



## The National Model Rail Safety (Reform) Legislation

### Interface Agreements for Rail/Rail and Rail/Road Interfaces

The rail safety law in the states and territories of Australia has been reviewed by the National Transport Commission.

#### Introduction

The Model Rail Safety Bill 2006 makes provision for new complementary obligations on rail transport operators<sup>1</sup>, rail infrastructure managers, road authorities and the owners/managers of private roads to jointly manage the safety risks of locations where two or more railways meet, or of 'road or rail crossings'.

'Road or rail crossings' include level crossings, rail over road and road over rail bridges, and may include parallel running between railway lines and roads if parallel running is adopted in the state or territory.

#### What does it mean?

Rail transport operators must:

- identify and assess safety risks associated with either the interface of any railway operations carried out by any other rail transport operator, or with the existence of any road or rail crossing;
- determine measures to manage those risks; and
- seek to enter into an Interface Agreement with the other rail transport operator or road manager (but if none of the parties is a rail infrastructure manager, this does not apply).

Road managers of public roads must:

- identify and assess safety risks associated with the existence of any road or rail crossing; and
- determine measures to manage those risks and seek to enter into an Interface Agreement with the relevant rail infrastructure manager.

The same obligations apply to the manager of a road other than public road, but only if the relevant rail infrastructure manager advises the road manager of the need for the safety risks associated with the existence of any non-public road or rail crossing to be managed in conjunction with the road manager.

The proposed legislation enables all these parties to jointly or separately identify and assess risks, or to adopt the identification and assessment carried out by the other party.

#### Background

For some years there has been dialogue between road and rail authorities to improve their interfaces. This joint work has evolved from the development of tools for level crossing risk analysis such as the Australian Level Crossing Assessment Model (ALCAM), the Australian Standard *Uniform Traffic Control Devices AS 1742.7* and the Australian Standard 4360 Risk Management, and engineering and other standards.



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<sup>1</sup> A Rail Transport Operator is a generic term for either a Rail Infrastructure Manager (RIM) or a Rolling Stock Operator (RSO).

However, so far there has been no systematic overarching process to create consistent, common frameworks and approaches to road/rail interface risks.

Accordingly, the legislative change proposals mandate a joint road/rail risk management process to systematically improve safety at road/rail interfaces.

The safety risks of level crossings and road/rail interfaces are different for each party, but it is important for both parties to work together to effectively manage their shared risks. In some instances, it is only the joint work on a risk that can reduce the risk. For example, coordinating the timing of level crossing signals and boom gates with traffic lights can only be achieved in cooperation.

### Reducing the safety risks

In all instances safety gains can be made through collective work. Ways of reducing risk at road/rail interfaces need not necessarily be costly. Some examples of cost-effective risk solutions include:

- moving warning signs to more appropriate distances and compliance with the *Australian Standard for Uniform Traffic Control Devices AS 1742.7*;
- coordinating traffic signals with level crossing warning equipment to stop vehicles entering an area where traffic is stopped due to an approaching train, and to facilitate their departure from an area where training is approaching;
- assigning priority to the road traffic departing an area where a level crossing exists;
- considering the level crossing safety issues when undertaking analysis for creating heavy vehicle routes;
- installing interlocked advance warning signals;
- clearing vegetation;
- when sealing/ resealing occurs the road authority liaising with the rail infrastructure manager to seal the level crossing as well;
- traffic queue relocation;
- signalling system timing adjustments to create consistent dwell times at level crossings; and
- parties to the Interface Agreement discussing current and proposed work programs for integrated outcomes<sup>2</sup>.

### Obligations for rail infrastructure managers

The proposed obligations on rail infrastructure managers (RIMs) apply to risks to safety associated with the railway operations carried out by RIMs or on their behalf by their contractors arising from the following three types of interfaces:

- interfaces with any adjoining, or above or below rail operations of other rail transport operators;
- interfaces arising through the use or the existence of a road or rail crossing that is part of the infrastructure of any public road; and
- interfaces arising through the use or the existence of a road or rail crossing that is part of the infrastructure of any road other than a public road.

For interfaces involving **other rail operations and public roads**, the obligations on RIMs are:

- to identify and assess risks arising from such interfaces (this can be done separately, or with the other party, or by adopting the other party's identification and assessment of those risks);
- to determine measures to manage, so far as is reasonably practicable, those risks; and
- to seek to enter into an Interface Agreement with the relevant rail transport operator or public road manager to jointly manage the risks.

For interfaces involving **roads other than public roads**, RIMs must first consider whether the identified and assessed risks need to be managed jointly with the responsible road manager.

If so, the RIM must advise that road manager in writing, determine measures to manage these risks and seek to enter into an Interface Agreement with the road manager to manage those risks, to ensure safety "so far as is reasonably practicable". If not, the RIM must document and keep a record of that opinion.



<sup>2</sup> Many suggestions in this list are taken from Australian Standard *Uniform Traffic Control Devices AS 1742.7*

### Obligations for rolling stock operators

The proposed obligations for rolling stock operators are:

- to identify and assess risks arising from any adjoining or interfacing above or below rail operations of other rail transport operators (this can be done separately, or with the RIM, or by adopting the RIM's identification and assessment of those risks);
- to determine measures to manage, so far as is reasonably practicable, those risks; and
- to seek to enter into an Interface Agreement with the relevant RIM to jointly manage the risks.

The proposed provisions do not require rolling stock operators to seek to enter into Interface Agreements with other rolling stock operators.

### New obligations for road authorities/responsible road managers of public roads

The proposed obligations for road authorities are:

- to identify and assess risks arising from the existence of the road or rail crossing (this can be done either separately, jointly with the RIM, or by adopting the RIM's risk identification and assessment of those risks);
- to determine measures to manage, so far as is reasonably practicable, those risks; and
- to seek to enter into an Interface Agreement with the RIM to jointly manage the risks.

This means that road managers and local councils (and any other road authorities) will need to come to an agreement with rail infrastructure managers on the way they will manage risks at road and rail crossings. In this agreement, all risks must be managed to the standard of "so far as reasonably practicable". This agreement is about managing safety risks in one or more Interface Agreements.

Because the parties are obliged to jointly agree upon and manage the interface risks, it is expected that the combined expertise and knowledge of both authorities will enhance safety management of these crossings and road/rail interfaces.

### New obligations for road managers of roads other than public roads

A road manager of a road other than a public road may be the owner of a non-public road or the person responsible for that road. The road may be managed by landholders, farmers, corporations and others.

The proposed obligations on a road manager of a road other than a public road only apply if a RIM has advised the road manager in writing of the need for one or more Interface Agreements for road or rail crossings.

If advised in writing by a RIM that there are road or rail crossing safety risks to be jointly managed through an Interface Agreement with the RIM, the obligations on the non-public road manager are:

- to identify and assess the risks of crossings (this can be done separately, or with the RIM, or by adopting the RIM's assessment of these risks);
- to determine measures to manage, so far as is reasonably practicable, those risks; and
- to seek to enter into an Interface Agreement with the relevant RIM to jointly manage the risks.

### Who does the change affect?

#### *State government owned public roads*

These roads are controlled by state road authorities, which usually have responsibilities for management of the principal metropolitan and rural arterial roads within the state and for general jurisdictional road safety policy and strategy.

#### *Local government controlled public roads*

Local government manages an extensive local road network that service communities and provide the important feeder and distribution roads that link with the State government controlled arterial road networks.

#### *Crown lands*

These are public and other roads which the Crown owns. The government department responsible for these lands effectively becomes another road authority and therefore has the same obligations as other road authorities under the proposed legislation.

#### *Owners or persons responsible for roads other than public roads*

These roads may be managed either by a road authority or a road manager. A road manager may own and/or manage a range of different roads for different purposes, from large commercial companies such as mines through to individual landholders or farmers.

#### *Railway infrastructure managers*

The legislation places an obligation on railway infrastructure managers to work in cooperation with other rail transport operators, road authorities and road managers to develop Interface Agreements for road or rail crossings.

## What is an Interface Agreement?

An Interface Agreement is made between two infrastructure managers (i.e. RIM, road authority or road manager) that sets out a mutual understanding and arrangement for the management of safety issues at a shared interface. The Interface Agreement covers the following:

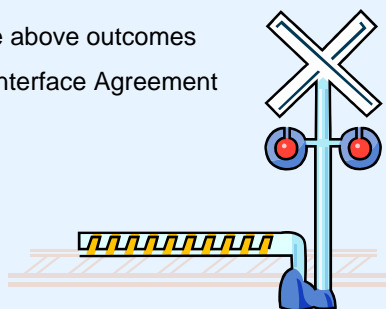
- implementing and managing the measures to control risks;
- evaluating and testing these measures;
- revising these measures when necessary;
- identifying the roles and responsibilities of each party for managing those measures;
- developing procedures for each party to monitor the other to check that it complies with the agreement; and
- developing a process to keep the agreement current through review and revision.

An effective Interface Agreement will specify the:

- detail of the assets in the agreement;
- processes for risk management;
- parties' responsibilities for specific risk measures covered by the Interface Agreement; and
- processes for review of the Interface Agreement.

### Typical Steps in Interface Agreement formation

1. Identify the level crossings and other road/rail interfaces, resulting in list of relevant assets
2. Agree on the division of asset ownership, operations and maintenance responsibilities for assets associated with the interfaces
3. Agree on how to identify, assess, control & document risks
4. Discuss the standards to be used
5. Develop and record the hazard register
6. Consider maintenance and operational issues and risk controls
7. Rank the risks for treatment
8. Document the above outcomes
9. Develop the Interface Agreement



The number of parties to an Interface Agreement is flexible, for example an Interface Agreement could:

- apply to multiple road authorities and private road owners and one or more railway infrastructure manager/s or rail transport operators;
- apply to a group of local councils and railway infrastructure managers along a particular railway line;
- be based on a model agreement developed by a rail safety regulator or a local government association, with particular information about individual road or rail level crossings in a schedule to the agreement; and
- could apply to one location between two or more parties.

Issues addressed in an Interface Agreement may include:

- responsibilities of the parties;
- detailed assets register;
- agreements on responsibilities, applicable standards and agreed treatments for items identified in the assets register, such as:
  - road signage, advance warning signs;
  - fencing and barriers;
  - railway signalling technology;
  - traffic signalling;
  - interlocking railway and traffic signalling;
  - road markings;
  - road pavement design (road width, surface treatment, rumble strips); and
  - roadside infrastructure.
- how risks will be identified assessed, managed, implemented, maintained, evaluated and tested, and revised;
- how Interface Agreement information will be managed and kept up to date;
- how operational information such as maintenance plans, train operations information, road and rail traffic speed, volumes, heavy vehicle routes, road vehicle mass and dimensions will be monitored and exchanges;
- arrangements for monitoring and maintenance of the Interface Agreement how to monitor changing environments;
- triggers for plan review;
- arrangements for continual improvement;
- emergency responses;
- land-use planning change; and
- managing change and continual improvement.

## Typical Interface Agreement structure

Generally, an Interface Agreement will look like a contract or standard agreement between parties. Its sections could include:

1. *Document control arrangements*  
Details how the Interface Agreement is distributed, what its status is and which amendment the reader is looking at.
2. *Statement of Parties to the Plan*  
An Interface Agreement usually states the parties to the plan, citing their names as legal entities and their business addresses, including ABN.
3. *Reference documents and standards*  
Section usually states those documents relied upon by the parties as standards and that will be used in this agreement, for example AS 1742 Manual Of Uniform Traffic Control Devices.
4. *Definition/interpretation*  
Sets out common definitions that both parties will use in the Interface Agreement and the risk assessment and how to interpret the Interface Agreement.
5. *Purpose and Parties*  
States the purpose of the Interface Agreement, its scope, it should provide detail of the responsibilities of each of the parties, including who is the point of contact, which functional areas of each organisation are involved in the Interface Agreement and communication arrangements for Interface Agreement matters.
6. *Risk Management Requirements*  
Holds the key content of the Interface Agreement, it includes the way in which risks will be identified, assessed and controlled and arrangements for management and maintenance of the risk control measures.
7. *General Requirements*  
Covers what asset details are kept and where, arrangements for management and maintenance of the asset, major changes to infrastructure, emergency management, personnel management, asset life cycle, the application of standards, operational information, plan review triggers.
8. *Compliance and auditing arrangements*  
Identifies the responsibilities for monitoring and management of compliance, what to do in non-compliance, and how compliance will be audited and reviewed.
9. *Dispute resolution*  
Dates the process the parties will use to resolve disputes.
10. *Party Representatives*  
Identifies the representative of each party with responsibility for this agreement.
11. *Review of Interface Agreement*  
Sets out the agreed processes for the timeframes or triggers that will activate the review of the plan.  
*Schedule 1 – Detailed assets register*  
Identifies which assets are covered by this agreement, it may or may not include the risk assessment profile of those assets]  
*Schedule 2 – Risk management methodology/risk register*  
The Interface Agreement may or may not contain a risk register, this is up to the parties, however it must contain the description of the method by which the parties will manage risk.



### What happens if either party will not enter into an Interface Agreement?

The proposed legislation gives power to a rail safety regulator, or a person appointed by the Minister, to review whether the parties have:

- made reasonable attempts to enter into Interface Agreements
- been unreasonably refusing to enter into an agreement, or
- unreasonably delaying negotiations for an agreement.

This person may give written notice to either party advising them that it has the power to issue a direction to:

- determine the arrangements for management of risks safety for road or rail crossings;
- direct parties to enter into these arrangements; and
- nominate a date by which the directions must be followed.

### Register

Each party to an Interface Agreement must keep a register of each agreement to which they are a party.

### Implementation

Interface Agreements between road authorities and railway infrastructure managers need to be in place within 3 years of the commencement date of the new laws.

### Safety risks at road rail interfaces

Studies show there are approximately 100 crashes between a road vehicles and trains each year in Australia<sup>3</sup>. About 8% of these incidents result in death.

Crossings are also risky for pedestrians, many crashes occur while pedestrians are crossing railways that are on public streets. About 22 pedestrians die each year from level crossing incidents.<sup>4</sup>

The nature of the risk in road/rail interfaces is referred to as low frequency, high consequence risk. This is different from the road crash statistics which tend to be high frequency risks with a range of consequences. In contrast, rail as an industry must manage low-frequency high consequence risk as a key part of its obligation to the public, its passengers and employees.

Because of the obligation upon rail to reduce this low frequency, high consequence risk, it must continually improve its management of interfaces with roads. Many risks to road/rail interfaces cannot be reduced by rail infrastructure managers working alone, rather these need the joint input of road authorities.

The national model legislation facilitates this cooperation by placing obligations on road authorities and RIMS to work jointly to reduce road/rail interface risks.

Actual crash scenarios at level crossings and road/rail interfaces in Australia and elsewhere in the world have included the following:

- a large truck hits a train and the train derails.
- a crash involving a road motor vehicle and a train carrying passengers or freight;
- a crash involving a freight train or a truck/ carrying dangerous goods/causing road/railway line closures;
- a crash involving a bus and a train;
- a derailment, which causes days of closure of a major freight or passenger line, resulting in economic loss and road congestion;
- a road vehicle crash through a fence and onto a parallel running railway track;
- a road vehicle crash through overpass barrier onto railway line;
- a road vehicle crash in an underpass/blocking road/causing fire/spilling dangerous goods and affecting the railway operations; and
- a truck overturns on level crossing.



<sup>3</sup> National Transport Commission *Model Rail Safety (Reform) Bill: Draft Regulatory Impact Statement for Consultation July 2006* p39

<sup>4</sup> As above, p39