

RAIL SAFETY NEWS

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DIRECTORS UPDATE

WELCOME TO
THE JUNE 2016 EDITION
OF RAIL SAFETY NEWS.



David Hourigan
Director, Transport Safety

Welcome to the Winter 2016 edition of Rail Safety News.

Why do we have rail safety regulation?

The objectives of rail safety regulation are to reduce:

1. the likelihood of a rail safety incident which may cause injury or fatality
2. the consequences of a rail safety incident.

People quite reasonably expect that when they ride on any form of public transport (either commercial or tourist and heritage) they will not be harmed by that experience. Rail safety regulation exists to help meet these expectations that are always increasing.

It provides a framework for the management of rail safety that includes systems, procedures and people. Without the structure the legislation provides, the management of rail safety would most likely be piecemeal, reactive and non-systematic. Nor would it be able to take advantage of the development of new technologies or approaches to managing issues such as fatigue.

Nobody wants to be involved in, or associated with, a serious rail safety incident either as someone who:

- suffers harm as a consequence of the incident or
- is involved in the incident response and recovery process or
- has to accept responsibility for any negative outcomes of that incident on behalf of the rail operator.

These incidents can impact on people and the rail operator for many years. Compliance with the rail safety legislation is therefore fundamental to avoiding rail safety incidents.

One of the underlying requirements of the rail safety legislation is continuous improvement. TSV's objective in preparing Rail Safety News is to share some ideas with tourist and heritage operators to support the continuous improvement in rail safety. In this edition, we have articles that cover a broad range of issues, including information on enforcement tools – a topic raised with us by an operator who wanted to know more.

If you have a topic you would like to see covered in future editions of RSN or have any other feedback please let us know as we welcome your input.

I am pleased to announce the appointment of Jodie Talone to the position of Director, Rail Safety. Jodie comes to TSV with very strong experience in the safety field and has experience in both the private and public sector. Jodie commenced with TSV on 27 June 2016.

All the best from TSV!



SUCCESSION PLANNING

When a member of a tourist and heritage operator leaves the organisation it may leave a gap in the knowledge and skills required to operate and manage the rail system safely. It may be difficult to fill these gaps quickly if at all.

It is important that people in key organisational roles, such as the President or Chief Executive Officer, staff who maintain track and rolling stock, manage the safety management system, have the necessary knowledge, skills and experience required to fulfil these positions. It is also important that they are not appointed on the basis of 'it's their turn' or there is no one else is willing to stand up and take responsibility.

One way of managing this risk is succession planning. This is a process for identifying and developing people with potential to fill key operational and leadership positions in the

future. It increases the availability of experienced and capable people who are prepared to assume key roles as they become available.

Some tourist and heritage operators may find this challenging because:

- they are volunteer based
- there is potentially a limited pool of people (either within or external to the organisation) with the capacity or interest in preparing to take up these roles.

It may assist in attracting suitable candidates if they are provided with opportunities to develop skills and gain experience in these roles. Experience and skills can be gained

through providing, or sending people to, training courses, giving them opportunities to act in the role, or to work under supervision.

The risk of loss of corporate knowledge also highlights the importance of documentation. Knowledge, information and processes required to support the operation and maintenance of the rail network in the organisation's safety management system. Evidence of compliance with the safety management system, such as records showing that maintenance tasks have been completed and governance processes followed, are also important documents.



REPORTING OF RAIL INCIDENTS AND ACCIDENTS

The *Rail Safety (Local Operations) Act 2006 (Vic)* and the *Rail Safety (Local Operations) Regulations 2006 (Vic)* state the requirements for rail operators in the local regulatory scheme to report incidents. The requirements apply to both notifiable accidents or incidents that must be reported to TSV immediately via the duty officer and to notifiable circumstances that must be reported to TSV within 72 hours.

TSV has a duty officer on call 24 hours per day seven days per week to enable local scheme rail operators to report incidents in timely manner.

For a notifiable accident or incident, the duty officer contacts the Director, Rail Safety, who makes an immediate decision about TSV staff attending the incident site.

TSV collects and stores all the occurrence data in a secure database that is accessible only to TSV staff.

The data is used to identify trends and issues that are an important part of safety intelligence. The reports provide an input to the planning of TSV's audit and compliance activities.

TSV also uses the data for educational purposes, such as media releases, that raise public awareness of safety issues on the rail and tram networks. It is hoped that data used in this way will positively influence public behaviour.

The occurrence data is turned into quarterly and annual tram incident statistics reports. These reports summarise incident statistics for all tram operations in Victoria and provide a measure of the change in safety incidents statistics over time.

The quarterly tram incident statistics for quarter 1, 2016 and the 2015 annual tram statistics report are now available on the TSV website.



‘ONE OFF’ TRAIN MOVEMENTS

Are these covered in the nature and scope of notice of accreditation?

Under the *Rail Safety Local Operations Act 2006* (Vic) (RSLOA), a notice of accreditation outlines the nature and scope of the rail operator’s accredited activities within schedule 1 and 2 respectively.

An accredited a rolling stock operator has been assessed as having the competence and capacity to operate certain types of rolling stock. The type/s of rolling stock is/are specified in the notice of accreditation.

On occasion, you may need to operate a type of rolling stock that is not on your notice of accreditation for a ‘one off’ movement. You can ask TSV for an exemption for any ‘one off’ movement by submitting an application in accordance with section 61B of the RSLOA.

What are the risks associated with one off movements of rolling stock?

Rail operators will need to demonstrate they have considered the nature of all risks associated with the proposed train movements. They will also need to demonstrate that all risks to safety associated with the proposed train movements are within the operator’s capacity to control, eliminate or manage.

Risks associated with ‘one off’ train movements that may need to be considered include:

- will the rolling stock operate safely on the network?
- what is the condition of the rolling stock and is it fit to move?
- will the one-off move comply with the rolling stock operators established rules and procedures for scheduling, control and monitoring of such moves?
- are existing systems and procedures adequate or appropriate?

The risk register should include any new risks identified with one-off movements and the implementation of controls to manage them.

Rail operators are strongly encouraged to discuss any proposed ‘one off’ movements of rolling stock with TSV well in advance to allow TSV time for processing.



RECORDS FOR TRACK INFRASTRUCTURE INSPECTIONS IN TWO QUICK STEPS

Everyone has an expectation that they will be safe from harm as they go about their day to day activities. Additionally, they expect those who are responsible for managing safety to have carried out their duties to the fullest. This is certainly applicable within the rail industry and this public expectation of safety is reflected in the rail safety legislation.

The rail transport operator is expected to deploy a competent workforce to carry out continual inspections, implement controls where required, regularly monitor risks and the effectiveness of controls.

It can be challenging for small operators to successfully respond to the requirements of the law. Your challenge however is to take your organisation's safety management beyond compliance up to living and breathing ever-improving safety.

This article follows from an earlier article in Rail Safety News June 2015, "Infrastructure inspections made as simple as 1, 2, 3."

The task

Legislation requires that infrastructure inspection records contain sufficient information and detail to demonstrate compliance with the operator's safety management system, infrastructure standards and legislative requirements.

What level of documentation is sufficient to demonstrate compliance? What does this mean in practice?

One suggested approach is outlined below.

Step 1 - Records of infrastructure inspections

These are often referred to as inspection sheets and typically contain certain information.

1. Information relating to asset identification

- a. Inspection date, brief description of inspection and/or works performed.
- b. Unique asset ID, asset location, asset description and key features of asset.
 - If this is a discrete asset, for example, a level crossing, turnout, then it is simple to locate and identify the key features.
 - If this is a continuous asset, such as track, it is often broken into sections of 100 m or 500 m intervals that are of similar configuration, for example, curves, sleeper type, that can be easily identified. Each section can now be assessed as a single homogeneous asset.
 - Asset identifications and asset locations need to be unique and unambiguous. General descriptions should be avoided.

2. Information relating to the asset criteria being inspected.

- a. A clear list of the criteria against which the asset is inspected.
- b. A clear acceptance/rejection criteria and/or tolerances for each criteria against which the infrastructure is to be inspected.

- c. The actual measurement or result of the inspection.
- d. An indication whether the asset complies with the criteria. If not, the severity of the defect and priority for the rectification of the defect based on risk to safety.
- e. Additional comments field to further explain defect if required.

3. Statement of conformance.

- a. A statement from the inspector that the infrastructure complies with the SMS, infrastructure standards and is safe for normal train operations. If not, accurate conditions for the reduced operation of trains services are to be recorded, for example speed restriction (TSR), loading limits, restrictions of specific train types.
- b. The inspector's name and signature including date [and time if relevant] inspected.

Of course there may be other data fields added by the rail transport operator to assist in asset management.

4. Inspection sheets.

These documents should:

- be concise, direct to the point
- use relevant codes and abbreviations that are consistent

COMPLIANCE PLANNING PROCESS FOR TOURIST AND HERITAGE OPERATORS

TSV undertakes an annual compliance planning process to decide what regulatory activities will be conducted during the year. The resulting plan is reviewed quarterly to assess its currency and updated to include any emerging issues or trends identified within industry.

This process aims to:

- provide a transparent, robust and defensible methodology based on in-house knowledge and expertise and the data and information available from a range of sources/inputs.

- ensure that resources are allocated to issues on the basis of risk and appropriately split between operators in the national and local regulatory schemes.

In 2015, TSV undertook a number of audits and inspections on tourist and heritage rail operators focussing on

infrastructure management and the application of standards.

In 2016, TSV will continue to monitor the outcomes of the regulatory activities undertaken on infrastructure management and will focus on the maintenance and management of rolling stock.

and defined, preferably in the footer or on the back of the inspection sheet

- have a logical, sequential and clear layout encouraging the inspector to cover all relevant inspection criteria
- avoid blank entries as the intent is unclear.

A single inspection activity may involve multiple inspection sheets to cover multiple assets, for example, several turnout inspections, several level crossings. It may be more convenient for the inspector to carry a specific inspection sheet for each asset rather than one big cumbersome sheet covering multiple assets.

Following the inspection, if any non-conformances are identified these are usually transferred to a central corrective action register for easy and efficient defect management. We discourage using the inspection sheet to manage and close the defect. This practice is generally inefficient, error prone, difficult to manage or review and is useful only for very minor defects that can be rectified 'on the spot' and covered with a suitable note on the inspection sheet.

Step 2 - Corrective action register

This is usually a spreadsheet and typically contains certain fields.

1. Defect's unique identification number means it can be traced across different documents as required.
2. Date the defect found.
3. Defect location in specific, unambiguous terms.
4. Be sure to clearly explain all abbreviations and codes used in the corrective action register.
5. Defect priority and proposed remedial action for each defect.
 - List, or at least reference, any necessary intermediate safety actions, for example, speed restriction (TSR), loading limits, restrictions of specific train types.
 - The defect priority should clearly explain both initial and final response actions and response action timeframes.
 - The process for determining defect priorities should be clearly explained in the corrective action register.
6. Date the defect is due to be fixed based on priority assessment.
7. Officer responsible for rectifying defect.
8. Date the defect was actually fixed.
9. The officer authorised for closing the defect.

10. Comments are useful if further detail is required to explain the management and status of the rectification works.

Of course there may be other data fields added to assist with asset management.

Once defects are collated in the corrective action register, the management of the defects is relatively straight forward as the information can be easily sorted, prioritised and allocated to staff. Lists of open, closed and overdue defects can be easily generated by the rail operator to determine the work that needs to be completed.

An ongoing focus of TSV is ensuring that rail operators:

- improve the quality of infrastructure inspection records
- clearly demonstrate the management and closeout of safety related corrective actions.

In documenting the above, the railway operator will provide sufficient information to demonstrate compliance with the safety management system, infrastructure standards and legislative requirements.

In addition this systematic approach will provide valuable asset management information to support the overall business targets of the railway.



ASSET MANAGEMENT - THE KEY TO SAFETY AND YOUR BUSINESS VIABILITY

Railways, including tourist railways, have a significant cost invested in the infrastructure assets required for the safe operation of their services.

Asset management is used to ensure that physical assets remain safe, fit-for-purpose, and commercially viable from design and construction through operation to decommissioning.

It is also used to plan for future asset performance by understanding stakeholder needs, the risks associated with their delivery and developing appropriate mitigation to those risks to delivering safe and reliable performance.

In essence, asset management is the foundation on which railways can manage and deliver assets that are safe, meet the demanded service and achieve the required financial performance.

The core objectives of asset management fall into one of three fundamental categories:

1. safety – for people and their environment – (staff, asset maintainers and passengers)
2. service delivery – the provision of cost effective and safe operations
3. financial performance – necessary to the continued viability of the organisation.

Clearly pushing assets beyond their

service life or deferring maintenance until an emergency asset replacement is required can have significant impacts on safety and the economic viability of the tourist railway.

Poor asset management decisions can lead to potential unsafe practices, excessive maintenance and shortened asset service life. Poor asset management can threaten the financial viability of the railway by requiring large, unscheduled and emergency asset replacements.

It is evident from many asset management studies that;

- after a long period of gradual decline assets can, and do, deteriorate quickly at the end of their service life
- regular small, targeted maintenance is preferable, safer and less expensive than delaying maintenance till there is a safety crisis, asset failure affecting rail operations, and threat to the economic viability of the railway.

Many good asset management systems have been implemented using a spreadsheet approach. They have also been implemented by organisations with fewer than six

employees.

The asset management system includes a management policy and supporting processes that address all the asset life stages of rail infrastructure, rolling stock and associated support service infrastructure.

The asset management policy should:

1. clearly set out the organisation's broad asset management objectives and measures for success
2. provide a framework for developing and implementing the asset management strategy, consistent with any organisational constraints
3. assign responsibilities for the asset management system and its outcomes
4. assign responsibilities for the establishment and improvement of the strategic asset management plan to individual positions
5. communicate to the organisation and other stakeholders the importance of disciplined asset management practices to

ensuring the safety of railway operations.

Typical asset management plans should cover:

- a systematic approach to safe asset management
- appropriate documentation of asset management processes
- effective monitoring of asset performance (including trending against life expectancy to determine timing for renewals)
- management of any changes to safety critical assets.

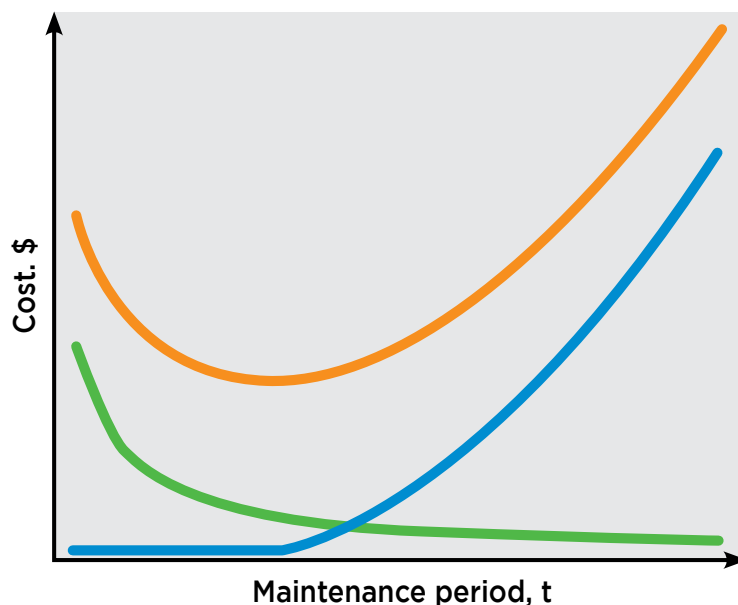
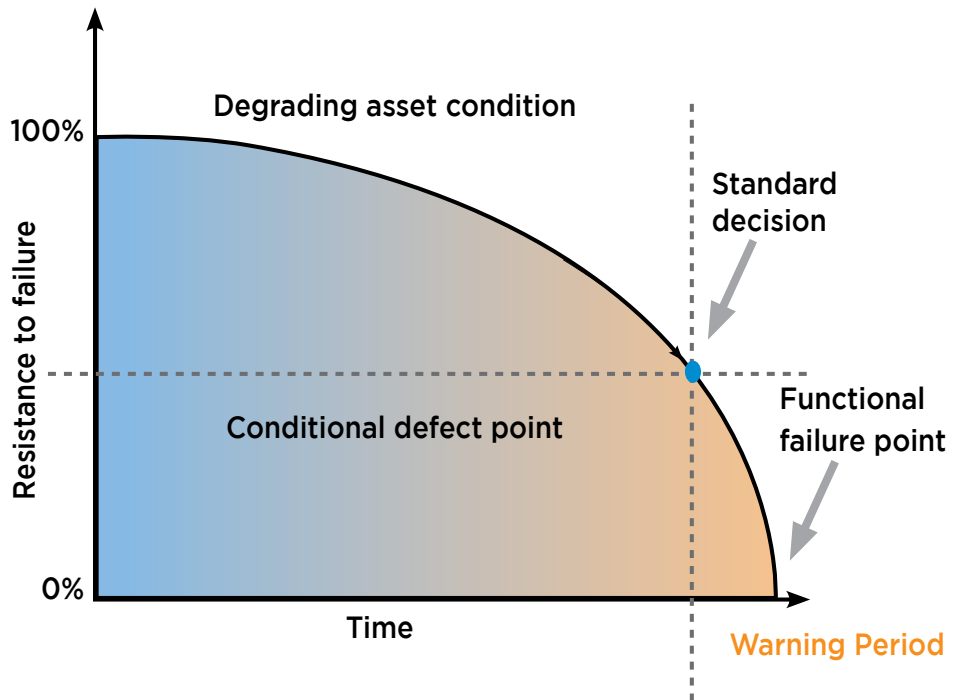
Typical asset registers contain details of the unique asset ID, asset location, asset description and key features of asset.

1. All your major assets should have a unique identification and be listed in your system with a description.
2. If the asset is discrete, for example, bridge, level crossing, turnout, it is simple to locate and identify the key features.
3. If the asset is continuous, such as track, it is often broken into sections of 100 m or 500 m intervals that are of similar configuration, for example, curves, sleeper type that can be easily identified. Each section can now be assessed as a single homogeneous asset.
4. Asset locations need to be unique and unambiguous.

The asset register should include details of the asset condition based on measurements, assessments and asset scores. It is also important to assess how critical the asset is in relation to the network, risk of failure, cost of replacement and resource priority.

Assets need to be maintained and the key is to determine for each main asset the maintenance activities for the short, medium and long term as well as the realistic service life and asset replacement timeframes.

Asset management and the strategic insight it provides are necessary to ensure the rail infrastructure is safe for the operation of railway services. They are also essential to meeting the overall business strategic objectives that ensure its ongoing financial viability.



- Total cost
- Cost of preventative maintenance and inspection
- Cost of failure

Poor asset management practices and getting asset management wrong leads to:

- potential safety related accident
- prematurely shortened residual asset service life, disrupted railway operations and service delivery
- huge variations in cash flow caused by the emergency asset

repair/upgrade works which put pressure on the financial survival of the railway.

In carrying out its function to enforce the rail safety legislation, TSV will conduct audits of rail operators' safety management systems, policies, and procedures including their approach to asset management.

INTRODUCTION OF UNFAMILIAR ROLLING STOCK

It is the responsibility of operators to apply to the Director, Transport Safety for a variation of their accreditation under section 54 of the *Rail Safety (Local Operation) Act 2006 (Vic)*. A variation is required when an operator introduces rolling stock they are not familiar with or which requires different competencies.

Under the legislation, TSV has a maximum of six months to process an application for variation of accreditation (AVA). If TSV requests more information, this time period is reset when that additional information is received by TSV.

Delays in approving the AVA may result if the rail operator fails to respond satisfactorily to TSV's questions, provide information or submit details of the variation of application requested by TSV.

Case study

A rail operator may wish to operate rolling stock which is currently not within its notice of accreditation and for which it does not currently have the competence or capacity.

The rail operator is required to provide information about the change by completing an AVA form available from TSV. A TSV Rail Safety Officer will review it to ensure the information provided by the rail transport operator includes the following:

1. summary of where and how the rolling stock is to be operated and maintained
2. description of the proposed change to, or the manner of carrying out, accredited rail operations – this should include the nature, character and scope of the change in rail operations
3. description of any significant change to risk profile, together with proposed controls
4. evidence of a plan to implement, monitor and review the proposed controls
5. copy of any relevant risk assessment relating to the proposed change
6. evidence of competence and capacity required for the variation applied for

7. details of consultation undertaken
8. details of review and revision of the safety management system in accordance with section 14 of the Rail Safety (Local Operations) Regulations 2006 (Vic), including safety interface agreements.

The rolling stock may have operated previously on another rail network, however the operating and infrastructure environment on which it is proposed to operate may be quite different. The rail operator may not have suitably qualified staff and systems required to ensure this rolling stock is maintained and operated safely.

The successful and safe introduction of the rolling stock may be assisted by a commissioning plan that includes:

- a condition assessment of the rolling stock completed by a competent person (for example, rolling stock expert) to ensure it is rail worthy and compatible to the rail transport operator's infrastructure and operational environment
- a list and schedule of works (repairs and modifications) to ensure it is fit for purpose
- risk review following these works
- specific maintenance, operational and logistics support to ensure risks to safety are mitigated and maintained on an ongoing basis
- training needs of maintenance and operational staff
- a plan for undertaking testing on the track
- planned date of introduction into service.

In some cases, the maintenance and operational regime used by the rail operators for existing rolling stock is unsuitable or unable to be modified. If that is the situation, additional or new maintenance and operational procedures may have to be developed by the rail operator to ensure the reliable and safe operation of the rolling stock.

In assessing AVAs for rolling stock, TSV has found:-

- in some instances, rail operators do not seem to have an understanding of the risks of operating rolling stock on their network and proposing/applying suitable controls to manage these risks. The risk assessment should include all possible controls and detail which controls which have been adopted, which controls have been rejected and the basis for their rejection
- no assessment has been undertaken of the suitability of fixed wheel rolling stock for operation on a track that has previously only been used by bogie type rolling stock. The risk of derailment of this type of rolling stock on this track has not been assessed
- the risk of derailment/collision under various conditions and loading of the rolling stock has not been adequately assessed
- there is high reliance on administrative controls to manage the risk of slips trips and falls, with little consideration of engineering controls such as restraints or barricades
- rail operators rely heavily on a person's experience and/or subjective assessment in maintaining the vehicle as 'fit for operations' rather than referring to appropriate acceptance/rejection criteria and documenting these in a check sheet
- committing to the introduction of rolling stock into service ahead of obtaining approval of the AVA from TSV. When the rail operator has not provided adequate information or prompt response to TSV queries nor allowed sufficient time for the processing of the AVA this commitment can become even more problematic.

Rail operators are encouraged to contact TSV early to discuss their plans to introduce different rolling stock on their network and to clarify accreditation requirements for these vehicles.



INFRASTRUCTURE INSPECTIONS 2016 REPORT CARD. HOW DID YOU GO?

In response to ongoing concerns regarding track conditions, TSV engineers have conducted a number of compliance inspections focused on track inspection and maintenance.

They also reviewed compliance with the rail operators' safety management system and provided guidance to the rail operators' track maintenance staff.

As a result TSV issued several non-conformance reports and improvement notices to tourist and heritage rail operators.

The issues causing concern are outlined below.

Standards

Common issues included the lack of normative and exceedance standards for some track features including turnouts, (check rails, points and v-crossing tolerances), track structure (joint gaps, joint alignment, rail head wear) and track geometry (track line, cross level cant, twist).

Safety management systems for some rail operators identified these track features, but did not document both normative and exceedance standards used to verify compliance.

Some rail operators referenced the Victorian Railways Institute Permanent Way correspondence course (the 'brown and green book') in their safety management system. These books, although an excellent reference, cover general

characteristics of track features only, that is nominal values and recommended dimensions. They do not generally specify tolerance or exceedance standards required to ensure safe rail operations.

Each rail operator needs to include details of the tolerance allowed for in the track measurements in their safety management system.

External consultants

Some rail operators have engaged external expertise to assist in developing their track maintenance procedures or to conduct track inspections. This is a good option however it is important to understand that the accountability for the safety of the rail network continues to reside with you, the rail operator.

A consultant's recommendations, or lack of, does not alter the rail operator's accountability for managing the risks to safety associated with the condition of assets. If you do not agree with the consultant's recommendations you will need to show the basis for rejecting them.

Your decision to act on any recommendations must be based

on safety criteria. Action cannot be deferred unilaterally based on convenience, resources, cash flow or timing of local activities.

TSV will request a copy of any reports produced by consultants when conducting compliance activities, or investigations following a derailment or track safety incident. These reports are evidence to support a rail operator's management of assets.

Corrective action management

Some rail operators are not managing defects as per the corrective action process included in their safety management system.

A corrective action register is needed to demonstrate how defects identified during track inspections, or the recommendations made by consultants, were being managed and closed out.

There have been instances of asset condition well exceeding acceptance conditions and presenting a derailment risk.

It is important to have evidence to show defects with the greatest safety risk are being given top priority. Risk prioritisation is also key to planning asset management.



RISK MANAGEMENT

Risk management is a key activity for tourist and heritage rail operators to ensure the safety of their rail operations.

The *Rail Safety (Local Operations) Act 2006* (RSA) imposes safety duties on tourist and heritage operators to ensure safety by eliminating or reducing the risks to safety. The following matters must be considered in a risk assessment process:

- the likelihood of the hazard or risk concerned eventuating
- the degree of harm that would result if the hazard or risk eventuated
- what the person concerned knows, or ought reasonably to know, about the hazard or risks and any ways of eliminating or reducing the hazard or risk
- the availability and suitability of ways to eliminate or reduce the hazard or risk
- the cost of eliminating or reducing the hazard or risk.

When making a change to any aspect of rail infrastructure or rolling stock, it is important that rail operators follow their management of change and risk management processes. This will help to ensure that all risks

associated with introducing a change are identified and adequate controls are implemented. On occasion, for example, TSV has found that rail operators have replaced components in vehicles that may not be made from the same material; over time small changes such as these could have a significant impact.

The following case study highlights what can happen if risk management and change management procedures are inadequate or not followed.

Case study: Swiss Glacier Express tourist train derailment

On the 23 July 2010, the Swiss Glacier Express tourist train derailed. The two rear carriages overturned while a third car derailed but remained on the track. One person died and a total of 42 people were injured and taken to hospital. Seventeen people were still in hospital the day after the incident occurred.

The incident was found to be caused by the excessive speed. The train started accelerating before all the carriages had left a section of track that had a speed restriction of 35

km/h and it had reached a speed of 55 km/h at the time of the incident.

Although the train was travelling at a relatively low speed, the excessive speed for that section of track was sufficient to cause the carriages to overturn. The curve in the track was such that even a small increase in speed would increase the risk of the train overturning. The weight of scenic glass windows fitted to the train also increased the risk of the train overturning.

Risk management and risk assessment

The derailment accident described in the case study could have been prevented with an effective risk management process in place. The process ensures rail operators identify all foreseeable incidents, and implement effective controls to reduce their likelihood and consequence. It should also include a comprehensive risk assessment, especially when a change is introduced to the vehicle or rail operations. In the case study above, the controls that were

implemented to manage the risks to safety were inadequate.

Generally, there are four key steps involved in a risk management framework.

- 1) Hazard identification
- 2) Risk assessment
- 3) Control measures
- 4) Decision basis.

Steps 1 and 2 together identify hazards (in the case study - over-speeding and the increased weight of scenic glass windows) that could cause, or contribute to causing, an event (derailment and carriages overturning). Once the hazards are identified, the associated risks are analysed with particular consideration given to the consequences of an event and the likelihood of its occurrence. The combination of consequences and likelihood determine the level of risk associated with a given hazard.

Step 3 assesses existing control measures and identifies potential new controls to eliminate or reduce the risks. Step 4 proposes a basis for making decisions about managing the risks, including the process for the implementing or rejecting the controls.

Risk registers

Rail operators are required to document all aspects of risk assessment. Transport Safety Victoria will request the rail operators' risk registers when assessing accreditations, variations to accreditation and when undertaking compliance activities.

A risk register should adequately document all relevant information, including:

- the identified risks and hazards considered, that is, a full picture of what can go wrong
- expected consequences
- risk ranking
- existing and proposed controls to manage the risks identified
- the effectiveness of these controls.

Where controls are implemented, the risk register should adequately reference these so they can be validated. The reasons for any decisions to implement, reject or review controls should be adequately documented.

Rail operators are encouraged to contact Transport Safety Victoria if they have any questions or concerns regarding risk management, risk registers or management of change.

TOWARDS A CULTURE OF BEING SAFE

Safety culture can generally be described as 'the way things are done around here' with respect to safety. It encompasses the values, beliefs, and attitudes held within the organisation that guide the way that people behave in the workplace.

While a direct link between culture and safety can be difficult to demonstrate, it is reasonable to expect that a negative safety culture can lead to practices that increase the risk of accidents. Indeed, safety culture has been implicated in several serious organisational accidents including the 2003 Waterfall, NSW, incident in which the train driver and six passenger were killed and 41 passengers injured.

The Special Commission of Inquiry into the Waterfall accident found that:

- The dominant culture [in the rail organisation] was not one of safety, but of on-time running.
- It [was] assumed there must always be an individual culpable for any incident, rather than that there are organisational deficiencies which require examination and remedial action to avoid a recurrence.
- When incidents occur, through oversight or inadvertence, the train driver is often blamed for the disruption to train services.
- [This] "blame culture" made it difficult for staff to raise safety concerns.
- The level of distrust between employees and management was apparent, [and this] environment of distrust and fear of punishment creates a negative safety culture.

While the Waterfall accident was caused by a seemingly unique and unfortunate combination of events, the same deficiencies in safety culture can still be found in many

organisations today. For instance, it is common for organisations to weigh up the importance of safety against performance. Their policies may adamantly state that safety is the utmost first priority, but actual practices may indicate otherwise. In balancing performance with safety, some decisions can inadvertently undermine the latter. An example is the decision to run a train with a minor fault in order to meet peak service demands. Another is to alter timetables to increase services that then places significant pressure on drivers to meet on-time running.

Over time this can lead to a common belief that is acceptable to make seemingly small calculated compromises on safety, particularly if these are condoned by the organisation's leaders and managers whether by their conscious actions or failure to act. In such an environment, people may become increasingly complacent, be more likely to take shortcuts, compromise on quality, hesitate to report incidents and near misses, and blame others when things go wrong. As these undesirable behaviours become more prevalent and accepted by the wider organisation as the norm, a culture of complacency and compromise is shaped. Once a culture becomes ingrained in the workplace, it is difficult to change.

Organisations with good safety cultures aspire to have safety consciously embedded within the organisation so that safe thinking and safe behaviour become the norm. This positive safety culture

can help protect the organisation, its people, and the public from threats to safety.

So how can a positive safe culture be achieved? According to organisational safety expert, James Reason, safety culture is shaped by everyday interactions and conversations, common workplace practices, past events, the character of the leadership, and the mood of the workforce. Therefore, safety culture can be “socially engineered”. This can be done by continuously promoting, reinforcing, and living a culture that is:

Vigilant: Individuals are vigilant and continuously anticipate that things can go wrong even when the very best safe guards are in place. At the organisation level, there are processes in place to continuously monitor incidents and, more importantly, the factors in the system and the organisation that can give rise to these.

Flexible: Individuals are able to follow standard practice but are also able to adapt when these safeguards fail. Here people are seen as the last line of defence rather than merely the generators of mistakes.

Just: When organisations adopt punitive methods to thwart accidents, sometimes called a blame culture, individuals can become fearful of reprimands and hide their mistakes. Conversely, a just culture rewards and commends the reporting of errors and only reprimands individuals when their behaviour is truly unacceptable such as a deliberate infringement.

Reporting: When individuals are encouraged to consistently report mistakes, observations, concerns, and near misses, the organisation becomes much more aware of potential threats to safety that would otherwise be hidden. This can also help identify factors that can contribute to accidents so that people and the organisation can modify their approach before these occur.

Learning: Lessons for continuously improving safety are proactively sought wherever they can be gained. This includes gathering intelligence from near-miss and incident reports, internal and external investigations, audits, developments in industry practice, technology and research, and good practice guidance.

Safety culture is shaped by everyday interactions, conversations and practices on the ground. However, it must be driven top down and continuously reinforced by the leaders and management of an organisation. Safety culture is even influenced by industry practices and standards. Most importantly, safety culture must be embedded in safety management systems and there must be mechanisms, processes and methods in place to maintain and promote a positive safety culture. This is one of the aims of rail safety legislation and regulation.

Everyone therefore has a role in developing a kind of culture that improves safety and wellbeing while balancing the need to be performing, productive and profitable. A ‘culture of being safe’ is a shared responsibility and is an important direction to work towards in the rail industry.



A tourist and heritage rail operator recently requested information regarding the types of compliance and enforcement action that can be taken by TSV in the event of a breach of transport safety legislation.

TSV takes the view that the provision or facilitation of the provision of advice, education and training in relation to rail safety issues is the best approach for driving improvement in rail safety. There are however a number of tools available to rail safety officers or the Safety Director in taking compliance and enforcement action when the occasion arises, including:

- improvement notices
- prohibition notices
- enforceable voluntary undertakings by an accredited operator
- disciplinary inquiries in relation to an accredited operator
- the variation of accreditation or conditions or restrictions on the accreditation
- prosecution
- suspension or cancellation of accreditation.

In this article we provide an outline of three of these compliance and enforcement tools – improvement notices, prohibition notices and enforceable voluntary undertakings.

Improvement notices

The legislative requirements for improvement notices are set out in sections 50 to 59 of the *Transport (Safety Schemes Compliance and Enforcement) Act 2014* (Vic) (the Act).

An improvement notice may be served when a rail safety officer reasonably believes that:

- a breach of the legislation is occurring or has occurred and is likely to continue or be repeated
- the rail transport operator is carrying out or has carried out operations that threaten rail safety
- the rail transport operator has contravened a condition of their accreditation.

In determining whether to serve an improvement notice, the rail safety officer will take into consideration a number of factors, including:

- the current risks and the safety history of the rail transport operator involved
- the safety consequences of the breach, and in particular, the likelihood of

IMPROVEMENT NOTICE



Transport (Safety Schemes Compliance and Enforcement) Act 2014 (Vic)

No:

TO: _____
POSITION: _____
ADDRESS: _____

1. This notice is served under section 50 of the Transport (Safety Schemes Compliance and Enforcement) Act 2014 (Vic).

2. I reasonably believe that you:

- Are contravening a transport safety or infrastructure law
- Have previously contravened a transport safety or infrastructure law in circumstances that make it likely the

PROHIBITION NOTICE

Transport (Safety Schemes Compliance and Enforcement) Act 2014 (Vic)



No:

erved under section 60 of the Transport (Safety Schemes Compliance and Enforcement) Act 2014 (Vic).
been served on you in relation to the following activity, over which you have, or appear to have, control:

Activity: [delete as appropriate]
in relation to [bus services / public transport premises]
relation to [bus services / at public transport premises]
on, or in the immediate vicinity of a bus stopping point
activity involves or will involve, or if it occurs will involve, an immediate risk to the safety of a person.
h my belief is based and the matters which give or will give rise to the risk are as follows:

- a notifiable occurrence taking place
- whether any notifiable occurrence that might occur as a result of the breach would be likely to be a serious one
- whether the breach might trigger other, more serious breaches, or encourage others to fail to comply
- the history of the rail transport operator's performance in respect of the breach - that is, whether the operator has had several similar breaches.

The rail safety officer will take into account whether an improvement notice is likely to result in significant costs for the rail transport operator before issuing one.

If it has been determined that an improvement notice should be served, the rail safety officer will discuss the proposed remedy for the breach of legislation and the date by which remedial action must be taken with the operator. In many cases, the rail transport operator will prepare a corrective action plan in which the proposed remedy, including milestones and deliverables required to achieve compliance, will be documented.

Once the improvement notice has been served, the rail transport operator has the right to seek a review of the notice. Importantly, the fact that it has been served and the content and details of the notice remain confidential. TSV does not publish improvement notices on its website.

Rail transport operators are encouraged to provide regular updates to the rail safety officer on progress towards fulfilling the requirements of the improvement notice. They are particularly encouraged to contact TSV if they are experiencing any difficulties or delays in complying with the requirements.

The rail safety officer will consider changing the date by which remedial action must be taken provided the rail transport operator can demonstrate that it has made all reasonable efforts to comply. Failure to comply may result in prosecution of the rail transport operator.

Prohibition notices

The legislative requirements for prohibition notices are set out in sections 60 to 70 of the Act.

A prohibition notice may be served when a rail safety officer believes on reasonable grounds that an activity that is occurring or that may occur involves or will involve an immediate risk to safety. The prohibition notice requires the immediate cessation of the relevant activity until the matter(s) that gives, or will give, rise to the risk(s) are remedied. A prohibition notice may be served as an oral direction but will be confirmed by written notice as soon as practicable.

The decision to serve a prohibition notice is reached after objectively considering and assessing all the relevant facts and issues. This includes any actions being taken by the rail transport operator, and the consequences of not serving a notice.

Prohibition notices may only be served in relation to an immediate threat to safety therefore non-compliance with it is a serious breach of safety legislation and may lead to prosecution.

Once the prohibition notice has been served, rail operators have the right to seek a review of the notice.

Enforceable voluntary undertakings

The legislative requirements for an enforceable voluntary undertakings are set out in sections 83 to 89 of the Act.

An enforceable voluntary undertaking

is a formal written undertaking by an accredited rail transport operator to address a contravention or alleged contravention of the *Rail Safety (Local Operations) Act 2006 (Vic)* or *Rail Safety (Local Operations) Regulations 2006 (Vic)*. It represents a significant commitment from the rail transport operator to correct serious matters that may otherwise be prosecuted.

It is up to the rail transport operator to propose to TSV that they enter into an enforceable voluntary undertaking which may or may not be accepted.

In considering whether or not to accept an enforceable voluntary undertaking, TSV will take into consideration a number of factors, including:

- whether the public interest would be better served by acceptance of an enforceable voluntary undertaking rather than proceeding with prosecution or cancellation or suspension
- the rail transport operator's record of compliance and upholding of previous commitments
- whether the actions proposed to be undertaken address the matters which have given rise to the breach.

Once an enforceable voluntary undertaking has been accepted by TSV, it becomes legally binding. It cannot be altered and the date for compliance cannot be extended. A rail transport operator may withdraw or vary the undertaking with the written agreement of the Safety Director - however, it cannot be varied to provide for a different alleged contravention of legislation. Failure to comply with an enforceable voluntary undertaking can result in the matter being heard in the Magistrates Court.

WHERE TO GET MORE INFORMATION

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