

# **TRACK & CIVIL CODE OF PRACTICE**

## **TRACK INSPECTION & ASSESSMENT: Yards & Sidings Specification**

**Document: SHRI-004-WPT-05**



### **Track & Infrastructure Services**

Issue date: 15th January 2014

Issued By: TC Barker  
Infrastructure Standards

Authorised by:



Troy Barker,  
Infrastructure Standards Coordinator

[Electronic Portable Document Format]

**UNCONTROLLED WHEN PRINTED**

This document is the property of SteamRanger Heritage Railway ABN 36 611 842 947.  
It must not be copied or used without prior approval of SteamRanger.

TRACK & CIVIL CODE OF PRACTICE -  
TRACK INSPECTION & ASSESSMENT: Yards & Sidings Specification  
Document No: SHRI-004-WPT-05

AMENDMENTS REGISTER

Issue Date	Summary of Change	Change Authorised By
15/01/2014	New document - developed as part of review of Track & Civil Code of Practice.	TC Barker SHR BoM

## **1.0 PURPOSE**

This document specifies the minimum operating requirements for the base construction, inspection and assessment of track work in yards and sidings. Tracks assess as falling outside of compliance with this specification will be listed for corrective action or closed.

## **2.0 SCOPE**

This specification is applicable to all SteamRanger Heritage Railway yard track work which includes sidings, requiring Inspections and Assessment by Competent Personnel.

## **3.0 PROCEDURE**

### **3.1 Inspection & Assessment**

SteamRanger Heritage Railway shall conduct track inspections and assessment of SHR Yards and Sidings in accordance with this Specification.

Yards and Sidings shall be inspected every three (3) years.

Note that crossing loops are normally inspected as part of Length Patrol Inspections but are also included as part of this Specification.

Normal Inspection and Assessment of Yards and Sidings every three (3) years will be recorded onto the Length Inspection Record Sheet. All defects shall be recorded and identified for Corrective Action or Closure of Siding. The Track Manager will generate Perway Work Sheets as deemed necessary to operational requirements.

### **3.2 Construction**

Final inspection and assessment shall be carried out on any work activity affecting Yard Track Work condition and shall include the following guidelines for each maintenance task.

Final Inspections shall be recorded by completing the SteamRanger Final Inspections Form by the Competent Worker.

All new yard track construction will be subject to Final Inspection with details entered on the Final Inspection Form and stored for Safety Audit purposes.

Competent Inspecting Worker must ensure that Management of Change processes have been undertaken.

TRACK & CIVIL CODE OF PRACTICE -  
TRACK INSPECTION & ASSESSMENT: Yards & Sidings Specification

Document No: SHRI-004-WPT-05

## 4.0 SPECIFICATION

Element		Minimum Operating Standard	Maintenance Standard
<b>RAIL</b>	Size	40 kg (80AS lb) for 21 tonne maximum axle load.  47 kg (94AS lb) for 21 tonne maximum axle load.	As per Minimum Operating Standard
	Condition	Less than 30% head area loss from wear.  No foot notching, excessive corrosion, or other defects such that rail breakage is likely.	Minimum Worn Head Width 50mm Minimum Worn Head Height 12mm
	Joints (fishplated or welded)	2 bolts through each rail end, with not more than 1 bolt through each rail end loose. No fishplate cracked or broken.  Rail ends cut by saw, friction disc or neat flame cut.	2 bolts in each rail end tight. Bolt holes drilled.  No relative movement of adjacent rail ends (vertically or horizontally) due to poorly fitting fishplates.
<b>SLEEPERS</b>  <b><u>NOTE: Station Platform policy</u></b> - rail track in view of passenger platforms shall be constructed from timber sleepers and may include base plates. This policy preserves the heritage construction visual aspects for the railway's visitors.		Consecutive sleepers no longer vertically supporting a rail (i.e. ineffective bearing): 0 at fishplated joints 3 elsewhere  Consecutive sleepers no longer laterally supporting a rail (i.e. ineffective): 1 at fishplated joint 2 on curves 3 on straights  Sleeper spacing: <ul style="list-style-type: none"> <li>• Storage Siding - 1400mm (1 in 2)</li> <li>• Shunt Siding - 760mm (18/12.1m panel inc joints)</li> <li>• Curves - as for Shunt Siding</li> </ul>	As per Minimum Operating Standard



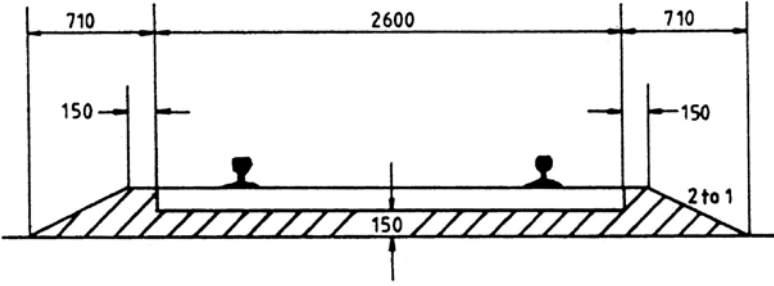
**TRACK & CIVIL CODE OF PRACTICE -  
TRACK INSPECTION & ASSESSMENT: Yards & Sidings Specification**

**Document No: SHRI-004-WPT-05**

Element		Minimum Operating Standard	Maintenance Standard
<b>FASTENINGS</b>	General	Consecutive fastenings allowing the rail foot or sleeper plate to move laterally by more than 10mm:  2 on curves 4 on straights	Maintenance intervention 20mm  As per Minimum Operating Standard
	Anchors	No unacceptable longitudinal rail movement, requiring anchoring.	As per Minimum Operating Standard
<b>GEOMETRY</b>	Gauge	Tight : 20mm, Wide 40mm	To suit gauge in the vicinity.
	Alignment (horizontal)	No sharp changes in alignment.	Smooth alignment.
	Top (vertical alignment)	No sharp changes in vertical alignment.	Smooth vertical alignment.
	Cross level	75 mm.	50 mm.
	Twist	Short 30 mm over 2 m. Long 60 mm over 10 m.	As per Minimum Operating Standard

TRACK & CIVIL CODE OF PRACTICE -  
TRACK INSPECTION & ASSESSMENT: Yards & Sidings Specification

Document No: SHRI-004-WPT-05

Element	Minimum Operating Standard	Maintenance Standard
<b>BALLAST</b>	<p>Provides acceptable:</p> <ul style="list-style-type: none"> <li>➤ Restraint and support to the track</li> <li>➤ Underfoot conditions for staff (shunt paths)</li> <li>➤ Drainage</li> </ul>  <p>630 cubic metres of ballast per kilometre</p> <p>Reference Plan: C-A3.13002</p>	As per Minimum Operating Standard

**TRACK & CIVIL CODE OF PRACTICE -  
TRACK INSPECTION & ASSESSMENT: Yards & Sidings Specification**

**Document No: SHRI-004-WPT-05**

Element		Minimum Operating Standard	Maintenance Standard
<b>SWITCHES</b>	Throw	Open gap 80 mm minimum.	As per Minimum Operating Standard
	Fit (at Toe)	Maximum gap 2 mm between switch blade and stock rail.	Maximum gap 1 mm between switch blade and stock rail.
	Condition	Not excessively bent or chipped, or presenting a blunt edge to facing wheels.	No chips or metal flow, smooth profile.
	Stops	Not more than 50% loose, or 1 per switch ineffective or missing.	Not loose, ineffective or missing.  Switch blade seats hard against stops when train passes.
	Lever	Operates without excessive effort, holding switches firmly against stock rails.	Lubricated, adjusted, working effectively, securely fastened to bearers.
	Chairs	Not more than 2 per switch broken or moving more than 10 mm on bearer.	Not cracked or broken. Securely fastened to bearers (screws preferred).
	Spreader bars & fillings	Not cracked, bent, damaged or missing. No bolts loose or missing.	As per Minimum Operating Standard
	Heel	Block not cracked or broken. No bolts excessively loose.	As per Minimum Operating Standard
	Bolts (general)	Bolts not excessively loose, or missing.	All bolts present and tight.

**TRACK & CIVIL CODE OF PRACTICE -  
TRACK INSPECTION & ASSESSMENT: Yards & Sidings Specification**

**Document No: SHRI-004-WPT-05**

Element		Minimum Operating Standard	Maintenance Standard
<b>CROSSING</b>	Condition	Not cracked to the extent that a portion is likely to break out of a running surface.	As per Minimum Operating Standard
	Nose wear	12 mm (vertical)	As per Minimum Operating Standard
	Wing rail wear	12 mm (vertical)	As per Minimum Operating Standard
	Flangeway depth	Wheel flanges running clear.	As per Minimum Operating Standard
	Bolts	Not more than 1 consecutive or 2 total loose, missing or ineffective.	All bolts present and tight.
<b>CHECK RAILS</b>	Flangeway width	Check Rails and Wing Rails not being excessively worn	44 – 47 mm
	Bolts	Not more than 2 per check rail loose, missing or ineffective. Wedges and/or shims effective.	All bolts present and tight.
Crossing nose to check rail dimension		Check Rails are preventing wheel flange contact with crossing nose	As per Minimum Operating Standard
<b>SWITCH FASTENINGS</b>		Not more than 2 consecutive bearer in switch or crossing areas with ineffective fastenings.	Resilient fastenings and attachment to bearers by screws preferred.
<b>SWITCH BEARERS</b>		Not more than 2 consecutive bearer in switch or crossing areas ineffective at holding gauge.  Both switch mechanism bearers effective.	As per Minimum Operating Standard



**TRACK & CIVIL CODE OF PRACTICE -  
TRACK INSPECTION & ASSESSMENT: Yards & Sidings Specification**

**Document No: SHRI-004-WPT-05**

Element		Minimum Operating Standard	Maintenance Standard
<b>CLEARANCES</b>	Lateral (from track centre line)	1,600 mm to platforms less than 1,000 mm above rail level.  1,600 mm to near edge of signs less than 1,000 mm above rail level.  1,830 mm to points levers (which includes allowance for curve effects in the turnout), except where calculations show a lesser clearance to be acceptable;  1,800 mm elsewhere.	1,600 mm to platforms less than 1,000 mm above rail level.  1,600 mm to near edge of signs less than 1,000 mm above rail level.  1,850 mm to points levers (which includes allowance for curve effects in the turnout), except where calculations show a lesser clearance to be acceptable;  2,000 mm elsewhere.
	Vertical (above top of rail)	Elsewhere: 6,095 mm.	Elsewhere: 6200 mm.
	Track centres	2700 mm	3125mm

TRACK & CIVIL CODE OF PRACTICE -  
TRACK INSPECTION & ASSESSMENT: Yards & Sidings Specification

Document No: SHRI-004-WPT-05

Element	Minimum Operating Standard	Maintenance Standard
<b>DRAINAGE</b>	No deficiency likely to result in unacceptable deterioration of track.	Track is free draining.
<b>VEGETATION</b>	No unacceptable: <ul style="list-style-type: none"><li>➤ Hazard to staff</li><li>➤ Risk of fire</li><li>➤ Obstruction of visibility</li><li>➤ Potential locomotive traction problem</li></ul>	Vegetation removed or herbicide applied.
<b>SIGNS (TRAIN OPERATIONS)</b>	Secure, conspicuous, legible.	
<b>ACCESS PATHS/ROADS</b>	No unacceptably frequent unauthorized access to infrastructure.	