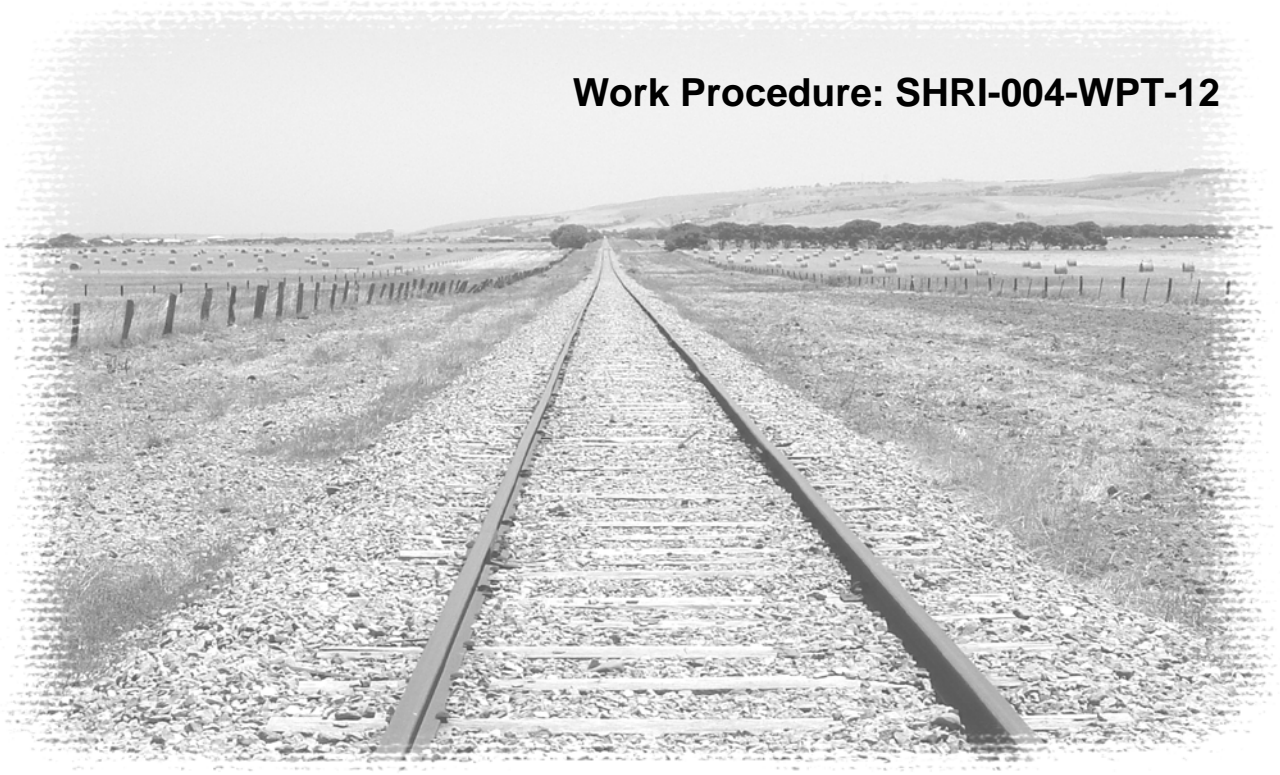




TRACK & CIVIL CODE OF PRACTICE

MANAGEMENT OF RAILWAY RESERVE

Work Procedure: SHRI-004-WPT-12



Track Maintenance Section

CONTROLLED COPY NO:

Authorised By: Troy Barker

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AMENDMENTS REGISTER

Issue Date	Summary of Change	Change Authorised By
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6-10-2015	Updated to reflect personnel changes and COP document standard. Remove AS4292.2 standard.	TC Barker

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1.0 PURPOSE

SteamRanger Heritage Railway, as a railway owner and operator is required to maintain the railway reserve in a consistent manner. Further, maintenance is conducted to provide protection against damage or injury to rollingstock, staff and passengers on trains. This work is done in the most cost effective manner. This document sets out the standards upon which this work will be undertaken and managed.

2.0 SCOPE

This document provides guidelines for the management of elements or features within the Railway Reserve (also referred herein as Right of Way) including

- * Vegetative growth including noxious weeds
- * Fire controls
- * Access roads/paths
- * Access controls
- * Third party assets and/or activities within the Right of Way (eg pipeline crossings).
- * General conditions and/or activities on adjacent properties which may have an effect on the Right of Way
- * General conditions or activities within the Right of Way effecting, or having the potential to effect, adjacent properties

The railway reserve will be inspected in accordance with the three tier processes provided in WPT-02 Track Inspection Practice and Maintenance Procedure..

3.0 REFERENCES

Code of Practice for the Defined Interstate Network Volume 4 Track, Civil and Electrical Infrastructure Parts 1, 2 & 3: June 2002.

TMT-01 Code of Practice for Permanent Way Maintenance

WPT-02 Track Inspection Practice and Maintenance Procedure

WPT-03 Track Inspection Schedule Victor Harbor Line

SteamRanger Heritage Railways Work Procedures, as applicable.

AS4292.2 Section 6 Monitoring and Maintenance, Track & Civil Infrastructure

4.0 SPECIFICATIONS

4.1 General

This section provides specific management details of base standards upon which SteamRanger's inspection regime will apply. Detected conditions will result in corrective actions, the processes of which are detailed in Section 6.0 of this document.

4.2 Access Controls

Assessment of Access Controls shall take into account where existing fencing, gates or enclosures are not effectively controlling access. Consideration must be given to the purpose for which the Access Control was installed. Assessments must be made on the ability to prevent access by persons or livestock. An assessment must be made of those locations where no access control currently exists to determine if control is required. This will include the scope of work necessary to make good repairs. Along the Victor Harbor Line corridor, the responsible landowner shall be advised, as rail organisations are not required to maintain reserve fencing, by legislative determination. During patrol inspections, the general condition of all fences, gates, enclosures and other access controls to SteamRanger property, equipment and/or materials shall be checked.

Assessment of enclosures, fencing and facilities shall include:

- * Fencing which does not achieve the intended access control

4.3 Fire Controls, Vegetation, Access Roads/Paths

Vegetation, Fire Controls and Access Roads shall be maintained to the tolerances and condition defined in this Section. Where the condition fails to comply with the limits specified, or damage does not allow it to perform its intended function, actions shall be taken to repair or remove defects as specified.

4.4 Vegetation and Fire Control

4.4.1 General

SteamRanger undertakes ongoing environmental maintenance programmes, overseen by the Manager, Track or delegate. These programmes are undertaken with the objective of meeting the following specifications.

4.4.2 April/May Inspection

Assessment of Vegetation and Fire Control in April/May shall be against the following criteria:

- * Extent and type of potential vegetative/weed growth up to 4 metres from centre line of track unless exemption provided by the Manager, Track.
- * The planned method and degree of control (mechanical or chemical) is adequate against previous control programmes and current conditions.
- * Development of resistance to particular herbicides.
- * No damage to vegetation outside of chemically treated swath or mechanically cleared width.
- * Noxious weeds within the Right of Way are controlled to limits as agreed between SteamRanger's Weed Management Officer and the local Animal and Plant Control Board.
- * Infringement by vegetation on Line of Sight standards for road crossings, signals and signs.
- * Infringement by vegetation on the structure clearance standards in accordance with TMT-01 Code of Practice for Permanent Way Maintenance, Section 13.
- * Potential for tree limbs to fall onto track or obstruct train operations

4.4.3 September/October Inspection

Assessment of Vegetation and Fire Control in September/October shall be against the following criteria:

- * Substantially free from vegetative/weed growth within a width of 4 metres either side of the track centre line unless exemption provided by the Manager, Infrastructure Services.
- * Established fire breaks are substantially free from combustible material
- * Established fire breaks are of sufficient width to prevent fires crossing the barrier
- * No damage to vegetation outside of the chemically treated swath or mechanically cleared width..
- * Infringement by vegetation on Line of Sight standards for road crossings, signals and signs
- * Infringement by vegetation on the structure clearance standards in accordance with TMT-01 Code of Practice for Permanent Way Maintenance, Section 13.
- * Potential for tree limbs to fall onto track or obstruct train operations

4.5 Fire Control Inspection

The purpose of the inspection is to identify the location of any condition which reduces the control of fire hazard to the Railway Reserve or adjacent property. Fire Control preparations are detailed under Section 6.3. Inspection for fire control shall be carried out in consultation with the local fire authority and include identifying the following :

- * Suitability of fire breaks to prevent the spread of fire initiated on the rail corridor to adjacent properties.
- * Appropriate controls in place to prevent the spread of fire to SteamRanger Heritage Railway equipment, installations and facilities

4.6 Vegetation General

4.6.1 Scheduled Inspection

The purpose of the inspection is to identify any localised condition where vegetation within or adjacent to the right of way which:

- * Reduces, or has the potential to reduce, the asset serviceability and performance
- * Will, over time, lead to deterioration of ballast or cuttings, embankments or formation.
- * Restricts line of sight for train operations
- * Restricts line of sight for road users and/or pedestrians at grade crossings.
- * Infringes on the structure gauge
- * Restricts access and operating clearance for normal maintenance and emergency access to and within the right of way
- * Restricts drainage within or away from the right of way
- * Falls into the category of a Proclaimed Plant requiring control under the Animal and Plant Control Act or equivalent
- * Creates a fire hazard
- * Will lead to spread of fire
- * Will lead to severe erosion due to loss of ground cover

4.6.2 Unscheduled Inspection

Assessment of Vegetation and Fire Control as part of the Unscheduled Inspections shall be against the following criteria:

- * Damage to vegetation outside of chemically treated swath or mechanically cleared width.
- * Noxious weeds within the Right of Way are controlled to limits as agreed between the SteamRanger's Weed Management Officer and the local Animal and Plant Control Board.

4.7 Access Paths/Roads

Assessment of Access Paths and Roads shall be against the following criteria:

- * Determining fit for purpose requirements for maintenance vehicles using access roads
- * Determining unsafe locations on operator walkways and paths (obstruction and tripping hazards)
- * Liaison with users of access paths in determining suitability (train drivers, maintenance staff etc)

5.0 INSPECTION AND ASSESSMENT

5.1 Scheduled Right of Way Inspections

Right of Way inspections are conducted in accordance with the inspection regime detailed in WPT-02 Track Inspection Practice and Maintenance Procedure.

5.5.1 Inspection

(a) Patrol inspections

Track length inspectors should keep a lookout for defects and conditions that may affect, or indicate problems with, the integrity of the right of way including the following:

- Damage to vegetative growth outside treated or controlled areas
- High risk fire locations including presence of combustible rubbish and vegetation
- Indications of unreported fires
- Infringement on firebreaks by combustible materials
- Hazardous tree limbs or trees which may effect train operations including line of sight
- Hazards effecting the safe use of access roads and walkway paths
- Effectiveness of fencing, gates and enclosures
- Livestock entering right of way.

The inspection should be carried out at a speed consistent with the local conditions and the full scope of the inspection being carried out (eg. the type and number of other infrastructure elements being inspected).

(b) General inspections

Scheduled general inspections should be sufficient to observe and document items of concern and significant changes in the condition of the right of way since the previous general inspection. General Inspections are conducted as part of the annual inspection as detailed in WPT-02 Track Inspection Practice and Maintenance Procedure.

A general inspection should be carried out when suspected defects are identified from conditions determined during patrols inspections. General inspections should include the tasks of the patrol inspection and in addition look for conditions or changes in the conditions which may affect the integrity of the right of way including the following:

5.1.2 Access Controls:

- Damaged or defective fences, gates, or pedestrian mazes designed to prevent or control the ingress of animals or persons onto the Right of Way. Note this is advisory to adjacent land owners as SteamRanger is not required to maintain fencing at level crossings or adjoining the rail reserve.

- Lack of access control where it may be required but is not provided
- Incidents of unauthorised access, particularly at SteamRanger facilities, depots and workshops.

5.1.3 Fire Controls, Vegetation, Access Roads/Paths and General Right of Way:

- Treated or controlled areas (including the ballast, cesses, established fire breaks and level crossing sight lines) not substantially free from vegetative growth
- Damage to vegetative growth outside treated or controlled areas
- High risk fire locations including presence of combustible rubbish and vegetation
- Infringement on firebreaks by combustible materials
- Hazardous tree limbs or trees which may effect train operations
- Presence of noxious weeds as defined by the relevant local authorities
- Hazards effecting the safe use of access roads and walkway paths
- Unauthorised encroachment into the Right of Way by third parties including the building of structures, new excavations, tipping of materials, blockage of drains and watercourses, road construction, erection of hoardings or fences, the laying of drains, pipes or cables
- Damaged or defective third party crossings of the Right of Way (pipelines, services, cables etc.)

5.1.4 Damage Caused by Vandalism not Reported

- Damage to equipment or features within the Right of Way
- Restrictions or obstructions to operations
- Restrictions or obstructions to other traffic types or users within the Right of Way

5.1.5 Un-Scheduled

An un-scheduled inspection of the Right of Way should be carried out following the identification of suspected defects, and the occurrence of an event that may have affected the infrastructure, such as:

- Heavy rainfall
- Fires
- Situations arising from reports from train crews.

6.0 MAINTENANCE PROCESSES

6.1 Weed Control Practice

6.1.1 Herbicides Application

The Weed Control Officer shall be responsible for the application of all herbicides.

The application of herbicides shall be carried out as agreed by the Manager, Infrastructure Services or delegate. The Weed Control Officer shall be responsible for the safe handling and transport of herbicides and shall ensure that:

- * No spillage occurs
- * Containers are not damaged
- * No degradation of the herbicide occurs including breakdown or abrasion of dry granule formulations
- * Stored in a manner to prevent deterioration, damage and misuse.

The rate of application of herbicides should be the minimum required to achieve the desired control. The rate of application across a swathe width should be varied according to the density of vegetation (eg heavy growth at the ballast toe compared to sparse growth between rails).

The Weed Control Officer shall ensure that all herbicides are applied strictly in accordance with their label, that personnel applying the herbicides are licensed to do so and that herbicides are not applied to watercourses.

6.1.2 Application Equipment

The Weed Control Officer shall ensure that all equipment used to apply herbicides is:

- * Suitable for the designated use
- * Continually monitored to ensure herbicides are applied at the correct rate and location

6.1.3 Off target Damage

All off-target damage must be avoided. The Weed Control Officer may determine situations where application of herbicide is excluded for this reason.

6.1.4 Disposal of Empty Containers/Bags

The Weed Control Officer shall be responsible for the proper disposal of all empty containers and material bags.

6.2 Control of Noxious Weeds

The Victor Harbor line is located in areas under the control of:

- (a) Mt Lofty Ranges Animal and Plant Control Board
- (b) Fleurieu Animal and Plant Control Board

The Weed Control Officer shall determine the strategy for the control of noxious weeds within the Right of Way. This may include the development of a control plan in consultation with the Manager, Infrastructure Services or delegate.

Local Animal and Plant Control Board Officers monitor the growth of noxious weeds in their respective areas. Where proclaimed weeds are identified on the Right of Way the Weed Control Officer shall negotiate with the Local Officer to determine the appropriate method of treatment (if required).

SteamRanger will undertake management of noxious weeds in accordance with recommended practice by the Animal and Plant Control Boards. This is detailed in Appendix A.

6.3 Fire Control

6.3.1 Fire Season Preparations

The Declared Fire Danger Season is advised as between the 1st December to the 30th April for the Mt Lofty Ranges District; however the Country Fire Service of South Australia can change dates of the fire danger season when fire risk conditions are high. Therefore, prior to the start of the Declared Fire Danger Season, SteamRanger is required to obtain a permit to allow the operation of steam locomotives on a determined section of track. Two processes are currently in place:

- (a) To satisfactorily operate the Cockle Train service, a permit is required to be issued for the Goolwa Depot – Victor Harbor section during the fire danger season. Slashing, ploughing and herbicides may be used (or in combination) to remove flammable materials in the railway reserve. The Weed Control Officer or Manager, Mechanical Services will liaise with the relevant Fire Authority to complete this process.
- (b) During the period just prior to the commencement of the Mt Lofty Ranges Declared Fire Danger Season, a permit is required to allow steam locomotives to operate through the Murraylands Fire Region. This permit may be issued with a requirement for a fire patrol to follow the train service.

For all remaining sections of track, SteamRanger has a responsibility to control the vegetation, particularly weed growth, to reduce the fire risk in accordance with accepted community standards. Usual practice is to conduct manual slashing of weeds through the Mt Barker and Strathalbyn townships. All other areas are subject to ongoing vegetation maintenance programmes.

6.3.2 Burning Off Vegetation

Process:

Before burning off at any place, a strip of land must be ploughed to a width of at least two metres or be cleared of all scrub, stubble and other flammable material to the same width. Where landholders, councils or the County Fire Service co-operate with environmental maintenance teams, simultaneous burning off outside of and adjacent to the railway boundary is permissible, providing such other parties desire to have a wider strip outside railway land and they burn out to proper firebreaks. Stumps, logs and other rubbish must only be burnt when weather conditions render it practicable. Grass and other flammable materials must be removed a sufficient distance from all structures or material to prevent possibility of damage by fire.

All workers directing or undertaking burning off or lighting a fire in the open for any reason, must ascertain whether the lighting of fires in the open has been prohibited within the declared fire danger district. From the 1st November to 30th April, no fire shall be lit in the open. Special requirements relating to fire management are required to be complied with during this time. This can include the issuance of a permit.

Burning off must be done only when the wind is moderate, and should be commenced on the leeward side of the grass to be burnt so that the fire must travel against the wind. Should the wind increase to such an extent as to involve risk of the fire breaking away, the burning must be at once discontinued and the fire thoroughly extinguished.

No burning shall be done unless there are present on site at least four workers with all necessary appliances including at least one knapsack spray for every two workers.

Four workers must be present from the time the fire is lit until it is thoroughly extinguished.

Every possible precaution must be taken to prevent the fire at any time spreading beyond the railway reserve.

Care must be exercised when burning under or near railway pole lines, as the heat from the fires softens the copper wires, causing them to stretch and break. The Signal & Telegraph Manager must be advised immediately it is suspected or known that pole lines have been damaged by fire.

7.0 DOCUMENTATION

Records as detailed throughout this document.

8.0 APPENDIX A

Weed Management - Getting Started

The following table is a general guide to appropriate spraying times. Suitable periods for spraying can vary with the seasonal conditions and location. Contact your local Authorised Officer for further advice.

Weed Control Calendar

	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Blackberry, Broom												
Gorse												
Boneseed												
Hawthorn												
Olive (wild)												
Salvation Jane & Thistle												
Summer Burrs - (Caltrop, Innocent Weed, Khaki weed)												
Broad-leaf Pasture Weeds												
Cape Tulip												
Asparagus Weeds (Bridal Creeper/ Bridal Veil)												
Watsonia												
Water Dropwort												

Timing: Legend:	Optimum	Suitable	Seek advice	Not Suitable

FREE PLANT IDENTIFICATION ADVICE IS AVAILABLE FROM YOUR LOCAL ANIMAL & PLANT CONTROL OFFICERS

Produced by
Purple Peril & Woody Weed Management Committee
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