no. 14*, p. 5.

25 Parliament of Victoria Road Safety Committee, December 2008, p. 73.

crossings with Stop signs. However, the strips were found to have negligible effects at those crossings with Give Way signs.

- 3.34 The Committee notes the difference in design between passive rumble strips in the different states. Level crossings fitted with rumble strips in Victoria, as part of the current trial there, have several sections of strips in the lead up to the crossing, beginning some distance back from the crossing, but with no strips right upon it. This design alerts the motor vehicle driver to the level crossing ahead in good time to reduce speed, however does not alert the driver at the time they reach the crossing. Other states have positioned their rumble strips closer to the intersection, which, while still alerting the driver to the crossing, does so with less time for the motor vehicle driver to brake.
- 3.35 In its submission, the Australasian Railways Association agreed with the Australian Government's rejection of the Committee's recommendations regarding rumble strips – both passive and active – in the 2004 report. It explains:

The ARA agrees with these two matters. The trial of rumble strips in Western Australia was inconclusive and recommended further trials.<sup>26</sup>

- 3.36 The Committee visited a level crossing fitted with rumble strips in regional Victoria during the course of this inquiry. The crossing was part of that State's current trial into the efficacy of passive rumble strips at some level crossings. The Committee was impressed by the effect of the strips, and believes that rumble strips have the potential to improve the safety of level crossings. The Committee, therefore, would welcome further trials in other jurisdictions to establish the broadest understanding of the efficacy of this engineering solution to level crossing safety.

## **Recommendation 5**

- 3.37 **The Committee recommends that the Government, through the Australian Transport Council, establish further trials of passive rumble strips at selected level crossings across the country.**

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26 ARA, *Submission no. 10*, pp. 30- 31.

- 3.38 One common argument in opposition to the efficacy of *passive* rumble strips, that the Committee notes, is that drivers become accustomed to the rumble strips over time and therefore they lose their impact. As such, the Committee reiterates its recommendation from the 2004 report that further study be done into the efficacy of active rumble strips, as no full-scale trial of this technology has been undertaken in Australia to date.

### Recommendation 6

- 3.39 **The Committee recommends that the Australian Government, through the Australian Transport Council, initiate a programme to begin trialling active rumble strips at a selection of the most dangerous level crossings.**

## Advanced warning systems

- 3.40 As part of their suite of railway level crossing safety strategies, the Victorian Government has introduced automated advanced warning signs at 53 crossings in regional areas of that State. These signs are triggered by an approaching train, activating flashing lights on the sign, to provide a visible warning to drivers. The Victorian Government has invested \$11.1 million to install the signs, which are located approximately 250 metres ahead of the crossing.<sup>27</sup> The submission from the Victorian Department of Transport notes that all 53 crossings, as well as a possible 4 more, are due for completion by 30 June 2010.<sup>28</sup>
- 3.41 The Australian Transport Safety Bureau, however, highlighted the necessity that these technological advancements be 'fail-safe'. According to Mr Foley, Director Surface Investigations:
- A lot of this technology is under trial, but the central issue is that it must fail safely to be used in a rail context. In one of our investigations there was an actively protected crossing that was not fail-safe as a result of some maintenance on the

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27 Victorian Department of Transport website accessed 12 March 2009.  
<<http://www.transport.vic.gov.au/DOI/Internet/transport.nsf/AllDocs/8EE1EDA7067A3EE1CA2571AF0005EEFC?OpenDocument>>

28 Victorian Department of Transport, *Submission no. 14*, p. 5.

signalling equipment, and the risks resulting from that are enormous. People expect such equipment to work and, if the lights are not flashing, it means that no train is coming and they will negotiate the crossing. In this case the lights were not flashing and a train was coming, which resulted in a collision.<sup>29</sup>

- 3.42 The Committee visited an advanced warning system in regional Australia during the course of this inquiry and was impressed by the efficacy of this simple solution. The Committee is also aware that Australian companies are developing solar powered advanced warning systems which will alert the motor vehicle driver with an audio warning as well as flashing lights on a sign; Partech Systems is one such company.<sup>30</sup> The use of advanced warning system technology is likely to be significant in improving the safety of level crossings. The Committee recognises, however, that the fail-safety of these devices is of great importance to their efficacy, and its assurance, prior to installation, is paramount.

## Intelligent transport systems

- 3.43 Intelligent Transport Systems (ITS) use technology to transmit information between trains, motor vehicles and infrastructure. The Committee's 2004 report concluded that 'significant safety improvements will come from developments in Intelligent Transport Systems.'<sup>31</sup>
- 3.44 The ARA, in conjunction with ITS Australia (The peak body for intelligent transport systems), held the *ITS for Railway Level Crossing Workshop* in 2008, in which participants were briefed by experts in the field – from government transport officials to technology manufacturers – on the potential of the available technology to improve safety at level crossings. At the workshop, transport industry leaders committed to further exploration of the possible

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29 Mr Peter Foley, Australian Transport Safety Bureau, *Transcript of Evidence*, 13 March 2009, p. 28.

30 Partech Systems website accessed on 15 June 2009  
<<http://www.partechsys.com/lcc.html>>

31 House of Representatives Standing Committee on Transport and Regional Services, *Train Illumination: Inquiry into some measures proposed to improve train visibility and reduce level crossing accidents*, June 2004 p. 13.

improvements to level crossing safety through the implementation of ITS.<sup>32</sup>

- 3.45 Intelligent Transport Systems are being developed and trailed internationally, with Japan planning to launch an active intelligent transport system in 2010.<sup>33</sup>
- 3.46 In the 2004 *Secretary's Action Plan for Highway-Rail Crossing Safety and Trespass Prevention* from the US Department of Transportation, use of ITS is also promoted.

In the future, Intelligent Transportation Systems (ITS) will provide the ability to use an in-vehicle warning of danger at highway-rail crossings and, perhaps, even provide the means to intervene before a collision occurs. Railroad Positive Train Control (PTC) systems will provide information on the direction, speed, and routing of each train; and highway-side systems will utilise this information to communicate a warning to individual motor vehicles.<sup>34</sup>

- 3.47 Domestically, the Australian Transport Council has requested that Queensland Transport lead the development of a work program for technology based solutions.<sup>35</sup>
- 3.48 The Committee has received strong evidence in support of ITS as a method for improving level crossing safety. According to the Victorian Department of Transport:

Linking intelligent vehicles and roadside to move from an autonomous to a cooperative intelligent transport system provides the opportunity to improve safety and mobility.<sup>36</sup>

- 3.49 In its submission, the ARA suggested that:
- ... the use of ITS has the potential to reduce railway level crossing crashes and ... the Australian Government should play a leading role in supporting the development, trialling

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32 ARA, *Submission no. 10*, p. 28.

33 Parliament of Victoria Road Safety Committee, December 2008, p. 99.

34 United States Department of Transportation, *Secretary's Action Plan for Highway-Rail Crossing Safety and Trespass Prevention*, 2004, p. 4, cited in Parliament of Victoria Road Safety Committee Report *Inquiry into Improving Safety at Level Crossings*, December 2008, p. 99.

35 Parliament of Victoria Road Safety Committee, December 2008, p. 101.

36 Victorian Department of Transport, *Submission no. 14*, p. 9

and implementation of ITS applications at railway level crossings.<sup>37</sup>

- 3.50 The Committee fully supports this recommendation from the ARA, and reiterates the view expressed in its 2004 report that ITS holds high potential to increase the awareness of trains at level crossings and thus improve level crossing safety. As such the Committee supports the ATC's request to Queensland Transport and urges the Government to invest in the development and implementation of these technologies in Australia.

### Recommendation 7

- 3.51 **The Committee recommends that the Australian Government support the ongoing research into Intelligent Transport Systems to speed the implementation of this important new technology.**

### In-vehicle warning systems

- 3.52 In their evidence to the Committee, the Australian Trucking Association made the suggestion that a form of radio cut-in warning system should be trialled. Chief Executive of the Association, Mr St Clair, stated that:

If you drive into one of the tunnels in Sydney or Melbourne and there is an accident or a problem, a cut-in system operates into your car radios and talks to you. We do not understand why there cannot be just a simple electronic activation, when a train approaches and is perhaps five or 10 kilometres away from a level crossing, that cannot go out over the UHF system. Virtually every truck in Australia has a UHF system.<sup>38</sup>

- 3.53 He continued:

We just think you need a warning that says, 'Train approaching crossing number so-and-so at Baan Baan,' or wherever it is, 'and will be there in two or three minutes.' The downside is, 'Good. I've got three minutes, so I'll try to get across.' But at least people would know, because the

37 ARA, *Submission no 10*, p. 29.

38 Mr St. Clair, Australian Trucking Association, *Transcript of Evidence*, 13 March 2009 p. 42.

frequency of trains is often the problem they use UHF radio. If it is a sophisticated one, it is on a scan system. Channel 40 is for operating just locally between trucks over a kilometre or two. The repeater band will operate through a repeater station to 100-and-something kilometres away. So often they will have it scanning, depending on what they are doing.<sup>39</sup>

- 3.54 The Committee also observed that some Global Positioning Systems (GPS) have in-vehicle warnings built in to alert drivers to school zones. The Committee believes this may be an area where more investigation is warranted which respect to having similar alerts at level crossings. The Committee believes that the potential problem identified by Mr St Clair, that is, that further reckless driving may be encouraged in order to beat an approaching train, is true for any advanced warning mechanism. The Committee considers, however, that, for the most part, the more advance warning motor vehicle drivers have of on-coming trains, the greater chance they will have of driving appropriately. As such, the Committee would like to see further investigation and research into this proposal, and urges the Government to support this.

## Recommendation 8

- 3.55 **The Committee recommends that the Government, through the Australian Transport Council, encourage further research into the feasibility of a cut-in warning system which would warn motor vehicle drivers of on-coming trains as they approach a level crossing.**
- 3.56 Reducing the number of level crossing accidents will require a multi-faceted approach. The measures noted in this chapter, when implemented as part of a suite of measures, will assist in the reduction of level crossing accidents. Likewise, the Government's recent announcement, as part of the National Building and Jobs Plan, of funding to bring forward the installation of around 200 new boom gates and other safety measures at high risk level crossings, will also assist in this regard.<sup>40</sup> The Committee is encouraged by this

39 Mr St. Clair, Australian Trucking Association, *Transcript of Evidence*, 13 March 2009 p. 42.

40 The Hon. Anthony Albanese MP, Minister for Infrastructure, Transport, Regional Development and Local Government, *Media Release: Black Spots, Boom Gates, Regional Roads and Community Infrastructure*, 3 February 2009.



prioritisation by the Government, of level crossing safety, and hopes this marks a long-term commitment to reducing collisions at level crossings around Australia.