



Rethinking safety through
INCLUSION
+
WELLBEING

RAIL

ELEMENT 19A

20/10/2023

ASSET MANAGEMENT OF ROLLING STOCK

PURPOSE AND SCOPE

The purpose of this Procedure is to advise Laing O'Rourke personnel involved in the management of rolling stock of the processes to be applied during the period the rolling stock is owned or leased by Laing O'Rourke.

This Procedure applies to all items of rolling stock owned or leased by Laing O'Rourke for the railway operations they will be engaged in across Australia.

While the asset management process will be generic across the country, there may be specific requirements set by the Rail Safety National Law (RSNL) and/or Work Health and Safety Regulators. There may also be specific requirements set by the respective Rail Infrastructure Manager that could impact on the generic process developed.

Should other legislative criteria or higher standards apply, that requirement will take preference over any generic issue contained in this Procedure and will be contained in the respective Project / Select Rail Safety Management Plan.

1.0 PROCEDURES

Laing O'Rourke, as an accredited Rolling Stock Operator, is required in terms of its accreditation and as part of its rail safety management system, to have an asset management policy and program in place for the rolling stock they are responsible for. The procurement and management of rolling stock must be managed in a formal process from the time an item of rolling stock or plant is identified as being required through to the disposal itself. (Refer to **Element 16A Procurement of Rolling Stock** and **Element 17D Decommissioning and Disposal of Rolling Stock**.)

There is a requirement throughout the period in which an item of rolling stock is owned or leased by Laing O'Rourke, for the item to be monitored, repaired, and maintained so the item meets the safety standards applicable to the item of rolling stock (see **Element 17B Monitoring, Maintenance and Repair of Rolling Stock**).

This includes periods when the item is being operated at worksites.

Construction, operation, maintenance, and improvement work on Laing O'Rourke's rolling stock is to be performed by authorised and competent personnel in accordance with approved design, inspection and testing, repair and renewal procedures.

The following are the systems to be applied to the rolling stock owned or leased by Laing O'Rourke to ensure, SFAIRP, that the assets are managed in a coordinated manner. All processes associated with the management of rolling stock must be analysed using the Laing O'Rourke risk management process (**Element 14 Risk Management for Railway Operations**).

2.0 INTRODUCTION

Asset management is defined as a systematic process of effectively maintaining, upgrading and operating assets; combining engineering principles with sound business practice and economic rationale; and providing the tools to facilitate a more organised and flexible approach to making decisions necessary to achieve the company's expectations.

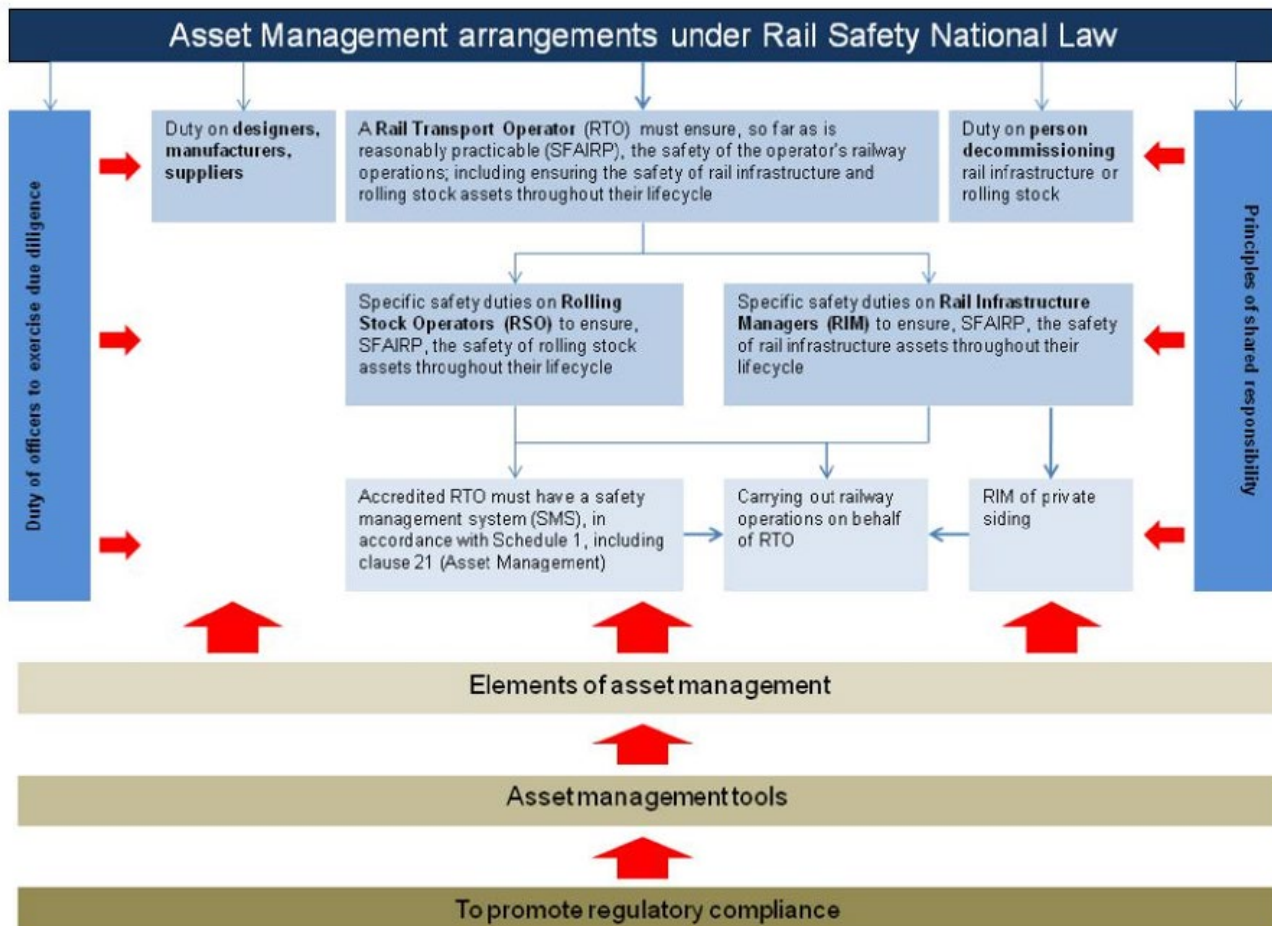


Figure 1 Asset Management Life Cycle

Rolling stock asset management means managing the rolling stock through all phases of its life cycle. This is to satisfy the requirements of Laing O'Rourke and other users at the lowest possible cost over a long period of time.

The asset lifecycle covers:

- Policy – A copy of the Laing O'Rourke Rolling Stock Asset Management Policy is displayed at Select Depots
- Design – not linked to Laing O'Rourke's accreditation criteria. Undertaken by others
- Construction and implementation – not linked to Laing O'Rourke's accreditation criteria; undertaken by others
- **Element 17A Commissioning of Rolling Stock**
- **Element 17B Monitoring, Maintenance and Repair of Rolling Stock**
- **Element 17C Modification of Rolling Stock**
- **Element 17I Operating Rolling Stock**
- **Element 17D Decommissioning and Disposal of Rolling Stock**



The main streams in asset management are:

- identification of the need for the asset, considering company requirements
- development of an asset management plan
- accountability of Select and line managers for all asset safety requirements
- provision of the asset, including its ongoing maintenance and repair to suit continuing needs – it is necessary to define the serviceability standards
- operation of the asset – it is necessary to define the operational standards
- disposal of the asset when the need no longer exists, or it is no longer appropriate for the asset to be retained
- Records are maintained and kept in the Asset management system.

This Procedure links to the stand-alone Procedures i.e. Procurement of Rolling Stock, Commissioning of Rolling Stock etc. relating to the separate asset lifecycle stages which are contained in other Engineering and Operational Systems Procedures.

3.0 CONCEPT

The concept stage is managed through the **Element 16A Procurement of Rolling Stock** As a minimum, the following will be considered:

- Completion of a feasibility study which needs to include:
- A determination of the requirements for any new and/or modified assets and consult on them with relevant stakeholders
- Manage the risks associated with implementing such changes, in line with the HSEME and **Element 11 Management of Change (MoC)** process
- Manage the risks associated with asset procurement and contract management
- Approval from Rail Operations and Select and where necessary the Laing O'Rourke Board
- Capital/Asset Expenditure (CAPEX) approval by way of iGMS **CAPEX Fixed Assets – Purchase, Transfer, Disposal and Depreciation Procedure** (LOR Access Only).
- Approval of suitable supplier/suppliers
- Proposal specification

4.0 DESIGN

Design is managed in accordance with the **Element 17F Design Management of Rolling Stock**.

5.0 COMMISSIONING

- Prior to the use of new or significantly altered plant, commissioning must be completed appropriate to the intended use, standards and alterations made.
- For new plant this will be defined in the Inspection and Test Plan as defined by Select or by a competent person.
- For existing plant that has been significantly altered, this will be defined by Select or by a competent person.
- The commissioning process is completed by the relevant Select representative as defined in **Element 17A Commissioning of Rolling Stock**.



6.0 MAINTENANCE, SERVICING AND REPAIRS

Maintenance, servicing and repairs of plant can present additional risks to personnel. For example, personnel may be required to:

- Work on remote-controlled plant i.e. PEM / LEMS
- Test the operation of guards, remove guards or render guards ineffective
- Force control device inputs or outputs
- Perform adjustments or measurements in proximity to hazards (moving parts, pressure, and electricity)
- **All plant is to be maintained, serviced and cleaned in line with the Asset Management system.** The processes developed by Laing O'Rourke have incorporated the requirements set out in the RISSB rolling stock standards as well as those of other network owners and operators.
- **Where maintenance is performed in-house, Select is responsible for ensuring the plant is maintained.** They must ensure that in-house maintenance is compliant with the Asset Management System as specified for the respective item and any relevant plant registration constraints/instructions.
- **Maintenance must only be performed by competent Select personnel** or their authorised agents. Personnel are deemed competent if they have met the criteria under the respective units of competence determined by the Australian Qualification Framework or recognition of prior learning.
- **Plant is to be isolated before maintenance, service or cleaning commences.** Where plant is isolated and any total or partial shutdown results, this must be managed to prevent hazardous situations being created.
- **Where plant cannot be isolated,** alternative means of preventing accidental operation are to be implemented and work is to be conducted under controlled procedures such as a permit to work system. This must be clearly defined in the relevant SWMS.
- Plant-specific controls relate to the risks arising from the plant or the interaction between the plant and the environment in which it is located. They may be integrated with or form part of other risk management tools. The specific controls for maintenance are set out in:
 - The manufacturers' and designers' documents, including handbooks, specifications, manuals and guidance material for operation and maintenance
 - assets are operated and maintained in accordance with the relevant manuals
 - the condition of the assets is monitored
 - equipment needed to test or inspect assets is appropriately controlled, calibrated, and maintained
 - any risks associated with operating and maintaining the assets are being managed in accordance with Laing O'Rourke's HSEMS, Asset Management strategy, risk management processes
 - all workplace health and safety (WHS) laws.

6.1 ASSET MAINTENANCE

Asset maintenance processes applied by Laing O'Rourke must:

- Address competency, capacity, and resource requirements
- Provide for information management and record keeping needs
- Deliver detailed plans that have been established through a risk-based process
- Ensure calibration of the tools and equipment that will be used for maintenance.



6.2 PLANNING OF THE MAINTENANCE AND OPERATIONAL NEEDS

Planning of the maintenance and operational needs should be documented and controlled in a computer maintenance management system and discussed at regular meetings with the operational people.

The process Laing O'Rourke has adopted ensures that:

- maintenance is delivered to schedule
- work instructions are available for all safety critical activities
- all tasks are signed-off for compliance
- documentation about maintenance carried out is controlled
- Competent and trained maintenance personnel are utilised for maintenance and repair of all safety critical systems.

6.3 MAINTENANCE COMPLETED BY AN EXTERNAL SUPPLIER

Where maintenance is completed by an external supplier, they must be approved in line with Selects approval of suppliers.

In order for Laing O'Rourke to monitor the effectiveness of its asset maintenance program it is necessary for key stakeholders to:

- understand the performance of their safety critical assets by identifying what needs to be monitored, measured, and reported
- establish and record the method and frequency of monitoring, measurement, analysis, and evaluation of the performance of safety critical assets
- monitor trending performance against the predicted strategic life of an asset
- report on performance issues based on the level of safety risk and escalate high-risk performance issues so that they are adequately addressed
- establish channels to communicate any results
- improve the conformance of safety critical assets with nominated standards by:
 - reviewing operational and maintenance controls, and assessing the risk of assets not meeting the predetermined standards
 - identifying the root cause(s) of safety performance issues
 - identifying actions that might be needed for recovery to safe operating conditions
- improve the SMS continuously by identifying potential risks and taking corrective action
- document where opportunities have been taken to reduce or eliminate risk and how this was achieved.

The relevant information is contained in **Element 17B Monitoring, Maintenance and Repair of Rolling Stock** and results of inspections are to be recorded on the **Track- Bound Plant Compliance and Annual Inspection Checklist**. Road Rail Vehicles will have their annual inspections recorded on **RRV Commissioning and Annual Checklist**.

6.4 REPAIR

Before any repairs are undertaken on plant, personnel are to make sure the plant is isolated and in a safe condition for the work to commence. Repairs are to be undertaken by competent personnel only, and are to be carried out:

- In line with the Asset Management System
- In accordance with relevant RISSB Standards
- In accordance with the systems developed by Laing O'Rourke for the management of the rolling stock.



7.0 TRENDING PERFORMANCE AGAINST PREDICTED STRATEGIC LIFE OF ASSET.

The asset life is initially dictated by the finance policies which are referenced within the CAPEX procedure. Management reports are produced to monitor and review the commercial and operational performance of the asset against the financial maintenance and revenue budgets that have been set. These reviews are based on annual performance.

Before reaching the initial financial life expectancy, the asset is reviewed to determine whether it remains in the fleet. The determination is based on the commercial and operational performance of the asset.

8.0 MODIFICATION

Modification is managed in accordance with the **Element 17C Modification of Rolling Stock** and through the application of **Element 11 Management of Change (MoC)**.

Modifications of plant may result in the modifier assuming the obligations of a designer or manufacturer. In the case of plant that requires design registration any modifications may require a new plant design registration certificate to be issued by the respective WHS Regulator.

Modifications that require a change in design registration include all those that affect the safety of the plant, including changes such as:

- Alteration of running speed
- Changes that affect the stability, reach, capacity, working load limit
- Changes to drive systems
- Relocation of fixed plant to new premises

For any modifications the Select Depot is to contact the Select Rail Plant Manager prior to commencement.

Before undertaking modifications, the modifier is to consult with the manufacturer or relevant design authority to ensure all safety issues have been considered. If the original manufacturer cannot be contacted the modifications are to be designed and fitted by a competent person.

A person modifying the design of plant fulfils the roles of the designer of plant, under WHS legislation which requires relative risk assessments to be undertaken.

Modification to plant is to be carried out:

- As recommended by the manufacturer or in other documented procedures
- In accordance with relevant Standards
- By an appropriately qualified person

Before being returned to service after maintenance, service, cleaning, repair or modification plant must:

- Have control measures in place to prevent or reduce risks SFAIRP
- Have all forms of guarding replaced.
- Be inspected and tested having regard to the modified design specifications and relevant RISSB Standards
- Be resubmitted for design registration (where applicable)
- Have a pre-mobilisation checklist completed by the person to confirm the item is again fit for use



9.0 OPERATION

When the rolling stock is ready for operation, the following must be adhered to:

9.1 TRAINING

Operators must complete the necessary training and be deemed competent to operate the plant prior to use. They must hold the relevant unit of competence aligned to the Australian Qualification Framework for the overall operation of the item of rolling stock.

In addition to the evidence that they hold this unit of competence as well as any other national competency for other specific tasks associated with the operations undertaken, they must also have undertaken and successfully passed any assessment criteria for the specific item of rolling stock. Where this is not linked to a national unit of competence the training and assessment can be undertaken by a suitably qualified trainer and assessor who holds relevant qualifications and has or seeks from an employee, knowledge in relation to the operation of the specific item of rolling stock.

In addition to the above, there are registration requirements set by the rail infrastructure manager of the railway on which the rolling stock is to operate that Laing O'Rourke will need to attain prior to operating on that network.

9.2 PREPARATION PRIOR TO USE

An assigned Select representative is responsible for preparing the rolling stock for operation and for checking that it is in a safe condition and compliant with all rules and procedures for its operation.

A Pre-Mobilisation checklist specific to the item of rolling stock must be completed by the Plant Assessor or competent person and sent with the item to the site where it will be received by the site representative / operator and signed off.

9.3 USE

The operator of the machine must ensure that the plant is only used in accordance with the documented method statement and manufacturers operating instructions and in accordance with the appropriate safe working systems applied to the particular railway network.

The operator of rolling stock is to perform a pre-start check of the rolling stock prior to use each shift. Results of inspections are to be recorded in an asset specific Pre-start Book or system.

The completed pre-starts sheets are to be handed in to the relevant plant maintenance supervisor at the end of each week.

10.0 INSPECTION AND AUDIT OF PLANT

10.1 INSPECTIONS

ROLES	RESPONSIBILITIES
LINE MANAGERS	<ul style="list-style-type: none"> Laing O'Rourke are to present the respective item of rolling stock for inspection, repair, maintenance or modification as required, to ensure SFAIRP that plant and equipment is inspected and serviced according to the determined schedule.
OPERATOR	<ul style="list-style-type: none"> If a defect is identified, the Operator is to comply with the Laing O'Rourke processes for the management of defective equipment and notify Select / asset owner in accordance with the process. If an item of rolling stock malfunctions, it is to be stopped where appropriate in a safe place or have other safety controls applied and be inspected by a competent person. Any faults that pose a potential safety hazard are to be rectified before the plant is operated again. The rolling stock may only be used or operated if the Select representative responsible for maintenance arranges the repair or replacement or deems that the safe operation or use of the rolling stock is not affected.



Inspection of items of rolling stock is to be recorded and will form part of a general inspection and audit process of the work site.

Inspection can identify:

- Potential problems that were not anticipated during plant design or task analysis
- Deficiencies in plant associated with its use such as excessive wear and tear, corrosion, and damage to plant
- Damage caused by incorrect operation or incorrect use of plant
- Adverse effects of changes in processes
- Inadequacies in control measures

Regular monitoring and review is required to maintain rolling stock to applicable standards of operational safety and quality. This is achieved by:

- Pre-mobilisation checks
- Pre-start checks
- Scheduled inspections
- Scheduled calibration
- Machine history recording and reporting
- Condition monitoring
- Rolling Stock Inspection and test plans

10.2 AUDITS

Audits of rolling stock operations including commissioning, maintenance and repair, modification, operation and decommissioning processes are to be undertaken by suitably qualified auditors. They must examine and verify from records kept that the processes developed have been conducted effectively and that all rail safety obligations are being met.

The Scope of the audit could include, but are not limited to:

- Accident records and investigation reports
- Past audit reports
- Past inspection reports
- Rolling stock checklist for Tampers and Regulators
- Pre-mobilisation checklists for other items of rolling stock
- Operators pre-start checklists
- Maintenance requests
- Past maintenance and servicing reports
- Repair records
- Training records and qualifications for Select and project personnel
- Risk assessments
- Communication between representatives involved with the use of rolling stock
- Shutdown/emergency procedures

Audits should include discussions with employees regarding the implementation of work processes, risk management and control measures, training, audit and investigation procedures that are required to be implemented.



11.0 SALE OR TRANSFER

Where rolling stock is sold or transferred Select is to make sure that risks arising from the condition of the rolling stock are eliminated. If this is not reasonably practicable, they must be controlled in accordance with the hierarchy of control SFAIRP. This must be done by means of a risk assessment.

Where used items of rolling stock (other than for use as scrap or as spare parts for other items) is sold or transferred, Select is to advise the purchaser or intended owner of the item of any faults detected and, if appropriate, that the item is not to be used until the faults are rectified.

All available information such as logbooks, records of tests/inspections, manufacturers' instructions are to be made available to the new owner as well as a risk assessment outlining the risks associated with the item being scrapped.

Where items of rolling stock are sold as scrap the purchaser is to be advised it is only sold to them as scrap. The asset owner must obtain a destruction certificate from the purchaser.

Where items are withdrawn from service in preparation for sale or disposal, they shall be secured in such a way that no unauthorized use of the item can be achieved.

12.0 DOCUMENTATION

Persons involved in the commissioning, installation, use and testing, de-commissioning, dismantling and disposal of rolling stock are to be supplied with all available information concerning the safety of the rolling stock.

All relevant information on emergency procedures relating to rolling stock is to be displayed where it can be readily seen by persons who may be exposed to risks arising from the operation of the rolling stock.

13.0 TRAINING AND INSTRUCTION

Personnel required to implement the requirements of this procedure must be trained in the use of the checklists, forms and associated risk management techniques. Personnel required to follow the systems of work developed by the implementation of this procedure must be instructed in the relevant systems of work.

Line Managers, including those from Select, must ensure personnel and subcontractors are competent to use and /or maintain / repair the item of rolling stock, and, where necessary, hold the required competencies. Where rolling stock is to be operated on a particular railway, the operator must hold the relevant competencies for the respective railway.

Employees who are likely to be exposed to risks associated with the rolling stock operations, and anyone supervising these employees must be trained and provided with information and instruction on:

- The nature of the hazards and risks associated with the rolling stock and systems of work
- The need for, and correct use and maintenance of control measures
- Operation of rolling stock and the procedures for safe use of the rolling stock
- The use, fit, testing, maintenance and storage of any personal protective equipment required
- Emergency procedures in case of a malfunction or other incident
- The location of information relating to the safe use of the rolling stock

14.0 LEGISLATION, GUIDES, STANDARDS and POLICY

- Rail Safety National Law
- ONRSR Guideline Preparation of a Safety Management System
- ONRSR Guideline Asset Management
- ONRSR Guideline Asset Management
- RISSB Rolling stock Standards
- AS-7472 2018 Railway operations management of change
- Laing O'Rourke Rolling Stock Asset Management Policy – Australia Hub



15.0 FORMS, TEMPLATES AND RECORDS

The following Records will be retained / produced in accordance with this Procedure:

- Manufacturers standards and specifications
- Plant design registration information
- Final and approved design drawings and calculations
- Relevant data from commissioning
- Compliance statements and/or test certificates
- Risk analysis carried out on the item of rolling stock
- Registration documents relating to the RIM's registration criteria
- The unique plant or equipment identification number
- Pre-mobilisation checklists
 - RRV Pre-mobilisation checklist
 - Track Bound Pre-Mobilisation Checklist
- Pre- start checklists
 - Hi-Rail Vehicle Prestart Checklist
 - Hi-Rail Excavator Pre-start checklist
- Maintenance Requests
- Maintenance records and service logs
- The Track-Bound Plant Compliance and Annual Inspection.
- RRV Commissioning and Annual Checklist
- Results of inspections
- Results of tests on safety devices
- Information on major repairs carried out
- Information on major modifications or ratings to original design
- **Element 11 Management of Change (MoC)**
- Significant deviations from normal operating or design conditions, including breakdown or other malfunction
- Competency of Operators