

	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 personnel 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



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



ASSESSMENT FOR PASSENGER OBERON RAILWAY

SHED

of Operation: From April 2013

Operating Scenario: Moving two passenger carriages into Oberon Rolling Stock Shed

S	Identified Event / Risk	Event/Risk Assessment			Resid. Risk Rating	Treatment/Control	Control Responsibility
		Likelihood	Consequences	Analysis			
		Likelihood	Consequences	Likelihood	Consequences		
/L1	Collision with other rolling stock						
/L1.1	– due to loss of control during movement	Very unlikely	Disastrous	F2	C5	C+ (ALARP)	On separate line from all other rolling stock Extremely low speed of movement Competent tractor operator Observer/assistant Competent staff (PRO-037)
/L1.2	– due to loss of control while positioning rolling stock	Very unlikely	Disastrous	F2	C5	C+ (ALARP)	Stop blocks Stabling procedures Extremely low speed during movement by shunting tractor or pinch-bar Communication between shunter and assistant Manning of handbrakes Competent staff (PRO-037)
/L1.3	– due to staff error, due to intoxication, ill health, fatigue	Very unlikely	Disastrous	F2	C5	C+ (ALARP)	Movement on siding only, protected from any running line by separate line. Stop blocks 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
							Track Manager Tractor Operator Track Manager Crew/Shunter TM, Ops Mgr Ops Mgr Ops Mgr, crew Ops Mgr, crew Ops Mgr, crew Ops Mgr, crew Ops Mgr Asset Manager or site owner Ops Mgr, crew Ops Mgr, crew ATM Ops Mgr, crew Ops Mgr, crew Ops Mgr Ops Mgr



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L2	Collision with object or track obstruction	Very Unlikely	Major	F2	C3	D	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	Ops Mgr TM TM TM TM TM TM TM TM Ops Mgr
L2.1	due to loss of control of movement							
L2.2	due to staff error, due to intoxication, ill health, fatigue	Very unlikely	Major	F2	C3	D	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 OTHER D & A program OTHER health assess't OTHER Fatigue mgt program	Ops Mgr Ops Mgr Ops Mgr, crew TM Ops Mgr, crew Ops Mgr, crew Ops Mgr Ops Mgr Ops Mgr
L2.3	due to failure of tractor draw bar	Very unlikely	Major	F2	C3	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	Asset Ops Mgr ATM ATM ATM ATM ATM
L3	Collision with road vehicle	Very unlikely	Major	F2	C3	E	No level crossings accessed No vehicles on site	Ops Mgr Ops Mgr,

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Risk Assessment- Carriage Movement

M/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 OTHER D & A program OTHER health assess't OTHER Fatigue mgt program Coupling (no-one in rolling stock outline) Restrict non-essential personnel access	Ops Mgr, crew, TM Ops Mgr Ops Mgr Ops Mgr Ops Mgr, crew Ops Mgr, crew
L5	Deraiment							
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 Competent staff	Ops Mgr Crew, TM Ops Mgr, crew, TM TM Ops Mgr, crew, TM Ops Mgr, TM Ops Mgr
L5.2	- due to points incorrectly set	Not Heard Of	Major	F1	C3	D	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 Competent staff	Infrastructure mgr Ops Mgr, crew, TM TM 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)	Track inspection and certification Visual track inspection Extremely low speed during operation Communication between tractor driver, shunter and assistant Restrict non-essential personnel access Competent staff	Ops Mgr, crew, TM Ops Mgr, TM Ops Mgr, site owner Crew, ATM Ops Mgr, crew, TM ATM Ops Mgr, crew, TM Ops Mgr, TM Ops Mgr, crew, TM
L5.4	- due to over-running dead-end of siding	Very Unlikely	Critical	F2	C4	C- (ALARP)	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 Competent staff	Ops Mgr TM TM TM TM, Ops Mgr, crew Ops Mgr, crew, TM Ops Mgr, TM Ops Mgr, crew, TM

In No: 1

Approved By: GM

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Version Date:

12/10/11

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/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	TM, Ops Mgr, crew Ops Mgr, crew, TM	
/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)	Ops Mgr, TM Ops Mgr, TM	
/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)	Ops Mgr Asset Mgr Asset Mgr Ops Mgr, TM TM Ops Mgr, TM	
/L10	Fire	Very Unlikely	Minor	F2	C2	D	Emergency procedures Fire appliances Staff vigilance	Ops Mgr, TM TM TM, crew	
/L11	Trips, slips & falls	Likely	Minor	F5	C2	C+ (ALARP)	Worksite risk assessments & controls Corridor/yard inspection and maintenance	Ops Mgr, TM TM, crew	

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

M.G. Blumfeld
N.S.W. R.T.M.

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		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) | ☒ | (measured every 4 th sleeper) |
| b. Cross Level Tolerances | ☒ | |
| c. Track Alignment | ☒ | |
| 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 | | Good |
| | ☒ | Acceptable |
| | ☒ | Poor |
| c. Drainage | ☒ | |
| d. Placement (90°) | ☒ | |
| e. Pinned Correctly (Dog Spikes) | ☒ | |
| 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: [Signature]

Certifier: Name: [Signature] Signed: [Signature]
BE FLEAUST

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

SIGNATURE SHEET - Risk Assessment for: *CARRIAGE MOVEMENT* (brief description)
Risk Assessment associated with OTHR operation described above. **Date of Operation:** / / 20.....

Risk No.	Hazard <i>What can go wrong?</i>	Risk <i>What could happen?</i>			Inherent Risk			Controls <i>How could it be fixed?</i>			Residual Risk			ALARP ?	Finding: <i>Issues? Problems? Adopt?</i>	Action	
		Lik.	Cons	Risk	Lik.	Cons	Risk	Lik.	Cons	Risk	By	When					
ALL	As described above.	I have discussed and <u>understand</u> the risks.															
OPERATING CREW. The operating crew on the day are requested to sign this document indicating that they have READ and UNDERSTOOD the RISKS and CONTROLS associated with this operation.		NAME (Print)			POSITION (Task)			SIGNATURE			COMMENT Note any issues you have with the Risks, Management or Controls.						
		Law DAVIS			ATM			<i>[Signature]</i>									
		Daniel Reg.			ATM F.Her.			<i>[Signature]</i>									
		MAX BUNDSER			ATM.			<i>[Signature]</i>									
		Arthur Robinson			FeT Ler			<i>[Signature]</i>									
		PETER CULLEY			TM			<i>[Signature]</i>									

CARRIAGE MOVEMENT

Date of Operation: / / 20.....

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