

Engineering Management

Asset Management



EM-001-01

Asset Management Procedure

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1. Introduction

The NSW Government endorsed a Sustainable Rail Heritage Asset Management Strategy in 2006 to ensure the State's rail heritage assets are conserved for current and future generations to appreciate and enjoy.

The Strategy aims to encourage the ongoing care of the State's most significant items of rail heritage by volunteer run organisations that are committed to sharing our rail story with the general public.

The National Rail Safety Accreditation Package (NAP 2005) outlines the requirements for Asset Management as part of the Safety Management System (SMS) and the NSW Rail Safety (General) Regulation 2008 - Schedule 1 (Safety management system content) sets out the requirement in section 18 for "An asset management policy and procedures that address all phases of the asset lifecycle of the rail infrastructure or rolling stock operations."

The phases of the asset lifecycle include:

Design and Construction (if applicable);

- a) Inspection;
- b) Operation;
- c) Maintenance;
- d) Monitoring (including inspection and testing);
- e) Modification (if applicable);
- f) Disposal or Demolition.

2. Definition

Asset management is the process of managing, use and disposal of assets to make the most of their service delivery potential and manage the related risks and costs over the asset life cycle.

The principal objective of asset management is to enable OTHR to meet its service delivery objectives efficiently and effectively.

Effective asset management also:

- a) makes the most of the service potential of assets by ensuring they are appropriately used and maintained.
 - b) reduces the demand for new assets and saves money through demand management techniques and non-asset service delivery options.
 - c) achieves greater value for money through economic evaluation of options that consider life cycle and full costs and value management techniques.
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- d) reduces unnecessary acquisition of assets by making OTHR aware of the full costs of holding and using assets; and
- e) Focuses attention on results by clearly assigning responsibility, accountability, and reporting requirements.

Asset Management is a continuous process covering the asset life cycle. OTHR's asset management program should encompass all the activities illustrated below.

Assets may be categorised as:

- a) Buildings
- b) Fixed Infrastructure
- c) Plant
- d) Hand Tools
- e) Rolling Stock
- f) Office Equipment
- g) Catering Equipment

OTHR has developed an asset management strategy which includes separate procedures for:

- a) Purchasing: procedures for acquisition of assets
 - b) An asset register: including all buildings, critical infrastructure, plant and engineering equipment, likely asset life, performance requirements, related expenditure etc;
 - c) Disposal of asset: procedures for disposal of assets
 - d) Asset risk management: to define possible impacts on service delivery, management of business continuity, contingency planning and uncertainties of the asset procurement and operating strategy.
 - e) Environmental impact of assets: which may include meeting energy efficiency targets, greenhouse gas minimising policy and green power requirements, water management planning, waste management planning, recycling and procurement issues, maintenance and operational monitoring including fuel and consumable items and instituting appropriate reporting and monitoring systems.
 - f) Asset funding: operation and maintenance of the normal business of a heritage railway; predictable upgrades; major refurbishments; methods of raising funds including asset sales.
 - g) Asset lifecycle management
 - h) Document and Data Control
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3. Accountability

The OTHR Management Committee is responsible for the implementation of a functional asset management system. It is the duty of this committee to oversee procedures to ensure that the assets of OTHR are protected, preserved, and managed in a manner which will limit financial and environmental liability.

Line Managers are in the best position to assess the assets under their control and are required to use the procedures laid out in this policy to implement the OTHR Management Committee's procedures.

Members of OTHR have a responsibility to assist in the care and preservation of railway assets and should report any matters which may impact on the asset(s) to their line manager or team leader.

4. Responsible Persons

The OTHR Management Committee may delegate asset management tasks to a designated Line Managers.

The OTHR Management Committee will identify and appoint persons who are technically qualified and competent to be responsible for asset assessment and management implementation. This may include persons drawn from the membership or seconded from outside OTHR who are identified as having appropriate skills.

Many assets may consist of essentially mechanical elements and require assessment and monitoring by persons with an engineering, trade, or industry background. All assets will require economic management over their life cycle, and some will require assessment and monitoring due to their potential impact on the environment.

The Financial Manager will need to be involved in planning the economic viability of assets during their life cycle, in order that budgeting implications for the future are considered.

Acquisition of Assets

Assets may only be purchased by following the procedures laid down in OTHR Purchasing Procedure (EM-005-01).

5. Categories of Assets

- a) Consumables
- b) Buildings
- c) Fixed Infrastructure
- d) Plant
- e) Hand Tools



- f) Rolling Stock
- g) Office Equipment
- h) Catering Equipment

All items must be correctly recorded and entered into the OTHR Asset or approved record system for consumable catering items.

6. Asset Register

OTHR has developed a register of assets covering all assets in use within its organisation. The asset register is updated as changes are made.

The register is maintained as an electronic register with a printed summary copy available on request.

The Management Committee utilises data in this register to assist in the decision-making process when acquiring and disposing of assets. Managers may request a copy to facilitate planning.

7. Disposal of Assets

Assets may only be disposed of by the authority of the Management Committee.

Only assets purchased by OTHR may be disposed of. Items on loan or contract must be returned to the donor, owner, or lessor.

Every attempt must be made to realise the best return for OTHR's investment in the asset.

Assets which are disposed of must have all details recorded in the Asset Register. The Management Committee must ensure the Asset Register is updated.

8. Asset Risk Management

For OTHR to commence and continue public passenger operations, the OTHR Management Committee shall consider the likely impacts on service delivery if there is a funding shortfall. The OTHR Management Committee in conjunction with the Financial Manager shall undertake contingency planning to ensure funding is available to continue operations.

To effectively implement this requirement, the Financial Manager shall follow a risk-based approach when managing asset funding. The following shall be considered:

- a) The objective of OTHR;
- b) The possible financial implications;
- c) The risk implications;
- d) The controls that may need to be implemented to mitigate the risk;



- e) The effectiveness of the proposed controls and implications associated with implementing these controls.
- f) Assign responsibility for implementing the controls with an action timeline.

9. Environmental Implications

Environmental implications need to be considered when assessing assets which are in use or may be purchased for use by OTHR, for example:

- a) Asset procurement should be based on meeting improved energy efficiency ratings.
- b) Green power options may be considered for electricity supply.
- c) Greenhouse gas minimisation may be achieved by using appropriate lighting technology and by managing the power usage of electrical appliances.
- d) Remote applications may be suitable for solar power (e.g. security cameras, communication equipment).
- e) Assets which are potentially dangerous pollutants (petrol, oil, lubricants, chemicals etc) need to be handled and stored with care to avoid environmental problems and subsequent financial penalties.
- f) Implications of emissions from locomotives need to be considered. Small scale diesel power will be suitable for the Oberon, Hazelgrove section and will be useful for operating in fire ban periods. Steam operation is desirable for a heritage railway, but offsetting diesel oil usage is increased pollution from coal burning.
- g) OTHR should try to offset emissions by actively revegetating areas within the corridor, subject to fire risk.
- h) Recycling of material assets should be encouraged.
- i) All new items purchased must be accompanied by a Materials Safety Data Sheet (MSDS).

10. Asset Financial Plan

For the successful operation of OTHR, it is essential to have a sound financial plan related to the number of assets required to be maintained and operated. The Management Committee has the responsibility for overseeing the effective expenditure of time and money.

Planning in the early stages continues to focus on the rebuilding of the permanent way which effectively means the replacement of all sleepers, followed by ongoing maintenance which, in the case of sleepers, amounts to approximately 80 sleepers per kilometre per year.



Sources of funding also need to be sourced for the restoration and maintenance of rolling stock in order to move into passenger carrying services. This will provide some revenue, but the Management Committee will need source other revenue streams which may include asset sales where possible.

11. Standard Procedures through the Asset Lifecycle

OTHR assets follow a normal lifecycle appropriate to the item. Where required the asset may be designed and constructed “in-house” however in most cases the item will be procured, inspected, and placed into operation. During its lifecycle, the asset will require maintenance, inspection, and testing.

When required the asset may require modification. Ultimately, some assets may be disposed of or require demolition and disposal. Some assets may be sold (section 4 above).

11.1 Design and Construction

Design projects must be preceded by a Risk Assessment which must be submitted to the Management Committee and approved before the project proceeds.

Minor assets may be constructed in-house by persons with appropriate engineering or industrial skills.

Major assets e.g. buildings, will require the services of professional builders, architects, tradespersons etc. The Project Manager shall document the process; maintain detailed records and ensure those records are kept on file.

Major asset design and construction requires the formal submission of a Project Plan to the Management Committee for approval.

11.2 Acceptance Inspection and Testing

Assets will require inspection and testing as follows:

- Inspected and testing prior to acquisition to ensure that they will meet OTHR’s operating requirements.
- Inspection, testing and grading prior to use (e.g., second-hand sleepers).
- Inspection and during their operating lifecycle.

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Line Managers will be responsible for preparing inspection procedures for submission to the Management Committee for approval.

11.3 Operation

General assets e.g. hand tools, office equipment, photocopiers etc. may be operated by volunteers who have –

- prior knowledge of the equipment and its use;
- on the job training by a team leader or other qualified person;
- appropriate professional or trade qualifications;
- attended a course or other acceptable training;
- provided evidence to allow recognition of prior learning.
- documented skills from another quality heritage railway
- More complex assets may require a training course to gain the required competencies.

11.4 Maintenance

Assets will require ongoing maintenance. Line Managers will be responsible for developing maintenance procedures for submission to the Management Committee for approval.

11.5 Maintenance Inspection and Testing

The level of inspection and testing will depend on the asset. Rollingstock will require inspection and testing undertaken by qualified engineers and tradespersons.

Track and structures will require inspection and testing undertaken by qualified engineers and supervisors.

Inspection and testing procedures will be developed by engineering personnel with appropriate engineering qualifications which will be submitted to the Management Committee for approval.

11.6 Modification

Modifications must be preceded by a **Risk Assessment** which shall be submitted to the Management Committee and approved before the modifications proceed.

All modifications of a significant nature require prior approval by the Management Committee.

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11.7 Disposal or Demolition.

Disposal of assets must follow OTHR's procedures for disposal of assets.

All demolition work must be preceded by a Risk Assessment which must be submitted to the Management Committee for approval before work commences.