



National Railway Museum Inc.

# 457mm Gauge Railway SAFETY MANAGEMENT PLAN

A plan in accordance with the South Australian WH&S Regulations 2012

## SCOPE

This plan is provided to manage the safe operations of the 457mm gauge railways operated by

the National Railway Museum at:

- the Lipson Street, Port Adelaide premises of the National Railway Museum, and
- the foreshore between Semaphore and Point Malcolm (Fort Glanville).

## PACKAGE

The plan is expressed in a package of documents:

- An overarching management plan (this document)
- Two Safeworking Instructions and Procedures (one for each of the two locations)
- A set of Duty Statements for the various classes of Authorised Operators

Authorised by: .....**Richard Crookall**.....  
Operations Manager, National Railway Museum

Approved by: **The Board, National Railway Museum, Inc 7 September 2016**

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Once printed it is no longer controlled*

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## ***WORK, HEALTH & SAFETY POLICY***

### **Goals**

This policy:

- shows the commitment of the National Railway Museum's management and workers to health and safety
- aims to remove or reduce the risks to the health, safety and welfare of all workers, contractors and visitors, and anyone else who may be affected by our business operations
- aims to ensure all work activities are done safely

### **Responsibilities**

Management is responsible for:

- the provision and maintenance of a work environment without risks to health and safety
- the provision and maintenance of safe plant and structures
- the provision and maintenance of safe systems of work
- the safe use, handling and storage of plant, structures and substances
- the provision of adequate facilities for the welfare at work of workers in carrying out work for the business or undertaking, including ensuring access to those facilities
- the provision of any information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking
- that the health of workers and the conditions at the workplace are monitored for the purpose of preventing illness or injury of workers arising from the conduct of the business or undertaking
- an environment that promotes a positive safety culture
- monitoring of safety performance to promote continuous improvement

continued ....

Workers must:

- take reasonable care for his or her own health and safety
- take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons comply, so far as the worker is reasonably able, with any reasonable instruction that is given by the person conducting the business or undertaking to allow the person to comply with the Work Health and Safety Act this Act 2012 (such as safe work procedures, wearing personal protective equipment) given by management for health and safety
- co-operate with any reasonable policy or procedure of the person conducting the business or undertaking relating to health or safety at the workplace that has been notified to workers
- communicate openly and honestly
- report all incidents, hazards and unsafe acts

We expect visitors and contractors to:

- work safely at all times and care for the safety of others
- comply with relevant laws including work health and safety
- take responsibility for their actions and the actions of others
- communicate openly and honestly
- follow safety procedures and reasonable instructions
- report all incidents, hazards and unsafe acts

Signed Chairman          David Burnett

Signed Vice Chairman   Frank Hussey

Dated 7 September 2016

# *457mm Gauge Railway SAFETY MANAGEMENT PLAN*

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## DEFINITIONS

### **National Railway Museum Inc.**

The organisation responsible for the Lipson Street Museum & the Semaphore and Fort Glanville Tourist railways.

### **Port Adelaide Railway**

A railway laid within the boundaries of the National Railway Museum

### **Semaphore and Fort Glanville Tourist Railway**

A railway laid along the esplanade between stations at Semaphore and Fort Glanville.

### **Council Boundary**

The point on the Semaphore and Fort Glanville Tourist Railway where the line passes from the responsibility of the City of Port Adelaide Enfield Council to the responsibility of City of Charles Sturt Council and is defined as being on the extension of Bower Road southern boundary at 34°51'0.77"S, 138°28'36.79"E.

### **Operations Manager**

The Operations Manager of the National Railway Museum, or his delegate.

### **Duty Manager**

The National Railway Museum Inc. presentative rostered as the person in charge of the National Railway Museum and its responsibilities for the day in question. This may, but not exclusively, be a paid employee.

### **(The) Board**

The controlling body of the National Railway Museum Inc.

### **Operator**

A volunteer who is a qualified driver or guard of the train.

### **Crew**

A volunteer(s) who are rostered to operate the train on a specific day/shift.

## RELATED DOCUMENTS

- Safeworking Instructions and Procedures for the Port Adelaide 457mm Gauge Railway
- Safeworking Instructions and Procedures for the Semaphore and Fort Glanville 457mm Gauge Tourist Railway
- Driver's Duties & Responsibilities – Port Adelaide 457mm Gauge Railway
- Driver's Duties & Responsibilities – Semaphore and Fort Glanville 457mm Gauge Tourist Railway
- Guard's Duties & Responsibilities – Port Adelaide 457mm Gauge Railway
- Guard's Duties & Responsibilities – Semaphore and Fort Glanville 457mm Gauge Tourist Railway

## **Section 1 - Land and Infrastructure Standards**

### **Land Access arrangements**

- National Railway Museum at Port Adelaide occupies a prescribed parcel of land in the name of the Minister for Arts.
- Semaphore and Fort Glanville Tourist Railway is on land which is the responsibilities of two Councils.

Between Semaphore Station and the *council boundary* the land is the responsibility of the City of Port Adelaide Enfield Council and the track and associated infrastructure is owned by the Council.

Between the *council boundary* and Fort Glanville Station the land is the responsibility of the City of Charles Sturt Council and the track and associated infrastructure is owned by the Council.

Track and infrastructure over the whole route is maintained by the by the respective Councils, with advise and some support provided by the Museum.

### **Infrastructure Standards**

#### Trackwork

Track is laid to meet the requirements of light weight trains operating at a maximum speed of 15 km/h. Overweight rail ( 60 lb.) and closer than necessary sleeper spacing has resulted in an over designed track.

On the Semaphore and Fort Glanville Tourist Railway, the track section from Semaphore Station to the Hart Street Car Park crossing is steel sleepers welded to the track suspended in concrete.

The remainder has full section wooden railway sleepers with dog spikes or screw fixings.

On the Port Adelaide railway the track is wholly laid on full section wooden railway sleepers with dog spikes or screw fixings.

Detailed track inspection is undertaken annually and corrective maintenance is carried out where found necessary.

No major work can be undertaken to the tracks without the prior approval of the Operations Manager. Basic day to day minor maintenance can be made, however the Operations Manager must still be informed in writing with all relevant details of the work undertaken within 48 hours by phone or e-mail. This enables an update to be made to the specific track infrastructure maintenance record.

#### Other Structures

The Port Adelaide Railway has no major engineering structures as part of the per-way, as predominantly all of the tracks are laid on an existing railway yard, which had no drainage problems, water courses or necessary track foundations.

On the Semaphore and Fort Glanville Tourist Railway, there are two embankments that are inspected for any degradation as part of the annual track inspection.

## *Section 2 - Management*

### *Statement of Authority*

The **Operations Manager** is responsible to the Board for:

- General policy development and all accreditation matters.
- Volunteer competency assessment for Certification.
- General overseeing of relevant volunteer qualifications.
- Dissemination of all appropriate notices and instructions.
- Arranging appropriate inspections of rolling stock and track.
- Arranging for registration of plant assessed as Amusement Devices.
- Reporting details of all breaches of the National Railway Museum Safety Management Plan, and any other incidents for the Board.
- Document control including volunteers personal files.
- Incident Management (see also Section 7)

### *Section 3. Locomotives and Rolling Stock*

The locomotives and rolling stock listed are purpose built for amusement rides.

They are inspected daily for operational integrity and annually for significant faults or potential failures.

Regular maintenance is carried out in accordance with manufacturers manuals and/or operating instructions.

Corrective maintenance is carried out as found necessary.

Steam locomotives are inspected annually by a certified boiler inspector. The boilers are registered with SafeWork SA and they are not operated until issued with an appropriate boiler certificate.

They are maintained by appropriately qualified personnel to be fit for purpose.

#### Locomotives.

	<u>Registration No.</u>
No. 4 (Bub) Steam 0-4-2	PDS/SEM SL-4
No. 6 (Bill) Steam 2-4-0	PDS/SEM SL-6
No. 7 Internal combustion 4-B	PDS/SEM IC-7
No. 8 Internal Combustion B-B (Under Construction)	PDS/SEM IC-8

#### Carriages

PPS 7	Bogie carriage	PDS/SEM PPS-7
PPS 8	Bogie carriage	PDS/SEM PPS-8
PPS 9	Bogie carriage	PDS/SEM PPS-9
PPS 10	Bogie carriage	PDS/SEM PPS-10
PPS 11	Bogie carriage	PDS/SEM PPS-11
PPS 12	Bogie carriage	PDS/SEM PPS-12
PPS 13	Bogie carriage / guard	PDS/SEM PPS-13
PPS 14	Bogie carriage / guard	PDS/SEM PPS-14

## **Section 4 - Document Control and Procedures**

### **General Document Control**

All National Railway Museum WH&S documents and records are managed by the Operations Manager and stored in this employee's office. Relevant documentation, including confidential personal files, is locked in the Operations Manager's office.

#### **457mm Gauge Railway Safety Management Plan Including Code of Practice**

This is a Controlled Document lodged on the web site of the National Railway Museum. Once printed it is no longer controlled

### **Procedures for Maintaining and Auditing Documents**

#### **Volunteer Personal Records**

These records are kept in a locked cabinet in the Operations Manager's office.

Each volunteer who is deemed to be competent and authorised for a rail operations function is issued with an authority card detailing the duties for which he/she is authorised. The date of acceptance of competency is deemed to be the date of issue of the individual's authority card.

Volunteers involved in rail operations are trained on the job, assessed for competency when judged competent by the Operations Manager. Records of competency assessments are kept by the Operations Manager.

In addition a copy of any incident report involving a particular volunteer, is kept on their personal file.

Personal files are updated on a 'need to' basis, whenever any changes, reports or additions are made.

#### **Rolling stock Maintenance**

Rolling stock log books are kept for all relevant operational rolling stock at both the Port Adelaide and Semaphore & Fort Glanville Tourist railways. These log books are filled in by the person carrying out the repairs or the Operations Manager, when any repairs, inspection or other work, or an incident involving that item occurs. Any fault that does not impede the rolling stock from operating, is to be recorded by each successive operator until the fault is rectified

#### **Track and Infrastructure**

Track and infrastructure maintenance records, kept in the Operations Manager's office, include any per-way work or other infrastructure repairs or alterations carried out on site.



### **Insurance Records**

Insurance policies and other relevant insurance records are kept in the administration office and a copy is kept in the 457mm file in the Operations Manager's office.

### **Land Lease**

The museum Lease with the SA Government, and the agreement with Port Adelaide-Enfield & Charles Sturt Councils relating to the Semaphore & Fort Glanville Tourist Railway, along with other supporting documentation is in the 457mm file in the Operations Manager's office.

## *Section 5 - Safeworking Procedures - Code of Practice*

### **Responsibility**

The operation of Port Adelaide and the Semaphore and Fort Glanville Tourist railways are treated as an amusement device. All volunteers need to understand that not only do they have a direct responsibility for their own safety, but also for other volunteers and the general public.

All volunteers should be aware of their responsibility to sign on and off each time, be punctual, neatly dressed, and be totally conversant with the railway operations for the day. If unable to attend a rostered duty, a volunteer must advise the roster clerk as soon as possible, prior to that shift.

- Only volunteers holding the necessary qualifications, are permitted to carry out those specific duties unless authorised by the Operations Manager.
- No operational volunteer is permitted to report for duty whilst affected by intoxicating liquor or a deleterious drug.
- Volunteers shall take care when carrying out any duty, so as not to expose themselves or other volunteers or the public to the risk of personal injury.
- Volunteers must always be alert and recognise where and when dangerous situations may arise, then exercise appropriate steps to reduce the risk of personal and/or property damage.
- Whilst on duty volunteers must always remember they are representing the National Railway Museum, and will need to obey instructions as issued by key attending personnel who have the relevant authority.
- If unsure of duty and/or responsibility, volunteers shall immediately clarify the situation with the attending personnel with the relevant authority.
- Volunteers are expected to always be courteous and obliging to the visitors and other members.
- If requested by the public or other volunteers, they should give precise accurate information. If unsure, they should give directions to the best person available on site.
- Volunteers are reminded that under the regulations of the WH&S Act, volunteers and National Railway Museum are responsible for any actions resulting from any incident associated with these railway operations.
- Volunteers must abide by all organisational rules.
- All relevant documents / inspection sheets must be completed prior to operations commencing.

## Common Duty of Care

Volunteers are required to abide by the following general guidelines (in addition to specific instructions documented elsewhere) to ensure that safe practices are implemented during operations:

- Volunteers shall not operate the device when feeling ill or under the influence of drugs or alcohol.
- Passengers who appear to be under the influence of alcohol or drugs, or who are visibly ill, should not be allowed on a train.
- Passengers shall only be allowed to travel in carriages, and the doors must be correctly closed and latched at any time the train is moving. Specifically, passengers shall not be allowed to travel in an engine cab, on an engine, on an engine tender, or in a guard's compartment unless authorised by the Operations Manager.
- Passengers shall be assisted on and off the train when necessary. Care must be exercised when assisting passengers with disabilities, and they shall only be assisted with their expressed permission.
- If the train is being misused in any way by passengers, it shall be shut down until the condition is corrected. Crew members must prevent carriages being rocked and passengers from standing. Passengers must not be allowed to travel with any part of their body outside the carriage.
- Smoking by passengers should not be permitted.
- Volunteers must be cautious and ready for the unexpected, especially where children are involved. Young children must be accompanied by a responsible adult.
- Passengers waiting to participate should be kept out of any operating zone.
- Crews must ensure that carriage doors are closed properly before departure.
- Crews are to be alert when travelling and be prepared for an emergency stop.
- Never, under any circumstances, may a driver leave the locomotive unattended while it is in operating condition.
- Crew are not to board or disembark a train while it is in motion.

- Crew must make themselves aware of the nearest location of a fire extinguisher and shall check its condition.
- Any fault or malfunction in accordance with specific operating instructions, must be reported.
- Crew must be familiar with first aid procedure.

## General Operating Duties

- Crew members are to make themselves fully acquainted with the equipment that they are to operate and the environment in which it is operating.
- Crew shall wear appropriate safety clothing and/or equipment, including safety footwear when working on a train or the track.
- When displaying and/or relaying an appropriate hand signal crew members must make sure the message is given promptly, accurately, and do so from a position where it can be seen, clearly understood, and acknowledged.
- If unsure of any hand signal or message, or if the line ahead cannot be seen clearly, the relevant train movement must be stopped until it can be established the correct message is clarified.
- When and where-ever possible, crew members shall converse with the driver/guard (whichever is appropriate) of the train or movement, to clarify any operational aspect and/or plan ahead.

## First Aid

- Any volunteer or paid staff who are museum qualified to perform first aid, are required to perform first aid on other volunteers or paid staff should the need arise.
- Volunteers and paid staff are not required to perform first aid on passengers, but should give whatever 'non-direct' assistance is appropriate. This can be, but is not limited to, handing a first aid kit to the patron or carer (ensuring that it is ultimately returned).

## Section 6 - Operational Volunteers Qualifications & Training

### Qualification Categories

Volunteers carrying out the following duties on the 457mm gauge railways, require authorised recognition of their competency to perform these duties.

	Port Adelaide	Semaphore & Fort Glanville
Driver Steam	D3	DS3
Driver Internal Combustion	D4	DS4
Guard	G3	GS3

Duty:

- D3 Duties for driving steam locomotives at Port Adelaide
- DS3 Duties for driving steam locomotive at Semaphore
- D4 Duties for driving internal combustion locomotive at Port Adelaide
- DS4 Duties for driving internal combustion locomotive at Semaphore.
- G3 Guard duties on 457mm trains at Port Adelaide
- GS3 Guard duties on 457mm trains at Semaphore.

### Categories of Guidelines for support functions

Volunteers carrying out the following duties on the 457mm gauge railways, are required to perform in accordance with the guidelines but do **not** require authorised recognition of their competency to perform these administrative duties.

	Port Adelaide	Semaphore & Fort Glanville
Station Master (Callington)	M3	
Crossing Keeper	K3	
Conductor		CS3

## Qualification Criteria:

### Driver Steam Engines at Port Adelaide - D3 ( Bub & Bill)

- min age of 18 years
- hold a High Risk Licence to operate a boiler (BS or BA)
- complete a minimum of 5 days operations, including light ups & stabling, at Port Adelaide under the supervision of a qualified driver
- complete required training assessments

### Driver Steam Engines at Semaphore - DS3 (Bub & Bill)

- min age of 18 years
- hold NRM D3 certification
- complete a minimum of 3 days operations, including light ups & stabling, at Semaphore under the supervision of a qualified driver
- complete required training assessments

### Driver Internal Combustion Engines at Port Adelaide – D4 ( Ken, #8)

- min age 18 years
- complete a minimum of 3 days operations, including preparation & stabling, at Port Adelaide under the supervision of a qualified driver
- complete required training assessments

### Driver Internal Combustion Engines at Semaphore – DS4 ( Ken, #8)

- min age 18 years
- hold NRM D4 certification
- complete a minimum of 2 days operations, including preparation & stabling, at Semaphore under the supervision of a qualified driver (or 1 day if a holder of a current DS3).
- complete required training assessments

### Guard at Port Adelaide (457mm gauge trains)

- min age of 18 years
- complete a minimum of 2 days operations at, Port Adelaide under the supervision by a suitably qualified guard
- complete required training assessments

### Guard at Semaphore (457mm gauge trains)

- min age of 18 years
- complete a minimum of 2 days operations at, Semaphore under the supervision by a suitably qualified guard
- complete required training assessments

## ***Section 7 - Incident Management***

### **Statement of Responsibilities**

#### **Operations Manager:**

##### *Responsibility for:*

- Initially liaising with the driver on-site, and providing any possible off-site assistance
- Taking control of any major incident, wherever possible on site.
- Managing recovery of any damaged National Railway Museum equipment.
- Reporting of Notifiable Dangerous Occurrences to the SafeWork SA .
- Compiling information related to Notifiable Dangerous Occurrences, for the Board..
- Reporting details of all breaches of the National Railway Museum Safety Management Plan to the Board

#### **Rostered Driver:**

##### *Responsibility for:*

- Ensuring the locomotive is in a safe stabled condition (particularly if the locomotive is steam powered)
- Applying brakes and any available device to chock the wheels of the consist
- Contacting any necessary emergency services
- Advising the Operations Manager or in his absence the Duty Manager, and requesting assistance.
- Assisting the Guard to tend to the welfare of the passengers  
(In the absence of a rostered Guard this becomes the direct responsibility of the driver)
- Complete reports as specified

#### **Rostered Guard (where such an appointment is rostered):**

##### *Responsibility for:*

- Welfare of the passengers
- Making the consist safe to the best of their ability

## Emergency Procedures

Detailed procedures differ between the Port Adelaide & Semaphore and Fort Glanville railways for a number of reasons, including degree of public access and remoteness. Accordingly detailed procedures are set down in the separate supporting documents ..

Safeworking Instructions and Procedures for the Port Adelaide 457mm Railway  
Safeworking Instructions and Procedures for the Semaphore & Fort Glanville  
457mm Tourist Railway

However the following action steps are common to both locations (except where shown)

### Action

In the event of an emergency where serious personal injury, or major damage has occurred to the train or the surrounding environment, the following procedures must be carried out as swiftly as possible:

- Assess which emergency services are required if any  
- FIRE - AMBULANCE - POLICE
- Use any available phone to ring 000
- Assess the situation and organise other volunteers, to assist where necessary, and treat whoever may be injured.
- Protect the public from any further danger and evacuate if necessary.
- Contact the Operations Manager, or his delegate, as well as the Duty Manager and inform them of the current situation, and what action has already taken place.
- Ensure that all relevant information has been collected as soon as possible after the incident. Details required are listed in each Safeworking Instructions and Procedures document.

### Reporting

A variety of reports are required dependent on the extent of the event.

- For any significant incident an *“Incident Report”* or *“Accident Report”* must be completed
- In the event where personal injury has occurred, an *Injury Report Form* must be completed.
- Complete a written statement as instructed by the Operations Manager or his delegate.

These shall be passed to the Operations Manager as soon as possible.

The forms are available from the First Aid Kit.



## Notifiable Incident SafeWork SA notification hotline 1800 777 209

Any incident is defined as “Notifiable” if

- an incident causes death,
- an incident causes an injury that requires immediate treatment
- an incident causes an injury that requires in-patient treatment in hospital, or
- a dangerous incident ☸

Since it may not be possible to determine if an injury will ultimately require in-patient treatment, the procedures for this type of incident should be adopted for any serious injury sustained during train operations.

The Operations Manager or his delegate will take management of the incident as soon as practical, remotely if appropriate. On site volunteers are to take practical actions as defined in the relevant “Safeworking Instructions and Procedures” document

☸ In the context of the 457mm railway operation a “dangerous incident” would include ....

- Collision with a vehicle
- Pedestrian being struck by the train
- Customer falling from a train
- Serious derailment of the train where injury or damage has occurred
- Explosion
- Unintentional discharge of steam amongst pedestrians
- Subsidence of track at an embankment

In the event of an incident that leads to injury or death the following action must be taken ....

- adopt the emergency procedures first giving aid to the victim and ensuring the safety of other members of the public, volunteers and staff.
- record information required to complete SafeWork SA form ..  
[http://www.safework.sa.gov.au/uploaded\\_files/notification.pdf](http://www.safework.sa.gov.au/uploaded_files/notification.pdf)

On site volunteers shall be instructed ***not to move the train or other items***, other than to assist in recovery of the persons and to make the scene safe, until cleared by the Operations Manager.

## **Section 8 - Volunteer Management**

### **Physical, Mental and Literacy Capacity**

Any volunteer involved in any museum rail operation, is initially interviewed by the Operations Manager or delegate. Based on their past performance and general activities on site, an assessment is made during the interview process, that the volunteer has an appropriate physical and mental capacity for the task to be performed. Literacy is proved by written exams.

### **Responsibility, Trust and Discipline**

A sense of responsibility and trust, based on previous performance or a series of questions, is established between the association and operational volunteers. The general performance, attitude, and appearance of volunteers, is monitored by the Operations Manager, his delegate, or any other Board representatives.

Volunteers not displaying common sense and responsibility may be requested to attend an interview, with representatives of the Management Committee, to discuss the relevant issues and concerns. Volunteers who need to be interviewed a second time may temporarily lose their right to that specific qualification, until progress is made to improve the situation.

A third or further incident involving the same volunteer may result in a loss of their right to participate in any rail operation activity.

### **Health and Fitness**

Volunteers are required to disclose any health problems which may have a bearing on the type of work they are involved with. The Operations Manager or his delegate monitors the health and fitness of volunteers, through general observation and analysing health and injury reports.

### **Drug & Alcohol Prevention**

It is the policy of the Museum that volunteers shall not work for the Museum when they have consumed alcohol or drugs such that they could endanger the safety of themselves or others. Supervisors are directed to be alert to any potential case, and to act to prevent a volunteer so affected from performing duties at the Museum.

### **Recognised Qualifications**

External qualification certificates and documents, and copies of Authority Cards, are kept in each volunteer's personal file. Volunteer operational categories, and the qualification criteria for specific positions is monitored and altered to reflect any down grade (albeit voluntary) or gaining additional qualifications.

If due to repeated reports and/or incidents, a volunteer may be requested to attend an interview with the Operations Manager or his delegate, to discuss the current qualification.

Volunteers must ensure that any external legislative qualifications which require retraining, are carried out at their own expense and undertaken through their own arrangements.

Any internal National Railway Museum qualification, that requires retraining must be overseen and monitored by the Operations Manager or his delegate.

Any appropriate external training must be carried out by a suitably qualified authority, whilst specific internal training will be supplied by suitably qualified museum personnel.

All relevant details associated with training and/or retraining will be recorded on the volunteer's personal file.

Volunteers who qualify in a specific area of rail operation, will be issued with an appropriately endorsed Authority Card. All operational volunteer's qualification and competency records are kept in their personal file.

A notice showing a list of all operational volunteers and their current qualification is available in the "Yellow" folder in the main workshop and in the Administration office area.