Australian Government

House of Representatives Standing Committee on Infrastructure, Transport, Regional Development and Local Government

Response to the
House of Representatives Committee report

Level Crossing Safety: an update to the 2004 Train Illumination Report

July 2009

Report by the House of Representatives Standing Committee on Infrastructure, Transport, Regional Development and Local Government

Level Crossing Safety: an update to the 2004 Train Illumination Report

The Government Response to the Report

Preamble

On 22 June 2009, the House of Representatives Standing Committee on Infrastructure, Transport, Regional Development and Local Government (the Committee) released a report titled *Level Crossing Safety: an Update to the 2004 Train Illumination Report* (the 2009 Report).

The 2009 Report concludes that, while reasons for level crossing accidents varied, poor road driver behaviour was the most significant factor leading to accidents. To address driver behaviour, the Committee recommends a three pronged approach:

- Education: further educate motorists as to the dangers at level crossings;
- Enforcement: introduce tougher penalties and lower speed limits at level crossings on major highways from 100 km/hr to 80 km/hr nationally; and
- Engineering: implement trials of passive rumble strips at a number of crossings and trials of active rumble strips at particularly dangerous crossings.

The 2009 Report builds upon the Committee's 2004 report *Train Illumination: Inquiry into some measures proposed to improve train visibility and reduce level crossing accidents* (the 2004 Report), which examined the connection between train visibility and level crossing accidents. The 2004 Report reviewed the practicality of measures proposed to improve train conspicuity and reduce level crossing accidents.

Since the tabling of the 2004 Report, a new standard for lighting and visibility has been introduced. However, to date this has resulted in little impact on serious accidents at level crossings. Depending on the source of data, it has been calculated that between 75 per cent (Australian Rail Track Corporation (ARTC)) and 94 per cent (Australasian Railway Association (ARA)) of level crossing accidents occur during daylight hours.

In November 2008, following a crash at a level crossing between a truck and a tilt train in north Queensland that killed two people, the Committee resolved to update its 2004 Report to re-examine level crossing safety; the measures that have been taken in the intervening years to improve it; as well as some potential new safety solutions that could be considered in the future.

At the time of its release, the 2009 Report noted a number of initiatives being undertaken through the Australian Transport Council (ATC) that addressed the recommendations concerning consistency of penalties; reduction of speed limits; trials of passive rumble strips; intelligent transport systems; cut-in warning systems; national database; and revision to the

National Railway [Level Crossing] Safety Strategy. In November 2009, the ATC endorsed the new *National Railway Level Crossing Safety Strategy 2010-2020* (the Level Crossing Safety Strategy).

In Australia's federal system, individual state and territory governments have primary responsibility for road rules and enforcement, including setting speed limits and penalties for traffic offences.

The ATC's Level Crossing Safety Strategy will guide policy and investment into the future to enhance safety outcomes at rail level crossings. The Level Crossing Safety Strategy will complement a new *National Road Safety Strategy 2011-12*, which is currently being developed, and better align road and rail safety.

The National Road Safety Council (NRSC), which has been established as an advisory body to the ATC, does not have a role in national railway safety. The main avenue for the development and implementation of specific national initiatives to address safety at railway level crossings is through the Level Crossing Safety Strategy endorsed by ATC in November 2009. This strategy seeks to align road and rail safety practices and principles and provide practical approaches to reduce crashes and near misses at level crossings, including consideration of potential warning devices and best practice in camera-based enforcement.

The development and effective delivery of a future National Road Safety Strategy will be supported by the work of the NRSC. Contrary to the reference in paragraph 4.11 of the 2009 Report and as noted above, the NRSC does not prima facie have a role in railway level crossing safety initiatives. The future National Road Safety Strategy will establish and continue to develop best practice approaches in a number of key priority areas, including speed management.

The Level Crossing Safety Strategy seeks to reduce crashes and near misses at level crossings through six areas of focus:

- Safe system: adoption of internationally recognised safety practices in a rail context;
- Governance: nationally consistent and coordinated arrangements across jurisdictions;
- Risk management: manage risk at level crossings to evaluate, prioritise and inform development of counter measures and strategies;
- Technology: identification and trialling of cost effective engineering and technological measures to reduce railway level crossing incidents;
- Education and enforcement: establish understanding of behaviour by users of level crossings and promote compliance; and
- Data improvement and knowledge management: capture information in a nationally consistent manner to inform decision making and guide implementation.

The Level Crossing Safety Strategy's emphasis is on nationally consistent, practical actions underpinned by sound data gathering to deliver safer outcomes at rail crossings. It will be reviewed every three years and is supported by a rolling three-year Action Plan that will be reviewed and prioritised annually.

On a broader level, the ATC's Rail Safety Policy and Regulation Group (RSPRG), which includes jurisdictional and industry membership, provides advice to the ATC via the Safety Standing Sub-Committee on strategic rail safety and regulatory policy issues and potential reforms.

The RSPRG receives reports from the Rail Safety Regulators' Panel (RSRP) and serves as an advisory committee to the Rail Safety Regulation Review that is informing the work of the project office establishing the Rail Safety Regulator.

In the pursuit of improved and consistent rail safety management, the RSPRG also provides oversight of the development by the Rail Industry Safety and Standards Board (RISSB) of national rail standards, rules and guidelines that form the Australian Code of Practice. RISSB is wholly owned by the ARA and receives funding from the rail industry and Commonwealth, state and Northern Territory governments.

Collectively, these activities under the ATC constitute a responsive national rail safety strategy designed to pursue and support a nationally consistent approach to rail safety.

The productivity and safety of Australia's rail industry are currently impacted by inconsistencies between state and territory regulation. In 2009, COAG agreed to implement a national rail safety regulator, based in Adelaide. To this end the Australian Government is working with the states and the territories to develop a National Partnership Agreement for the national rail regulator for COAG's consideration in 2011 and to fully implement a national rail safety regulator and investigator framework by the end of 2012.

Australia's regulatory system for rail needs to be streamlined to reflect a truly national approach to transport policy planning and to support the safe, efficient and sustainable growth of the railway industry.

The establishment of a National Rail Safety Regulator will deliver better rail safety outcomes for Australia, as it will draw on a national pool of knowledge and resources. This historic reform will also remove red tape that currently makes it difficult for operators to improve productivity and efficiency while trying to meet different safety regulations in each state and territory.

In the meantime, COAG has agreed to strengthen the RSRP with a view to progressing national harmonisation of rail safety regulation during the period in which the national regulator is being established.

The Australian Government considers a competitive, safe and reliable rail network – both within and between our major urban communities – is critical in order to lift national productivity, curb the escalating cost of traffic congestion and tackle climate change.

The Government has increased its annual investment in rail tenfold to some $9 billion between 2008-09 and 2013-14 to improve and expand the nation's passenger and freight rail infrastructure through the Nation Building Program. This includes the investment of $150 million to install boom gates and other active controls at some 300 high risk rail crossings across Australia by mid-2010 – the first time the Australian Government has had a program to invest in the upgrade of level crossings. In addition, the Government is improving safety at the busier road/rail intersections through investments such as the $140 million Springvale Road

Rail Crossing separation project in Melbourne and the $19 million Daddow Road project in Perth.

The investment in rail infrastructure projects will help to boost the rail freight share and will take trucks off our roads. Each 1,500 metre train can take up to 100 trucks off our roads.

The Australian Government's investment in our infrastructure and commitment to improving transport safety and productivity through regulatory reforms also needs to be supported by an investment in innovative transport solutions. Building on the above initiatives, the House of Representatives Standing Committee on Infrastructure, Transport, Regional Development and Local Government has agreed to the request of Minister Albanese, to inquire into smart infrastructure and to make recommendations on ways to maximise its potential benefits to Australian communities including the transport sector.

Research into level crossing treatments is also being undertaken by the Cooperative Research Centre for Rail Innovation (Rail CRC), a $100 million collaborative venture between leading organisations in the Australian rail industry and Australian Universities and is supported by the Commonwealth Government through a $21 million grant from the Innovation, Industry, Science and Research portfolio.

RESPONSE TO SPECIFIC RECOMMENDATIONS

Recommendation 1 - *The Committee recommends that Australian Standard 7531 be adapted to include a mandatory requirement for ongoing maintenance of reflective materials on locomotives, as well as stricter enforcement of the standard's requirements.*

SUPPORT IN PRINCIPLE

The application of standards and the enforcement of rail rolling stock visibility requirements is a matter for the relevant state and Northern Territory rail safety regulators (Accreditation Authorities).

With the introduction of the AS7531 *Railway Rolling Stock – Lighting and Visibility* standard in 2007 the issue of train illumination is now considered to be less significant with regards to causes of level crossing crashes. AS7531 sets requirements for and recommended requirements with respect to lighting and visibility of new rolling stock and rolling stock undergoing maintenance. There is a high compliance level by commercial rail operators and this level is expected to grow as their rolling stock undergoes maintenance.

Recommendation 2 - *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.*

NOT SUPPORTED

The undertaking of rigorous scientific research into additional auxiliary lighting on trains is not considered warranted at this point in time.

A study by the US Federal Railroad Administration showed that crossing lights were the most effective treatment. Studies have also shown that strobe lights can improve detection when added to locomotives previously equipped with headlights alone. However, a recent study for Western Australian Government Railways indicated that a single strobe light added to locomotives already fitted with headlights did not improve detection at level crossings fitted with flashing warning lights.

The rail industry, including the ARTC, supports this view: the ARTC has identified that in excess of 75 per cent of level crossing accidents occur during daylight hours. The ARA estimates this figure to be as high as 94 per cent. Notwithstanding this, the Rail CRC's 2008 finding that collision rates are higher at night when normalised against traffic volumes are accepted. Domestic and international research to improve train conspicuity at night will continue to be monitored.

Recommendation 3 - *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.*

NOT SUPPORTED

Neither the Australian Government nor the NRSC has the authority to set traffic penalties. In Australia's federal system, individual state and territory governments have responsibility for road rules and enforcement, including penalties for traffic offences. In the interests of improved transport safety, the Government is working with the states and territories through the ATC to encourage greater national consistency in road rules and enforcement.

Recommendation 4 - *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.*

SUPPORT IN PRINCIPLE

Any agreement on the reduction of speed limits to 80 kilometres per hour at level crossings on major highways nationwide would need to be agreed through the ATC.

The reduction of speed limits at level crossings is part of the Level Crossing Safety Strategy endorsed by ATC in November 2009. The RLCG's Action Plan under the Strategy for 2010 focuses on a number of practical approaches to reduce crashes and near misses at level crossings, including: consideration of potential warning devices; best practice in camera-based enforcement; and implementing nationally consistent speed reductions on sealed highways and major arterials in the lead up to railway crossings.

Under the Australian Government's $150 million Boom Gates for Rail Crossings program to install active controls at some 300 high risk rail crossings across Australia by mid-2010, advance active warning systems are being installed to warn drivers in vehicles of rail traffic at oncoming crossings.

Recommendation 5 - *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.*

SUPPORT IN PRINCIPLE

Research into level crossing treatments is being undertaken by the Rail CRC. In particular, the Rail CRC is looking into affordable level crossing protection systems for crossings in regional areas and non-public crossings in areas with high speed passenger trains. This work is being monitored by the RLCG as part of its action plan.

Passive rumble strips are being trialled at crossings in Victoria at locations where it is considered to be an appropriate control measure. The trial result is being closely monitored by Victoria, other states and the Northern Territory through the RLCG.

Recommendation 6 - *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.*

NOT SUPPORTED

The Australian Government strongly supports the identification and implementation of appropriate new engineering and technological measures that alert or guide road users as a safely as possible through railway level crossings. However, the full-scale trialling of active rumble strips is not a priority while the effectiveness of passive rumble strips is still under consideration.

In comparison to the use of passive rumble strips and the other active level crossing safety measures currently available, jurisdictions generally consider that the testing and application of active rumble strips does not represent a cost-effective solution for rail level crossings at this time.

Recommendation 7 - *The Committee recommends that the Australian Government support the ongoing research into Intelligent Transport Systems to speed the implementation of this important new technology.*

SUPPORTED

The House of Representatives Standing Committee on Infrastructure, Transport, Regional Development and Local Government has agreed to inquire into smart infrastructure and to make recommendation on ways to maximise its potential benefits to Australian communities including the transport sector.

The Australian Government has also initiated the Smart Infrastructure Awards for innovative, technology-driven solutions to infrastructure bottlenecks and urban congestion, which include a $25,000 grant for an innovative proposal supporting excellence in smart infrastructure research and development.

Smart technologies is one of the seven Rail CRC themes for rail research to meet participant and industry needs over seven years to 2014, with $21 million in funding coming from the Australian Government. One of the projects being undertaken is a two-year research project addressing new affordable level crossing protection systems for crossings in regional areas and occupational crossings (e.g. crossings on farmland) in areas with high speed passenger trains. The project aims to look at options using new technologies that are cheaper to install and maintain. Combinations of non-vital technology such as GPS will be considered by including a vital systems integrity backup system which delivers reduced functionality if needed.

The industry wide benefits of this project are estimated at a 10 per cent reduction in collisions. It should be noted that the real savings are difficult to assess as it is difficult to place an accurate value on the lives saved and property protected from the successful completion of this project.

Recommendation 8 - *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.*

SUPPORT IN PRINCIPLE

It is expected that the House of Representatives Standing Committee on Infrastructure, Transport, Regional Development and Local Government inquiry into intelligent transport system referred to above would address the case for in-vehicle warning systems that warn motorists of an approaching train as motorists approach the crossings.

In 2009, the Rail CRC conducted a workshop on new approaches to understanding and preventing level crossing incidents. As a result, the Rail CRC has prioritised work to trial road vehicle driver response to a range of in-vehicle warning systems to warn of approaching rail level crossings and to trial application of changes in speed limits approaching rail level crossings and driver response.

Under its level crossing safety action plan, *Towards Zero – a Strategy for Improved Level Crossing Safety in Victoria*, the Victorian Government's is also sponsoring trials of the use of vehicle-to-vehicle and vehicle-to-infrastructure radio-interfaced systems with signalling and in-cab technology for both trains and motor vehicles. These will be reviewed and trialled and, if successful, adapted across the state and potentially across Australia.

Recommendation 9 - *The Committee recommends that the Australian Government seek, through the Australian Transport Council, a national database which aggregates data from level crossing crashes and fatalities in all Australian States and Territories.*

SUPPORT IN PRINCIPLE

The Level Crossing Safety Strategy includes a work stream on coordinated data reporting and monitoring for all jurisdictions regarding level crossing incidents across Australia. In addition, the ATC is implementing the National Strategy for Rail Safety Data to improve data collection, access, analysis, publication and use. National rail safety data will be enhanced further by the move towards a single, national rail safety regulatory and investigation framework.

The RLCG's work on rail safety data will feed into the ATC's Data Action Plan, the Australian Transport Data Action Network (ATDAN). The ATC's Network Performance Standing Sub-Committee's objective for ATDAN is to inform national strategic transport policy and research priorities identified for the ATC, through providing advice and action on related data needs. It undertakes projects to improve transportation data processes and implement the ATC's Data Action Plan and the Australian Bureau of Statistics' (ABS) Data Quality Framework. The ABS chairs and provides secretarial support for ATDAN and all jurisdictions, transport industry representatives and academics will be represented.

Recommendation 10 - *The Committee recommends that the Australian Government seek, through the National Road Safety Council, a revised National Railway Safety Strategy as part of the new National Transport Policy.*

NOT SUPPORTED

The NRSC does not have a role in developing a national railway safety strategy. The main avenue for the development and implementation of specific national initiatives to address safety at railway level crossings is through the Level Crossing Safety Strategy endorsed by the ATC in November 2009. This strategy seeks to align road and rail safety practices and principles.

The NRSC will support the new *National Road Safety Strategy 2011-2020*, currently being developed and based on the Safe System approach, and will seek to establish and continue to develop best practice approaches in a number of key priority areas, including speed management.