OFFICE OF THE national rail safety regulator

ONRSR Guideline

Major Projects

safe railways for Australia

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1 Introduction

In order to promote the safe and timely delivery of rail infrastructure and rolling stock assets through major projects, the Office of the National Rail Safety Regulator (ONRSR) has prepared this guideline to:

> provide guidance to duty holders about their duties and related obligations under the *Rail Safety National Law* (RSNL); and

> explain ONRSR's **minimum** expectations when reviewing the processes and associated evidence used to demonstrate that safe outcomes are being planned and, ultimately, have been achieved by major projects.

1.1 Guideline outline

Chapter 1	provides the introduction to this guideline.
Chapter 2	explains the legislative basis for the major project advice provided in this guideline.
Chapter 3	explains ONRSR's expectations in relation to the effective control and management of major projects. Further information on this topic is contained within the ONRSR Guideline: Effective Control and Management for Major Projects.
Chapter 4	explains ONRSR's expectations in relation to safety assurance of major projects.

1.2 Scope

This guideline has been produced as part of ONRSR's obligation to promote safety improvement in the Australian railway industry. **It does not supersede obligations for major projects to satisfy the requirements of the RSNL, particularly the demonstration that safety risks have been managed so far as is reasonably practicable** (SFAIRP).

Application of this guideline is by agreement between ONRSR and the major project. Experience strongly suggests that the process outlined in this guideline will substantially support timely delivery of the major project.

Those responsible for initiating major projects are encouraged to engage early with ONRSR in order to agree whether this guideline should be adopted and also to reach a common understanding as to how the guideline can be applied for the major project.

All major railway projects will result in a requirement to either vary or obtain accreditation under the RSNL. This guideline describes the minimum processes to be followed, from the onset of a major project, in order to support accreditation applications.

It is not the intent of this guideline to provide a specific definition for major projects, although usually major projects will involve significant technical or operational change, e.g. signalling system upgrades, introduction of new rolling stock, significant new railway infrastructure etc. Rail transport operators (RTOs) and industry stakeholders will be aware themselves as to the parameters that define a major project for them.

Rather, the aim of this document is to provide guidance to the industry as to how projects can safely manage major change.

Major projects can be characterised by their complexity, involving:

> multi-disciplinary activity
> complex contractual structures, and
> intricate organisation structures.

Within this environment, the clarity of safety responsibilities and safe delivery, across the whole asset lifecycle, must not be lost.

In the context of this guideline, a major project is considered to be an entity, or entities, that are managing the delivery of a significant change to railway infrastructure or rolling stock. Typically, a major project will be a railway transport operator undertaking accredited activity. However, in the early stages of a project, the major project entity may not be an RTO but would be responsible for the supply and/or design processes.

In relation to the delivery of major projects, the following are areas of particular interest to all parties:

> demonstration that the concept design minimises macro risk
> identification of the accredited party/parties
> **demonstration of effective control and management:** to ensure the safe management of change across all entities involved with the major project, and
> **assuring safe outcomes:** to gain confidence that safety risk is managed, SFAIRP, in a manner appropriate to the complexity of the project.

1.3 Project lifecycle

Assets have a lifecycle. Typically, projects follow a subset of the asset lifecycle, covering inception through to commissioning and then into operations and maintenance. There are many models that can be used to describe the project lifecycle and the ONRSR accepts that a major project will adopt terminology and lifecycle definitions that are appropriate to its own delivery.

For the purposes of this guideline, a five-stage asset lifecycle model is proposed as shown at figure 1. Note that major projects will rarely progress through the asset lifecycle in one single cycle: e.g. some assets will be at construction while others may have been commissioned and are already in the operate and maintain phase.

The requirements definition phase of a major project is of particular interest to ONRSR as the decisions made at this stage have a significant impact on the safe outcomes for the project. This stage produces the scope of change and the business reason for the project that in turn provides the context for the safety risk assessments. At this early stage, it is also important to start considering the safety risks for both standard and non-standard modes of operation.

Major projects should assure themselves that the proposed concept design manages safety risk SFAIRP, and safety risk continues to be managed throughout the project lifecycle.

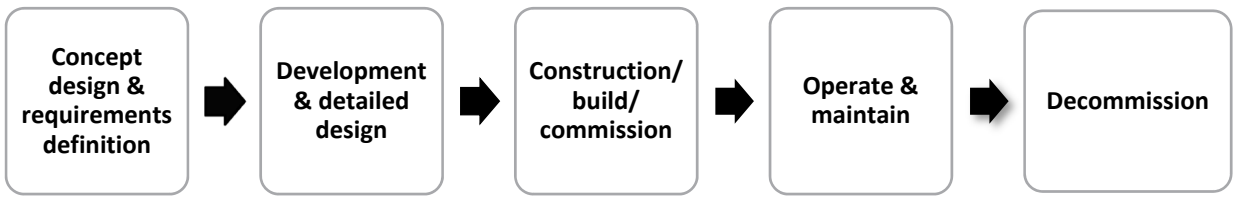

Figure 1: Example asset lifecycle model

2 Regulatory requirements

The RSNL specifies certain duties and obligations for officers, operators, and other relevant parties concerning the ongoing management and safety of rail infrastructure and rolling stock assets.

In assuring safe outcomes, the ONRSR is looking for confidence that those delivering major projects are satisfying their RSNL obligations, be that under accreditation *(RSNL s65),* RTO duties *(RSNL s52)* or duties of designers, manufacturers and suppliers *(RSNL s53),* and that safety risk is managed SFAIRP *(RSNL s47)*.

2.1 Definitions

For a complete listing of relevant definitions, refer to section 4 of the RSNL.

Rail infrastructure	The facilities that are necessary to enable a railway to operate, including: > railway tracks and associated track structures > service roads, signalling systems, communications systems, rolling stock control systems, train control systems, and data management systems > notices and signs > electrical power supply and electric traction systems > associated buildings, workshops, depots, and yards, and > plant, machinery, and equipment. A **rail infrastructure manager** has effective control and management of the rail infrastructure, whether or not they own it or have a statutory or contractual right to use it.
Rail transport operator	A rail infrastructure manager or rolling stock operator, or a person or organisation which is both.
Railway operations	These include: > the construction of a railway, railway tracks, and associated railway track structures > the construction of rolling stock > the management, commissioning, maintenance, repair, modification, installation, operation, or decommissioning of rail infrastructure, and > the commissioning, use, modification, maintenance, repair, or decommissioning of rolling stock.
Rolling stock	A vehicle that operates on, or uses, a railway. It includes a locomotive, carriage, rail car, rail motor, light rail vehicle, train, tram, light inspection vehicle, self-propelled infrastructure maintenance vehicle, trolley, wagon, or monorail vehicle. It does not include a vehicle designed to operate both on and off a railway when it is not operating on a railway. A **rolling stock operator** has effective control and management of the operation or movement of rolling stock on rail infrastructure for a railway, but does not include a person who drives the rolling stock, or controls the network or network signals.

SFAIRP	So far as is reasonably practicable. In relation to a duty to ensure safety it means that which was reasonably able to be done, taking into account and weighing up all relevant matters (*RSNL s47).* The ONRSR Guideline: Meaning of Duty to Ensure Safety So Far As Is Reasonably Practicable provides further information including the 'hierarchy of risk controls' approach.

2.2 Safety duties: rail transport operators

RTOs are required to ensure, SFAIRP, the safety of their railway operations *(RSNL s52(1)).*

This means that rail infrastructure managers, rolling stock operators and any organisation or contractor undertaking railway operations must ensure, SFAIRP, that:

> rail infrastructure and/or rolling stock assets are designed, constructed, operated and maintained to appropriate standards that ensure safety

> activities undertaken across the lifecycle of rail infrastructure and rolling stock assets are performed in a way that ensures the ongoing safety of railway operations.

In addition:

> Accredited RTOs must comply with the requirements of Schedule 1 of the *RSNL National Regulations* in relation to the development and implementation of a safety management system (SMS).

> Contractors and suppliers to an RTO must comply with the accredited operator's SMS to the extent that it applies to their activities and relevant equipment. It is the RTO's responsibility to ensure that contractors remain compliant.

2.3 Safety duties: designers, manufacturers and suppliers

Designers, manufacturers, and suppliers must ensure that rail infrastructure or rolling stock assets are safe for their intended purpose.

They must also provide adequate information as to their safe use *(RSNL s53)* to help RTOs maintain safety, including:

> details about the use for which the asset was designed, commissioned, manufactured, supplied, installed, or erected;

> the results of any testing or examination of the asset; and

> any conditions necessary to ensure, SFAIRP, that the asset is safe if used as intended.

A person who decommissions rail infrastructure or rolling stock must ensure, SFAIRP, that the decommissioning is carried out safely and that appropriate testing and examination has been carried out to comply with the duty *(RSNL s53(3)).*

2.4 Principles of shared responsibility, accountability

The RSNL makes it clear that rail safety is the shared responsibility of everyone who has a role at any point of an asset's lifecycle from project conception through operations and maintenance to decommissioning.

Each party has a duty to work with others to ensure that everything reasonably practicable is done to ensure the safety of assets throughout their lifecycle *(RSNL s50).* However, the degree to which a person is accountable for rail safety is dependent on the nature of the risk their activities might pose to rail safety.

Thus, the management of risks associated with railway operations is predominantly the responsibility of the person best able to control them.

2.5 Duty of officers to exercise due diligence

If an organisation has a duty or obligation under the RSNL, an 'officer' of that organisation must exercise due diligence to ensure that it complies *(RSNL s55).*

2.6 Requirement to have a safety management system

Section 99 of the RSNL requires RTOs to have an SMS to cover their railway operations, including tasks or activities that are contracted out, in a form approved by ONRSR that:

> provides systems and procedures for compliance with risk management obligations

> identifies, and comprehensively and systematically assesses, any safety risks to railway operations

> specifies the controls and procedures to be used to manage these risks, monitor safety, and review and revise the adequacy of the controls, and

> addresses and includes any other matter prescribed by the national regulations.

The SMS must be documented and must identify the people responsible for preparing and implementing the system. Further information on this topic is contained within the ONRSR Guideline: Safety Management System.

2.7 Requirement to assess safety risks

In conducting a risk assessment, the RTO must:

> examine and analyse each identified risk, including:
    - the nature of the risk
    - the likelihood of it occurring
    - consequences should it be realised
    - the range of control measures available that are considered to eliminate or minimise it

> consider risks cumulatively as well as individually, and

> use assessment methodologies that are appropriate to the risk being considered *(RSNL s100(1)).*

2.8 Requirement to demonstrate management of safety

Section 64 of the RSNL requires RTOs to apply to the ONRSR for accreditation to undertake railway operations, the application to be in a manner and form approved by the ONRSR.

Such applications are considered by ONRSR and accreditation granted if it demonstrated that *(RSNL s65):*

> the applicant is, or will be, the rail infrastructure manager or rolling stock operator for the railway operations

> the applicant has:
    - the competency and capacity to manage risks to safety
    - the competency and capacity to implement the proposed safety management system
    - the financial capacity to meet reasonable potential accident liabilities (or has public risk insurance)
    - appropriately consulted in relation to the SMS, and
    - complied with the regulations.

Major projects introduce change, and such change will result in an application for variation to accreditation *(RSNL s68)* if the RTO:

> proposes to change the scope and nature of its accredited railway operations

> no longer has the competence or capacity to manage risks to safety associated with its railway operations, and

> proposes a change to its railway operations that should be reflected in its accreditation.

Such variation applications are considered by ONRSR and variation to accreditation granted in accordance with RSNL s65 requirements, as outlined above.

3 Effective control and management: ONRSR expectations

3.1 Establishing safety roles and responsibilities

Major projects can be characterised by the number of entities that are involved in their specification and delivery. ONRSR recognises that the delivery structures and contract arrangements adopted by a major project will be based on a number of factors such as program, risk, value for money etc.

Whatever organisational structure is selected, a major project must effectively manage railway safety risks. This will include all entities understanding their role and responsibilities, in relation to the RSNL, from the start of the project, and who has effective control and management of safety risks. Further information on this topic is contained within ONRSR Guideline: Effective Control and Management for Major Projects.

In particular, the RTO responsible for operating and maintaining the assets will need to demonstrate how it will be assured that the delivered assets manage safety risk SFAIRP.

Major projects by their very nature are complex. Clear and effective safety leadership is required by all parties involved in project delivery for the support of safe project outcomes.

As a minimum, ONRSR expects:

> major projects to identify the entities that are the key safety stakeholders from the requirements definition phase onwards

> major projects, at the requirements definition phase, to document:

- the role of each key safety stakeholder
- the responsibilities and accountabilities of each key safety stakeholder for safe project outcomes, including RSNL safety duties, and
- the management of interfaces across the key safety stakeholders

> major projects to ensure roles and responsibilities support clear safety leadership and accountability throughout project delivery, and

> the RTO responsible for the operation or maintenance of the assets (O&M RTO) to assure itself that the delivered assets are safe.

3.2 Planning the accreditation process

ONRSR recognises that major project organisational structures can be complex, with different entities potentially designing, constructing, commissioning and decommissioning assets for an operator and maintainer. The entities delivering a major project must, where applicable, do so under the effective control and management of an appropriately accredited RTO. Further information on this topic is contained within ONRSR Guideline: Effective Control and Management for Major Projects.

Further, major projects will often choose to stage delivery in a cost-effective manner in a way that minimises disruption to the operating railway. At every stage of a major project, the assets commissioned into service must be operated and maintained by an RTO accredited to do so.

Clarity as to the RSNL accreditation requirements will reduce delivery risk for a major project.

A documented accreditation strategy will assist all stakeholders in a major project to understand their obligations under the RSNL. It will also help the major project to manage the accreditation or variation process with the ONRSR and to ensure safety and RSNL compliance is integral to project delivery and timescales.

There is one common theme to all projects: ultimately, they are delivered to an O&M RTO. ONRSR considers that there is merit in supporting a delivery model that has the O&M RTO as the accredited entity during the project delivery phases. This supports the management of safety risk in a manner consistent with how the assets will be used throughout their service life.

For some major projects, ONRSR recognises that multiple RTOs may be involved in the development, delivery and commissioning phases. In such circumstances, an accreditation strategy that adequately describes the arrangements will support safe project delivery and RSNL compliance.

As a minimum, ONRSR expects:

> major projects to prepare an accreditation strategy that identifies the scope and timing of applications for accreditation and applications for variation to accreditation

> major projects to consult with the ONRSR on the content of the accreditation strategy

> an accreditation strategy to clearly establish the entity with effective control and management at each phase of the project lifecycle

> an accreditation strategy to incorporate regulatory review timescales consistent with the RSNL, and

> the O&M RTO to apply to ONRSR for any accreditation applications associated with the operations and maintenance phase.

3.3 Establishing a common safety approach

Early project engagement between ONRSR, relevant RTOs, relevant government departments and project delivery organisations will support:

> the adequate development of project safety requirements and controls, and

> the appropriate consideration of operational safety from the early stages of the project.

As a minimum, ONRSR expects:

> major projects to engage with all key safety stakeholders from the requirements definition phases onwards

> major projects to scope the extent of their proposed change on the operations of the wider railway network

> major projects to undertake ‘safety in design’ assessments

> to receive plans for safety management from major projects, and

> to receive preliminary hazard analysis and safety requirements from major projects.

3.4 Establishing operational and maintenance requirements

Projects deliver railway assets that will be operated and maintained on the railway.

Therefore, a major project must consider the requirements of the operator and maintainer throughout the project lifecycle. Early consideration of construction, operational and maintenance safety risks will support safe project outcomes.

As a minimum, ONRSR expects:

> major projects to identify the O&M RTOs who will be responsible for the operation and/or maintenance of the assets being delivered

> if no single RTO can be identified, then:

- major projects to create a review function, independent from the design function, that is responsible for ensuring operational and safety risks are appropriately identified and managed (such a function is often referred to as a 'shadow operator') or
- major projects to engage with all existing O&M RTOs that interface with the project to ensure operational and safety risks are appropriately identified and managed, and

> each phase of a major project to include the O&M RTO / shadow operator in the safety risk management process.

4 Safety assurance: ONRSR expectations

4.1 Planning safety assurance

Effective safety assurance needs an approved plan in place to support a coherent approach to safety assurance across all parts of a major project's organisation.

As a minimum, ONRSR expects:

> major projects to create their plan for managing safety assurance that:

- documents roles and responsibilities of all parties and of key positions within each party
- contains the safety risk management processes to be applied
- documents the management of external and internal interfaces to the project
- documents the key safety assurance deliverables and evidence
- documents audit processes to ensure that the plan is appropriately implemented, and
- is in line with the relevant RTO's SMS

> major projects to create a safety assurance strategy identifying the work required to deliver the safety argument across the project lifecycle

> major projects to audit the application of their plan for managing safety assurance, and

> to receive evidence that major projects have audited their safety assurance processes and, if necessary, taken corrective action.

4.2 Independent safety assessment

Major projects are complex undertakings, typically involving some or all of the following: multi-disciplinary activity, novel technology and safety critical engineering.

Assuring safe outcomes needs rigorous oversight of project safety processes. Independent safety assessment (ISA) represents good practice for such a review.

As a minimum, ONRSR expects:

> major projects to undertake an ISA that:
  - is appropriately independent from the project delivery organisation
  - is delivered against a documented ISA brief covering the project lifecycle
  - is delivered against a documented ISA plan
  - is resourced appropriately, relevant to the scale and complexity of the task
  - uses resources and subject matter experts with an appropriate mix of competence, qualifications and relevant experience for the project scope
  - produces documented reports containing remedial actions categorised by safety risk, and
  - concludes in a final report with a clear, unambiguous statement as to the assessor's opinion on the safety of the major project plus any limitations on the use of the assets
> major projects to support ONRSR's direct access to the ISA through open communication between the major project, ONRSR and the ISA, and
> major projects to consider how an ISA can support the assurance needs of the O&M RTO.

4.3 System safety

Robust processes need to be implemented to enable major projects to manage change safely.

Good practice dictates that effective risk-based system engineering and safety assurance processes should be implemented.

Such practices support safety risks being eliminated or reduced SFAIRP in the design phase and the continuity of achieving safety requirements throughout the project lifecycle.

Major projects often have the opportunity to control safety risk through elimination or the introduction of engineering controls in accordance with the hierarchy of controls. Further information on this topic is contained within the ONRSR Guideline: Meaning of Duty to Ensure Safety So Far As Is Reasonably Practicable.

As a minimum, the ONRSR expects:

> major projects to adopt good practice system engineering principles that are relevant to the nature of the change, for example:
  - safety requirements management
  - 'V-Model' principles
  - ISO/IEC 15288

- major projects to adopt good practice safety assurance principles that are relevant to the nature of the change, for example:
  - IEC 61508
  - ISO EN 50126/8/9
  - the *International Handbook for Engineering Safety Management* (iESM), and
  - the European Railway Agency's Common safety method on risk evaluation and assessment
- major projects to document all safety requirements and any associated conditions
- major projects to provide traceability from risk analysis to safety requirements to final verification and validation
- to receive the integrated safety risk register used by the major project
- major projects to consider elimination of safety risk and the adoption of engineering controls in accordance with the hierarchy of controls
- major projects to undertake verification and validation of all safety requirements
- major projects to document the basis of the safety change being implemented and its supporting justification, and
- major projects to demonstrate that residual risks have been appropriately transferred, assessed and controls implemented by the O&M RTO.

4.4 Quantitative safety limits

Quantitative safety limits sets a clear framework within which major projects can assess safety risk and understand those risks that are unacceptable, tolerable or broadly acceptable.

The use of such limits provides guidance as to the acceptability of risk, but fundamentally all safety risk must still be managed SFAIRP.

As a minimum, ONRSR expects:

- major projects to document the upper limit for individual or collective risks of equivalent fatality, and
- major projects to ensure documented limits are consistent with the relevant RTO's SMS.

4.5 Quantitative risk assessment techniques

The method of risk assessment needs to be appropriate to the nature of the hazard and the assessed risk.

Most risks encountered by major projects may be managed qualitatively, but some risks need the greater understanding that can be obtained from using quantitative risk assessment (QRA). There are a number of techniques that may be used, such as cause-consequence analysis, fault tree analysis, cost-benefit analysis etc.

As a minimum, ONRSR expects:

- major projects to document:
  - the decision factors to employ a QRA study
  - the processes to be used for undertaking a QRA study
  - the assumptions and data inputs to a quantitative analysis, and
  - the process for making safety critical decisions based on a QRA, including the acceptance criteria

> major projects to document key safety inputs:
  - the approach to gross disproportion
  - value for preventing a fatality / value of statistical life, and
  - values for weighted injuries.

4.6 Human factors integration

Human factor-related risks must be managed throughout the asset lifecycle.

Similar to all risks, the greatest opportunity to eliminate or minimise such risks occurs during the initial phases of a major project. Planning how a major project considers such risks is a critical step in delivering effective and safe outcomes.

As a minimum, ONRSR expects:

> major projects to prepare a human factors integration plan covering all phases of the asset lifecycle

> a human factors integration plan to consider cognitive ergonomics, for example:
  - human reliability analysis
  - human-system interface assessment
  - risk-based training needs assessment
  - consideration of normal and degraded operations, and

> major projects to manage and integrate human factors risks in the project safety risk register.

4.7 Standards

It is essential that all parties involved in a major project understand the safety requirements.

Documenting and communicating the relevant engineering and safety standards that will be adopted by the major project is an important early step in assuring safe outcomes.

As a minimum, ONRSR expects:

> major projects to document:
  - the operational, engineering and safety standards to be adopted
  - the process for managing any non-compliances to the identified standards along with appropriate justifications

> major projects to identify standards during the requirements definition phase, and

> major projects to ensure that standards used are able to be implemented across the full asset lifecycle, supported by early engagement with relevant manufacturers, operators and maintainers.

4.8 Level crossings

Level crossings are a key source of risk to safe operations along the railway corridor and remain the ongoing focus of industry initiatives to eliminate them or to manage safety risk at existing level crossings.

Major projects may have the opportunity to eliminate this risk or influence level crossing protection arrangements.

As a minimum, ONRSR expects:

> in greenfield locations, major projects not to introduce new level crossings to the railway corridor unless the introduction can be robustly demonstrated to manage safety risk SFAIRP, and

> in brownfield locations, major projects to demonstrate that, if level crossings are to remain or be constructed within the project scope, then the decision manages safety risk SFAIRP.

5 Feedback

ONRSR welcomes constructive feedback on the content of this guideline which will be used to share good practice across the Australian railway industry.

Comments can be submitted by email to contact@onrsr.com.au.

6 References

This guideline should be read in conjunction with the following ONRSR publications available at www.onrsr.com.au:

1. ONRSR Guideline: Meaning of Duty to Ensure Safety So Far As Is Reasonably Practicable
2. ONRSR Guideline: Safety Management System
3. The ONRSR Way

Attachment: Effective Control and Management for Major Projects

Refer to attached ONRSR Guideline Effective Control and Management for Major Projects (A1032907).

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ONRSR Guideline

Effective Control and Management for Major Projects

safe railways for Australia

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1 Purpose

To provide guidance to major railway projects as to the entity with effective control and management of railway operations.

This document is an attachment to the ONRSR Guideline: Major Projects.

2 Introduction

Effective control and management of rail infrastructure, or of the operation or movement of rolling stock, determines whether a person is a rail transport operator (RTO). The concept of effective control and management is fundamental to the *Rail Safety National Law* (RSNL) as it establishes whether a person is entitled to, and required to, seek and obtain accreditation.

This guideline considers contracting arrangements and provides a framework to identify who has effective control and management of:

> rail infrastructure

> the operation or movement of rolling stock.

3 Disclaimer

This guideline is a guide only and is intended to be read in conjunction with the legislation and relevant ONRSR policies. The guideline itself imposes no legal duty and where actions or requirements are described as mandatory these reflect requirements in the RSNL or *Rail Safety National Law National Regulations 2012*. It is not intended to replace the legislation or to limit or expand the scope of the legislation. In the event of an inconsistency between this guideline and the legislation, the legislation will prevail.

It is recommended that you obtain your own independent legal advice about the legislation or contact ONRSR for further information.

4 Abbreviations and Definitions

Item	Meaning
body corporate	anybody that has been incorporated and includes a private company, a public company, an incorporated association and a body deemed by statute to be a body corporate
NRSR	National Rail Safety Regulator
ONRSR	Office of the National Rail Safety Regulator
person	any legal entity, for example, an individual or a body corporate
RSNL	Rail Safety National Law
RTO	rail transport operator

5 Regulatory requirements

The RSNL specifies certain duties and obligations for officers, operators, and other relevant parties concerning the ongoing management and safety of rail infrastructure and rolling stock assets.

In assuring safe outcomes, ONRSR is looking for confidence that those delivering major projects are satisfying their RSNL obligations. Further information is contained in the ONRSR Guideline: Major Projects.

5.1 Meaning of 'so far as is reasonably practicable'

The following matters must be considered in determining what is reasonably practicable in relation to ensuring safety:

- the likelihood of the risk concerned eventuating
- the degree of harm that would result if the risk eventuated
- what the person concerned knows or ought reasonably to know, about the risk and any ways of eliminating or reducing the risk
- the availability and suitability of ways to eliminate or reduce the risk
- the cost of eliminating or reducing the risk, including whether the cost is grossly disproportionate to the risk *(RSNL s47)*.

What is reasonably practicable is always a judgment based on all the relevant facts of each case. In general unless the likelihood and degree of harm is disproportionately low compared to the costs and likely benefit of the measure, ONRSR expects RTOs to implement appropriate safety measures.

The term 'so far as is reasonably practicable' is explained in detail in the ONRSR Guideline: Meaning of Duty to Ensure Safety So Far As Is Reasonably Practicable.

5.2 Meaning of 'railway operations'

Under the RSNL, railway operations means:

- the construction of a railway, railway tracks and associated track structures or rolling stock;
- the construction of rolling stock
- the management, commissioning, maintenance, repair, modification, installation, operation or decommissioning of rail infrastructure;
- the commissioning, maintenance, repair, modification, or decommissioning of rolling stock;
- the operation or movement (or causing the operation or movement) by any means, of rolling stock on a railway (including for the purposes of construction or restoration of rail infrastructure);
- the movement, or causing the movement, of rolling stock for the purposes of operating a railway service;
- the scheduling, control and monitoring of rolling stock being operated or moved on rail infrastructure *(RSNL s4)*.

5.3 Prohibition on 'contracting out' legal obligations

A contract may include a term known as an 'exclusion clause'. There are three main types of exclusion clauses:

- Clauses which operate to exclude a person's rights and obligations which that person would otherwise possess under the legislation.
- Clauses which operate to limit (or restrict) the rights and obligations which that person would otherwise possess under the legislation.
- Clauses which operate to modify (or qualify) the rights and obligations which that person would otherwise possess under the legislation.

The practice of excluding, limiting or modifying a legal right or obligation by way of contract is generally referred to as 'contracting out' legal obligations. The RSNL imposes a prohibition on contracting out legal obligations and the use of exclusion clauses in regard to the provisions of the legislation *(RSNL s262)*.

Therefore, any person (including an RTO) who has an obligation under the RSNL cannot 'contract out' their obligations under the RSNL. This is different from contracting out railway operations, which is permissible.

The key result of the prohibition on contracting out legal obligations is that persons subject to the requirements of the RSNL remain bound to those exact requirements. This is the case irrespective of any express or implied contractual provision which provides otherwise. Accordingly, RTOs and others with duties under the RSNL cannot use exclusion clauses as a defence to any contravention of the RSNL.

It may be possible however for the RTO to recover compensation from a contractor it has engaged to complete work required to comply with the RSNL if that work does not satisfy the contract requirements or is performed negligently. RTOs would need to obtain their own legal advice about such matters.

Example

An RTO may wish to include and then rely on a term in a contract restricting the operator's duty to establish a safety management system for railway operations which the other party to the contract will carry out on the operator's behalf. In this case the prohibition on contracting out would render that particular term void and ineffectual.

RTOs consequently remain responsible for the safety of their railway operations and their other obligations under the RSNL. These responsibilities (and their inherent risks) cannot be limited or transferred to other parties by contractual terms, either expressly or implied.

It is important to note that the prohibition will operate in all cases. That is, there can be no conditions or exceptions. Accordingly, a person may not be able to argue that a contractual exclusion of, or limitation on, a provision of the legislation was fair and reasonable, or otherwise acceptable, in the circumstances.

5.4 Contractors

In addition to general duties, the legislation imposes other obligations on RTOs and contractors. These include requirements for:

- Persons other than RTOs (i.e. contractors) carrying out railway operations to only carry out those operations if they are doing so "for and on behalf of" an RTO that is accredited in relation to those operations or exempt from accreditation *(RSNL s62)*.
- Contractors to comply with the safety management system of the RTO to the extent that it applies to the railway operations carried out by the contractor *(RSNL s119)*.

6 Determining who has effective control and management

Which party has the effective control and management is a question of fact, to be considered on a case by case basis. In most common operational situations on the railway, it will be evident who has effective control and management of the relevant railway infrastructure, or the operation or movement of rolling stock. However, in some situations it may be more difficult to determine who has effective control and management.

In cases where the same person owns, operates, maintains and manages rail infrastructure, then that person is the one who has effective control and management of the rail infrastructure. Similarly, where one person operates rolling stock that person has the effective control and management of the operation or movement of the rolling stock.

However, more complex ownership and operating structures for rail infrastructure and rolling stock exist. In these circumstances it may be less clear who has effective control and management and, in such cases, more than one person may have effective control and management. Ownership and fiscal accountabilities do not always point to effective control and management in every case.

Different considerations may apply depending on whether the effective control and management relates to the operation or movement of rolling stock, or to the management of rail infrastructure.

The following sections outline some principles which may assist in determining the person with effective control and management.

6.1 Principle: influence or direct

Generally the RSNL will look to the party that has the greatest ability to "influence or direct" the particular activity at the operational level.

In the case of a rail infrastructure manager, the party with effective control and management will have the ability to influence or direct railway operations relating to the state or condition of the rail infrastructure.

In the case of a rolling stock operator, the party with effective control and management will have the ability to influence or direct the operation or movement of rolling stock.

The capacity to "influence or direct" the operation or movement of rolling stock, or the management of rail infrastructure may in some circumstances rest with the owner of the relevant asset or in other cases be transferred to another contracted party. The nature of the contract should determine whether or not the contracted party influences or directs the relevant railway operation or whether this remains with the principal.

6.2 Principle: ownership

The RSNL contemplates that the person who has effective control and management of rail infrastructure (and therefore is the rail infrastructure manager) may not be the owner of the rail infrastructure. Two examples are included here:

Example 1: Rail infrastructure is leased to another party

Rail infrastructure is leased by an owner to another party and the lessee has "effective control and management" over the rail infrastructure. In this circumstance, it may be necessary for the NRSR to look beyond the general nature of the relationship between the parties and look to the precise terms of the lease to determine the extent to which (if at all) the owner of the infrastructure reserves for itself some residual right to direct or control railway operations involving or relating to the rail infrastructure. For example, it is possible that the lease may reserve for the owner a right to audit the decisions and/or activities of the lessee from time to time and to direct remedial action by the lessee where, in the owner's opinion, the audit reveals some deficiency.

It is likely that the NRSR would need to consider the precise implications of the arrangement. If, in these circumstances, the owner can direct the precise remedial action required (which may include behavioural change) by the lessee, or if there is the possibility of direct intervention by the owner, this may be considered to be limited "effective control and management".

Example 2: Operations and maintenance are contracted to another party

The owner of rail infrastructure contracts out operation and maintenance of the rail infrastructure to a service provider – in some cases through traditional principal and agent structures and in others through an 'alliance' contract model. A comparison of agent/ principal and alliance contract models is discussed in section 6.3.

It is possible that both the owner and the contractor will exert some degree of effective control and management, depending on:

> the precise arrangements between the parties in these relationships

> the degree of autonomy given to the lessee, contractor or alliance contractor

> involvement of the owner or principal in the day to day running of the railway operations

> the ability of the owner or principal to take over, step-in or direct the way in which railway operations are carried out

> governance arrangements, including veto rights of the owner or principal

> other factors.

6.3 Principle: multiple parties

In practice, situations will arise where it is not factually possible to distinguish, between two or more parties, who has effective control and management.

In determining who has the effective control and management, the basic principle is that it is a question of fact and always depends on the circumstances of a particular accreditation assessment.

In some situations, the NRSR may determine that more than one party to the arrangement must be accredited, albeit for different railway operations for the same rail infrastructure or rolling stock.

Alliance arrangements

An alliance is one example of an arrangement where more than one party to the arrangement may need to be accredited.

In a traditional principal-contractor relationship, the principal does not retain a right of control over the way in which the contractor works. That is, although the contractor is entrusted with the task of procuring a particular result, the means by which that result is to be realised are left to the judgment of the contractor. The principal does not generally interfere with the process whereby any necessary works are carried out.

Conversely, in an alliance, the person who engages the contractor may assume a significant degree of control over the way in which the contractor carries out the works and procures the intended outcome. Often, the essence of the relationship is that the parties assume a level of responsibility which may be a joint or proportional level of control.

In an alliance, although the principal may not actually exercise day-to-day control over operations, ONRSR will need to consider whether the principal reserves for itself the right to do so (for example, by way of step-in rights which may be personally exercised by a principal in the event of a contractor's default).

ONRSR may consider more than one party to the alliance to be the rail infrastructure manager and require all parties who are considered rail infrastructure managers under the arrangement to be accredited.

6.4 Practical Considerations

Determining who has effective control and management is a question of fact and always depends on the circumstances of a particular arrangement. As discussed in section 6.1, ONRSR will be guided by a consideration of which party has the greatest ability to influence and direct the relevant railway operation (i.e. the management of rail infrastructure, or the operation or movement of rolling stock).

The capacity to influence or direct the relevant railway operations is most prevalent in the person who prescribes or defines:

> the standards to be applied to the relevant railway operation

> the specifications for the performance of the relevant railway operations

> the quality that will be accepted for the railway operations.

These matters are considered in more detail in the diagrams below in the context of a rail infrastructure manager and a rolling stock operator. Example scenarios are presented to assist in consideration of who has effective control and management of railway infrastructure or the operation or movement of rolling stock.

Rail Infrastructure

Key considerations in determining who has effective control and management include:

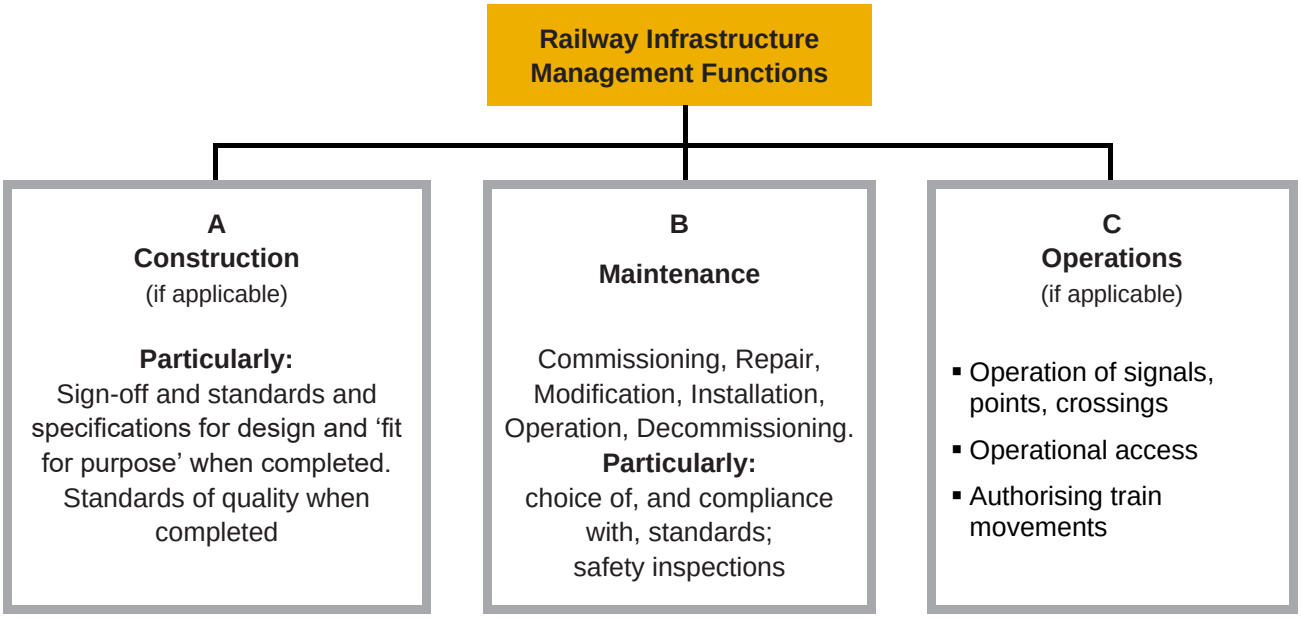
> Effective control and management normally means that there will only be one rail infrastructure manager for a railway, although in some circumstances there may be more than one (such as an alliance scenario).

> The owner is normally the rail infrastructure manager, unless the rail infrastructure management functions are contracted out.

> If A, B and C in the diagram below are contracted out to another party the owner is probably not the rail infrastructure manager.

> If one or more of A, B and C are not contracted out to another party, then either:

- the owner remains the rail infrastructure manager, or
- more often than not, the party who exercises the operations functions in C is the rail infrastructure manager.



Rolling Stock

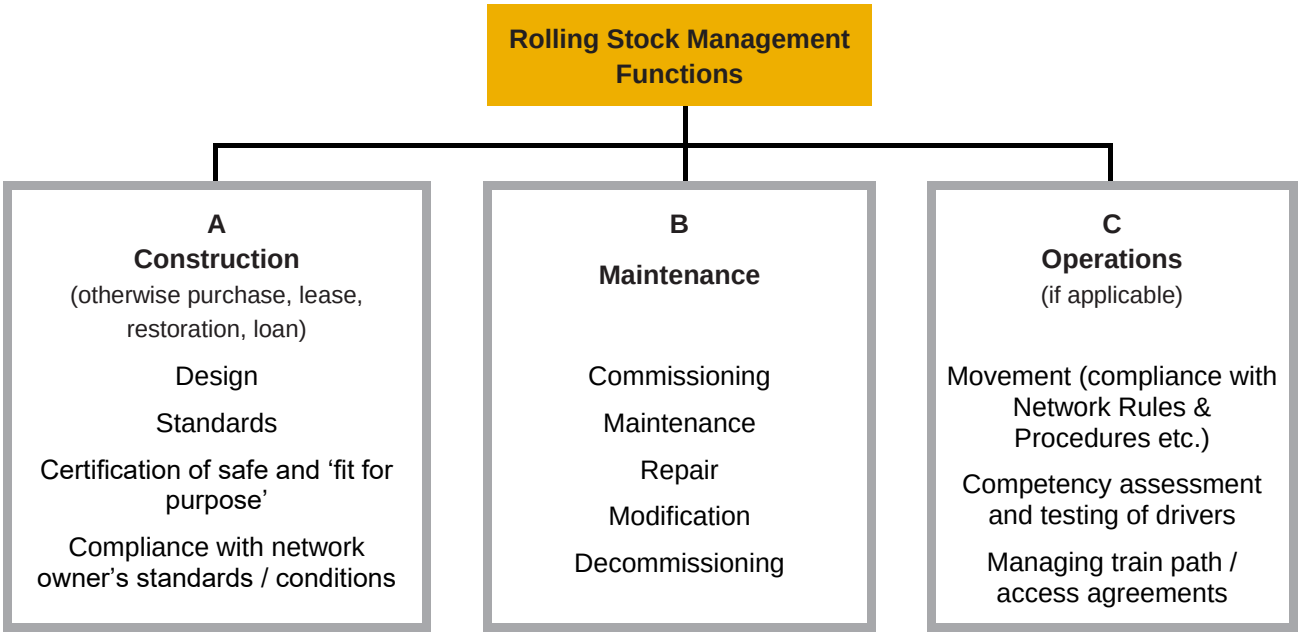
Key considerations in determining who has effective control and management include:

> Effective control and management implies that there can only be one rolling stock operator for the operation or movement of rolling stock.

> The rolling stock operator may be the person who has the access agreement with the relevant rail infrastructure manager or under whose safety management system the operation or movement of rolling stock is carried out. Other factors to consider include which party books the train path, and which party employs or hires the train crew.

> In the diagram below it is the activities in C, and who carries out those activities, that will be the relevant factor in determining whether or not the person is a rolling stock operator. More often than not, the party who exercises the operations functions in C is the rolling stock operator and will require accreditation.

> If one or more of the activities in A or B involve the incidental operation or movement of rolling stock (for example for testing purposes) then the person having the capacity to direct and influence these operations will also require accreditation in their own right.



7 Contracting arrangements and obligations

7.1 Meeting the accreditation requirements

To comply with the legislative requirements relating to accreditation, ONRSR recommends that:

> the principal (i.e. the party tendering the contract) and the prospective contractor actively consider, before entering into the contract, which party will be the RTO in relation to the relevant railway operations.

In considering accreditation requirements, ONRSR recommends that the following matters are taken into account:

> the scope of railway operations which will need to be undertaken to carry out the contract

> which party is carrying out, causing or permitting to be carried out those railway operations

> in relation to those railway operations, which party has "effective control and management" of the rail infrastructure or rolling stock operations

> whether any parties to the contract are already accredited (or exempt) in relation to those railway operations.

The RTO must be accredited (or exempt) from accreditation in respect of the relevant railway operations before carrying out those railway operations. Where an RTO proposes to undertake new or altered railway operations which are not covered by its existing accreditation, it will need to apply for and be granted a variation of accreditation before undertaking the railway operations.

7.2 Identifying the scope and nature of railway operations

In planning to engage contractors to carry out railway operations, ONRSR recommends that:

> the principal identifies the scope and nature (i.e. type) of railway operations to be carried out under the contract

> the principal and contractor consider the need for accreditation for ancillary railway operations, e.g. the movement of track vehicles for the purpose of carrying out rail infrastructure maintenance.

The RSNL sets out the purposes for which accreditation may be granted *(RSNL s63)*. If the RTO for the specific railway operations is already accredited (or exempt) from accreditation, their existing notice of accreditation (or exemption) may be reviewed to determine whether the railway operations to be carried out fit within this accreditation (or exemption).

7.3 Establishing who has effective control and management

In planning to engage contractors to carry out railway operations, ONRSR recommends that:

> the principal identifies whether the principal or the contractor will be considered to be the RTO in relation to the specific railway operations.

The key question here is: which party has the effective control and management? Section 6 sets out the factors that a principal and contractor should consider when establishing the roles and responsibilities of each party.

In relation to worksites it is necessary to distinguish between contractors having control over a worksite for the purposes of carrying out discrete construction or maintenance work on railway infrastructure from the person that has the overall control and management responsibility for the whole of the railway infrastructure. It is unlikely that contractors carrying out such work will be regarded as having “effective control and management” over rail infrastructure as this will only be temporal. They are not the party that defines or prescribes the above matters in relation to the particular rail infrastructure or rolling stock.

Generally, in the case of rail infrastructure, the following may be indicators of effective control and management in a contracting arrangement:

> The owner or lessee is likely to have effective control and management if functions such as construction, maintenance and operations have not been contracted out.

> If all functions such as construction, maintenance and operations have been contracted out to a single party, that party is likely to have effective control and management.

> If functions such as construction, maintenance and operations are contracted out to more than one party then the contractor exercising the operations functions or the owner may have effective control and management.

Generally, in the case of the operation or movement of rolling stock, the following may be indicators of effective control and management in a contracting arrangement:

> The party that has:
  - the access agreement with the relevant rail infrastructure manager, or
  - the safety management system under which the operation and movement of rolling stock is carried out.

> The party that assesses and checks drivers' competency and training requirements.

It is suggested that, in the first instance, the relevant parties should consider which of them has effective control and management and, therefore, ought to be accredited. Following this, the parties may wish to contact ONRSR for advice.

7.4 Documenting which party is to be accredited

ONRSR expects to see evidence that the accredited person for railway operations under and ancillary to a contract has been identified. ONRSR recommends that the following is documented:

> The railway operations to be carried out under the contract and any ancillary railway operations.

> Identification of under whose accreditation the railway operations will be carried out.

> If works are carried out under the contractor's accreditation, evidence that the principal has obtained a copy of the contractor's notice of accreditation and has reviewed it.

> If works are carried out under the principal's accreditation, evidence that the contractor has obtained a copy of the principal's notice of accreditation and has reviewed it.

> Processes for the review of accreditation requirements if the railway operations to be carried out under the contract or ancillary to the contract change during the course of the contract.

8 Contractors and safety management systems

The RSNL requires a contractor carrying out railway operations for an RTO to comply with the operator's safety management system to the extent that it applies to the contractor's railway operations *(RSNL s119)*. Options for complying with this obligation may include:

1. The RTO sets safety and operational outcomes, and the contractor is required to demonstrate that it has systems to meet these outcomes through the tendering and/or contracting process (i.e. the RTO amends its safety management system to incorporate the contractor's systems);
2. The RTO sets out the systems by which a contractor must carry out the railway operations (i.e. the contractor applies the RTO's existing safety management system to the extent that it applies to the contractor's railway operations).
3. A combination of options 1 and 2.

An RTO, before establishing or reviewing or varying its safety management system, is obliged to consult, so far as is reasonably practicable, with:

> any person likely to be affected by the safety management system, or its review or variation, being persons who carry out those railway operations or work on or at the operator's railway premises or with the operator's rolling stock;

> health and safety representatives and applicable unions;

> any other RTO with whom there is an interface; and

> the public, as appropriate *(RSNL s99(3))*.

ONRSR recommends that the RTO and contractor agree the safety management system arrangements through the contract formation process and that these arrangements are specified in the contract documentation.

8.1 Incorporating a contractor's systems

The following steps may be taken to incorporate a contractor's systems into the RTO's safety management system:

> RTO sets safety and operational outcomes.

> RTO develops list of railway operations to be undertaken under contract and conducts risk assessment.

> RTO reviews contractor's systems against railway operations, safety and operational outcomes and its safety management system to identify any inconsistencies or issues.

> Contractor amends systems to meet railway operations, safety and operational outcomes and address inconsistencies or issues if necessary.

> RTO amends the safety management system to address any inconsistencies or issues if necessary.

> RTO references contractor's systems in its safety management system.

> The safety management system arrangements are documented.

8.2 Applying an RTO's safety management system

The following steps may be taken to apply an RTO's existing safety management system to a contractor:

> RTO develops a list of railway operations to be undertaken under contract and conducts a risk assessment.

> RTO reviews its safety management system to identify and assess the parts of the safety management system relevant to the railway operations to be undertaken under the contract.

> RTO amends its safety management system if necessary, to reflect railway operations to be undertaken under contract.

> Contractor reviews relevant parts of the RTO's safety management system to identify any issues.

> RTO amends the safety management system to address issues if necessary.

> The safety management system arrangements are documented.

8.3 Documenting the safety management system arrangements

RTOs and contractors must be able to provide evidence that they have considered and agreed the safety management system arrangements that are to apply to railway operations to be undertaken.

As part of the safety management system, an RTO must, if relevant to the railway operations for which it is accredited, have systems and procedures:

> for the review of tender documents and contracts to ensure that safety requirements under the RTO's safety management system are adequately defined and documented;

> to ensure that the terms of any tender documents or contracts do not lead to unsafe work or an activity that may affect the safety of railway operations;

> for the selection and control of contractors and to ensure the monitoring and performance of contractors, including conducting or commissioning audits of the contractor's performance in relation to the safety aspects of the contract;

> to ensure that safety duties under the law are being met under contracts, and procedures for the taking of remedial action where necessary; and

> to ensure that goods and services provided to the railway operations meet the standards and specifications required for the safety of the railway operations *(RSNL Reg Sch1.18)*.

A safety management system must identify and assess any risks to safety arising from railway operations carried out on or in relation to the RTO's rail infrastructure or rolling stock, and specify controls to manage those risks.

A safety management system is required to cover elements that are relevant to the railway operations for which the RTO is accredited, and the level of detail in the safety management system must reflect the scope, nature and risks to safety of the railway operations *(RSNL Reg16)*.

ONRSR expects to see a compliant safety management system with a level of detail that is appropriate to the scope, nature and risks to safety of the railway operations and the need to comply with general duties *(RSNL Reg16)*.

The ONRSR Guideline: Safety Management System provides more detailed guidance on the requirements for a safety management system.

9 References

This guideline should be read in conjunction with the following ONRSR publications available at www.onrsr.com.au:

- ONRSR Guideline: Major Projects
- ONRSR Guideline: Safety Management System
- ONRSR Guideline: Meaning of Duty to Ensure Safety So Far As is Reasonably Practicable.
- The ONRSR Way