
Confidential

Independent Review Report into Rail Systems Team

For



New Zealand Transport Agency (NZTA)

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1 Executive Summary

- 1.1 Australasian Transport Risk Solutions (ATRS) Pty Ltd was engaged by the New Zealand Transport Agency (NZTA) to undertake a review of the effectiveness of the NZ Railways Act pertaining to the best practice provision of the rail safety licencing process, and the application and management of the Act by the NZTA Rail Systems Team.
- 1.2 The project team has been very cognizant of the highly significant impact of the Pike River Coal Mine Tragedy on the conduct of this review. Whilst obviously coal mining is a very different industry to that of railway operations, there is a very significant alignment of strategic safety issues and failings, the lessons of which offer significant improvement opportunities in the safety critical area of rail safety regulation.
- 1.3 The most outstanding aspect of this alignment is the role of the Regulator in more closely scrutinizing the effectiveness of the corporate governance of license holders and the role of the licensed entity's Board of Directors. This report has examined this issue and made a number of recommendations in relation to the role of the Rail Safety Regulator and its critical continuous review of a licensed rail organisation's Board and senior management in ensuring the safety of its rail operations.
- 1.4 Specifically, the Terms of Reference required a response to three key questions being **(1)** Does the legislative framework reflect best practice? **(2)** Does the rail regulator operational policy represent best practice?, and **(3)** Does NZTA operational activity reflect best practice?
- 1.5 Generally speaking the current legislation represents "good" if not "best" practice, and is in need of a review and amendment in the normal course of the legislative review timetable to bring it into line with more contemporary thinking. However, the legislation in its current form does not prevent or limit in any way the need for improved NZTA and Rail Safety Regulator improved safety and service delivery performance.
- 1.6 When undertaking such a legislative review, it is suggested that any revised legislation needs to adopt more of a "risk management" based approach and be aligned more to the WH&S legislation, thereby enabling a more consistent approach with a future Rail Safety Regulator being able to take the lead role in any safety related regulatory issue within the rail industry.
- 1.7 While the existing legislation is adequate for the originally intended task, the review team suggests that a future review will potentially add significant value in the regulation of rail safety in NZ and may gain additional benefit in the further alignment (where appropriate) with the new Australian National Rail Safety Law and Regulations which underpinned the reform of rail safety regulation in Australia. Such a review should consider the benefits to be achieved in adopting the Safety Management System

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- guidance using the SMS 29 key safety elements (see attachment No.3) developed and implemented within the new Australian national rail safety law and regulation.
- 1.8 Any future review of the current NZ rail safety law and regulations should be given some priority as the law has not been reviewed since 2005, and the supporting regulations since 2008, with the law having exceeded the stated periodic review period.
- 1.9 In terms of the question "Does the rail regulator operational policy represent best practice?", the review team found that despite the best intentions and endeavours of the rail safety regulator team, it cannot be considered as "best practice" at this stage. This finding has been based upon international benchmarking against similar Western developed countries, and in particular the multiple rail safety regulator jurisdictions within Australia, and also on the feedback received from a range of stakeholders within both the public and private sectors of the NZ rail industry.
- 1.10 Finally, in terms of the question "Does NZTA operational activity (in rail safety) reflect best practice?", the review team found that there is considerable room for improvement. This conclusion is based on the results of the international benchmarking analysis, feedback received from the stakeholders, and evidence found by the review team which suggests that the current administrative and support arrangements within NZTA for such a safety critical independent rail safety regulator function to be less than an acceptable standard.
- 1.11 While there have been a number of significant issues found that present opportunities for improvement, the review team highlights the key issues as being: The level of the rail safety regulator within the current NZTA organisational structure, the level of support and resources available to the rail safety regulator, the need to in-source the safety critical core function of license holder compliance assessments (currently out-sourced), and the need for NZTA to actively promote its Independent Rail Safety Regulator as one of its key delivery services.
- 1.12 The project team has made a range of recommendations for the consideration of NZTA including positioning the Independent Rail Safety Regulator at a more senior level within the organisation, improving the availability of an appropriate level of resourcing and competencies within the rail safety regulator team, and the need to establish a close working collaboration with the Australian National Rail Safety Regulator to take advantage of the sharing of information and resources including documentation and human resource expertise.
- 1.13 The review team has also made a number of recommendations pertaining to the need for the Rail Safety Regulator to take a greater role in terms of industry education.
- 1.14 The review team wishes to acknowledge the great support and genuine commitment to safety performance improvement demonstrated by NZTA during the course of this review project.

2 Project Terms of Reference

2.1 Does the legislative framework represent best practice?

- To review and assess the Railways Act/NZ legislation to advise if it reflects best international practice.

2.2 Does rail regulator operational policy represent best practice?

- To assess and report on the current status and activities of the NZTA rail regulator relative to international best practice, including:
 - whether the rail regulator's processes and activities are effective in identifying, responding to, and managing system risk (failures of the regulatory system), operations risk (failures in the operational management system), and tactical risk (failures in the execution of specific roles or activities);
 - whether it is resilient to changes in the rail sector, such as changes in technology.

2.3 Does NZTA operational activity reflect best practice?

- To review the NZTA rail regulator management of occurrences, reporting and subsequent occurrence investigations (as appropriate);
- To assess the overall way in which the NZTA/Rail industry is currently managing the National Rail System Standards (NRSS).

2.4 Validation Activity

- To undertake a process of consultation with nominated NZTA clients and stakeholders (such as TAIC & KiwiRail) within the NZ Rail Industry to gather feedback on the effectiveness of the existing NZTA Rail Unit structure, application and management of the rail safety legislation and licensing requirements;
- To provide an International rail safety regulatory comparative review based on the recent Australian experience in developing a National Rail Safety Regulator.

2.5 Project Outputs

Structure / Operational Recommendations:

- To provide a report making findings and any appropriate recommendations in relation to potential (NZTA Rail Team) structural and/or operational improvements to achieve "best practice" outcomes within the context of the existing legislation;
- Summarise any recommendations on changes to legislation that are identified as part of the review.

People Capability Recommendations:

- To review the rail team (regulator) structure to assess its capability to manage major changes in the rail industry such as the electrification and EMU rolling stock project(s) in Auckland;
- To review and offer value adding findings in terms of the existing NZTA Rail Team organisational structure, competency of staff, and its application and management of the NZTA Rail Safety legislative obligations.

3 Project Review Team

3.1 The New Zealand Transport Agency (NZTA) Manager Rail Systems, Mr John Freeman, engaged Australasian Transport Risk Solutions (ATRS) Pty Ltd to undertake an independent review of the New Zealand rail safety legislative framework, its operational policy, and associated operational activity to assess it against "best practice" and report on any suggested improvement recommendations.

3.2 Consistent with the requirements of the NZTA engagement of ATRS, the following independent lead project manager was appointed to conduct the project and prepare an appropriate project report:

Mr David Edwards
Executive Director
ATRS Pty Ltd

3.3 The following additional ATRS senior project reviewer was also appointed to assist in the review:

Mr Phil Sochon
Senior Rail Safety & Legislative Consultant
ATRS Pty Ltd

3.4 Information on the experience and expertise of the project team members may be obtained on the ATRS web site www.atrs.com.au

4 Project Methodology

- 4.1 During the course of the project the project team used a range of techniques and analytical tools to gather evidence and to reach validated findings consistent with the project objectives.
- 4.2 A review of all applicable NZTA legislative, policy and operating guidance material was conducted.
- 4.3 The review team interviewed a range of stakeholder representatives and conducted an analysis of the gathered information.
- 4.4 An issues register was maintained through the review process to record all issues raised during the stakeholder consultation phase.
- 4.5 The review has been conducted using a reviewer positive and mentoring style, and so should not be construed as any form of negative reflection on or an unwarranted criticism of the existing NZTA rail safety framework or those who administer and deliver that framework.
- 4.6 The review also acknowledges the professional and dedicated members of the NZTA rail team and their devotion to safety, and the assistance provided to the review team while undertaking this "continuous improvement" project.
- 4.7 Even the best run organisations are not immune to the effects of potential systemic latent failures, hence the importance of their awareness of them as an outcome objective of this review project.

5. Project Background

5.1 Overview

The NZTA Rail Systems Team review project was undertaken with a background context of the outcomes of the Pike River Royal Commission, and a number of other contributing factors including maintaining a model of "co-regulation" as the guiding principle in regulating the rail industry in New Zealand. Also contributing to the review background was the Australasian Rail Industry Safety and Standards Board (RISSB) and its development and management of rail industry standards for both Australia and New Zealand, and the recently introduced Australian National Rail Safety Law and Regulations. Each of these factors is discussed in the following paragraphs.

5.2 The review team also acknowledges the NZTA recently released organisational "strategy snapshot" which communicates the NZTA values including the belief that "**it all starts with our people**" in an organisation with 1,372 people spread across 14 locations in New Zealand.

5.3 As further background, the NZTA "strategy snapshot" communicates a five step organisational vision of:

- **Purpose** - Creating transport solutions for a thriving New Zealand;
- **Customer Groups** - Individuals and New Zealand communities;
- **Behaviours** - Success comes from what we do and how we do it;
- **Goals** - Our goals over the next 10-20 years; and
- **Priorities** - Our priorities over the next 3 years.

5.4 **Rail Transport in New Zealand**

Rail is an effective mode of transport for high volume and heavy freight and carries approximately 15 percent of freight moved in New Zealand (tonne-kilometres). It carries large numbers of urban commuters in Auckland and Wellington with more than 22 million passengers in 2010/11. The rail system also reduces the pressure on New Zealand's roads and can provide significant safety, health and environmental benefits to the broader New Zealand community.

5.5 With a track network length of 4128 km, approximately 16 million tonnes of freight, and 99 licensed rail operators, the rail industry is a significant land transport mode, and as such it requires an effective and efficient rail safety regulatory system to ensure it is well managed and above all safe in so far as it is reasonably practicable (SFAIRP) to do so.

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- 5.6 NZ rail industry also contributes significantly to the national economy, the metropolitan commuter and long distance passenger transport tasks, the freight transport task, and the tourist and heritage rail industry which in turn supports the wider NZ tourist economy.
- 5.7 With predicted growth in freight over the next 3 decades, an efficient rail freight network will play an important and complimentary role to road freight to maintain access to the key maritime ports of New Zealand. For these reasons it is important that the rail system operates as efficiently and safely as possible.
- 5.8 The NZ Government, through KiwiRail, now owns and controls not only the rail tracks and associated infrastructure, but also the majority of the rolling stock. The government wants rail to compete on a commercial basis with other freight and passenger transport modes, with services funded from customer revenue as far as possible and rail investments providing a rate of return.
- 5.9 The Ministry's focus over the short to medium term is to work to establish the appropriate governance, institutional, funding and legislative frameworks that will position rail to contribute positively to the transport system in the future.
- 5.10 The Ministry aims to make the New Zealand rail industry progressively safer and reduce the distress and trauma arising from death and injury in the rail sector. A well resourced, efficient and respected rail safety regulator is key to the Ministry objective.
- 5.11 ***NZTA Regulation of Rail***
NZTA manages and regulates the road and highways transport sector for New Zealand, in addition to the safety critical rail safety regulation portfolio. The Rail Safety Regulator (RSR) is located physically on the third floor of the NZTA head office in Wellington in a general open plan office area. This office houses a significant number of staff whose tasks are almost exclusively dedicated to roads, highways and road safety issues.
- 5.12 The rail safety regulator team is comprised of six (6) positions as follows:
- Manager Rail Systems (1);
 - Principal Rail Advisor (1);
 - Senior Rail Advisor (3);
 - Senior Rail Systems Advisor (1).
- 5.13 The Manager Rail Systems is effectively and functionally the NZTA Rail Safety Regulator from an Industry regulatory perspective as he directs the rail safety team and is the key contact and "face" of rail safety regulation in New Zealand.
- 5.14 From a legal perspective the New Zealand Transport Agency (which in legal terms is the Board of the Agency) has statutory powers and functions under the Railways Act 2005. Those functions and powers are currently delegated from the Board to the Transport

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- Agency's Chief Executive, and sub-delegated by the Chief Executive to the Group Manager Access and Use. By further sub-delegation, the functions and powers are sub-delegated from the Group Manager Access and Use to certain office holders within the Transport Agency, including the Manager Rail Systems.
- 5.15 The functional Rail Safety Regulator being the Manager Rail Systems, currently sits at level four within NZTA, and reports to the National Manager Delivery, who in turn reports to the General Manager Access and Use, who in turn reports to the Chief Executive NZ Transport Agency.
- 5.16 ***Pike River Royal Commission***
The project team has been very cognizant of the highly significant impact of the November 2010 Pike River Coal Mine tragedy on New Zealand, and the subsequent Royal Commission and its findings, and how they may impact and provide valuable safety lessons in the conduct of this review.
- 5.17 Whilst coal mining is a very different industry to that of the rail industry, there is a very significant alignment of the critical role of the respective safety regulator legislative obligations and activities, and the potential impact of strategic policy decision making upon the safe outcomes required in both industries.
- 5.18 Of specific relevance to this review has been the outcomes and ramifications of the Pike River Royal Commission Report, and the opportunity to learn from the identified safety issues and failings to ensure the lessons of which are applied to the continuous improvement in the regulation of rail safety in New Zealand. As Professor James Reason has said "***never waste a good accident, learn from it***", and if there is any possible good to come from the Pike River tragedy it must be that the lessons are understood and improvements are made (in this case) in the regulation of rail safety.
- 5.19 The most outstanding aspect of this alignment is the role of the Regulator in more closely scrutinizing the effectiveness of the corporate governance role of the rail industry licensed entity's Board of Directors and senior management teams, the conduct of regulatory compliance assessments and inspections, and the undertaking of compliance investigations as may be required. There exists many opportunities for improvement in each of these areas in the current regulation of rail safety in New Zealand.
- 5.20 This report has examined the corporate governance issue from the lessons of Pike River, and made a number of recommendations in relation to the role of the Rail Safety Regulator and its responsibilities in competently and professionally assessing and reviewing the required compliance of a licensed rail organisation's Board and senior management to the legislation and the license conditions, and to gain more than just a superficial understanding of how each organisation is managing its rail safety.

5.28 These parts which all contribute to an effective safety management system may be described as follows:

➤ NZ Legislation	NZTA
➤ NZ Regulation	NZTA
➤ Education of Industry	NZTA
➤ Licensing Conditions	NZTA
➤ Guidance Material	NZTA
➤ National Rail System Standards	Joint NZ Industry
➤ Industry Standards	Industry (RISSB)
➤ Codes of Practice	Industry (RISSB)
➤ Guidance Material	Industry (RISSB)
➤ Safety Case	License Holder
➤ Policies	License Holder
➤ Company Standards	License Holder
➤ Company Generic Procedures	License Holder
➤ Company Site Procedures	License Holder

Note: The strength of this model requires each stakeholder to do its part including NZTA and the Rail Safety Regulator

5.29 **Rail Industry Safety & Standards Board**

The Rail Industry Safety and Standards Board (RISSB) is responsible for the development and management of rail industry standards, rules, codes of practice and guidelines, all of which have national application in Australia and in some cases are being adopted for use in New Zealand by KiwiRail.

5.30 An example of the development and application of a New Zealand and Australian developed standard which has been successfully implemented within the rail industries in both countries is the Rail Safety Worker Health Assessment Standard. While this standard was first developed in 1999 in Victoria by the rail safety regulator in that jurisdiction, it was later taken over for national application by the Australian National Transport Commission (NTC), and now forms an important component of the rail safety management framework of standards being applied for industry use by RISSB.

5.31 The Rail Industry Safety and Standards Board (RISSB) is wholly owned by the Australasian Railway Association (ARA) which is inclusive of New Zealand based member organisations and is responsible for the development and management of the rail industry standards, rules, codes of practice and guidelines, all of which have national application in both countries.

5.32 Originally established by the ARA on 16 June 2003 as the Code Management Company, it was renamed RISSB on 17 October 2007, and modelled on the UK Rail Safety and Standards Board.

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- 5.33 RISSB is a "not for profit" company limited by guarantee which does not have a share capital and which is required to apply the whole of its income and assets to achieving the listed objectives in its constitution.
- 5.34 The RISSB is accredited by Standards Australia and New Zealand as a Standards Development Organisation, and all new standards commenced by RISSB after 31 July 2007 are published as Australian Standards.
- 5.35 The objectives for which the RISSB is established are to:
- develop, own, amend and manage a suite of documents, called the "the Australian Code of Practice (ACOP)". The ACOP includes codes, standards, rules, guidelines and other documents necessary and desirable to promote standardisation in the Australasian Rail Industry; and
 - promote and implement initiatives on behalf of the Australasian Rail Industry including rail safety, rail level crossing safety, industry harmonisation to promote efficiency, and other initiatives as agreed between the Company and the ARA from time to time.
- 5.36 The RISSB product development process involves working closely with industry stakeholders. In this regard, the RISSB maintains close relationships with the ARA, Standards Australia, the Rail Industry Unions, and Government in Australia through the Department of Infrastructure Transport Regional Development and Local Government, the National Transport commission and the various Rail Safety Regulators.
- 5.37 **National Rail Safety Law in Australia**
On 20 January 2013 in Australia, new template National Rail Safety Law and supporting Regulations came into effect in the jurisdictions of New South Wales, Tasmania, South Australia, and the Northern Territory. The remaining jurisdictions of Queensland, Victoria and Western Australia are expected to join the National scheme in late 2013 or early 2014.
- 5.38 The establishment of Australia's first Office of National Rail Safety Regulator (ONRSR) has enabled for the first time in that country the development and application of a consistent single set of policies and guidance material in support of the new National Rail Safety Law and Regulations under a single National Rail Safety Regulator for application across multiple jurisdictions.
- 5.39 In undertaking this review for NZTA, the review team has been able to call upon experience gained during involvement in the development of the new Australian law and regulations, and refer to a range of new policies and guidance material that may add value to any future changes within the NZTA application of its rail safety regulatory obligations in New Zealand.

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- 5.40 Of particular interest has been the Australian rail safety law being aligned more closely with Workplace Health and Safety (WH&S) law, and the more contemporary risk based approach now being taken in a range of areas including fatigue management, drug & alcohol management, asset management, and security management within a rail environment.
- 5.41 **Project Background Summary**
Each of the topics discussed within this section of the report were identified as key issues that have led to or influenced the development and conduct of this NZTA rail safety regulator review project.

6 Strategic Direction

6.1 Legislation

The New Zealand Rail Safety legislation (Railways Act 2005, Railways Regulation 2008) provides a reasonable structure within which to achieve a strategic and well managed rail safety regulative outcome within a co-regulative environment.

6.2 It facilitates the essential element of co-regulation being the ability to provide an approval to operate in the form of a licence, having demonstrated the extent of satisfaction with the law in relation to how the operator proposes to operate whilst managing safety in so far as is reasonably practicable (SFAIRP). During the stakeholder feedback interviews, no negative comment was received on any significant issues in relation to the Rail Safety Regulator's administration of the law or the law itself.

6.3 However, given that the New Zealand Rail Safety Law has been in operation since 2005, and following the recent establishment of the Australian Office of the National Rail Safety Regulator with new national legislation, it is suggested that at the next legislative review opportunity the New Zealand law be reviewed in the light of this new Australian Rail Safety legislation. This is particularly relevant in the light of the fact that the Australian legislation has been written to ensure it is aligned where relevant to the recently established national model workplace health and safety law in Australia.

6.4 Capacity to Regulate Effectively

Whilst the Rail Safety Regulator (RSR) has appropriate legislation to undertake its task in a co-regulatory manner, it currently lacks the ability and capacity to undertake its task to the level of world best practice. The specific areas that need attention are addressed in the following sub sections.

6.5 Profile of Rail Safety Regulator

The current low public and industry profile of the Rail Safety Regulator is limiting its ability to manage rail safety and to lead industry safety change.

6.6 The RSR is located within NZTA organisational structure at a level 4 ranking. Whilst the RSR is a very small unit within the very large NZTA organisation, the fact that its function is the safety regulation of a very significant transport mode nationally within NZ demands a greater recognition than it currently receives.

6.7 Furthermore, influence with rail operators and other key stakeholders, given that the RSR is currently a level 4 position, is being lost and evidence suggests that it is very difficult for the rail safety regulator function to be taken seriously by other stakeholder CEO's particularly in larger rail organisations.

6.8 The same applies to other Government agencies with which the RSR has to relate for regulatory and policy reasons. This makes the task of working with such organisations more difficult and less influential than should be the case.

6.9 **Strategic Focus**

The key focus of the RSR is essentially the core business activities of licensing, auditing, enforcement and provision of advisory information. There is no evidence of a strategic vision of working with Industry to lower accident or incident rates by identifying key safety trends and working with Industry to enhance safety.

6.10 **NZTA Relationship**

Unlike some other International Independent Rail Safety Regulator bodies where a specific position and in some cases, a specific person, is nominated as the "Rail Safety Regulator", in New Zealand under the legislation it is the NZTA as an entity which is the "Rail Safety Regulator". This NZTA entity responsibility for rail safety regulation is delegated to the CEO and subordinates to ensure the functional application and industry compliance with the legislation.

6.11 **Relationship with Government Policy Organisations**

The RSR interfaces with a wide range of other NZ government agencies such as the MBIE, MoT, WorkSafe NZ, and TAIC. Throughout this intergovernmental agency interface, the RSR needs to maintain an efficient working relationship with these other key Government stakeholders. The current interface and liaison with these agencies appears to essentially be operationally focused without any strategic medium to long term strategic focus or direction and therefore needs to be reviewed for an improved outcome.

6.12 **Railway Tunnel Safety**

A topical issue which touches on this relationship is the interplay between the Rail Safety law and the Occupational Health and Safety law, particularly in relation to the oversight of railway tunnel safety and a developing conflict and confusion in this area.

6.13 Clearly this is an area in which the New Zealand rail industry and rail regulator has had significant experience, and while it is recognised that this is a key area of occupational safety, a single rail safety focus in the rail environment inclusive of tunnels should be maintained. Whilst a healthy dialogue is occurring between rail industry and MBIE in this regard, the RSR needs to be more active in this tunnel safety area to ensure that rail safety interests are advanced where practicable, and when required tunnel safety expertise is engaged on a needs basis within the rail safety regulator area of control.

6.14 **Rail Regulator Submissions to Inquiries**

Rail industry stakeholders made comment about perceptions that the RSR had missed opportunities or perhaps decided not to make submissions in relation to significant

activities or inquiries that impacted or had the potential to impact the rail sector. In particular, this related to doubt about whether the RSR had commented on:

- The Task Force on Health and Safety;
- Pike River Royal Commission.

6.15 One Government stakeholder advised that a 2007 Report on the RSR indicated concerns about the level of available competence, the capacity of the team to deliver outcomes as required by the legislation, and the level of responsibility placed upon the current RSR structure. The review team was advised that this view is still held within other sections of Government Agencies.

6.16 **Transport Accident Investigation Commission (TAIC)**

The interface working relationship between the rail safety regulator and TAIC is in need of some value adding improvement. Although not a licence holder, TAIC has raised a number of concerns in relation to the rail safety regulator response to TAIC reports. The concerns cited by TAIC include:

- Loss of focus since being re-structured within NZTA;
- Lack of understanding of powers and co-regulatory practice;
- Not taking an active Regulator role and being comfortable as a passive regulator;
- Alleged influence over the RSR by KiwiRail;
- Lack of RSR standards.

6.17 **Investigation Recommendations Close-Out Rate**

The Team Leader of the RSR indicated that the RSR had worked diligently over recent years to close out the number of unresolved recommendations made by TAIC in a number of investigation reports. In 2009 there were over 80 outstanding recommendations, however, during this review, evidence was presented in support of there currently being only 9 recommendations remaining to be closed out.

6.18 This issue also raises the question as to why the TAIC has a continuing role in following up and monitoring the stakeholder close-out rate and action plans in relation to recommendations made in an investigation report by TAIC. The review team believe that this responsibility should sit with the rail safety regulator to follow-up and monitor stakeholder actions and close-out of applicable TAIC recommendations.

6.19 Heritage Sector (FRONZ)

The regulator relationship with the Federation of Rail Operators in New Zealand (FRONZ) which represents licence holders in the Rail Tourist and Heritage sector, appears to be appropriately balanced with the regulator team being supportive of the Tourist and Heritage sector, and FRONZ representatives reporting that the regulator has always been of great assistance, however, could always do more.

6.20 Rail & Maritime Transport Union (RMTU)

The RMTU, which is not a licence holder, was critical of the rail safety regulator as not being hard enough on Industry, and was also critical of the use of outsourced compliance assessment processes using contractors such as TELARC. This feedback while welcome, was unsurprising and appeared to be more about management style than substance. However, it does allude to a continuing undercurrent of commentary which relates to the general lack of engagement by NZTA with Industry as evidenced by the outsourced compliance assessment management program which has had a direct impact on the negative perception of NZTA with sectors of the rail industry.

6.21 Auckland & Wellington Regional Councils

While not a licence holder, feedback was received from both the Auckland Council and the Greater Wellington Regional Council indicating that the RSR needs to achieve a higher profile and greater presence with the two major councils on rail safety regulatory issues and in particular, as a principal advocate for rail safety.

6.22 Linkage with International Rail Safety Regulators

In past years the New Zealand rail safety regulator has had good connectivity with the Australian joint Rail Safety Regulators Panel (RSRP) providing a significant interface and involvement by the rail safety regulator with other similar agencies in Australian jurisdictions. However, in recent years this interface and sharing of information and knowledge has been lost or restricted, due in part to NZTA budget and travel restrictions. With the recent establishment of the Australian Office of the National Rail Safety Regulator 20 January 2013, a new opportunity has arisen to engage with that new entity and take advantage of the information and resources that are now being offered to the NZTA rail safety regulator by the Office of National Rail Safety Regulator (ONRSR) in Australia.

6.23 Review team discussions with the CEO and senior staff at the ONRSR in Australia have identified a genuine willingness to include the NZTA rail safety regulator in both policy and practice opportunities. For example, the ONRSR is willing to enter into discussions with the objective of sharing "Rail Safety Officer" staff members to participate in the major NZTA rail safety regulator compliance assessments and vice versa.

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- 6.24 Opportunities also exist for the NZTA RSR representatives to participate in ONRSR senior management dialogue and formal meetings. This willingness to engage owes its linkage to the on-going relationship between Australian and New Zealand Transport Ministers at SCOTI meetings and Departmental Heads at TISOC meetings each year.
- 6.25 In addition, the Australian Office of National Rail Safety Regulator (ONRSR) has made an offer to NZTA that it will be potentially possible to make available on both a needs basis and cost neutral basis, technical human resources as may be required by NZTA for a specific major project.
- 6.26 These human resources may be drawn from the ONRSR Australia wide network of full-time staff in areas such as risk management, data analysis, infrastructure engineering, rolling stock engineering, compliance assessment, and rail safety compliance investigation.
- 6.27 If this ONRSR offer can be accepted by NZTA and a suitable agreement established, this may assist NZTA in being able to provide a much higher level of service in having available a wide range of specialist expertise without the need to have this expertise on-staff as full-time fixed positions with all the overhead costs etc.
- 6.28 **Partnership Synergies**
NZTA and the rail safety regulator would derive significant benefit from any association or future synergy partnership with the ONRSR, in particular, the development and recent introduction of new "risk based" Rail Safety Legislation and Regulations in Australia has much contemporary thinking to offer the New Zealand rail regulatory environment, and conversely, Australia can learn from the NZTA experiences in the New Zealand environment.
- 6.29 Additional synergies and advantages in establishing consistent and uniform rail safety licensing documentation and guidance material (where appropriate) may be gained in NZTA working in partnership with the Australian ONRSR to publish (where possible) generic material. Not only would this initiative produce value adding documentation outcomes, it would likely lead to significant NZTA cost savings given the work already commenced and in some cases completed by the Australian ONRSR.
- 6.30 From the review team discussions with the ONRSR in Australia, it is very clear that ONRSR is very keen to develop these relationships with NZTA and to enter into an appropriate agreement to achieve mutually beneficial outcomes for both New Zealand and Australia.
- 6.31 **Compliance Assessment**
The review team believes that the management and conduct of license holder compliance assessments in accordance with its legislative obligations is a core business activity and should be conducted directly by the rail safety regulator team.

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- This belief is supported by NZTA stakeholder feedback and by the international comparison with other similar rail safety regulators.
- 6.32 Currently, NZTA use a range of contractors, however, the principal contractor being used is engaged from an external quality auditing and management systems certification business called Testing Laboratory Registration Council (Telarc) SAI Ltd of New Zealand.
- 6.33 According to the Telarc web site, Telarc is New Zealand's largest certifier of quality, environmental, and occupational health and safety management systems. The Telarc web site states that its business model provides the tools and professional support needed to improve performance and assist its clients to comply with the requirements that shape the business world.
- 6.34 The web site also states that Telarc has built the most experienced assessment team in New Zealand with qualified auditors having backgrounds in a wide range of industry sectors, allowing for a sound understanding of client business and management system needs.
- 6.35 Telarc SAI Ltd, a registered company in New Zealand and is a Crown Entity Subsidiary in terms of the Crown Entity Act 2004. It is owned by the Testing Laboratory Registration Council (75%) and SAI Global Limited, Sydney, Australia (25%).
- 6.36 The review team makes no judgment on the professional standing and individual ability of the Telarc auditors to undertake the quality, environmental, OH&S, and management systems audit function to a potential high standard as stated on the company web site.
- 6.37 However, it is of concern to the review team that NZTA has inadvertently created a perception within its rail sector stakeholders that in "contracting out" (as it has been described) this core function, it has been relegated to a much lower level of legislative and regulatory control and importance.
- 6.38 The review team is also of the belief that following stakeholder feedback and its own international experience in this area, that the systematic use of an external agency for compliance auditing in this regard will provide limited benefit and intelligence within the rail team in general, and hence the senior NZTA management, with any real assessment of the state of safety within individual licensed organisations or the rail industry as a whole.
- 6.39 Further, the current compliance assessment practices may well be limiting the ability of the rail team to form a considered and quantified view of the safety of the rail industry. In addition, this situation is potentially restricting the ability of the rail team to further enhance its own growing knowledge and that of the NZTA corporate knowledge of the safety state of the rail industry in New Zealand.

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- 6.40 While the review team is of the view that the core function of compliance assessment should be conducted "in-house" with a small increase in the available human resources, it may still be appropriate in times of peak loading or to cover a team member annual leave period, that a contractor be engaged to assist the NZTA rail team with the delivery of the compliance assessment task.
- 6.41 However, in doing so, the contractor would be working as a temporary or part-time contract employee and therefore function as an official member of the rail team and under the provisions of the Railways Act and Regulations for whatever short or medium term period may be needed. In this way, the current perception of this function having been contracted-out would be dispelled.
- 6.42 Significant training and experience gaining opportunities currently exist if the NZTA were to consider working with the Australian National Rail Safety Regulator in collaborating to provide a NZTA rail team safety compliance auditor to participate as a team member in an appropriate compliance audit of an Australian rail transport operator, and conversely, that an Australian National Rail Safety Regulator auditor be invited to participate as a team member in the audit of a major license holder (such as KiwiRail or Transdev Auckland Limited) in New Zealand.

7 Regulatory Policy & Practice

7.1 Policy Strategic Focus

At the macro level, the NZTA regulatory policy underpinning the operations of the rail safety regulator appears to be sound and practicable. There are appropriate systems and processes in place to effectively manage licensing, compliance assessments, variation applications, and other regulatory practices. However, what appears to be lacking is a sense of strategic policy direction relating to where the rail safety regulator is heading in terms of improved efficiency and effectiveness.

7.2 Further there was no evidence of policy targets for improvement in rail safety regulation or involvement of Industry in improving rail safety outcomes in New Zealand. With one exception (participation in the Australian Rail CRC) there is no evidence of the rail safety regulator having the resources and the intention to challenge the Industry to continuously improve its safety performance and resources, in a genuine co-regulatory manner.

7.3 The review team found that the key regulatory focus is very much about maintaining the status quo with a singular focus on operational aspects of regulation only. This approach is somewhat explained by the observed lack of rail safety regulator function standing within the NZTA, and the apparent low level of resourcing and support within the organisation for this key safety regulator role.

7.4 Management & Board Oversight

While it is vital that a national rail safety regulator be focused on delivering the essential day-to-day activities such as licensing, compliance assessments, and investigations etc, it must also lead and enhance current safety practice by working with Industry. However, to achieve this outcome, there needs to be a strategic focus derived from senior executive management including the Board of Directors,

7.5 In the case of the NZTA rail safety regulator, the review team was unable to find substantive evidence of any such strategic policy view which suggests that senior executive management has not had cause to oversight the strategic policy functioning of the Rail Safety Regulator in the past, or at least until the identified need for this current review. However, even if there is no obvious need, the normal good NZTA senior executive management and Board corporate governance and due diligence practices would require such a pro-active and regular oversight.

7.6 This anomaly needs to be addressed, and we are pleased to say is now being addressed, in order for the NZTA to be able to demonstrate "good practice" in rail safety regulatory oversight and management and to ensure that the sort of issues raised following the Pike River Royal Commission cannot be said of the NZTA management of the rail safety regulator.

7.7 Rail Safety Regulator Unit Position within NZTA

A fundamental reason for a lack of strategic policy direction in rail safety may be found in the NZTA decision to locate the rail safety regulator function in a comparatively low level position within the organisation structure.

7.8 The review team understands that this outcome has occurred mainly due to the overwhelming scale and importance of the primary function of NZTA which is the management of roads and road safety in NZ. This co-location of rail safety with road safety does not occur in Australia (with the one exception being in Queensland Transport & Main Roads) nor in other western developed countries with a rail safety regulator function.

7.9 The comparatively low level location of the Office of the NZ rail safety regulator understandably creates an impression of a downgrading of the significance of rail safety regulation in New Zealand and the importance of the licencing process, subsequent compliance assessment and investigation functions, and where necessary any potential enforcement activity.

7.10 The identified significant issue of "**negative perception**" by industry and Government stakeholders may be traced back to the rail safety regulator structure and standing within its own organisation, and this factor needs to be addressed as a matter of some urgency.

7.11 Rail Safety Regulator Unit Manager

Without making any comment on the competence of the present incumbent functional Rail Safety Regulator with the title of **Manager Rail Systems**, this senior position with substantive delegated legislative authority as the head and public face of rail safety regulation in New Zealand is functioning as a level 4 position.

7.12 It is also important to note that the current direct report for the rail safety regulator, the **National Manager Delivery**, has a total of eight (8) direct reports, including the rail safety regulator, with the other seven (7) direct reporting functions being primarily road based and having no clear synergy with the separate but key function of a rail safety regulator.

7.13 Past practice within this road and delivery focussed management structure including "call centre" management has seen the rail safety regulator (Manager Rail Systems) taken off his substantive duties as the rail safety regulator at times and placed on other "special project duties" (one for a four month period) that were unrelated in any way to the his rail safety regulatory and legislative obligations under the Railways Act (2005) and the Railways Regulations (2008). While it is acknowledged that this was done in a genuine attempt to further develop the skills of the manager concerned, this action left vacant and exposed the day-to-day governance function of the rail safety regulator during that period.

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- 7.14 During this period when the rail safety regulator was on other special duties, the decision to not install a temporary replacement for the Team Leader for this period seems to have underscored a perspective that the role is not safety critical to the efficient management of the unit. This is hard to understand given the fact that the rail safety regulator function is absolutely critical to the regulation and good governance of the rail industry in New Zealand.
- 7.15 The review team acknowledges that this decision was taken in a genuine attempt at further personal development for the Manager Rail Systems, however, at the expense of the NZTA rail safety legislative obligations.
- 7.16 **Rail Industry Context**
This apparent assignment of a lesser level of significance to rail safety in New Zealand is difficult to understand as it is not consistent with the scale of the NZ rail industry which contributes significantly to the national economy, the metropolitan commuter and long distance passenger tasks, the freight transport task, and the important tourist and heritage industry.
- 7.17 With a track length of 4,128 km, approximately 16 million tonnes of freight, and nearly 22 million passengers and 99 rail operators, the rail industry in New Zealand is a significant land transport mode. As such, it requires effective and efficient rail safety regulatory systems and the allocation of appropriate resourcing levels and support to ensure it maintains its good safety record, and that the structure and management of rail safety by NZTA may be defensible in the event of a major incident occurring.
- 7.18 **International Rail Safety Regulator Structure**
By comparison with the NZTA Rail Safety Regulator positioned within the organisation at level 4, in Australia the new National Rail Safety Regulator is totally independent and sits as a Chief Executive Officer level of the organisation at level 1.
- 7.19 Prior to the recent establishment of the independent Office of National Rail Safety Regulator (ONRSR) in Australia, the previous State based Rail Safety Regulators were typically either completely independent agencies (such as ITSr in New South Wales) at level 1, or within Transport Policy Departments at Level 2 reporting to the Chief Executive or Director General of the department.
- 7.20 Other international practice has most rail safety regulators either as a totally independent function reporting to a Minister, or function at level 2 responding to a head of department. There are a small number of examples that might function at level 3 but this is mostly the exception to the general rule.
- 7.21 For further detailed international benchmarking comparative information on this issue, please refer to Section 13 of this review report, and Attachment 2 for an International Comparative (quick reference) Matrix.

- 7.22 Based on that international analysis, it is apparent that the NZ rail safety regulator needs to report either directly to the Chief Executive or to a level 2 General Manager to provide the profile both to Industry and within NZTA to ensure that the function is appropriately targeted and resourced.
- 7.23 In terms of the structural position of the rail safety regulator within the NZTA, the review team provides the following range of options from which NZTA may determine which one is the best fit and most appropriate for the rail safety regulator given the size and nature of the rail safety legislative task in New Zealand:
- **Option 1**
Level 1 Position - Independent Rail Safety Regulator
(preferred but perhaps not achievable)
 - **Option 2**
Level 2 Position – RSR reporting to CEO
(realistic outcome)
 - **Option 3**
Level 3 Position – RSR reporting to senior GM
(not preferred, but an improved fallback position)
 - **Option 4**
Level 4 Position – Status Quo
(not recommended)
- 7.24 **NZTA Rail Team Function**
While it is again acknowledged that it is the NZTA entity that is the "Rail Safety Regulator", there is evidence that the rail safety regulator "day-to-day" regulatory function has been unwittingly and unintentionally established and conducted at a lower level in the organisation without the necessary authority or organisational profile that is normal for such rail safety regulator functions in other comparable jurisdictions.
- 7.25 This outcome has resulted in a Regulator function that is essentially **tactical** rather than **strategic** in outlook, and whilst addressing the tactical issues to the best of the team's ability, there is currently little or no strategic view or plan, or indeed the necessary resources to further develop into the desired "best practice" function.
- 7.26 The above discussion points perhaps give some explanation as to the reasoning behind some stakeholder feedback where they offered comments such as "**the regulator is too soft**" and "**it is a regulator in name only**".
- 7.27 This lack of profile of the rail safety regulator accompanied by resourcing shortfalls has contributed without doubt to a disempowering of the function and thereby to an undermining of the capacity for NZTA to deliver an effective rail safety regulatory regime in New Zealand.

7.28 Furthermore, there was minimal evidence of the rail safety regulator having a profile with the NZTA Board in terms of the regulator providing briefings or addressing more strategic rail safety issues which would be of interest to the Board.

7.29 The review team also heard other evidence which suggested that some of the rail safety regulator external communications had reflected a less than authoritative tone, which is suggestive of a lack of confidence in the level of authority that is assigned to the role of Rail Safety Regulator. This outcome is potentially indicative of the way the rail safety regulator has been established in terms of its position within the organisation and also its understanding of the authority vested in it by the organisation, and needs some clarity in any potential re-organised structure.

7.30 **Education & Hierarchy of Powers**

The rail safety regulator team while having undertaken a number of information sharing tasks with stakeholders which is acknowledged by the review team, currently does not do enough in the key area of rail safety "education" of the rail industry in New Zealand.

7.31 While some specialist skills are needed within or available to the rail safety regulator team to achieve this improved education outcome, the review team found that there is a genuine desire and understanding by the team to do more in this area, but again the lack of resources has limited its ability to achieve this value adding outcome.

7.32 Of particular note is the NZTA Hierarchy Of Agency's Powers in Rail Safety Regulation (please see the diagram at Attachment 4 of this report). This range of powers and functions as listed makes no mention of "education" as a starting point, but lists the powers as the following ten (10) process steps:

- Ordinary Safety Assessment;
- Special Safety Assessment;
- Requirement for Improvement;
- Safety Improvement Plan;
- Vary Safety Case;
- Prohibit or Immobilise;
- Temporary Conditions;
- Licence Suspension;
- Permanent Conditions; and

- Licence Revocation.

7.33 While acknowledging the above process steps and their linkage back to the Railways Act (2005), the review team believes that the process would be improved if an "education" step was included at the very beginning. It is also acknowledged that perhaps it is not additional "power" that is needed, but rather adequate and appropriate resources to provide the ability to implement an "education" process step.

7.34 As an example where "education" has been built into the rail safety regulatory process, the review team has provided a similar but simplified Hierarchy Of Agency's Powers in Rail Safety Regulation from the Queensland Rail Safety Regulator in Australia (please see the diagram at Attachment 5 of this report).

7.35 In the Queensland example, the following simplified process steps are listed and take a journey from Co-regulation through to enforcement strategies:

- Education;
- Compliance Audits;
- Conditions of Accreditation (Licensing);
- Safety Notices;
- Prosecution; and
- Cancellation.

7.36 Rail Safety Data Analysis

In relation to the basis for the targeting of specific aspects of safety improvement, there was no evidence found of the systematic management or analysis of industry safety performance occurrence data being utilised. It is also acknowledged that at the time of the conduct of the review, a vacant position within the rail team was in the process of being filled, and that position, once occupied, was intended for this occurrence data analysis purpose.

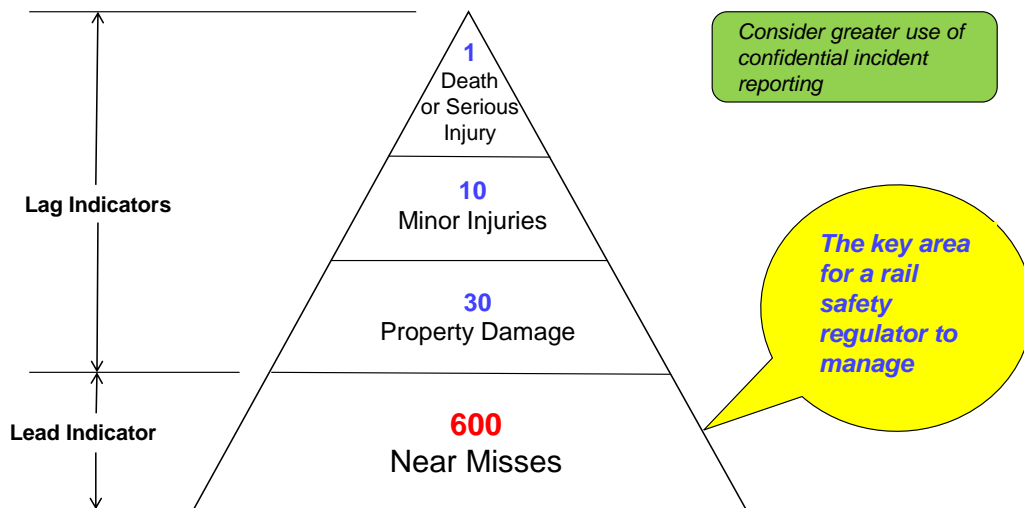
7.37 A search of the NZTA website did not reveal any summation of Industry rail safety data and confirmed the view of the review team that, for a number of logistical reasons, the rail safety regulator team, while gathering some safety data, has not been pro-active in analysing and disseminating safety critical data information to its stakeholders.

7.38 Industry should expect that the rail safety regulator would be able to provide (as a minimum) an annual summary of rail safety occurrence data (based on incident reports and the licence holder Annual Performance Reports) with on-going comparative analysis of trends. This lack of safety data being provided back to licence holders may call into

question the basis for any rail safety regulator interventions (if any have occurred) which should be based on incident data and statistical analysis.

7.39 The following Bird's Pyramid diagram is provided as an example of the need for the rail safety regulator to place a much greater emphasis on the reporting, collection and analysis of incident "near miss" data as a safety critical "lead indicator" for performance reporting:

Bird's Pyramid



Bird's accident pyramid tells us there are many more near miss incidents than there are major accidents, serious injuries, minor injuries or property damage. On average there are 600 near miss (or near hit) incidents for every death or serious injury

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7.40 In following the logic of Bird's Pyramid, it is accepted that an organisation or an industry sector will have many more near miss incidents than major accidents or serious injuries, so this is an area where the rail safety regulator needs to be focusing a lot more energy, as it is from the "Lead Indicator" analysis of near miss incidents where an answer may be found to the question "Where is the next accident coming from", and if you are able to answer the question, perhaps through the rail safety regulator, that next big accident just may be prevented.

7.41 Benchmarking

The review team found no evidence of any substantive safety performance benchmarking being undertaken by NZTA with other rail safety regulators in countries with similar rail safety regulation. However, evidence was provided that this activity was

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- being undertaken previously by the Rail Team up until 2005 when the team had nine (9) members prior to a restructure which reduced its ability to resource such activities.
- 7.42 As a result NZTA is not informed of just how the rail safety regulator is performing or functioning when compared with similar organisations. This is vital if Government is to be assured that New Zealand rail safety regulation is functioning at an appropriate standard.
- 7.43 The review team raised this matter with the Chief Executive Officer of the Australian National Rail Safety Regulator (ONRSR) who indicated that the ONRSR will be more than willing to provide advice and assistance to the NZTA rail safety regulator in this safety critical area.
- 7.44 As stated in section 6 of this report, the ONRSR is willing to establish a formal interface arrangement to facilitate on-going liaison and strategic discussions, and to support joint operations whereby for example ONRSR and NZTA rail safety regulator staff could swap for the purposes of the assessment of major operators. If this outcome can be achieved this would prove invaluable in relation to learning from and exchanging ideas with the ONRSR with likely strategic benefits for both Regulators.
- 7.45 Another suggestion made by one of the stakeholders was for the rail safety regulator to be looking not only at other rail safety regulators as above, but also at how other industries are regulating in a safety case manner to see if there are lessons to be learned.
- 7.46 **National Rail System Standards (NRSS)**
The management of operational and technical railway standards is undertaken by the industry, essentially through the continuation of standards that were once the sole providence of KiwiRail and its predecessors.
- 7.47 From an industry perspective, the current process for the management of a wide range of the standards is in need of a significant overhaul to ensure that standards are kept current through the establishment of a clear management structure and resources to achieve effective oversight. The example of the National Rail System Standards (NRSS) is the most likely candidate for being called up into the Australasian RISSB standards process and would benefit from this outcome.
- 7.48 NZTA is encouraged to work with the rail industry in New Zealand to give effect and support to the National Rail System Standards (NRSS) being adopted into the Australasian RISSB management process.
- 7.49 In doing so, RISSB should establish a New Zealand based "Development Group" made up of New Zealand rail industry and other related stakeholders and chaired by a RISSB appointed Project Manager for the purpose of the on-going management of the NRSS.

- 7.50 In the longer term once the NRSS have been successfully adopted into the formal RISSB standards management process, a further review of the standards may be appropriate at some stage to update, rationalise, and normalise the required standards for the New Zealand industry with other similar contemporary RISSB technical standards.
- 7.51 From a whole of industry approach beyond just the NRSS, the rail industry in New Zealand has an excellent opportunity at this time to re-invigorate the existing wider standards management process by involvement in and use of the Australasian Railway Association's Rail Industry Safety and Standards Board (RISSB).
- 7.52 The RISSB is accredited through Standards Australia to certify standards with the AS/NZ title. The review team understands that the RISSB Chief Executive Officer (Mr Kevin Taylor) recently visited New Zealand to promote the RISSB process and seek New Zealand rail industry support for the continued development and application (where appropriate) of RISSB standards and other guidance material in New Zealand.
- 7.53 Please refer to Section 5 Project Background (5.29 to 5.36) for further background information on RISSB and why RISSB is an influencing factor on this review.
- 7.54 The RISSB and NTC standards and process can add significant value to the New Zealand rail industry and the following two examples, one a generic application in both New Zealand and Australia, and the other (if adopted) will be specific to New Zealand:
- *Rail Safety Worker Health Assessment Standard*
(developed and implemented in both New Zealand & Australia)
 - *National Rail System Standards*
(proposed for incorporation into the RISSB process for application in NZ)
- 7.55 The rail safety regulator is generally aware of key areas of weakness within rail Industry and within its current capacity is seeking to address these areas. In this regard there is a significant opportunity to link with the RISSB and Industry to see how the RISSB annual program of work on guidelines and standards may be further developed and influenced to address areas in common between Australia and New Zealand.
- 7.56 Further information on RISSB and on the products developed by the Australasian rail industry for the rail industry may be found on the RISSB web site at: www.rissb.com.au
- 7.57 **Rail and Maritime Transport Union**
The principal transport union in New Zealand, the Rail and Maritime Transport Union (RMTU), has expressed a view that the rail safety regulator should take control of and issue all applicable standards for use in the rail industry in New Zealand.
- 7.58 The RMTU is of the belief that only a prescriptive regulatory model can provide a safe outcome and not the adopted co-regulatory model currently in place.

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- 7.59 While the views of the RMTU are important in considering a whole of industry perspective for the review of the rail safety regulator, the review team cannot support the views expressed by the RMTU, and while well intended, moving the rail industry into a more prescriptive model of rail safety regulation would not provide the best outcome for all stakeholders.
- 7.60 If the RMTU position were to be adopted, it would place the rail safety regulator in a potential conflict of interest position in that it would be responsible for regulating rail safety and at the same time be responsible for the development and application of the standards that it is charged with regulating. Not a sustainable position.
- 7.61 **Research**
The rail safety regulator has been a stakeholder along with other New Zealand rail organisations and those in Australia, in various rail research projects through the Australian Cooperative Research Centre for Rail (CRC).
- 7.62 While there has been a number of rail safety related projects including one on level crossing safety. However, disappointingly, there is no evidence of any research being undertaken into the development and understanding of rail safety data and trend analysis which would be of direct use to the whole of Industry in New Zealand as well as the rail safety regulator. This is a safety critical issue and one that needs to be addressed by the rail safety regulator as a matter of some urgency.
- 7.63 Of special note is the current work by the Australasian Railway Association (ARA) in creating a new research entity for the Australasian rail industry to be called the "**Australian Centre for Rail Innovation (ACRI)**". The new ACRI will come into affect at the end of 2013 when the CRC mandate expires.
- 7.64 **Strategic Communication**
The review team found that whilst stakeholders were generally positive about communication with the office of rail safety regulator such as the annual industry seminars and support for the annual FRONZ conference. Nevertheless, there remains a number of opportunities to improve stakeholder communication in the broader sense.
- 7.65 Further, the review team found there is more that can be done to promote a "whole of industry liaison" strategy within the co-regulatory processes, whereby the rail safety regulator provides and facilitates the opportunity for industry sectors to meet regularly with the regulator (monthly interface meeting) to discuss operational policy and practice issues. This is a fundamental opportunity for two-way informal dialogue between both Regulator and Industry, utilising Industry representatives of different sectors to bring issues to the table about regulatory practice and opportunities to improve same. The opportunity exists in this setting and has worked well in Australia and elsewhere.

8 Structure & Resources

8.1 The current rail team resourcing level and position within the organisational structure of the NZTA does not reflect contemporary good practice and provides a significant impediment to the effective discharge of the rail safety regulator legislative obligations in New Zealand.

8.2 Rail Safety Regulator Structure

The Rail Safety Regulator has the title "Manager Rail Systems" and reports to the National Manager Delivery, who reports to the GM Access and Use, who in turn reports to the Chief Executive NZTA and the Board.

8.3 The current structure which comprises the Manager Rail Systems and a team of five (5) officers (Principal Rail Adviser, and three (3) Senior Rail Systems Advisers, and one (1) Senior Systems Advisor) is adequate in the scenario where compliance assessment is outsourced. However, for reasons advanced earlier, the compliance assessment task needs to be brought "in house" to increase the effectiveness of the office of rail safety regulator. The review team estimates that the in-sourcing of the compliance assessment task will require two (2) additional new full-time positions to replace the current outsourced capacity, in addition to the multi-skilling of existing staff.

8.4 Furthermore, the office of the rail safety regulator has no dedicated administration support. This means that team members are required to undertake a range of administrative tasks that are not value adding to the overall regulatory outcome in terms of efficiency and effectiveness and reduces the available hours for the team members to spend on practical rail safety tasks.

8.5 The administrative task is not huge but it is critical to the efficiency of the team, and it is estimated by the review team that the allocation of a half to 1 one full-time equivalent (FTE) position would be able to address the administrative support needs effectively. This would mean the rail safety regulator would comprise 8.5 or 9.0 positions in total comprising:

- Director (or other appropriate title);
- Principal Rail Adviser;
- Senior Rail Advisers (5);
- Senior Systems Advisor;
- Administration Support Officer (0.5 to 1.0 FTE)

8.6 Rail Safety Regulator Title

The current rail safety regulator title of "*Manager Rail Systems*" does not reflect the role or give it the stature that it needs to overcome the current negative perception in New Zealand. The review team suggest that the title of **National Manager Rail Regulation** be considered in any future internal review.

8.7 NZTA (Rail Safety) Web Site

A review of the rail component of the NZTA web site was conducted with comparisons made to other similar mode and regulatory function web sites. While a wide range of rail safety regulator web sites were reviewed, the comparative analysis of the NZTA web site was based primarily on the Australian ONRSR web site, and the NSW ITSR web site.

8.8 The NZTA web site in its current form is not considered to be very user friendly – small text – needs rail safety to stand out more as a significant mode in its own right – currently it is swamped by the equally important road information giving the impression of rail safety being of much lesser importance.

8.9 Of particular note is documentation provided by the web site that is "out of date" and not reflective of a contemporary and rail industry leading regulator which in turn is having an adverse affect on the stakeholder perception of NZTA as a whole.

8.10 An example of the out of date documentation is the "**Rail Safety Licensing and Safety Assessment Guidelines**". While in general this document would benefit from a periodic review including from a "Plain English" and "formatting" perspective, the significant issue is that it is published and bears the now redundant name of Land Transport NZ which was replaced by NZTA some years ago. Also, the document has on its front page and at other locations through the document photographs of the now redundant rail operator "Toll Rail" locomotives and trains. During the review, the review team was informed that this document was already under re-development and that work was well advanced.

8.11 Furthermore, in newsletters the site lists two from 2008 and a link to the more current newsletters. However, the last newsletter was October 2012. Whilst newsletters are not critical, the lack of recent newsletters and the example of a 2008 newsletter sends a negative signal in relation to the currency and of timeliness of the office of the rail safety regulator to make appropriate changes. Notwithstanding the above comments the site does contain some very useful information for the rail license holder.

8.12 A review and update of the rail regulatory section of the NZTA web site would greatly assist in overcoming (in part) the negative perception of various rail industry stakeholders in NZTA, and from a posted documentation perspective, it is long overdue.

9 Legislative Framework

9.1 Assessment of Legislative Framework

The review team was tasked to review and assess the Railways Act (2005) and Railways Regulations (2008) to advise if it reflects best international practice.

9.2 The review team found that generally speaking the current rail safety legislation represents "good" practice, if not "best" practice. This is primarily due to the age of the legislation and the fact that it has not been reviewed since 2005 in the case of the law, and 2008 in the case of the regulations.

9.3 The current legislation was found to be adequate and "fit for purpose" when enacted, however, as a significant period of time has passed, it would benefit from a further review taking into account more contemporary safety thinking including the recently enacted National Rail Safety Law in Australia and closer alignment with the NZ WH&S law.

9.4 The existing legislation does not provide (in so far as it is reasonably practicable to assess) any overt increased level of rail safety risk for its intended operation at this time, and that its current status does not prevent a wide range of NZTA rail safety regulatory structural and functional improvements from being achieved in the short term.

9.5 In terms of a potential future review of the Railways Act (2005) and Railways Regulations (2008), the review team highlights for consideration in any review the more contemporary advances recently achieved in the development and enacting of the National Rail Safety Law and Regulations (2012) in Australia.

9.6 The Australian National Rail Safety Law and Regulations (2012) were developed over a three year period with great support and commitment from all rail industry sectors and is "risk based" and set within the continued principles of "co-regulation", however, while providing the National Rail Safety Regulator with increased powers, it provides industry organisations with an increased ability to determine how they may achieve compliance within a legislative framework that provides clear responsibilities and accountabilities.

9.7 Of particular interest to MOT in any potential review of the Railways Act (2005) and Railways Regulations (2008), will be the clear guidance on what is expected of an Australian licence holder, and the agreed principle of the 29 key elements of a rail safety management system (please see Attachment 3 for a list of the 29 key elements).

9.8 Finally, while the Railways Act (2005) and Railways Regulations (2008) need to be reviewed in time, this aspect has not been the cause nor hindered the current service delivery impediments experienced by the NZTA rail safety regulator team.

10 Rail Regulator Operational Policy

10.1 Management of Operational Policy

The review team was tasked to assess and report on the current status and activities of the NZTA rail regulator relative to international best practice, including:

- whether the rail regulator's processes and activities are effective in identifying, responding to, and managing system risk (failures of the regulatory system), operations risk (failures in the operational management system), and tactical risk (failures in the execution of specific roles or activities);
- whether it is resilient to changes in the rail sector, such as changes in technology.

10.2 The review team found that against most measures, the current operational and management processes of the NZTA rail safety regulator team do not reflect international "best practice". This is due to many contributing factors such as the available human resourcing, the associated small team and limited availability to specialty competencies, the potential reduction in motivation due in part to the loss of rail safety regulator stature within NZTA and the rail industry, and the isolation felt by the rail safety regulator team within an organisation focussed on the importance of "road safety", however, not the equally important rail safety regulatory function.

10.3 The current out-sourcing of the regulator core activity of the compliance assessment function, with the associated potential loss of NZTA rail safety regulator team "first hand" day-to-day regulator "feel" for the current risk and safety level of the rail industry as a whole does not demonstrate even "good" practice when compared to other international rail safety regulators.

10.4 In addition, the current limited ability of the rail safety regulator team to conduct safety critical lead indicator "near miss" type incident analysis is a lost opportunity in predicting "where the next accident will come from" and thereby, potentially a lost chance of preventing it from happening.

10.5 In terms of technology, the rail safety team demonstrated its willingness to embrace all forms of new technology that is delivered by the rail industry, and simply needs to be appropriately resourced and supported in areas such as training and experience building opportunities to achieve that much needed outcome.

10.6 The review team is strongly of the opinion that given some additional resources, training and support, the NZTA rail safety regulator team is highly capable of being resilient to the current environment and would embrace any future changes in a professional manner as it continues to administer the Railways Act (2005) and the Railways Regulations (2008) for the overall safety of the New Zealand rail industry.

11 Rail Regulator Operational Activity

11.1 Management of Occurrence Reporting

The review team was tasked to review the NZTA rail regulator management of occurrences, reporting and subsequent occurrence investigations.

11.2 The review team observed that due to a lack of human resources, only a minimal level of occurrence reporting is being achieved and managed, and that at this time, no meaningful incident data analysis or trend analysis is being undertaken.

11.3 There was no evidence found of the systematic management or analysis of industry safety performance incident data being utilised. This safety critical data management area is one for consideration in any future potential allocation of additional resourcing for the rail safety regulator team, including the need for a professional "data analyst".

11.4 A search of the NZTA (rail safety regulator) website did not reveal any summation of industry rail safety data and confirmed the view of the review team that, for a number of logistical reasons, the rail safety regulator team, while having gathered the data, has not been pro-active in using and disseminating safety critical occurrence data information to its stakeholders.

11.5 Industry should expect that the rail safety regulator would be able to provide (as a minimum) an annual summary of rail safety data with on-going comparative analysis of trends. This lack of safety data necessarily calls into question the basis for any rail safety regulator interventions (if any have occurred) which should be based on incident data.

11.6 It is accepted that an organisation or an industry sector will have many more near miss incidents than major accidents or serious injuries, so this is an area where the rail safety regulator needs to be focusing a lot more energy, as it is from the "Lead Indicator" analysis of near miss incidents where an answer may be found to the question "**Where is the next accident coming from**", and if you are able to answer the question, perhaps through the rail safety regulator, that next big accident just may be prevented.

11.7 Given the importance of gathering incident data for a rail safety regulator, the review team suggests that a need exists for the establishment of a "Confidential Reporting Scheme" within the office of rail safety regulator, to provide an opportunity for a rail industry employee or contractor, or a member of the public to be able to report a rail safety incident or issue in a confidential manner.

11.8 Further discussion on the topic of occurrence reporting and data analysis may be found in section 7.36 of this review report.

11.9 Management of National Rail System Standards

The review team was also tasked to assess the overall way in which the NZTA/Rail industry is currently managing the National Rail System Standards (NRSS).

11.10 Having done so, the review team recommends that NZTA be encouraged to work with the rail industry in New Zealand to give effect and support to the National Rail System Standards (NRSS) being adopted into the Australasian RISSB management process.

11.11 The RISSB should establish a New Zealand based "Development Group" made up of New Zealand rail industry and other related stakeholders and chaired by a RISSB appointed Project Manager for the purpose of the on-going management of the NRSS.

11.12 In the longer term once the NRSS have been successfully adopted into the formal RISSB standards management process, a further review of the standards by New Zealand stakeholders may be appropriate at some stage to update, rationalise, and normalise the required standards for the New Zealand industry with other similar contemporary RISSB technical standards.

11.13 Further detailed discussion on the management of the NRSS and standards in general may be found in section 7.46.

12 Validation - International Comparative Review

12.1 International Comparative Review

To provide an International rail safety regulatory comparative review based on the recent Australian experience in developing a National Rail Safety Regulator, and the administration of rail safety regulation by a number of Australian agencies and rail safety regulators in other countries.

12.2 Comparative Table of Rail Safety Regulators

A total of ten rail safety regulation agencies across six countries in addition to the NZTA were assessed for this review. Please also see a quick reference comparative table of rail safety regulators at **Attachment 2** within this review report.

12.3 Australia

Office of National Rail Safety Regulator

On 20th January, the Office of the National Rail Safety Regulator (ONRSR) became the rail safety regulator for rail activities under the Rail Safety National Law (RSNL) in the jurisdictions of New South Wales, South Australia, Tasmania and the Northern Territory.

The creation of the ONRSR is the outcome of considerable co-operation and collaboration involving State and Federal Governments, the wider rail industry and of course the state-based regulators. I extend my thanks to everyone involved in setting the canvas from which the ONRSR can now operate.

Subject to the passage of further state law, it is expected that Western Australia, Victoria, Queensland and the Australian Capital Territory will also be regulated by the ONRSR within 12 months.

The ONRSR is a new and evolving organisation but has retained the wealth of experience, skill and knowledge of the previous state based regulators. In this initial phase, the ONRSR will continue to deliver the 2012/13 regulatory work programmes established by the previous Australian state based regulators.

The ONRSR operates a head office based in Adelaide and two regulatory branches, the Central Branch, also based in Adelaide covering South Australia, Tasmania and Northern Territory, and the New South Wales branch based in Sydney.

The formation of the ONRSR provides the opportunity for a single regulator to take an increasingly Australian rail safety national perspective. As a national organisation the ONRSR has the unique opportunity to:

- oversee rail safety performance across a wide range of rail operations;
- collect and assess data and trends; and
- develop consistent risk based policies and approaches.

We are able to speak as one regulator to operators and stakeholders across the country. This will help us develop our future priorities and work programmes and in working with stakeholders to positively influence safety improvement strategies

The ONRSR has been created to work in a co-regulatory environment. Co-regulation means that the regulator and the regulated work together in the interest of rail safety.

Operators have the primary duty in law to identify risks and execute risk based safety management approaches to reduce risks so far as is reasonably practicable. The ONRSR has an obligation to work with and support the regulated to deliver on their obligations. The regulator has powers, and is obliged to enforce compliance with the law where the duty holder has failed to meet their obligations. Success for the ONRSR will be to see continuous reduction in rail safety risk.

Independent Regulatory Body: **Yes**

Regulator Organisational Level: **Level 1**

Model of Regulation: **Co-Regulatory**

12.4 New South Wales - Australia

Independent Transport Safety Regulator (ITSR)

The Independent Transport Safety Regulator (ITSR) is an independent statutory body within the NSW Government's transport portfolio established on 1 January 2004. Its Chief Executive reports directly to the Minister for Transport.

ITSR undertakes a range of regulatory activities on behalf of the ONRSR including safety audits, compliance inspections and investigations, and promoting safety as a fundamental objective in the delivery of railway operations.

The principal objective of ITSR is to facilitate the safe operation of railway operations in NSW and involves working with the rail industry to encourage the adoption of better practices in risk and safety management.

ITSR's functions include providing independent advice or recommendations to the Minister for Transport on any matter related to the safe operation of NSW rail operations and entering into an agreement with the national rail safety regulator to provide for regulation of railway operations in NSW under Rail Safety National Law.

ITSR's Annual Reports provide an overview of past work and achievements.

In late 2012, the State Government passed legislative amendments adopting the Rail Safety National Law which enables the Office of the National Rail Safety Regulator to regulate in NSW. In adopting the National Law the Government also specified that, in the interest of assuring the current level of safety regulation and oversight of railway operations is maintained, regulation on behalf of the ONRSR in NSW would be delivered

by ITSR through a service level agreement. On 20 January 2013, ITSR began operating the NSW Branch of the Office of the National Rail Safety Regulator (ONRSR) under the service level agreement.

ITSR remains responsible for reviewing and evaluating matters relating to the safe operation of railway operations and advising or making recommendations to the NSW Minister for Transport as appropriate. Where feasible, these responsibilities will be exercised in consultation with the ONRSR.

In addition, the NSW Transport Master Plan provides for a large number of significant rail transport programs which will require specific regulatory oversight. This was also accounted for in the changes to NSW legislation which focused ITSR's efforts solely on rail safety regulation and transferred some of its broader transport safety functions to other agencies.

Independent Regulatory Body: Yes

Regulator Organisational Level: Level 1

Model of Regulation: Co-Regulatory

12.5 Victoria - Australia

Transport Safety Victoria (TSV)

Transport Safety Victoria is Victoria's integrated safety regulator for bus, maritime and rail transport.

It is headed by the Director, Transport Safety (Safety Director) whose statutory objective is to independently seek the highest transport safety standards that are reasonably practicable, consistent with the transport system's vision and objectives under the *Transport Integration Act 2010* (Vic).

This is achieved through administering bus, maritime and rail safety legislation that promotes transport safety outcomes in Victoria.

As Victoria's transport safety regulator, the TSV core functions are:

- licences, registers and accredits operators and other industry participants;
- monitors the transport industry and participant' systems for managing safety risks;
- monitors compliance with transport safety legislation; and
- takes enforcement action as appropriate to promote safety outcomes in Victoria.

Transport Safety Victoria also:

- investigates and reports on transport safety matters;
- provides advice and recommendations to the Minister for Ports and the Minister for Public Transport on transport safety issues;
- promotes awareness, and informs and educates on transport safety issues, including through practical guidance and training;
- collects, analyses and reports on safety data and safety science;
- develops policy relating to the administration of transport safety legislation;
- represents Victoria in national reform issues, including the Council of Australian Government's national rail safety and maritime safety regulation agendas; and
- maintains constructive relationships with stakeholders in government, industry and the wider community on transport safety issues.

While the Safety Director may advise and make recommendations to the Minister for Ports and the Minister for Public Transport, the independence of the office is protected under the Transport Integration Act. This means that the Safety Director is not subject to the direction or control of the Ministers when exercising statutory functions or powers.

TSV works within the transport system policy framework that applies to the whole of the transport portfolio under the Transport Integration Act. TSV's safety regulation plays a key part in achieving the transport system's vision of 'having an integrated and sustainable transport system that contributes in Victoria'.

As a transport safety agency under the portfolio, TSV also considers the objectives and decision-making principles required under the Transport Integration Act when making decisions or exercising powers/ functions.

The Victorian Rail Safety Regulator is currently not a participant in the Australian National Rail Safety Regulator scheme, however, is expected to join in the coming months.

Independent Regulatory Body: **Yes**

Regulator Organisational Level: **Level 1**

Model of Regulation: **Co-Regulatory**

12.6 Queensland - Australia

Department of Transport & Main Roads (DT&MR)

Transport and Main Roads is Queensland's Rail Safety Regulator and it works with the rail industry in Queensland to enhance rail safety by:

- conducting regular safety audits of operators;
- investigating rail safety incidents;
- overseeing compliance with rail safety legislation;
- working with rail operators on potential opportunities to improve safety management; and
- collecting and analysing rail safety incident statistics.

On 1 September 2010 the Queensland Government introduced the *Transport (Rail Safety) Act 2010* and the *Transport (Rail Safety) Regulation 2010* as part of its commitment toward increasing rail safety in Queensland and aligning with national rail safety standards.

The legislation was a result of extensive consultation with the rail industry, including commercial and not-for-profit tourist and heritage rail transport operators, rail and associated unions, and relevant state and federal government agencies. Rail operators and the Queensland Government worked together to improve rail safety standards.

The legislation provides for improvements to the safe carrying out of railway operations, the management of risks associated with railway operations, and the promotion of public confidence in the safety of transport of passengers or freight by rail.

In Queensland a range of strategies, including fatigue and emergency management plans and increasing the skill requirements for rail safety workers are now law, demonstrating a commitment to continue improving safety across Queensland's 9,800 kilometres of diverse rail corridor.

The legislation affects more than 57 accredited railways operating in Queensland. This includes Queensland Rail, Aurizon, Pacific National, Airtrain, and tourist and heritage rail operators.

The Queensland Rail Safety Regulator is currently not a participant in the Australian National Rail Safety Regulator scheme, however, is expected to join in the coming months.

Independent Regulatory Body: No

Regulator Organisational Level: Level 2

Model of Regulation: Co-Regulatory

12.7 Western Australia - Australia

Department of Transport (DOT) - Office of Rail Safety

The Office of Rail Safety (ORS) is the business unit within the WA Department of Transport responsible for administering rail safety in Western Australia. The current legislative basis for its activities is the Rail Safety Act 2010 and Regulations 2011, which can be accessed through the State Law Publisher website.

The *Rail Safety Act 2010* was given assent by Parliament on June 28 2010 and was proclaimed with the Rail Safety Regulations 2011 on 1 February 2011.

Having regard to the importance of rail safety and regulatory efficiency, the legislation is based on the following objectives:

- to provide for improvement of the safe carrying out of rail operations;
- to provide for the management of risks associated with railway operations;
- to make special provision for the control of particular risks arising from railway operations; and
- to promote public confidence in the safety of persons or freight by rail.

Although railways have been in existence for many years, the technology of railways is changing. As new ideas, equipment and operating methods are developed and adopted in WA (particularly in the heavy haul railways in the North West), the Office of Rail Safety has a responsibility to ensure that their associated risks are identified and managed by railways (Risk Management) and that all affected parties are involved and consulted. This is why Change Management is included in a railway safety management system.

To enable the public to have confidence in rail safety, it is essential that the Office of Rail Safety be, and be seen to be an independent regulator and free from any conflicts of interest. Independence is a key feature of the Office of Rail Safety.

Although it is part of the Department of Transport, the Office of Rail Safety is an independent regulator not directed by Government or the rail industry. The Office is self funding, controls its own finances in an account set up in accordance with Section 43 of the Act and generates its own revenue by the collection of fees from rail organisations.

The following principles, developed by the National Transport Commission to support uniform rail safety legislation in Australia and approved by the Australian Transport Council (ATC), underpin the role and activities of the Office of Rail Safety:

Principle of Responsibility

Rail safety is the responsibility of Government, rail transport operators, rail safety workers and others involved in railway operations.

Principle of Integrated Risk

If approaches to managing risks associated with any particular railway have impacts on any other railway or the railway network of which the railway is part, the best practicable rail safety outcome should be sought.

Principle of enforcement

The purpose of enforcement of the Act and the regulations is:

- protecting safety;
- promoting improvement in rail safety;
- removing incentive for any unfair commercial advantage that might be derived from contravening the rail safety laws; and
- influencing the attitude and behaviour of persons whose actions may have adverse impacts on rail safety.

Principle of Transparency and Consistency

Regulatory decision-making processes should be timely, transparent and nationally consistent.

Principle of Participation, Consultation and Involvement of all Affected Persons

Rail transport operators and the organisations representing them, Rail Safety Regulators, rail safety workers and the organisations representing them and others involved in railway operations should participate in, the development and implementation of measures to manage safety risks associated with railway operations.

The Western Australia Rail Safety Regulator is currently not a participant in the Australian National Rail Safety Regulator scheme, however, is expected to join in the coming months.

Independent Regulatory Body: **Yes**

Regulator Organisational Level: **Level 2**

Model of Regulation: **Co-Regulatory**

12.8 **United Kingdom**

Office of Rail Regulation

The vision of the ORR is to achieve success for Britain's railways by achieving zero workforce and industry-caused passenger fatalities, with an ever-decreasing overall safety risk, satisfaction levels of passengers and freight customers equivalent to the best in railways and other forms of transport, and efficiency equivalent to that achieved by the best comparable railways in the world.

The principal roles of the ORR are to Secure delivery by the industry of its regulatory obligations, helping the mainline railways meet the long-term challenges, and by enhancing and keeping under review the industry's framework of incentives, accountabilities and competition.

In safety terms the ORR is responsible for enforcing the law and to ensure that the rail industry delivers continuous improvement in the health and safety of passengers, the workforce and public, by achieving excellence in health and safety culture, management and risk control.

The ORR is also committed to develop and apply proportionate and risk-based regulation, taking a whole-sector approach while making more effective use of its resources across safety and economic functions, maximise the value of the rail regulation function while minimising the costs of compliance for the UK rail industry.

Independent Regulatory Body: **Yes**

Regulator Organisational Level: **Level 1**

Model of Regulation: **Co-Regulatory**

12.9 **Europe (UIC)**

European Rail Agency

The Agency has been established to provide the EU Member States and the Commission with technical assistance in the fields of railway safety and interoperability. This involves the development and implementation of Technical Specifications for Interoperability and a common approach to questions concerning railway safety. The Agency's main task is to manage the preparation of these measures.

Independent Regulatory Body: **Yes**

Regulator Organisational Level: **Level 1**

Model of Regulation: **Co-Regulatory**

12.10 **United States of America**

Federal Railroad Administration

The Office of Railroad Safety has 14 divisions that serve as technical experts on matters of railroad safety, provide technical assistance to field personnel, and aid in the development of regulations and the evaluation of waivers submittals.

As part of its oversight function, FRA has many programs and initiatives that help foster a safe railroad environment nationwide. Additionally, FRA personnel either sponsor or are represented on boards, committees, and task forces that share information or provide forums for collaborative efforts. This site offers links on the side navigation of this page to some of the more prominent safety programs and forums

Each regional safety office consists of a Regional Administrator responsible for Administering National Inspection Plan and National Safety Program Plan and the overall planning, direction, organization, management of resources, administration of assigned safety programs, and evaluation of program performance throughout the region. Each region within the assigned geographic jurisdiction conducts inspection activities to ensure the safe operation of railroads, including:

- safety inspection of railroad operating practices, motive power and equipment, signal and train control, hazardous materials, and track and structures;
- investigation of accidents and complaints, waiver requests, noise complaints, signal system false proceeds, active warning device activation failures and block signal applications;
- appearance in the courts and in administrative adjudications in support of cases arising from violations proven during inspection or investigative activities;
- Grade Crossing and Trespasser Safety Promotion; and
- Quiet Zone Development and related support.

Independent Regulatory Body: **Yes**

Regulator Organisational Level: **Level 1**

Model of Regulation: **Prescriptive**

12.11 **Canada**

Transport Canada

With 48,000 kilometres of track, Canada has one of the largest rail networks in the world. Transport Canada regulations, standards and programs work to make the Canadian railway system safe, secure, accessible, competitive and more environmentally responsible.

Transport Canada is responsible for the development and regulation of rail policy for the monitoring of Canada's rail industry to ensure that it meets the varied requirements of the Canadian economy and Canadian shippers. In the federal context, this is done mainly through the Canada Transportation Act. In addition to providing on-going policy advice to the Minister of Transport on the broad range of factors that pertain to

Canada's railway industry, Transport Canada is also responsible for administering the subsidy to VIA Rail, and for the federal government's fleet of 13,000 hopper cars used in the transportation of western grain.

The role of Transport Canada is also to develop, recommend and coordinate modal and multi-modal policies. Essentially offering advice, analysis and data on transportation issues, system performance and stakeholder positions, and advice on policy options based on efficiency, competitiveness, safety and security, environmental sustainability, and inter-modal integration.

Independent Regulatory Body: Yes

Regulator Organisational Level: Level 1

Model of Regulation: Co-Regulatory

12.12 Republic of Indonesia

The Directorate of Safety

The Ministry of Transportation in Indonesia is currently developing and implementing a new Directorate of Safety which will be the defined statutory rail safety regulator within the Ministry of Transportation.

This new Directorate of Safety is being established along similar lines to the existing Indonesian Directorate of Maritime Safety, and will be self-supporting, however, will be wholly Government funded and is likely to operate as a "prescriptive" style of regulator although having to work closely with its principal stakeholder being the PT. Kereta API Indonesian Railways.

In an unusual variation to the normally accepted role of an independent rail safety regulator, the rail safety regulator also has a large influence and control over some aspects of the Indonesian Railways budget process and the procurement and acquisition of various major physical resources for the Government Railways.

This procurement function being exercised by a rail safety regulator is unique within the rail safety regulator world and not recommended in a Western developed world environment.

Independent Regulatory Body: No

Regulator Organisational Level: Level 2

Model of Regulation: Prescriptive

12.13 International Review Summary

The review of other international rail safety regulatory agencies has highlighted the following key variations with the current NZTA management of rail safety in New Zealand.

- The current low level of the rail safety regulator within the NZTA organisational structure;
- While it is acknowledged that the NZTA is an independent agency, the function of the rail safety regulator as currently applied and reporting through two other senior line management level positions prior to the Chief Executive would suggest that the function has no real "independence" when compared with other similar rail safety regulatory agencies internationally;
- The current NZTA use of contractors for the conduct of rail safety regulatory compliance assessments under an "out sourcing" arrangement is unique to New Zealand and not undertaken by other international rail safety regulators surveyed, with feedback received from most indicating that they would not use contractors for this safety critical "core business" activity;
- The use by NZTA of the "co-regulatory" model of rail safety regulation has been validated in that this model is used by a very high percentage of all rail safety regulatory agencies surveyed;
- While it is acknowledged that the NZTA rail safety regulatory team has attempted to provide some level of information to the NZ rail industry, due to both funding and resource limitations, it has been unable to take a wider role in the safety "education" of the NZ rail industry, and again is at odds with all other key rail safety regulatory agencies surveyed;
- NZTA currently does not address license holder "counter-terrorism security" issues and security in general inclusive of undertaking a "security threat analysis" is not required to be addressed within a license holder safety case for submission to NZTA. The lack of direction in this key area by NZTA is at odds with all other key rail safety regulatory agencies surveyed;
- Finally, NZTA currently has only a limited ability to prosecute (as a last resort) for offenses/breaches of the NZ Railways Act, 2005, or Regulations, and this reduced ability to do so (*and seldom used*) is at odds with all other key rail safety regulatory agencies surveyed.

12.14 Please also see a quick reference comparative table of rail safety regulatory agencies at **Attachment 2** within this review report.

13 Findings

The project team found:

- 13.1 That the NZTA rail team is currently perceived by some sectors of the rail industry and other related Government Agencies in a negative manner and as a "soft" regulator.
- 13.2 That the overall negative perception of the NZTA in rail safety regulation has developed over a long period of time and commenced when the rail safety regulator team was re-structured to a much lower level within the organisation and had the number of positions reduced which reduced in the team's ability to fulfil its legislative mandate.
- 13.3 That the reduction in "status" both within NZTA and across the wider rail industry, and the practice of out-sourcing of the compliance assessment task has led to a steady decline in team moral and wider industry respect for the Office of Rail Safety Regulator, including the regulator title of "*Manager Rail Systems*" which does not reflect the role or give it the stature that is needed to overcome current negative perception.
- 13.4 That the current rail safety regulator management level within the NZTA organisational structure is too low in the organisation and without precedence in any other developed country where an independent Government sector rail safety regulator has been established. As one major industry stakeholder stated "*it's a rail safety regulator in name only*".
- 13.5 That the NZTA rail safety regulator team is under resourced in both the number of human resources (positions) available to manage this safety critical task, and in the availability of a range of competent technical resource areas such as human factors and data analysis.
- 13.6 That the NZTA currently out-sources its conduct of many of its rail sector compliance assessment activities to an external private sector organisation and in some cases some individual sole trader providers.
- 13.7 That due to the current out-sourcing of the compliance assessment function, the NZTA rail safety regulator team potentially may lose a high level of "first hand" day-to-day regulator "feel" for the current risk and safety level of some individual license holders, or potentially the rail industry as a whole.
- 13.8 That the current out-sourced compliance assessment principal provider to be a very professional provider of quality and management systems certification, however, that expertise alone limits the providers ability to provide the detailed technical service that is required. In terms of some of the other lower level sole trader out-sourced compliance assessment providers, this process was found to be more of a casual arrangement with little quality control over the output required.

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- 13.9 That the rail regulator sections of the NZTA web site and a number of associated published documents on the web site are "out of date" and in need of an urgent review and update.
- 13.10 That the current management and control of the National Rail System Standards (NRSS), while appropriate for many years, is now in need of a new and more appropriate level of independent corporate governance, and standards type document control.
- 13.11 That the NZTA recently released organisational "strategy snapshot" which communicates the NZTA values for the period 2013 to 2016 while featuring two photographs taken in a rail environment makes no mention of its key function as the New Zealand Rail Safety Regulator or the promotion of rail safety in New Zealand.
- 13.12 That the rail safety regulator currently has no oversight or assessment of license holder security related risks as a key part of an integrated safety management system, and that this aspect is at odds with all other similar rail safety regulators across Australia and in other countries assessed as a part of this review.
- 13.13 That the NZ Railways Act (2005) and the Railways Regulations (2008) to be overdue for a periodic review.
- 13.14 That the current legislation to be adequate and "fit for purpose" when enacted, however, would benefit from a further review taking into account more contemporary safety thinking including the recently enacted National Rail Safety Law in Australia and closer alignment with the NZ WH&S law.
- 13.15 That the existing legislation does not provide (in so far as it is reasonably practicable to assess) any overt increased level of rail safety risk, and it does not prevent a range of NZTA rail safety regulatory structural and functional improvements from being achieved in the short term.
- 13.16 That the current rail safety regulator provision of legislative compliance services to the NZ rail industry does not provide for a well developed and implemented strategy on rail safety education topics and services.
- 13.17 That the rail systems team currently does not have an effective ability to conduct an analysis of the safety critical "pre-cursor events" or lead indicator "near miss" type incidents, and has not integrated this need with other existing internal agency resources available in this area. An effective outcome in this area is critical in assisting to predict "where the next accident will come from" and thereby, have a chance of preventing it from happening.
- 13.18 That the NZTA rail safety regulator currently has no formal or informal established interface arrangements for the sharing of information with the Australian Office of National Rail Safety Regulator (ONRSR).

14 Recommendations

Structure / Operational Recommendations

14.1 Legislative Review

NZTA in conjunction with the Ministry of Transport and Ministry of Business Innovation & Employment (MoBIE), plan to undertake a review of the Railways Act (2005) and the Railways Regulations (2008) in the medium term.

14.2 Structural Position of Regulator

NZTA to undertake a review of the position of the rail safety team within the current organisational structure with a view of raising the level of the key role of rail safety regulator to a more senior level in line with international good practise.

14.3 Corporate Strategy

NZTA to develop a corporate strategy that will promote, support, grow and reinforce to all stakeholders the need and legislative requirement for an effective, visible and respected rail safety regulator.

14.4 Communication Strategy

NZTA to develop a communication strategy to assist in re-establishing effective, authoritative and productive rail safety regulator interface communications and protocols with all stakeholders.

14.5 Compliance Assessment

NZTA to in-source the core regulatory function of safety compliance assessment of all licence holders.

14.6 Industry Leadership & Education

NZTA to take a greater role in the leadership, education and provision of information to the New Zealand rail industry.

14.7 Regulator Team Positions Review

NZTA to undertake a structural review of the existing rail safety team positions, taking into account the need to in-source the compliance assessment function and to take a greater role in industry education, to determine a potential increase in the number of positions to enable the delivery of its services and discharge of its obligations under the Railways Act (2005) and Railways Regulations (2008).

14.8 NZTA Web Site - Rail Safety Section

NZTA to undertake a review of the rail regulator sections of the NZTA web site to ensure that it is effective and easy to use from an end user perspective and that all information

and documents contained on the web site are appropriately up to date and relevant to stakeholder needs.

14.9 **ONRSR Australia**

NZTA to establish communication with the Australian Office of National Rail Safety Regulator (ONRSR) with the objective of sharing information, knowledge and resources for the benefit of both organisations.

14.10 **ONRSR Australia**

NZTA to consider entering into a Memorandum of Understanding (MOU) with the Australian Office of National Rail Safety Regulator (ONRSR) with the objective of the NZTA participating in an appropriate ONRSR strategic planning and/or regulatory operational meetings.

14.11 **Confidential Incident Reporting**

NZTA establish within the rail safety regulator unit a confidential incident reporting scheme designed to reflect similar schemes in Australia, Canada and the UK, with the ability for any person to report safety concerns or safety incidents pertaining to the New Zealand rail industry on a confidential basis.

14.12 **Incident Data Base**

NZTA to review its current system with an objective of achieving improvements to be a robust whole of rail industry incident occurrence data base for the collection and analysis of all rail safety incidents with a strong focus on "near miss" incident reporting. The improvement of existing systems or the development of a new system data base should take account of the development in Australia by RISSB of the Safety Information System for Australasian Railways (SISAR) and the associated benefits and cost savings in adopting the RISSB system.

14.13 **Incident Data Sharing**

NZTA to establish an interface agreement with the Australian Office of National Rail Safety Regulator (ONRSR) and the Rail Industry Safety and Standards Board (RISSB) to enable the sharing of rail industry incident data, and the systems that support the management of such incident data.

14.14 **Investigation**

NZTA to undertake compliance investigations where necessary and as evidence may suggest that a license holder has been in non-compliance with its conditions of license and/or in breach of the Railways Act (2005) or Railways Regulations (2008).

14.15 **Promotion of Rail Safety Regulator Role**

NZTA to give consideration to the greater promotion and awareness, both internal and external, of its key safety critical function as the New Zealand Rail Safety Regulator.

14.16 **Cost Recovery**

NZTA to undertake a review of the current formula for recovering rail safety regulator costs from license holders with a view to transitioning to a 100% cost recovery model in the medium to longer term.

14.17 **National Rail Safety Standards**

NZTA to work with the rail industry in New Zealand to give effect and support to the National Rail Safety Standards (NRSS) being adopted into the Australasian Rail Industry Safety and Standards Board (RISSB) management process.

14.18 That the RISSB establish a New Zealand based "Development Group" made up of New Zealand rail industry and other related stakeholders and chaired by a RISSB appointed Project Manager for the purpose of the on-going management of the NRSS.

14.19 Once the NRSS have been successfully adopted into the formal RISSB standards management process, a further longer term review of the standards be undertaken to update, rationalise, and normalise the required standards for the New Zealand industry with other similar contemporary RISSB technical standards.

People Capability Recommendations

14.20 **Training - Internal**

NZTA to review the human and technical capability of the existing rail team with a view to ensuring that future training of the team members will be planned and delivered to enhance the competency and experience of the team as a whole.

14.21 **Training - External**

NZTA to establish an interface agreement with the Australian Office of National Rail Safety Regulator (ONRSR) to facilitate NZTA rail safety regulator personnel receiving the generic competency units of training designed and developed for rail safety regulator personnel nationally in Australia.

14.22 **Rail Safety Regulator Title**

NZTA to review and upgrade the current rail safety regulator title of "*Manager Rail Systems*" as it does not reflect the role or give it the stature needed for a major national transport mode safety regulator.

14.23 **Additional Specialist Resources**

NZTA to consider the enhancement of the existing rail safety regulator team by the addition of both a human factors specialist and a specialist data analyst. Both these positions in addition to their specialist roles, should also be trained (in time) to undertake additional multi-skilled generic functions within the rail safety regulator team.

14.24 **Compliance Assessment Staff Exchange**

NZTA to consider working with the Australian Office of National Rail Safety Regulator (ONRSR) in collaborating to provide a NZTA rail team safety compliance assessor to participate as a team member in an appropriate compliance assessment of an Australian rail transport operator, and conversely, that an Australian National Rail Safety Regulator assessor be invited to participate as a team member in the assessment of a major license holder (such as KiwiRail or TransDev Auckland) in New Zealand.

14.25 **ONRSR Provision of Specialist Staff**

NZTA to consider accepting an offer from the Australian Office of National Rail Safety Regulator (ONRSR) to make available on both a needs basis and cost neutral basis, technical human resources as may be required for a specific major project. These human resources may be drawn from the ONRSR Australia wide network of full-time staff in areas such as risk management, data analysis, infrastructure engineering, rolling stock engineering, compliance assessment, and rail safety compliance investigation.

15 List of Stakeholder Interviews

15.1 The following persons and organisations were interviewed and/or provided information and feedback to the review team:

15.2 New Zealand Transport Agency

Geoff Dangerfield;	Chief Executive Officer;
Celia Patrick:	General Manager - Access & Use Group;
Michael Cummins:	Manager Operations Policy;
John Freeman:	Manager Rail Systems;
Merv Harvey:	Principal Rail Advisor;
Graeme Hudson:	Senior Rail Advisor;
Rob Gould:	Senior Rail Advisor;
Adrian Douglas;	Senior Rail Advisor;

15.3 KiwiRail

Jim Quinn:	Chief Executive Officer;
Matt Ballard:	General Manager Safety & People;
Ian Cotton:	National Standards & Risk Manager;
Deb Hume:	General Manager Passenger Services;
Phil O'Connell:	National HSE Improvement & Innovation Manager;

15.4 Transdev Auckland (previously Veolia Transport)

Terry Scott:	Chief Executive Officer;
Huw Bridges:	General Manager – Safety & Compliance;
Gareth Williams:	Rail Safety Advisor;

15.5 Federation of Rail Organisations NZ

Grant Craig:	President;
Trevor Burling:	Executive Officer;

-
- 15.6 **Transport Accident Investigation Commission NZ**
Lois Hutchinson: Chief Executive Officer;
Vernon Hoey: Senior Rail Accident Investigator;
- 15.7 **Auckland Transport**
Tom Salt: EMU Project Director;
Lloyd Major: Engineering Manager;
- 15.8 **Ministry of Transport**
Leo Mortimer: Manager Land Transport Safety;
- 15.9 **Ministry of Business Innovation & Employment (MoBIE)**
Richard Steel: Engineering Manager;
- 15.10 **Rail and Maritime Transport Union (RMTU)**
Wayne Butson: General Secretary;
Karen Fletcher: Health & Safety Organiser;
- 15.11 **TELARC**
Ivan Cowell: Client Manager (Rail Assessments);
- 15.12 **Fonterra**
Karen Walsh: Compliance Support Co-ordinator;
- 15.13 **Office of National Rail Safety Regulator (ONRSR) Australia**
Rob Andrews: Chief Executive Officer;
Julie Bullas: Executive Director Policy Communications & Planning;
Simon Foster: Executive Director Technical;
- 15.14 **Rail Industry Safety & Standards Board (RISSB) Australia**
Kevin Taylor: Chief Executive Officer;
- 15.15 **Australian Transport Safety Bureau (ATSB)**
Peter Foley: Director Surface Investigation.

16 Definitions

16.1 For clarification, the following list provides a range of terms and definitions used within this investigation report:

ACRI:	Australasian Centre for Rail Innovation;
ARC:	Auckland Regional Council;
ARA:	Australasian Railway Association;
ATRS:	Australasian Transport Risk Solutions Pty Ltd;
ATSB:	Australian Transport Safety Bureau;
CRC:	Cooperative Research Centre (Australia);
D&A:	Drug and Alcohol;
DAMP:	Drug and Alcohol Management Plan;
DTWA:	Department of Transport Western Australia;
DT&MR:	Department of Transport & Main Roads (Queensland);
EMU:	Electric Multiple Unit;
ERA:	European Rail Agency;
FRMP:	Fatigue Risk Management Plan;
FRONZ:	Federation of Rail Organisations of New Zealand;
FTE:	Full Time Equivalent;
GWRC:	Greater Wellington Regional Council;
ITSR:	NSW Independent Transport Safety Regulator;
KM:	Kilometres;
LTNZ:	Land Transport New Zealand;
MoBIE:	Ministry of Business Innovation & Employment;

MOU:	Memorandum of Understanding;
MOT:	NZ Ministry of Transport;
NSW:	New South Wales;
NTC:	National Transport Commission (Australia);
NZTA:	New Zealand Transport Agency;
ONRSR:	Office of National Rail Safety Regulator (Australia);
OTSI:	Office of Transport Safety Investigation (New South Wales);
PPE:	Personal Protective Equipment;
RISSB;	Rail Industry Safety & Standards Board (Australia);
RMAP:	Risk Mitigation Action Plan;
RMTU:	Rail and Maritime Transport Union;
RSR:	Rail Safety Regulator;
RSSB:	Rail Safety & Standards Board, United Kingdom;
SFAIRP:	So Far as is Reasonably Practicable;
SISAR:	Safety Information System for Australasian Railways;
SMS:	Safety Management System;
TAIC:	Transport Accident Investigation Commission;
TELARC:	Testing Laboratory Registration Council;
TSV:	Transport Safety Victoria (Australia);
WH&S:	Workplace Health and Safety (legislation).

17 Acknowledgements

- 17.1 The review team acknowledges the valued assistance of the following NZTA representatives and their involved staff for their time, cooperation and expertise in assisting with the project.

Geoff Dangerfield

Chief Executive

Celia Patrick

General Manager - Access & Use Group

Robyn Elston

National Manager Delivery

John Freeman

Manager Rail Systems

Merv Harvey

Principal Rail Advisor

Graeme Hudson

Senior Rail Advisor

Rob Gould

Senior Rail Advisor

Adrian Douglas

Senior Rail Advisor

Carmel Hilliard

PA to National Manager Design

This assistance was provided in a genuine "Just Culture" safety environment with all parties focussed on the continuous improvement of the NZTA rail safety legislative obligations and customer service delivery for a safe rail industry in New Zealand.

18 Research & Reference Material

- 18.1 The following is a listing of the various research and reference material including associated reports researched by the review team in its analysis of all available information for the purpose of (where relevant) making findings and recommendations.
- 18.2 Railways Act (New Zealand) 2005.
- 18.3 Railways Regulations (New Zealand) 2008.
- 18.4 Land Transport Management Act (New Zealand) 2003.
- 18.5 Rail Licence Application Form, NZTA.
- 18.6 NZTA Rail Incident/Accident Report Form.
- 18.7 Land Transport NZ, Rail Safety Licencing and Safety Assessment Guidelines, April 2006.
- 18.8 Transport Accident Investigation Commission Act, 1990.
- 18.9 NZTA Web Site, Rail Transport Legislation & Rail Licencing Sections - (www.nzta.govt.nz).
- 18.10 Web Site for New Zealand Ministry of Transport, Rail Transport Pages - (www.transport.govt.nz).
- 18.10 National Rail System Standards (NRSS).
- 18.11 KiwiRail Annual Safety Performance Report for the Period 1 July 2011 to 30 June 2012.
- 18.12 Royal Commission on the Pike River Coal Mine Tragedy, New Zealand, Final Report, 2012.
- 18.13 The Report of the Independent Taskforce on Workplace Health & Safety (NZ) April 2013.
- 18.14 Australian National Rail Safety Law and Regulations (Rail Safety Act & Regulations South Australia) 2012.
- 18.15 Preparation of a Rail Safety Management System Guideline, Australian Office of National Rail Safety Regulator, 2013.
- 18.16 The Web Site, Office of National Rail Safety Regulator (ONRSR) Australia - (www.onrsr.com.au).
- 18.17 The Web Site, Rail Industry Safety and Standards Board (RISSB) Australia - (www.rissb.com.au).
- 18.18 The Web Site, Rail Safety and Standards Board, United Kingdom - (www.rssb.co.uk).

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- 18.19 The Web Site, Queensland Transport & Main Roads (Australia), Rail Safety Section - (www.tmr.qld.gov.au).
 - 18.20 Light Handed Regulation and Work Safety – Rail Safety in New Zealand 1974 – 2000, presented to the NZ Fabian Society in Wellington on 8 October 2012 by Hazel Armstrong, Rail and Maritime Transport Union.
 - 18.21 Submission of the Rail and Maritime Transport Union to the Independent Task Force on Workplace Health and Safety on the Review of Health and Safety System, November 2012, Rail and Maritime Transport Union.
 - 18.22 Your Life for the Job, New Zealand Rail Safety 1974 – 2000 by Hazel Armstrong, Rail and Maritime Transport Union.

19 List of Attachments

- 19.1 Guidance List of Stakeholder Interview Questions;
- 19.2 Comparative Table of International Rail Safety Regulators;
- 19.3 Listing of Key Elements of a Safety Management System;
- 19.4 NZTA Hierarchy Of Agency's Powers in Rail Regulation;
- 19.5 Queensland Rail Safety Regulator - Hierarchy of Powers.

REPORT END

ATTACHMENTS ON FOLLOWING PAGES

Attachment 1

GUIDE TO STAKEHOLDER INTERVIEW QUESTIONS

1. **Does the current NZTA legislative framework represent best practice?**
 - **Context** - Review and assess the Railways Act/NZ legislation to advise if it reflects best international practice;
 - **Context** - Comparison to Australian National Rail Safety Law.

2. **Does the NZTA rail regulator operational policy represent best practice?**
 - **Context** - To assess and report on the current status and activities of the NZTA rail regulator relative to international best practice, including:
 - Whether the rail regulator's processes and activities are effective in identifying, responding to, and managing system risk (failures of the regulatory system), operations risk (failures in the operational management system), and tactical risk (failures in the execution of specific roles or activities);
 - Whether it is resilient to changes in the rail sector, such as changes in technology;
 - Implications of Pike River Royal Commission Report and the likely push towards a more prescriptive WH&S style of rail regulation.

3. **Does NZTA operational activity reflect best practice?**
 - **Context** - To review the NZTA rail regulator management of occurrences, reporting and subsequent occurrence investigations;
 - **Context** - To assess the overall way in which the NZTA/Rail industry is currently managing the National Rail System Standards (NRSS).
 - **Context** - Consider factors such as licencing arrangements, compliance auditing, fatigue management, D&A management, education, consultation, and co-regulation.

4. **In your opinion, what are the positive aspects of the current NZTA Rail Safety Legislation?**

- **Context** - Provide examples of where you believe the NZTA Rail Safety legislation is adding value to your business and to the general community.
- **Context** - What are its strengths and where can it be improved?

5. **In your opinion, what does the NZTA Rail Team do well?**

- **Context** - Provide examples of where you believe the NZTA Rail Team is adding value to your business and to the general community of NZ.
- **Context** - What are the Rail Team strengths and where can it be improved?

6. **Are there any NZTA Rail Team Structural and/or Operational improvements needed, and if so, what would you like to see as an outcome?**

- **Context** - Findings and any appropriate recommendations in relation to potential (NZTA Rail Team) structural and/or operational improvements to achieve "best practice" outcomes within the context of the existing legislation;
- **Context** - How should Rail Team resourcing levels be funded?

7. **Are there any People Capability or Competency improvements needed within the NZTA Rail Team, and if so, what would you recommend?**

- **Context** - To review the rail team (regulator) structure to assess its capability to manage major changes in the rail industry such as the electrification and EMU rolling stock project(s) in Auckland;
- **Context** - To review and offer value adding findings in terms of the existing NZTA Rail Team organisational structure, competency of staff, and its application and management of the NZTA Rail Safety legislative obligations.
- **Context** - To review the NZTA Rail Team in terms of current competency levels and potential future required competencies of operational staff.

8. **Please provide stakeholder feedback on any other issue that may be relevant to this NZTA review?**

- **Context** - Within the context of the review terms of reference.

Attachment 2

COMPARATIVE TABLE OF INTERNATIONAL RAIL SAFETY REGULATORS

RAIL SAFETY REGULATOR	Fully Independent Rail Regulator	Level within Organisation	Separate Independent Investigator	Use of Contractors in Compliance Auditing	Co-Regulatory Model	Prescriptive Model	Role in Education of Rail Industry	Ability to Prosecute for Offences	Security Issues Covered in Rail Safety Law	Direct Management of Enabling Law
NZ Transport Agency	No	4	Yes	Yes	Yes	No	Yes	No	Yes	No
ONRSR Australia	Yes	1	Yes	No	Yes	No	Yes	Yes	Yes	No
Independent Transport Safety Regulator - NSW Australia	Yes	1	Yes	No	Yes	No	Yes	Yes	Yes	No
Transport Safety Victoria Australia	Yes	1	Yes	No	Yes	No	Yes	Yes	Yes	No
DT&MR - QLD Australia	No	2	Yes	No	Yes	No	Yes	No	Yes	Yes
Dept of Transport - WA Australia	Yes	2	Yes	No	Yes	No	Yes	No	Yes	Yes
Federal Railroad Administration America	Yes	1	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Transport Canada	Yes	1	Yes	No	Yes	No	Yes	Yes	Yes	Yes
European Rail Agency - Europe	Yes	2	No	No	Yes	No	Yes	No	Yes	No
Office of Rail Regulation UK	Yes	1	Yes	No	Yes	No	Yes	Yes	Yes	Yes
Directorate of Rail Safety Indonesia	No	2	Yes	No	No	Yes	No	No	No	No

Attachment 3

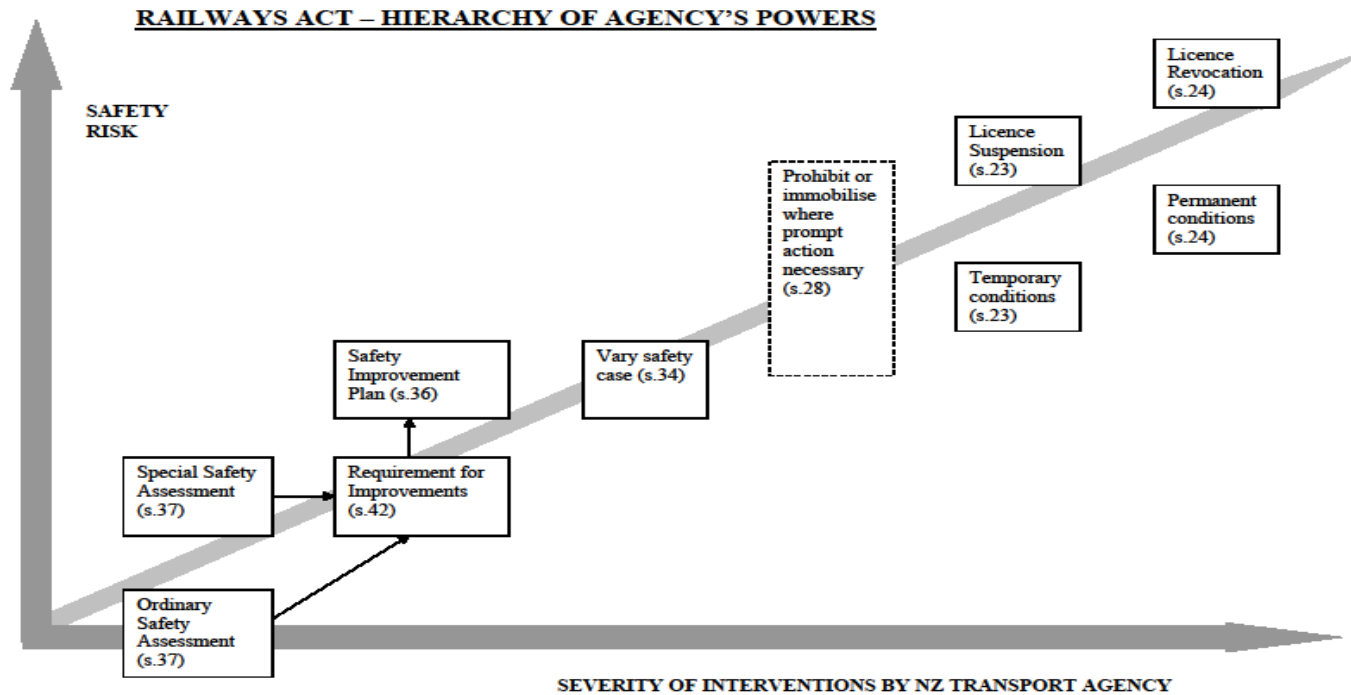
LISTING OF THE 29 KEY ELEMENTS OF A SMS

1. Safety policy;
2. Safety culture;
3. Governance & internal control arrangements;
4. Management responsibilities & accountabilities;
5. Regulatory compliance;
6. Document control & information management;
7. Review of the safety management system;
8. Safety performance measures;
9. Safety audit arrangements;
10. Corrective action;
11. Management of change;
12. Consultation;
13. Internal communication;
14. Training & instruction;
15. Risk management;
16. Human factors;
17. Procurement & contract management;
18. General engineering & operational system safety requirements;
19. Process control;
20. Asset management;
21. Safety interface coordination;
22. Management of notifiable occurrences;
23. Rail safety worker competence;
24. Security management;
25. Emergency management;
26. Health & fitness;
27. Drugs & alcohol risk management;
28. Fatigue risk management;
29. Resource availability.

Reference Source: [Australian National Rail Safety Regulations \(2012\) - Schedule 1](#)

NZTA Rail Safety Regulator Powers

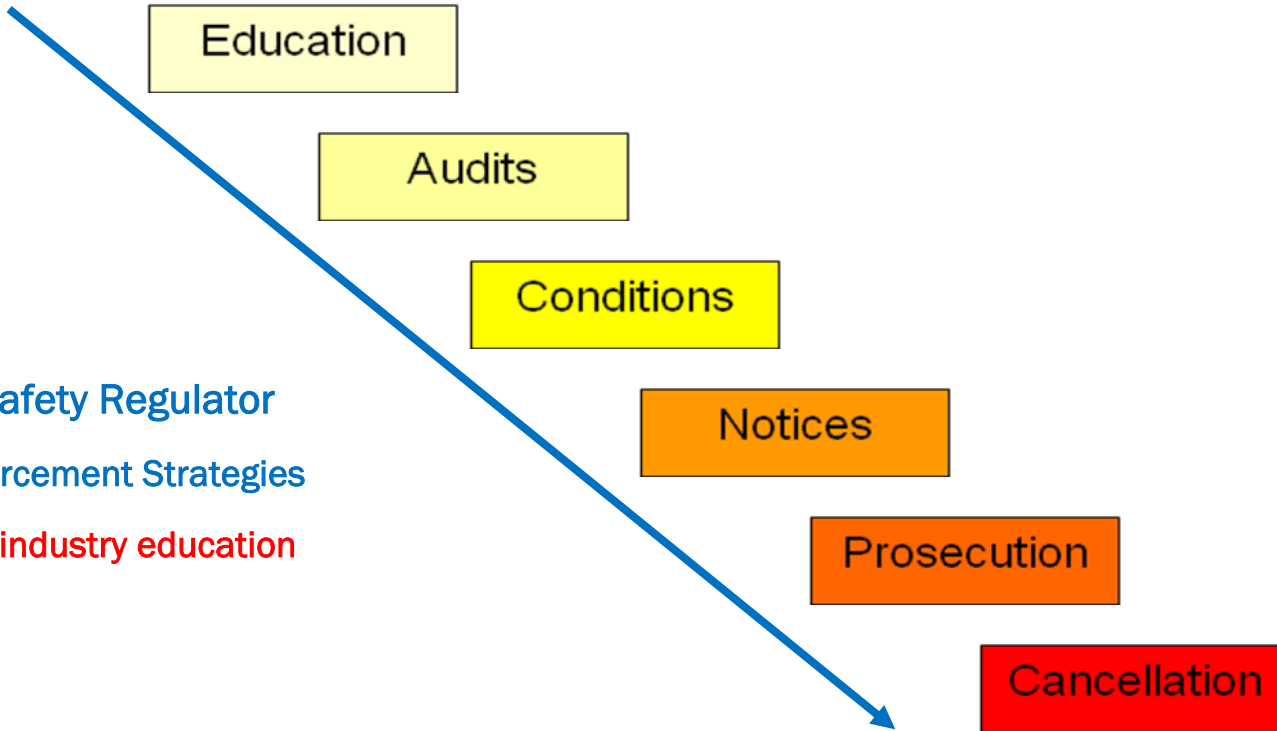
Attachment 4





Co-regulatory Strategies

Attachment 5



Enforcement Strategies

Queensland Rail Safety Regulator
Co-regulatory to Enforcement Strategies
Note: Key role in rail industry education