



CONSULTATION – ONRSR CODE OF PRACTICE – LEVEL CROSSINGS AND TRAIN VISIBILITY

AUSTRALIAN TRUCKING ASSOCIATION SUBMISSION 10 APRIL 2024

1. About the Australian Trucking Association

The Australian Trucking Association (ATA) is a united voice for our members on trucking issues of national importance. Through our [ten member associations](#), we represent the 60,000 businesses and 200,000 people who make up the Australian trucking industry.

2. Introduction

The Office of the National Rail Safety Regulator (ONRSR) has been tasked with developing a Code of Practice (the Code) to reflect the findings of the research into lighting trials and train visibility that was conducted in 2022 and 2023. The Code aspires to crystallise best practise in the rail industry on these subjects. The draft Code was made available for public comment from 13 March 2024 to 11 April 2024.

3. Key Issues

There are key issues contained within the draft Code. These are as follows:

1. **Non-binding nature of the Code:** The Code, being non-binding, lacks enforceability and does not sufficiently address safety concerns. The absence of legally binding requirements hinders effective implementation and compliance.
2. **Lack of industry obligations:** The Code primarily reiterates existing legal obligations without introducing new measures, limiting its impact on improving safety standards.
3. **Discretionary approach to train visibility:** The document delegates decision-making on train conspicuity measures solely to rail industry stakeholders, excluding valuable input from other stakeholders and impeding collaborative efforts towards safety enhancement.

4. **Limited stakeholder representation:** Concerns arise regarding the lack of diverse stakeholder representation during the Code’s development, limiting the breadth of perspectives considered.
5. **Focus on human error over rail conspicuity:** While the Code addresses human error and infrastructure deficiencies, it inadequately emphasises improving train conspicuity, a critical aspect of level crossing safety.
6. **Misleading interpretations:** Certain interpretations within the Code, such as references to Section 50 of the RSNL, are misleading, necessitating clarification to avoid misrepresentation.
7. **Lack of commitment to action:** The document contains vague language and empty rhetoric, potentially undermining its credibility and effectiveness in driving tangible safety improvements.

These key issues will be detailed in turn, accompanied by recommendations.

4. Issue 1: Non-binding nature of the Code

The Code, although released by the ONRSR, lacks enforceability as it is non-binding. The Code details that an ‘application of a code of practice is not mandatory’.¹ Like many Codes of Practice, adherence may form part of a legal defence. This does nothing to prevent the tragic loss of life that can occur at rail crossings.

The ATA has previously stated that –

‘a voluntary code will not go far enough to ensure we protect the lives of our pedestrians and road users. A Code of Practice is more flexible and less intrusive than regulation, and neither of these are desirable characteristics when we talk about saving lives. A legally binding requirement clarifies expectations and objectives and can make a serious and immediate impact. It will also ensure compliance through the provision of penalties for contravention’.²

Recommendation: Transition the Code into regulations under the Rail Safety National Law to ensure greater accountability and safety compliance in the rail industry.

¹ ONRSR Code of Practice – Level Crossings and Train Visibility (The Code) 2024, 19.

² ATA Submission – AS 7531 Rolling Stock Lighting and Visibility, 28 October 2023.

5. Issue 2: Lack of industry obligations

The Code fails to introduce new safety obligations for the rail industry, instead simply reiterating the existing legal landscape. This is a missed opportunity for the rail sector to demonstrate proactive commitment to addressing level crossing safety issues.

This Code is an opportunity to demonstrate the rail industry's dedication to achieving zero deaths and serious injuries at level crossings in Australia. The draft is inadequate for achieving that important benchmark.

Recommendation: Expand relevant obligations on rolling stock operators to address the established safety challenges posed at level crossings. Foster and encourage a proactive approach to safety management. These obligations should include, but are not limited to, fitting flashing lights to rolling stock and increasing the conspicuity of rolling stock with lights or tape.

6. Issue 3: Discretionary approach to train visibility

Not only does this document fall short of promoting level crossing safety and train visibility, but it actively seeks to limit stakeholder engagement on important issues, leaving too much discretion to rolling stock operators.

‘Risk controls that enable visibility of an approaching train for road users through illumination and conspicuity are agreed between the rolling stock operator and rail infrastructure manager’.³

The Code states that –

‘Rolling stock operators must assess and document whether additional lighting on their locomotives or along the train consist is required to ensure, so far as is reasonably practicable, that vehicle drivers and pedestrians will be made aware of and/or are able to see approaching trains at level crossings which form part of their rail operations. Reasons for or against additional lighting require documentation as part of the risk assessment process along with the supporting evidence to justify the decision’.⁴

As we will state in Issue 4, a very narrow approach to stakeholder engagement has been employed in the development of this Code and associated safety standards. As such, it would be improper and potentially unsafe to make assumptions about road user and pedestrian perspectives on train illumination. We invite the ONRSR to educate us on the reasons and types of evidence that will be accepted as justification for refusing to illuminate trains more effectively.

³ The Code, 6.

⁴ Ibid 5.

Clauses such as these seek to delegate decisions on train visibility measures solely to rail industry stakeholders, without the need for external input or consultation. This undermines the necessary collaborative spirit vital to improving safety at level crossings and raises serious concerns about accountability in safety measures implementation.

The ATA submits that the Code be a regulatory requirement subject to the usual regulatory impact assessment processes. If this is not accepted, then the ATA submits that solutions be tested with road user groups to ensure fitness for purpose. Feedback from road user groups should be detailed and recorded in the same manner as proposed above in line with the risk assessment process. Failure to do so will undermine the pursuit of the safest and most effective outcome.

7. Issue 4: Limited stakeholder representation

The Code states that it ‘has been produced by the Office of the National Rail Safety Regulator’.⁵ The development process of the Code and associated safety standards appear to have limited stakeholder representation, raising concerns about inclusivity.

Standards referenced in the Code are developed almost exclusively by rail industry stakeholders, potentially excluding diverse perspectives. The resultant standards may lack comprehensiveness and fail to adequately address the needs of all stakeholders.

Diverse perspectives are crucial for ensuring comprehensive and effective policy formulation. We invite the ONRSR to detail which representatives from other stakeholder groups, such as road managers and road users, formed an active role in the production of the Code and associated safety standards, beyond input at public consultation.

Recommendation: In the spirit of promoting safety for all stakeholders, the ONRSR should foster collaboration and encourage broader stakeholder involvement in the development and review processes of rail safety documents to ensure diverse perspectives and comprehensive solutions. Involved groups should include, but are not limited to, road user representatives and road management representatives.

8. Issue 5: Focus on human error over rail conspicuity

While the Code addresses human factors and infrastructure deficiencies, it inadequately emphasises the importance of train conspicuity. This imbalance in focus undermines the collective responsibility of all stakeholders in ensuring level crossing safety.

⁵ Ibid 2.

The importance of train conspicuity is overlooked throughout the document. Research shows that strobing or flashing in a person's visual field draws their attention directly in a stimulus-driven response.⁶ This is something thought to be hardwired into the brain's visual processes during evolution because it promoted survival⁷ and as such, does not require voluntary effort and is not expected to wear off in repeated level crossing encounters. As such, fitting strobe lights on trains is a low-cost option to address the visibility issues encountered by road users and pedestrians when navigating level crossings safely.

Several studies have examined the effects of locomotive-mounted lighting measures on train conspicuity. These studies used strobe mounted lights on the side and front of trains, ditch lights illuminating the side of track, and crossing lights which are a flashing variant of ditch lights.⁸ All solutions produced statistically significant increases in train detection distances. The greatest increase resulted from use of all three. As time has passed, technological and scientific advances have meant that authoritative research can confirm that flashing lights have been proven effective at drawing the visual attention of drivers to the right and left peripheries, enhancing the probability of train detection.⁹ The ATA questions why resources were allocated to researching a field already heavily researched instead of using those resources to improve train illumination. Lives were lost while needless research was conducted, where lives could have been saved by simply illuminating trains better.

Research facilitated by the ONRSR, repeating an established field of research and science, identified '30 potential controls for improving train visibility at level crossings, with the majority focussed on better illumination of trains'.¹⁰ The ATA questions why train illumination and conspicuity are overlooked in a document titled 'Level Crossings and Train Visibility'.

The failure to acknowledge the widespread issue of insufficient train illumination in this Code, and by the rail industry generally, suggests a limited applicability and effect of additional visibility measures.

The reluctance to address illumination concerns reflects a lack of commitment to enhancing safety standards, and a lack of commitment to achieving zero fatalities and serious injuries at level crossings in Australia.

⁶ Jeremy Wolfe & Todd Horowitz, 'What attributes guide the deployment of visual attention and how do they do it?' (2004) 5 *Nature Reviews Neuroscience* 495.

⁷ Steven Yantis, *Goal-Directed and Stimulus-Driven Determinants of Attention Control* in Stephen Monsell & Jon Driver (eds) *Goal-directed and stimulus-driven determinants of attentional control* (Cambridge, 2000) 73.

⁸ Carroll *et al*, *Safety of Highway-Railroad Grade Crossings: Use of Auxiliary External Alerting Devices to Improve Locomotive Conspicuity*, US Department of Transportation Research and Special Programs Administration (Cambridge, 1995) 2142.

⁹ Jan Grippenkov, *Human Factors – Maßnahmen zur Erhöhung der Sicherheit im Verhalten von Straßenverkehrsteilnehmern an Bahnübergängen* (Phd Thesis); Grippenkov *et al*, 'PeriLight - effektive Blicklenkung am Bahnübergang' (2015) *EI – Der Eisenbahningenieur* 42.

¹⁰ Monash Institute of Railway Technology Report Released (Accessed 27 March 2024)

<<https://www.onrsr.com.au/industry-information/train-visibility-review>>.

Recent evidence highlights the difficulty in spotting unlit carriages, particularly in low light conditions.

Recommendation: Actively improve train visibility by placing greater emphasis on the commitment to illuminate trains sufficiently to mitigate collision risks and enhance safety.

9. Issue 6: Misleading interpretations

The Code misinterprets legal provisions such as Section 50 of the Rail Safety National Law (RSNL) potentially leading to erroneous conclusions. Clarity in legal interpretation is essential for ensuring compliance and accountability.

The Code states that under Section 50 of the RSNL, ‘rail transport operators and road managers must continue to apply a risk assessment process and monitor and manage the risk of controls at level crossings’.¹¹ This is misleading as road managers are not mentioned in Section 50. Duties in the RSNL ‘cannot be transferred to another person’¹², so it would be contrary to the law to do so. This is an attempt to delegate responsibilities under the Act to parties to whom it does not apply, reallocating the burden of responsibility away from the rail industry.

Section 50 of the RSNL states that

1) Rail safety is the shared responsibility of—

(a) rail transport operators; and

(b) rail safety workers; and

(c) other persons who—

(i) design, commission, construct, manufacture, supply, install, erect, maintain, repair, modify or decommission rail infrastructure or rolling stock; or

(ii) supply rail infrastructure operations or rolling stock operations to rail operators; or

(iii) in relation to the transport of freight by railway—load or unload freight on or from rolling stock; and (d) the Regulator; and

(e) ONRSR; and

(f) the public.¹³

It is concerning that the ONRSR is unsure of the legal obligations bestowed upon it by key legislation.

¹¹ Ibid 5.

¹² Rail Safety National Law (South Australia) Act 2012, s 51.

¹³ Ibid s 50.

Recommendation: Clarify any ambiguous or misleading statements within the Code to ensure accurate interpretation and implementation by stakeholders.

10. Issue 7: Lack of commitment to action

The Code contains vague language and empty statements throughout which detract from its substantive value. Terms like ‘facilitating the delivery’, ‘establishing’ and ‘as far as reasonably practicable’ lack concrete action points, signalling a lack of genuine commitment to improving safety at level crossings.

In some instances, the Code appears to suggest that more time is needed to research human behaviour so that more appropriate controls can be selected for level crossings –

‘Consequently, understanding human factors and their impact on human behaviour especially at level crossings may assist in better design of level crossing and in the selection of treatments used to control risks to safety at level crossings.’¹⁴

The above is a stalling tactic used to shift the burden and apportion accountability to a different party. After ‘facilitating the delivery of important research to improve awareness and visibility of trains approaching level crossings’¹⁵, we invite the ONRSR to help us comprehend what more the rail industry needs to understand before they can commit to achieving zero fatalities and injuries at level crossings.

The statements made throughout the Code amount to very little in terms of commitment to action. Immediate action is required to save lives.

Recommendation: Replace vague language with concrete commitments and actionable strategies to demonstrate a genuine commitment to improving safety outcomes.

Each of these issues reflects concerns regarding the effectiveness, inclusivity, and commitment to action within the draft. Addressing these concerns is essential for fostering a safer and more collaborative approach to rail safety in Australia. We need to act immediately to avoid any more needless fatalities and serious injuries at level crossings.

¹⁴ Ibid 5, 7.

¹⁵ Ibid 2.