

PO Box 299
Oberon NSW
2787
ABN 98 107 506 208

Version	Author	Reviewed	Reference
A - Rev 1	SM		
18 th Feb 2013			

Risk Assessment- Carriage Movement

CONTEXT & BACKGROUND

Introduction

The NSW Rail Transport Museum (RTM) occasionally is asked for rolling stock under its control, ownership or custodianship to be moved within the Oberon Station precinct by request from the Oberon Tarana Heritage Railway (OTHR).

The movement of the two carriages is to facilitate their storage, under cover, to prevent further weather related damage to these units

In some cases, the track or premises is not under the control of an accredited rail infrastructure manager (RIM), and/or the rolling stock is not being moved by an accredited rail transport operator (RTO), in which case the operations may be performed under the accreditation of the RTM

Train Operations

This risk assessment is specifically for the movement of rolling stock within the Oberon Station Precinct and will enable the storage within the recently erected carriage shed.

The train movement will be facilitated using a tractor for moving the two coupled carriages at a speed of no more than 2kph along the level track.

Safeworking

Carriage movement operations are normally carried out under 'Yard Working' conditions, where no safeworking arrangements apply other than, if necessary, protection from any nearby running line. Communications are normally by voice, as the work is confined to a small area.

Personnel

All personnel associated with the movement of the rolling stock are instructed to keep well clear of the moving rolling stock. As far as is reasonably practicable, the number of personnel on the site is kept to the minimum needed for operations.

Track

The siding used for the carriage movement is mainly straight track, with one set of clipped points, and no other unusual geometry in the immediate location that could cause derailment.

Level Crossings

There are no Level Crossings in the vicinity of the carriage movement.

Public/spectator risks

The carriage movement location is private property, with nil or controlled public access. Having regard for the extremely low speed of the operation and the high degree of control provided by the tractor, risk of collision with personnel is minimal. However in situations where personnel other than those actually carrying out the operation may enter the site, additional personal are delegated to ensure that those people are kept away from the Danger Zone and isolated from any risks

Passenger risks

No personnel are permitted in any rail vehicles at any time during the operations.

Rolling stock

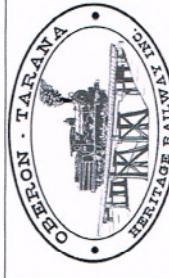
The rolling stock being moved may not be currently operational, but will generally have had an operational history. Rolling stock will be inspected (having regard for the extremely low speed



PO Box 299
Oberon NSW
2787
ABN 98 107 506 208

Version	Author	Reviewed	Reference
A - Rev 1	SM		
18 th Feb 2013			
Risk Assessment- Carriage Movement			

involved) before the operation. Rolling stock brakes will be half applied to prevent any run-away occurring.



RISK MOVING RAIGES INTO

PO Box 299 Oberon NSW 2787 ABN 98 107 506 208	Version A - Rev 1	Author SM	Reviewed 18 th Feb 2013	Reference
Risk Assessment- Carriage Movement				

ASSESSMENT FOR PASSENGER OBERON RAILWAY

of Operation:
ating Scenario:

From April 2013
Moving two passenger carriages into Oberon Rolling Stock Shed

Identified Event / Risk	Event/Risk Assessment			Resid. Risk Rating	Treatment/Control	Control Responsibility
	Likelihood	Consequences	Analysis			
Collision with other rolling stock				C+ (ALARP)	On separate line from all other rolling stock	Track Manager
I.L1.1	- due to loss of control during movement	Very unlikely	Disastrous	F2	C5	Extremely low speed of movement Competent tractor operator Observer/assistant Competent staff (PRO-037)
I.L1.2	- due to loss of control while positioning rolling stock	Very unlikely	Disastrous	F2	C5	Stop blocks Stabilising procedures Extremely low speed during movement by shunting tractor or pinch-bar Communication between shunter and assistant Manning of handbrakes Competent staff (PRO-037) Movement on siding only, protected from any running line by separate line. Stop blocks
I.L1.3	- due to staff error, due to intoxication, ill health, fatigue	Very unlikely	Disastrous	F2	C5	Extremely low speed during shunting Communication between shunter and assistant Manning of handbrakes Sprags and chocks to hand OTHR D & A program OTHR health assess't OTHR Fatigue mgt program



PO Box 299 Oberon NSW 2787 ABN 98 107 506 208	A - Rev 1	Author SM	Reviewed	Reference
			18 th Feb 2013	

Risk Assessment- Carriage Movement

L2 Collision with object or track obstruction						
			F2	C3	D	
L2.1	- due to loss of control of movement	Very Unlikely	Major			Movement on siding only Stop blocks Extremely low speed Solid draw bar on tractor to push carriages Carriages coupled together Competent tractor operator Observer/assistant Communication between driver and assistant Use of skid chocks Competent staff
L2.2	- due to staff error, due to intoxication, ill health, fatigue	Very unlikely	Major			Movement on siding only Stop blocks Extremely low speed during movement Communication between winch operator, shunter and assistant Manning of handbrakes Sprags and chocks to hand OTHR D & A program OTHR health assess't OTHR Fatigue mgt program
L2.3	- due to failure of tractor draw bar	Very unlikely	Major		D	Movement on siding only Stop blocks Extremely low speed movement Competent winch operator Adequate rating of tractor draw bar Maintenance regime draw bar Use of skid chocks Carriage brakes half on to resist movement
L3	Collision with road vehicle	Very unlikely	Major	F2	C3	E
						No level crossings accessed No vehicles on site



PO Box 299
Oberon NSW
2787

ABN 98 107 506 208

Version
A - Rev 1

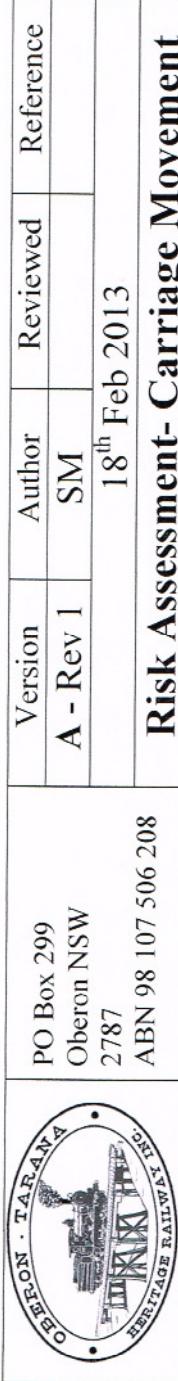
Author
SM

Reviewed
18th Feb 2013

Reference

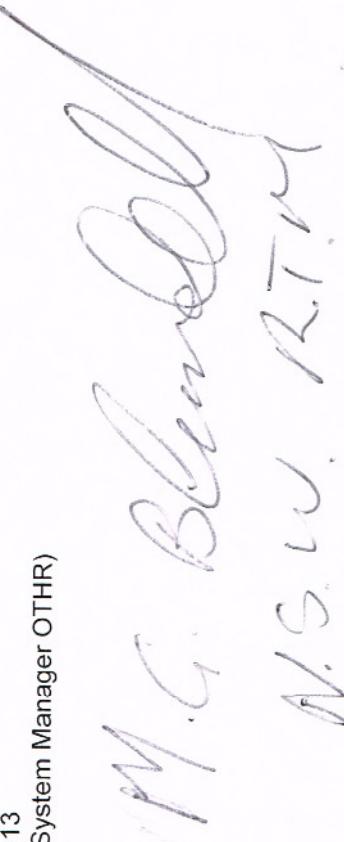
Risk Assessment- Carriage Movement

M	L	Risk Description	Severity	Probability	Control Measure	C- (ALARP)	C+ (ALARP)	Comments	Responsible Person
M4	L4	Collision with workers whilst shunting, coupling or attaching tractor	Very Unlikely	Disastrous	F2	C5	C+ (ALARP)	Extremely low speed during movement Communication between tractor operator, shunter and assistant OTHR D & A program OTHR health assess't OTHR Fatigue mgt program Coupling (no-one in rolling stock outline) Restrict non-essential personnel access	Ops Mgr, crew, TM
L5	L5.1	- due to track defect	Unlikely	Major	F3	C3	C- (ALARP)	Track inspection and certification Visual track inspection Extremely low speed during shunting or loading Communication between tractor driver, shunter and assistant Restrict non-essential personnel access	Ops Mgr Crew, TM
L5.2	- due to points incorrectly set	Not Heard Of	Major	F1	C3	D	Competent staff One set of points that will be clipped for operation Track inspection and certification Visual track inspection Extremely low speed during shunting or loading Communication between tractor driver, shunter and assistant Restrict non-essential personnel access	Ops Mgr, crew, TM Ops Mgr, TM Ops Mgr ,	
L5.3	- due to overspeed (no curves or points)	Very Unlikely	Critical	F2	C4	C- (ALARP)	Competent staff Track inspection and certification Visual track inspection Extremely low speed during operation Communication between tractor driver, shunter and assistant Restrict non-essential personnel access	Ops Mgr, crew, TM Ops Mgr, TM Ops Mgr, site owner	
L5.4	- due to over-running dead-end of siding	Very Unlikely	Critical	F2	C4	C- (ALARP)	Competent staff Extremely low speed during shunting or loading Stop blocks Use of skid chocks Competent tractor driver Observer/assistant Communication between tractor, shunter and assistant Restrict non-essential personnel access	ATM Ops Mgr, crew, TM Ops Mgr, TM Ops Mgr, crew, TM Ops Mgr TM TM TM, Ops Mgr, crew Ops Mgr, crew, TM Ops Mgr, TM	



		Version		Author		Reviewed	Reference		
		A - Rev 1		SM					
		18 th Feb 2013							
Risk Assessment- Carriage Movement									
L6	Public/spectators struck by rolling stock	Very Unlikely	Closed Area Restricted access	F1	C1	D	N/A		
L7	Trespasser struck by rolling stock	Very Unlikely	Critical	F1	C4	D	No public access Closed area		
L8	Passenger falling from carriage or struck by infrastructure outside train	Not heard of	Critical	F1	C4	D	No passengers permitted (monitored by qualified workers) Competent staff (PRO 037)		
L9	Breakaway rolling stock (due to coupling failure) causes derailment, collision, strike personnel, or infrastructure damage	Very Unlikely	Disastrous	F2	C5	C+ (ALARP)	Coupling procedures Design, inspection & maintenance of couplings Stop blocks Use of skid chocks Extremely low speed of operations Adequate draw bar rating Competent staff (PRO-037)		
L10	Fire	Very Unlikely	Minor	F2	C2	D	Emergency procedures Fire appliances Staff vigilance		
L11	Trips, slips & falls	Likely	Minor	F5	C2	C+ (ALARP)	Worsite risk assessments & controls Corridor/yard inspection and maintenance		

Review Version
 of Risk Review:
 Dated by:
 1
 18th Feb 2013
 Ian Davis (System Manager OTHR)


 Ian Davis



PO Box 299
Oberon NSW
2787
ABN 98 107 506 208

Version	Author	Reviewed	Reference
A - Rev 1	SM	TM/VP	F-037
4 th January 2011			
Rail Certification Checklist			

RAIL CERTIFICATION CHECKLIST

Date: 4/8/13

Rail Section: Oberon - TARANA, Oberon YARD

1. Track Geometry
 - a. Gauge (1435mm +/- 15mm)
 - b. Cross Level Tolerances
 - c. Track Alignment

✓
✓
✓

(measured every 4th sleeper)
2. Rail Condition
 - a. Corrosion within limits
 - b. Wear within limits

✓
✓
3. Rail Joints
 - a. Fishbolt Tightness
 - b. Fishplate Lubricated
 - c. Fishplate Condition

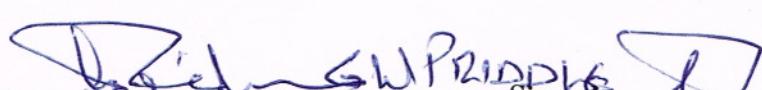
✓
✓
✓
4. Sleepers
 - a. Spacing (600mm +/- 100mm)
 - b. Condition
 - c. Drainage
 - d. Placement (90°)
 - e. Pinned Correctly (Dog Spikes)

Good
Acceptable
Poor
✓
✓
✓
✓
✓
5. Points
 - a. Locked
 - b. Oiled
 - c. Dirt Free
 - d. Correct operation

✓
✓
✓
✓

Inspectors Comments: RAILS + SLEEPERS CHECKED
FROM OBERON PLATFORM TO END OF
SIDING #1 AT NEW SHED. CERTIFIED
UNTIL 30/9/13.

Signed (Track Manager): Name: P. CULLEY Signed: 

Certifier: Name:  Signed: 

BE FRIENDLY

ACTION BY KEY: CEO= President, OM= Operations Manager, SM= Systems Manager, SEC= Secretary, PO= Public Officer, IM= Track Manager *includes A* IM= Assistant IM, EC= Finance Co-ordinator, TB= Treasurer, IM= Infrastructure Manager, IA= Internal Auditor, RM=Rollingstock Manager

SIGNATURE SHEET - Risk Assessment for: CAREL & MONTI
Risk Assessment associated with OTHR operation described above.

ACTION BY KEY: CEO= President, OM= Operations Manager, SM= Systems Manager, SEC= Secretary, PO= Public Officer, TM= Track Manager *includes ATM*= Assistant TM, FFC= Finance Co-ordinator, TR= Treasurer, IM= Infrastructure Manager, IA= Internal Auditor, RM=Rollingstock Manager

**SIGNATURE SHEET - Risk Assessment for: ...CARRIER M
Risk Assessment associated with OTHR operation described above.**