SteamRanger Heritage Railway

Mount Barker Junction to Victor Harbour
South Australia

General Instructions and Working Timetable

Incident Reporting
Network Configuration (Stations and Level Crossings)
Rollingstock Details
Train Scheduling
Operational Instructions

For the Information of Rail Safety Workers on the SteamRanger Heritage Railway
(Not for Public Distribution)

Document – SHR-WTT-22
Revision 1.0

February 27, 2022

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Contents

Document Owner

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This document is issued and managed by the Operations Manager, SteamRanger Heritage Railway, for the information of, and use by, workers on the Railway.

Document control:

This is version **Revision 1.0** of this document, and is uncontrolled when printed.

The controlled version of this document is available only on the Staff Information pages of the SteamRanger Heritage Railway intranet site.

All workers have a responsibility to periodically check that their copy aligns with the controlled version on the SHR Intranet.

Annual amendments to this document (if/as required) will be published in November of each year, or as required. Replacement pages and an amendment register will be provided to registered holders of this document.

Any urgent or short-term changes to information contained in this document will be published via a Network Notice, issued by the Operations Manager.

Such Network Notices shall remain in effect only for the period required, or until the information contained is included within an annual amendment.

Version history:

Version	Date	Author	Reviewer	Issued
1.0	*February 27, 2022*	*Various*	*Various*	*For use*

Amendment details:

Version	Sections	Details
1.0	*All*	*Initial release version – for use*

NOTE :

This document replaces those portions of WPO 02 that are not addressed by the HRSA Safeworking Rules.

WPO 02 is now withdrawn from use in its entirety.

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1.0 GENERAL

This document is the General Instructions and Working Time Table for the SteamRanger Heritage Railway.

The SteamRanger Heritage Railway extends 82.5 kilometres from Mount Barker Junction to Victor Harbour, in the State of South Australia.

The Railway was part of the grater South Australian Railways network and of the SAR's successor, the Australian National Railways Commission.

The Railway is of Broad Gauge (1600 mm or 5'3") and was previously connected to the South Australian Broad-Gauge network via Mount Barker Junction.

The railway from Adelaide to Tailem Bend (and to Melbourne) was converted to Standard Gauge (1435 mm or 4' 8 ½ ") in 1995.

This severed the connection, isolating the SteamRanger Heritage Railway from the remaining railway network in South Australia.

1.1 Contact Telephone Numbers

The following contact telephone numbers are applicable:

SHR Train Control	***8391 2719***	***All hours of railway operation***

Calls to this number are directed to the duty-Controller for the day.

Mount Barker Station	***8391 1223***	*Office (hours of attendance only)*
Mount Barker Depot	***8398 3621***	*Workshop hours of attendance only*
Strathalbyn Depot	***8536 2816***	*Workshop hours of attendance only*
Strathalbyn Platform	***8536 2816***	*Not attended at any time*
Goolwa Depot	***0491 237434***	*Workshop hours of attendance only*
Goolwa Station	***8555 2691***	*Ticket office hours of attendance only*
Port Elliot Station	***8554 2024***	*National Trust hours of attendance only*
Victor Harbour Station	***8552 2782***	*Station hours of attendance only*

2.0 INCIDENT REPORTING

In the event of any kind of incident, it is the responsibility of all workers to ensure their own safety first, then that of other people, the safety of the environment or assets (if able), and then summon help as required.

All incidents and occurrences on the Railway must be reported to the Train Controller.

SHR Train Control	***8391 2719***	***All hours of railway operation***

If there is any uncertainty about the seriousness of an incident tell the Train Controller and allow the Train Controller to make that decision, but in any event:

Tell the Train Controller about ALL incidents and occurrences as soon as possible after they happen.

After verbally reporting an incident to the Train Controller, **all workers involved** with or affected by incidents have a responsibility to submit a written report on the day it occurs.

The Train Controller will initiate a Train Control Incident report, which will be passed on to the appropriate functional mangers for action.

Take photos of anything associated with the site, even if it does not seem important.

All incidents must be reported in writing using the Incident Reporting Package, copies of which are available:

- at all book-on points, and
- in all Guard's dispatch boxes, and
- at Mount Barker and Goolwa Depots, and
- at Mount Barker, Goolwa and Victor Harbour Stations.

An editable pdf copy of the form is available on the Staff Information page of the SHR website.

Workers are encouraged to carry a blank copy with them for immediate reference.

You may not need to fill out all pages, but work through the form and provide as much detail as you can recall, with particular attention to times, locations, assets and personnel involved in the incident.

To ensure that the information is reported on as quickly as possible, you must either:

- Take photos of the relevant pages and send via SMS to the Rail Safety Manager, and/or
- Scan the completed report and send it via email to the Rail Safety Manager:

RSM@steamranger.org.au - Phone Number as published

Send the original completed report to the Administration Manager, Mount Barker:

- If the incident involves train operations, include the incident report with the train running documents that are collected on the completion of each running day and sent to the Administration Manager, Mount Barker.
- If the incident is not train-related, arrange for the original form to be sent to the Administration Manager, Mount Barker, via the most effective means.

3.0 NETWORK CONFIGURATION

Kilometre references on the SteamRanger Heritage Railway are derived from a survey datum point-zero, at the location of the former Platform One buffer stop, at the Adelaide Railway Station, North Terrace, Adelaide.

3.1 Station Location and Layout

The facilities at Station Locations on the Railway are outlined within the following section of the document.

Track layout diagrams, facility descriptions, location of infrastructure and specific operating instructions (where appropriate) are provided.

Station	***Km Post***	***Facilities and Comment***
Mount Barker Junction	*50.000*	*Main Line Dead end – Passenger Platform*
Mount Barker	*55.000*	*Platform; Main Line; Crossing Loop; Sidings (9); Water Column; 26m Turntable; Workshops; Track Maintenance Depot; Attended as required*
Philcox Hill	*61.550*	*Main Line (Non Crossing Station)*
Bugle Ranges	*64.075*	*Main Line (Non Crossing Station)*
Gemmells	*70.184*	*Main Line (Non Crossing Station)*
Strathalbyn	*81.500*	*Platform; Main Line; Crossing Loop; Goods Sidings (5); Water Column; 14m Turntable; Track Maintenance Depot*
Sandergrove	*89.790*	*Main Line (Non Crossing Station)*
Finniss	*97.040*	*Platforms (2); Main Line; Goods Loop; Stock Ramps*
Gilberts	*99.220*	*Main Line (Non Crossing Station)*
Currency Creek	*106.700*	*Platform; Main Line; Goods Loop*
Goolwa Depot	*112.360*	*Main Line; Sidings (6); Triangle; Water Column; Workshops; Track Maintenance Depot*
Goolwa	*114.377*	*Platform; Main Line; Crossing Loop; Dead End Siding Attended for train working as required*
Middleton	*122.480*	*Platforms (2); Main Line; Crossing Loop;*
Port Elliot	*125.670*	*Platform; Main Line; Dead End Goods Siding*
Victor Harbour	*131.980*	*Platform; Main Line; Crossing Loop; Goods Sidings; 26m Turntable; Normally attended for train working*

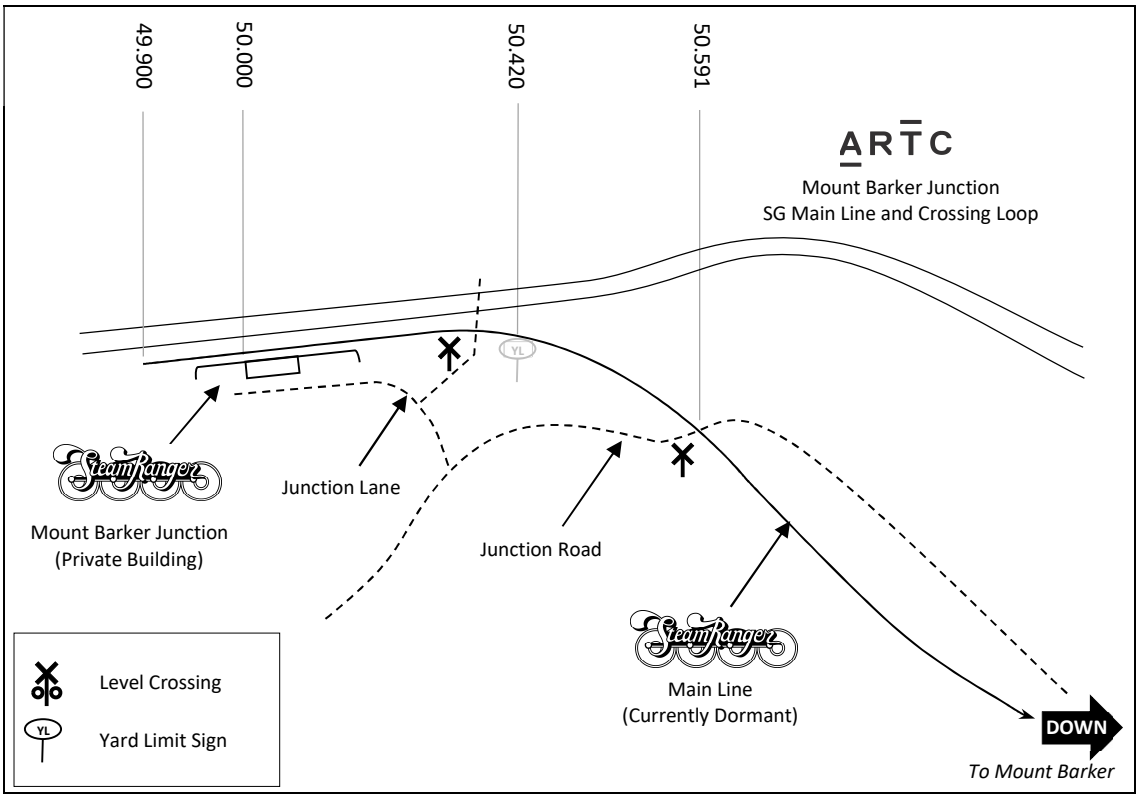
3.1.1 MOUNT BARKER JUNCTION – 50.000 km

MOUNT BARKER JUNCTION is an unattended non-crossing Station, provided only with a Main Line, which terminates at this location.

Within Yard Limits trains can terminate, and reverse their direction of travel.

MOUNT BARKER JUNCTION Yard Limits extend from the dead end at 49.900 km to 50.420 km (Down-End) but there is no Yard Limit Sign currently provided.

A passenger platform of 145 metres in length is provided.



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Mount Barker Junction

Standing Room:

Main Line - (In Clear of Yard Limit Sign)	*420 metres*

Additional Information:

MOUNT BARKER JUNCTION is the former interface with the Adelaide to Tailem Bend Railway, and is the commencement point of the SteamRanger Heritage Railway.

The ARTC Standard-Gauge Main Line and Mount Barker Junction Crossing Loop run immediately parallel to the SHR Railway.

The operation of revenue services to Mount Barker Junction is not currently conducted.

The track between Mount Barker Junction and Mount Barker is currently classified as dormant, and is unavailable to all rail traffic except for movement of track inspection vehicles, operating primarily for the purpose of track inspection or track maintenance work.

Only workers engaged in authorised work on track or track inspection activities may travel on rail movements within the Section Mount Barker to Mount Barker Junction.

Some passive level crossings in this Section have had railway level crossing signs removed, and have been provided with signs denoting “Level Crossing not in use”.

All level crossings must be protected by a Competent Worker for the passage of rail traffic.

Operation of Trains to Mount Barker Junction.

Trains operating to Mt Barker Junction must operate in accordance with the interface agreement between SteamRanger and ARTC which details the following :

- All train movements to the platform at Mount Barker Junction must be advertised in advance via a Network Notice.
- The SHR Operations Manager (or delegate) must provide the SHR Train Controller and the Train Transit Manager at ARTC Network Control Centre West (NCCW), with a copy of that Network Notice.
- On the day of operation, before authorising departure for train movements towards Mount Barker Junction, the Train Controller must:
    - Contact the ARTC Network Controller (NCCW South Board);
    - Advise details of the intended SHR movement;
    - Seek details of Standard Gauge services due through Mount Barker Junction whilst the SHR service is at that location;
    - Tell the Guard of the SHR service about any Standard Gauge services due through Mount Barker Junction whilst the SHR service is at Mount Barker Junction.

Facilities at Mount Barker Junction

The station building at Mt Barker Junction must not be accessed without the authority of a member of the SHR Board of Management.

3.1.2 MOUNT BARKER – 55.000 km

Mount Barker is a crossing Station, provided with a Main Line and Crossing Loop.

Within Yard Limits, trains can terminate and reverse their direction of travel.

Yard Limit Signs are located at 54.715 km (Up-End) and 55.325 km (Down-End).

A Location Ahead signs is located at 56.325 km (Down-End).

There is no Location Ahead sign located in the Mount Barker to Mount Barker Junction section.

(a) Railway infrastructure at Mt Barker Station Yard comprises:

(i) a Main Line extending through the station Yard Limits;

(ii) an electrically operated turntable, 26 metres in length;

(iii) a crossing loop of 272 metres clear standing room;

(iv) a passenger platform of 134 metres in length;

(v) 9 tracks within the Mount Barker Depot (outlined separately);

(vi) Switch Stands to all Main Line points;

(vii) Water column at UP End of Platform (Currently out of service).

Standing Room - Mount Barker Station Yard:

Between Yard Limit Signs	*625 metres*
Crossing Loop - (In Clear of Main Line)	*272 metres*
Main Line - (In Clear of Crossing Loop)	*270 metres*
Main Line - UP End Fouling Point to Clear of Number 2 Points	*153 metres*
Platform Length	*134 metres*

(b) Railway infrastructure within the Mt Barker Depot comprises:

(i) 9 dead-end storage or maintenance tracks;

(ii) a stone goods shed spanning a portion of 2 Road;

(iii) a workshop shed spanning the majority of 4 and 5 Roads;

(iv) a carriage storage shed spanning the majority of 6, 7 8 and 9 Roads;

(v) spring-lever operated points;

(vi) 3 rail access gates.

Standing Room - Mount Barker Depot:

1 Road (rail gates to dead end)	*134 metres*
2 Road (clear of 3 Road to dead end)	*158 metres*
2 Road (clear of 3 Road to Goods Shed)	*78 metres*
2 Road (within Goods Shed)	*19 metres*
3 Road (in clear)	*51 metres*

4 Road (in clear of road crossing to Workshop)	*53 metres*
4 Road (to south end of Workshop)	*43 metres*
4 and 5 Road (within Workshop)	*94 metres*
5 Road (in clear of road crossing to Workshop)	*56 metres*
5 Road (to south end of Workshop)	*43 metres*
6 Road (in clear of 7 road to Workshop)	*48 metres*
6 Road (to south end of Workshop)	*39 metres*
7 Road (in clear of 8 Road to Workshop)	*32 metres*
7 Road (to south end of Workshop)	*39 metres*
8 Road (in clear of 7 Road to Workshop)	*32 metres*
8 Road (to south end of Workshop)	*39 metres*
9 Road (in clear of road crossing to Workshop)	*65 metres*
9 Road (to south end of Workshop)	*39 metres*
6, 7, 8 and 9 Road (under roof of Carriage Shed)	*94 metres*

Additional Information:

Mount Barker Railway Station is the administrative centre for the Railway.

The Mount Barker Railway Station is attended from 0900 to 1500 on most days for souvenir sales as well as “back office” administrative purposes.

Maintenance activities are conducted six days per week (Monday to Saturday) within the Mount Barker Depot workshops compound.

Operational Information

Mount Barker Station is not normally attended for train working purposes, but may become attended when advertised advised via a Network Notice.

Occupation of tracks outside of workshop gates is under the control and authorisation of the Train Controller when unattended, or the Station Master (or delegate) when attended.

Dutton Road Level Crossing

A short approach circuit is provided for the active level crossing at Dutton Road (55.450 km).

DOWN trains departing Mount Barker must not exceed 20 km/h until the lead locomotive has occupied the intersection with Dutton Road.

UP trains approaching Mount Barker from Philcox Hill, are not subject to this requirement.

Turntable Operation

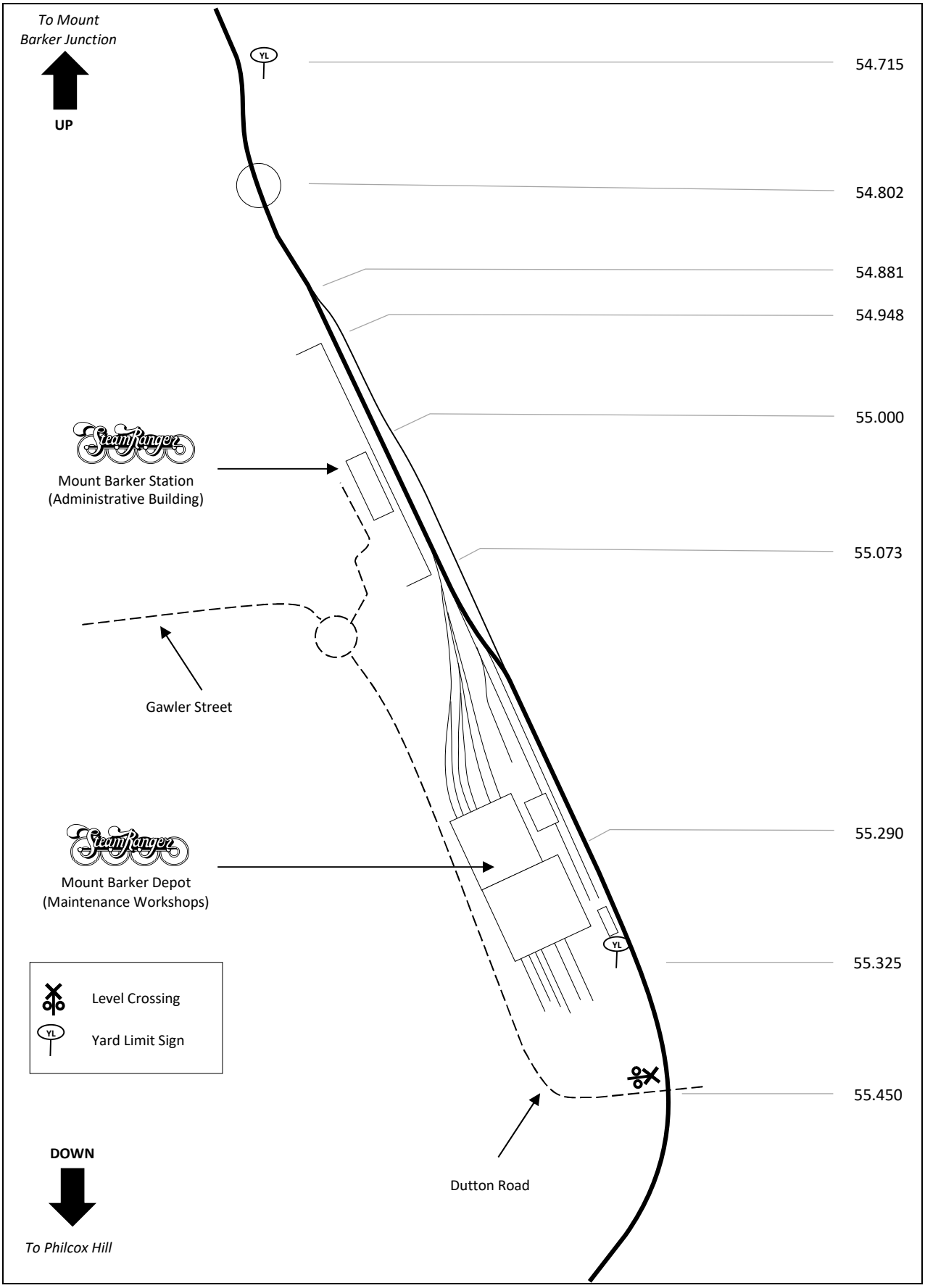
A 26 metre electrically powered turntable is located on the Main Line at the Littlehampton end of the Mount Barker yard.

The controls for the turntable are located within the cabin on the turntable platform.

The isolation circuit breakers are located in the junction box on the south-western side of the turntable pit.

Both plunger locks must be engaged before any attempt is made to move any locomotive or vehicle onto the table.

Mount Barker – Overall Layout



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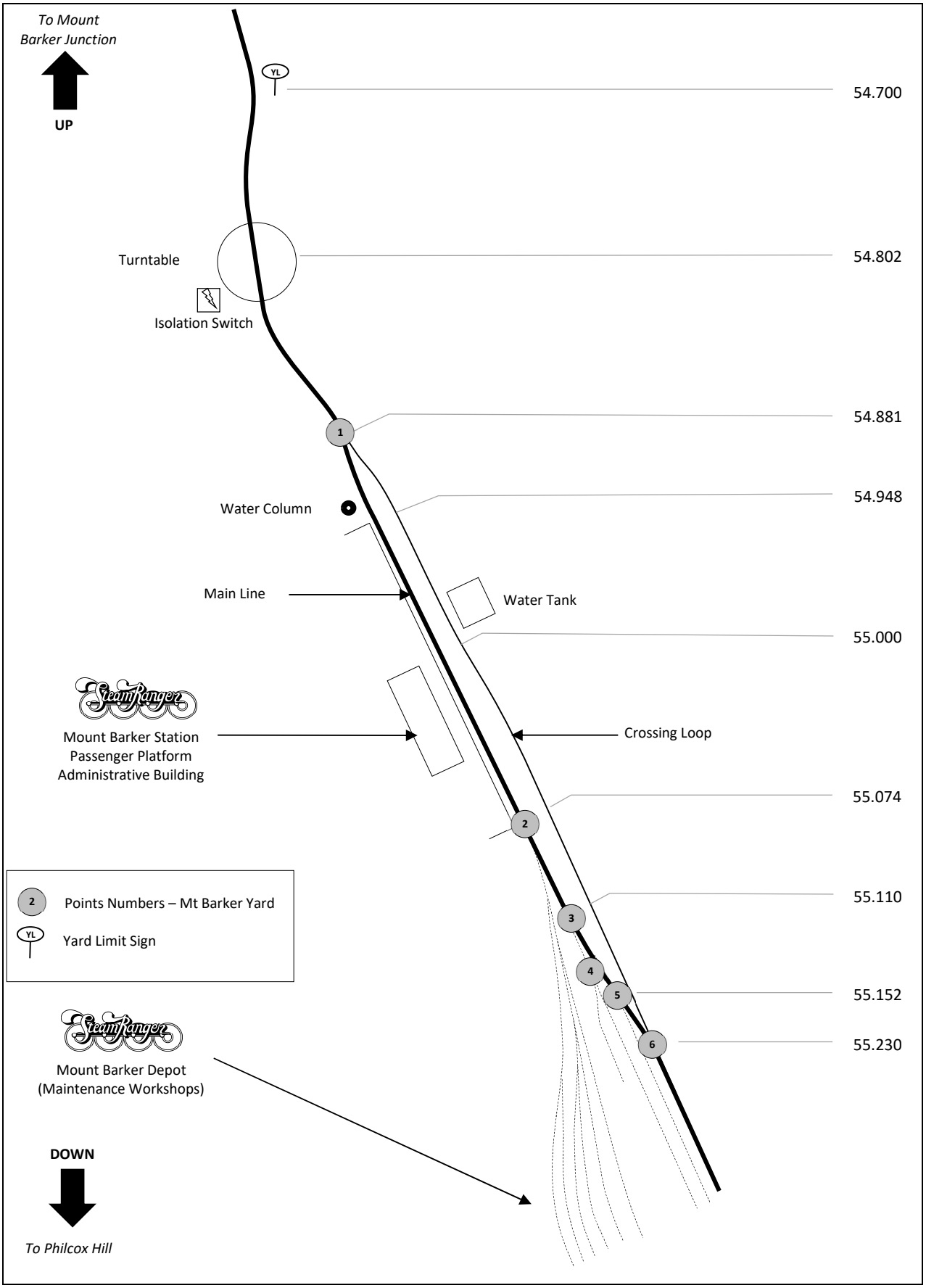
Mount Barker Station - Yard Layout



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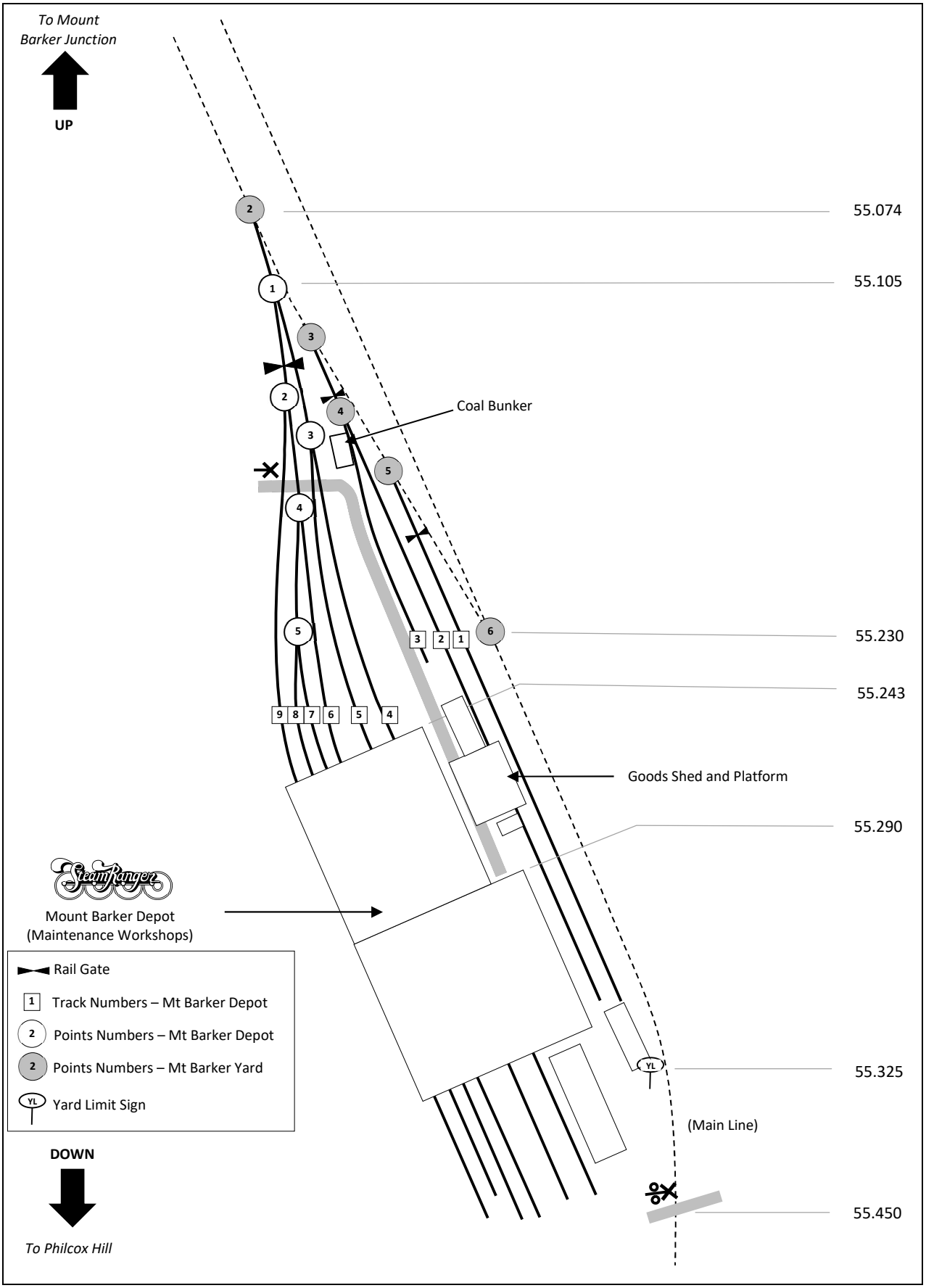
Mount Barker – Depot Yard Layout



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3.1.3 PHILCOX HILL – 61.450 km

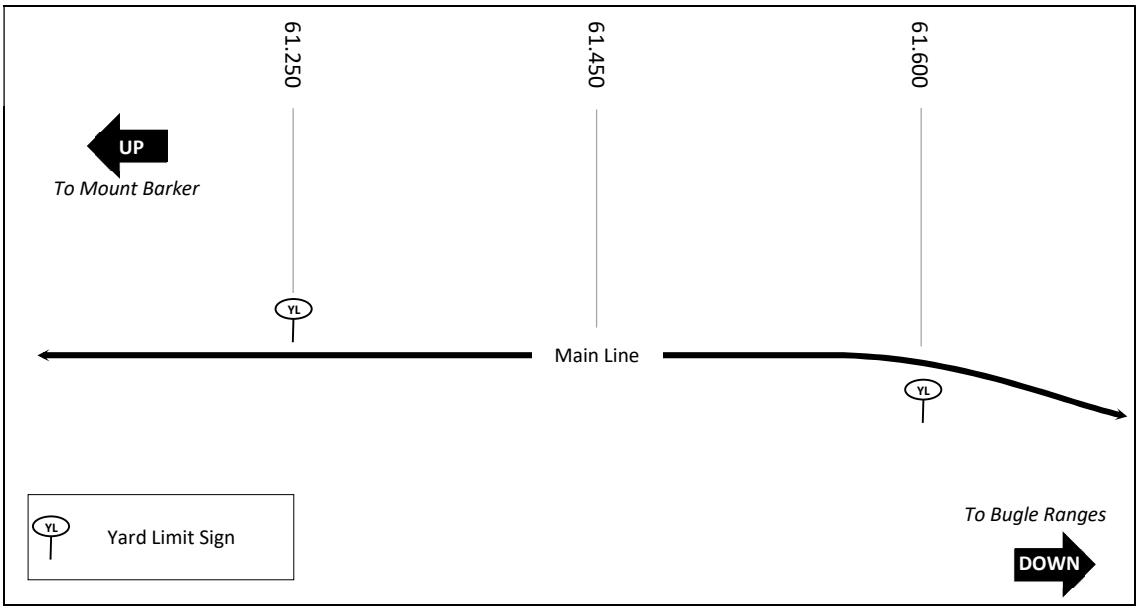
PHILCOX HILL is an unattended non-crossing Station, provided with a Main Line only.

Within Yard Limits, trains can terminate and reverse their direction of travel.

Yard Limit Signs are located at 61.250 km (Up-End) and 61.600 km (Down-End).

Location Ahead signs are located at 60.200 km (Up-End) and 62.700 km (Down-End).

The Main Line is the only track provided - there are no other tracks.



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Philcox Hill Yard

Standing Room:

Main Line - (In Clear of Yard Limit Signs)	*350 metres*

Additional Information:

PHILCOX HILL is most easily accessible by rail.

Road vehicle access is only available via adjoining properties, and only with the expressed permission of the adjoining property owner.

A Goods Siding existed at this location during the time of South Australian Railways operations.

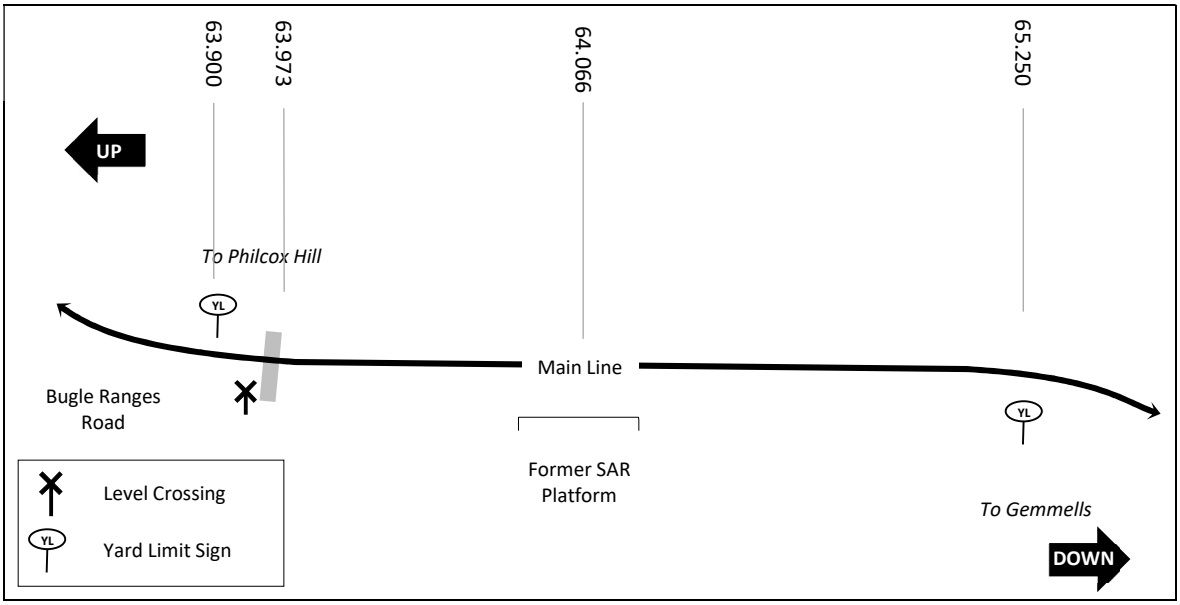
3.1.4 BUGLE RANGES – 64.066 km

BUGLE RANGES is an unattended non-crossing Station, provided with a Main Line only.

Within Yard Limits, trains can terminate and reverse their direction of travel.

Yard Limit Signs are located at 63.900 km (Up-End) and 64.400 km (Down-End).

Location Ahead signs are located at 62.900 km (Up-End) and 65.500 km (Down-End).



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Bugle Ranges Yard

Standing Room:

Main Line - (In Clear of Yard Limit Signs)	*350 metres*

Additional Information:

A Goods Siding and a Passing Siding existed at this location during the time of South Australian Railways operations.

The former South Australian Railways Main Line alignment was alongside the platform.

The SHR Main Line is on the alignment of the former South Australian Railways Passing Siding.

3.1.5 GEMMELLS - 70.184

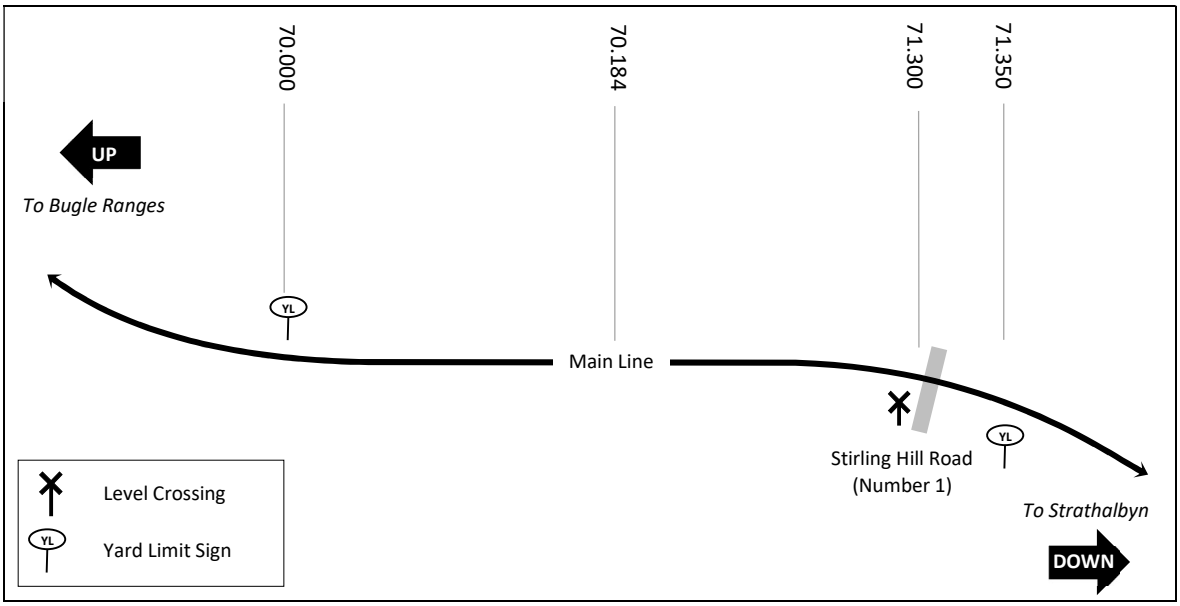
GEMMELLS is an unattended non-crossing Station, provided with a Main Line only.

Within Yard Limits, trains can terminate and reverse their direction of travel.

Yard Limit Signs are located at 70.000 km (Up-End) and 71.350 km (Down-End).

Location Ahead signs are located at 69.000 km (Up-End) and 72.350 km (Down-End).

The Main Line is the only track provided - there are no other tracks.



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Gemmells Yard

Standing Room:

Main Line - (In Clear of Yard Limit Signs)	*350 metres*

Additional Information:

A Goods Siding existed at this location during the time of South Australian Railways operations.

3.1.6 STRATHALBYN – 81.500 km

STRATHALBYN is an unattended crossing Station, provided a Main Line, Crossing Loop and Goods Sidings.

Within Yard Limits, trains can cross, pass, terminate, and reverse their direction of travel.

Strathalbyn is unattended for train working purposes unless advised otherwise.

Yard Limit Signs are located at 81.145 km (Up-End) and 82.000 km (Down-End).

Location Ahead signs are located at 80.000 km (Up-End) and 83.000 km (Down-End).

Railway infrastructure at Strathalbyn comprises:

(a) a Main Line extending through the station Yard Limits;

(b) a Crossing Loop of 337 metres standing room (clear of level crossings);

(c) a passenger platform of 174 metres in length;

(d) 3 Goods Loops;

(e) 3 dead end sidings;

(f) 2 loco roads:

- Loco road 1, leading to the turntable;
- Loco road 2 (out of service).

(g) Switch Stands to Main Line points 1, 2 and 6;

(h) Cheese Knobs mechanisms to points 7, 8, 9, 10, 11, 3, 5 19;

(i) Spring Levers to points 12, 13, 14, 15, 16, 17 and 18;

(j) Hand operated derails for the protection of the Crossing Loop on Goods Loops 1 and 2;

(k) a Goods Shed and Goods Platform (with crane) serviced by Goods Loop 2;

(l) a Goods Platform (with crane) serviced by Goods Loop 3;

(m) a hand operated turntable, 16.3 metres in length;

(n) a water tank, ash pit and water column adjacent to the turntable.

Standing Room:

Main Line between Yard Limit Signs	*855 metres*
Main Line / Crossing Loop (Foul of South Terrace and Milnes Street LXs)	*502 metres*
Main Line / Crossing Loop (clear of South Terrace and Milnes Street LXs)	*337 metres*
Goods Loop 1 (in clear of Crossing Loop)	*212 metres*
Goods Loop 1 (in clear of Goods Loops 2 and 3)	*170 metres*
Goods Loop 2 (in clear of Goods Loops1 and 3)	*214 metres*
Goods Loop 2 (in clear Up end of Goods Shed)	*128 metres*
Goods Loop 2 (within Goods Shed)	*19 metres*
Goods Platform (Goods Loop 2)	*30 metres*
Goods Platform (Goods Loop 3)	*6 metres*
Goods Loop 2 (in clear of Goods Shed and derails (Down End))	*108 metres*
Goods Loop 3 (between derails – foul of Goods Loop 2)	*152 metres*

Up Siding	*48 metres*
Down siding (Out of Service)	*48 metres*
Passenger Dock	*46 metres*
Back Road	*28 metres*
Loco Road 1 (Clear of turntable)	*70 metres*
Loco Road 2 (out of order)	-
Turntable	*16.3 metres*

Additional Instructions:

300 / 400 class Railcars are not permitted to travel over tracks to the Passenger Dock (west side of the platform), as the underfloor equipment on these cars fouls the corner of the platform.

Operation of Turntable:

A 16.3 metre manually operated turntable is located on a siding at the south-eastern end of the yard.

The plunger lock must be engaged before any attempt is made to move any locomotive or vehicle onto the table.

The turntable is marked with a plate which must be at the UP end when operation is no longer required. This will require the turntable to be operated through 360° on each occasion.

Active Control Level Crossing Equipment:

Active control level crossings are located at each end of the Strathalbyn Yard.

The active control level crossing equipment for the High Street and East Terrace level crossings will operate automatically for DOWN trains entering Strathalbyn but must be manually activated for UP movements departing Strathalbyn.

The South Terrace active control level crossing equipment will operate automatically for DOWN trains entering Strathalbyn via the Main Line or Crossing Loop, but must be manually activated for:

- UP movements departing Strathalbyn, or;
- any movement required to shunt over South Terrace level crossing.

The Milnes Road active control level crossing equipment will operate automatically for UP trains entering Strathalbyn via the Main Line or Crossing Loop, but must be manually activated for:

- DOWN movements departing Strathalbyn;
- any movement required to shunt over Milnes Road level crossing.

Trains shunting or departing Strathalbyn must not proceed past any active control level crossings until the active control level crossing equipment has been in operation for at least 20 seconds.

Controls are provided to allow active control level crossing equipment to be manually operated.

These controls are located in one of 4 locked Control Enclosures:

- Control Enclosure A is an aluminium-cased cabinet located under the verandah of the Strathalbyn Station building.

  This enclosure contains controls enabling the manual operation of active control level crossing equipment at South Terrace, and High Street for UP trains, and Milnes Road level crossing for DOWN trains, as well as for the clearance of Permissive Signal 810.

  A Telstra telephone and public address system is also located within the cabinet.

- Control Enclosure B is located on the side of an equipment cabinet, on the south-western side of the South Terrace level crossing.

  This enclosure contains controls for the manual operation of active control level crossing equipment at South Terrace for departing UP trains or for shunting movements.

- Control Enclosure C is located on the side of an equipment cabinet adjacent to Permissive Signal 810, on the south-western side of High Street level crossing.

  This enclosure contains controls for the manual operation of active control level crossing equipment at High Street.

- Control Enclosure D is located on the side of an equipment cabinet on the south-western side of Milnes Road level crossing.

  This enclosure contains controls for the manual operation of active control level crossing equipment at Milnes Road for departing DOWN trains, or for shunting movements.

Departure of DOWN Trains from Strathalbyn:

When a DOWN train is to depart Strathalbyn, the rail traffic crew must:

- Unlock and access Control Enclosure A;
- Depress (for 3 seconds) the black push button labelled “5102 – to Start Milnes Road Crossing”;
- Observe the operation of the Milnes Road active control protection equipment;
- Close and lock the Control Enclosure door, and;
- Proceed in accordance with the Authority held for the movement.

The black push button “5102B” within Control Enclosure D may be used to cancel the crossing activation, if necessary.

Departure of UP Trains from Strathalbyn:

When a UP train is to depart Strathalbyn, the rail traffic crew must:

- Unlock and access Control Enclosure A;
- Depress (for 3 seconds) the black push button labelled “810 High St - Operate”;
- Depress (for 3 seconds) the black push button labelled “South Terrace Crossing - Operate”;
- Observe that the South Terrace active control protection equipment is operating;
- Close and lock the Control Enclosure door, and;
- Proceed in accordance with the Authority held for the movement.

The High Street active control level crossing equipment will commence operation when the movement passes over the South Terrace level crossing.

Permissive Signal 810 will display a proceed indication approximately 20 seconds after the commencement of operation of the at High Street active control level crossing equipment.

If necessary, the push button within Control Enclosure C may be used to operate the High Street active control level crossing equipment.

In the event of the need to cancel the operation of any active control level crossing equipment, red cancel push buttons are provided.

Shunting over South Terrace Level Crossing:

If a movement is required to shunt at the UP end of the Strathalbyn Yard, over South Terrace level crossing, the South Terrace active control level crossing equipment must be manually activated.

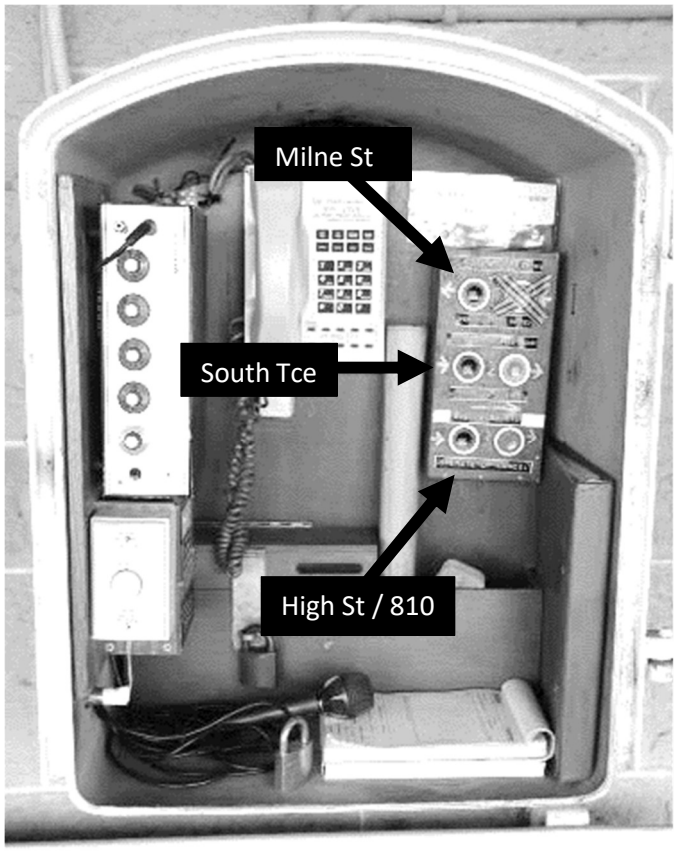
This may be achieved by use of the black push buttons for South Terrace level crossing in Control Enclosure A, or Control Enclosure B.

Do NOT depress the black push button in Control Enclosure A, labelled “810 High St - Operate”; when shunting at the UP end of the Strathalbyn Yard.

Shunting over Milnes Road Level Crossing:

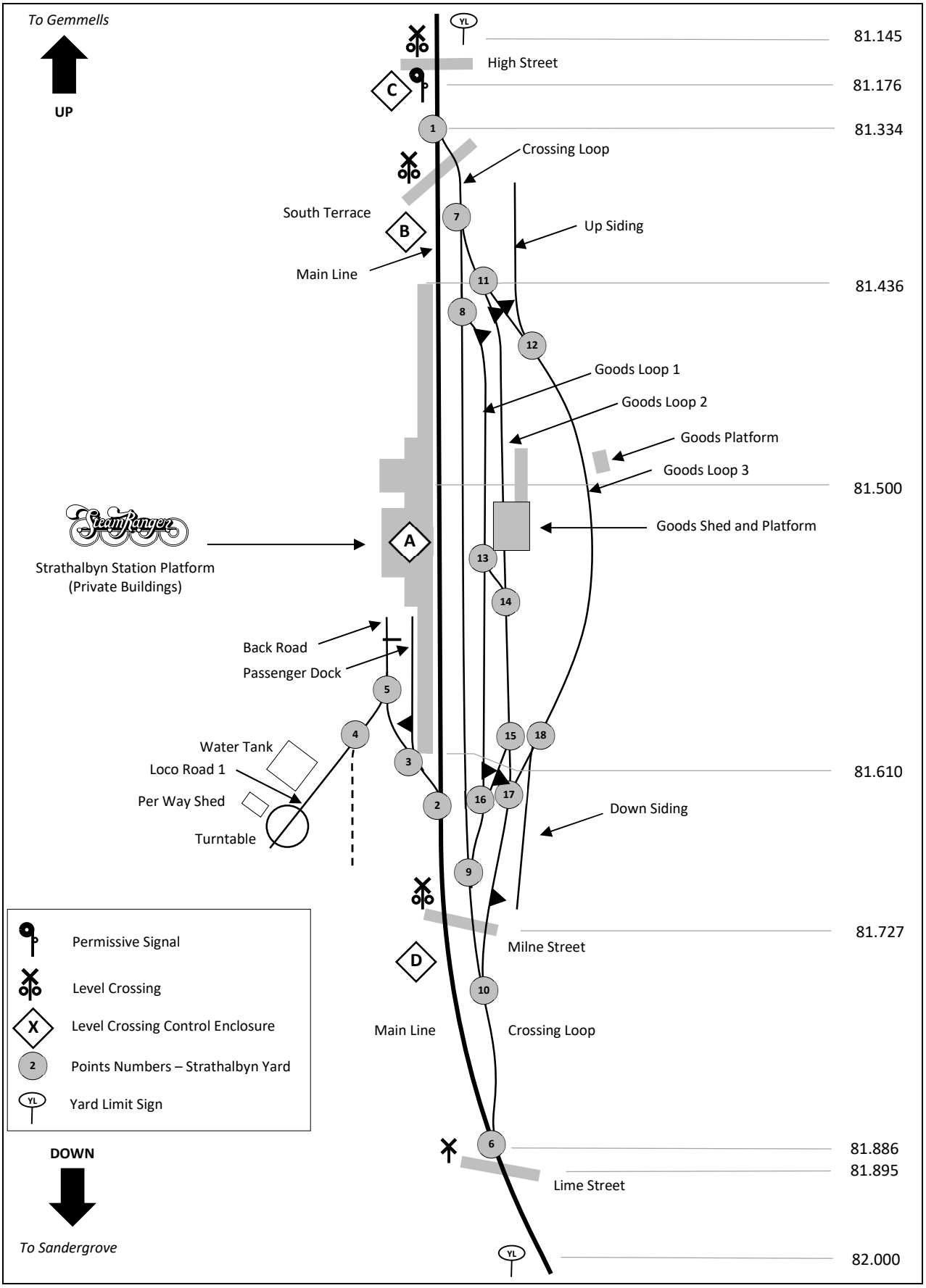
If a movement is required to shunt over Milnes Road level crossing at the DOWN end of the Strathalbyn Yard, the Milnes Road active control level crossing equipment must be manually activated.

The activation of the Milnes Road level crossing equipment may be achieved by use of the push buttons in Control Enclosure A, or Control Enclosure D.



Level Crossing Control Enclosure A – Strathalbyn Platform

Strathalbyn Yard Layout



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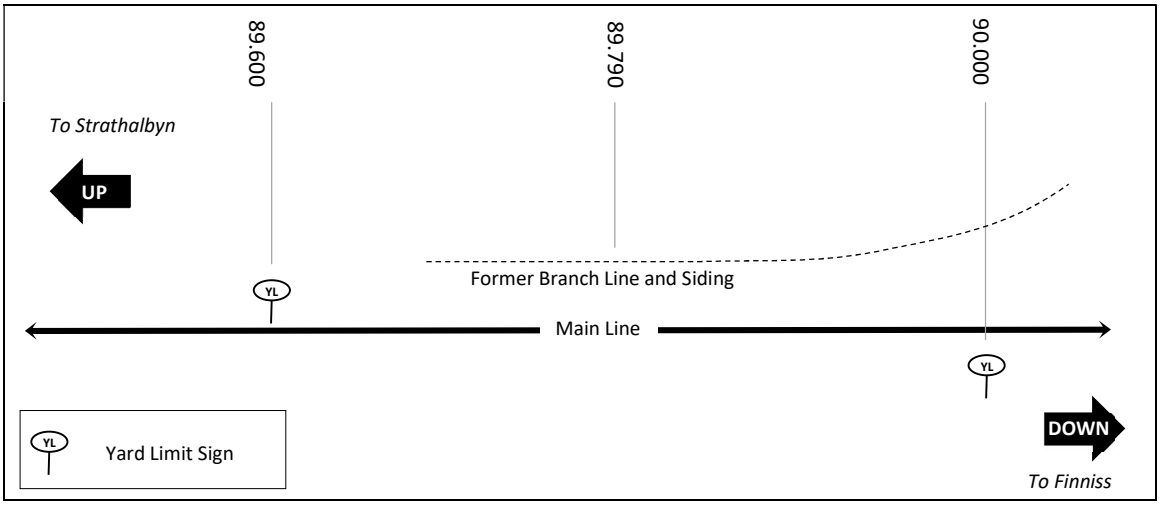
3.1.7 SANDERGROVE – 89.790 km

SANDERGROVE is an unattended non-crossing Station, provided with a Main Line only.

Within Yard Limits, trains can terminate and reverse their direction of travel.

Yard Limit Signs are located at 89.600 km (Up-End) and 90.000 km (Down-End).

Location Ahead signs are located at 88.500 km (Up-End) and 91.000 km (Down-End).



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Sandergrove Yard

Standing Room:

Main Line - (In Clear of Yard Limit Signs)	*400 metres*

Additional Information:

Sandergrove is the location of the former junction for the Milang Branch (closed and dismantled).

A Goods Siding also existed at this location during the time of South Australian Railways operations.

3.1.8 FINNISS – 97.040 km

FINNISS is an unattended crossing Station, provided with a Main Line and Goods Loop.

Within Yard Limits, trains can cross, pass, terminate, and reverse their direction of travel.

Yard Limit Signs are located at 96.600 km (Up-End) and 97.300 km (Down-End).

Location Ahead signs are located at 95.600 km (Up-End) and 98.500 km (Down-End).

Railway infrastructure at Finniss comprises:

(a) a Main Line extending through the station Yard Limits;

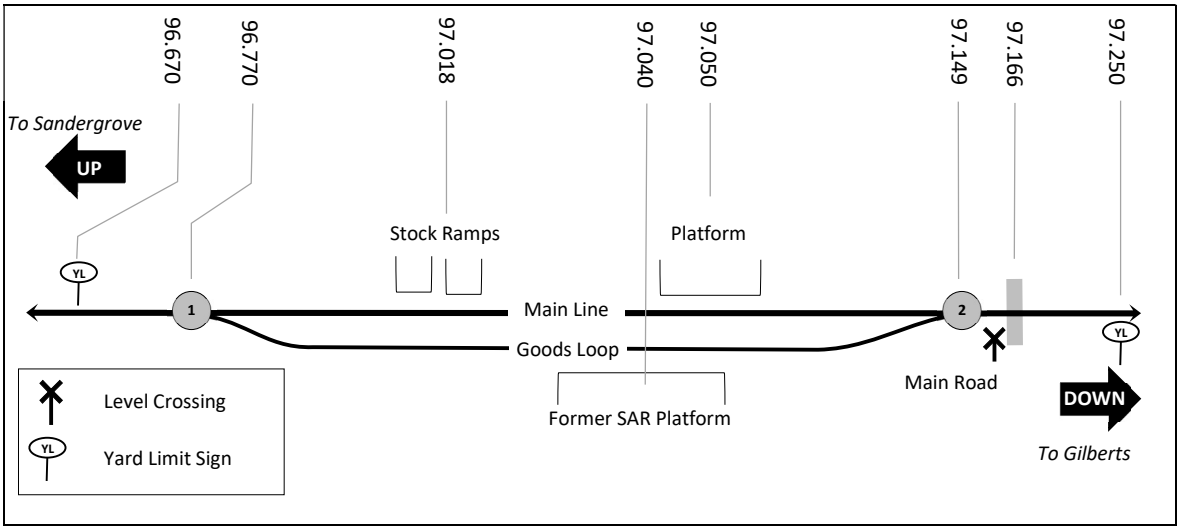
(b) a Goods Loop;

(c) two stock ramps servicing the Main Line;

(d) a platform (formerly the Goods Platform) servicing the Main Line

(e) a platform (formerly the passenger platform) servicing the Goods Loop

(f) High-Type Points Stands on Main Line points 1 and 2.



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Finniss Yard

Standing Room:

Between Yard Limit signs	*420 metres*
Main Line - (In Clear of Goods Loop)	*252 metres*
Goods Loop - (In Clear of Main Line)	*252 metres*
Main Line Platform	*10 metres*
Goods Loop platform	*60 metres*
Main Line platform to Down-End Fouling Point	*47 metres*

Additional Information:

The SHR Main Line is on the alignment of the former South Australian Railways Goods Siding.

The SHR Goods Loop is on the alignment of the former South Australian Railways Main Line.

NOTE – No runaway protection is provided on the Goods Loop, and any detached vehicles MUST be secured using handbrakes, chocks, sprags and if necessary, chains.

3.1.9 GILBERTS – 99.220 km

GILBERTS is an unattended non-crossing Station, provided with a Main Line only.

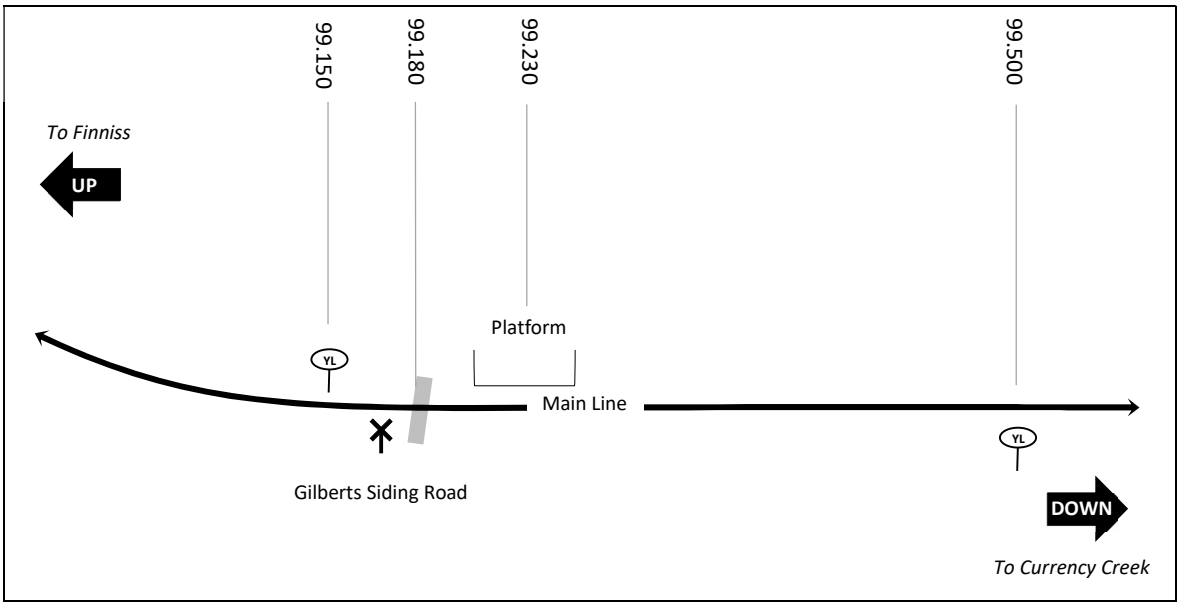
Within Yard Limits, trains can terminate and reverse their direction of travel.

Yard Limit Signs are located at 99.150 km (Up-End) and 99.500 km (Down-End).

Location Ahead signs are located at 98.000 km (Up-End) and 100.500 km (Down-End).

The Main Line is the only track provided - there are no other tracks.

A short platform services the Main Line, but this is currently unsafe for use.



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Gilberts Yard

Standing Room:

Main Line - (In Clear of Yard Limit Signs)	*350 metres*
Platform	*12 metres*

Additional Information:

A Goods Siding also existed at this location during the time of South Australian Railways operations.

3.1.10 CURRENCY CREEK – 106.700 km

CURRENCY CREEK is an unattended crossing Station, provided with a Main Line and Goods Loop.

Within Yard Limits trains can cross, pass, terminate, and reverse their direction of travel.

Yard Limit Signs are located at 106.310 km (Up-End) and 106.890 km (Down-End).

Location Ahead signs are located at 105.250 km (Up-End) and 108.000 km (Down-End).

Railway infrastructure at CURRENCY CREEK comprises:

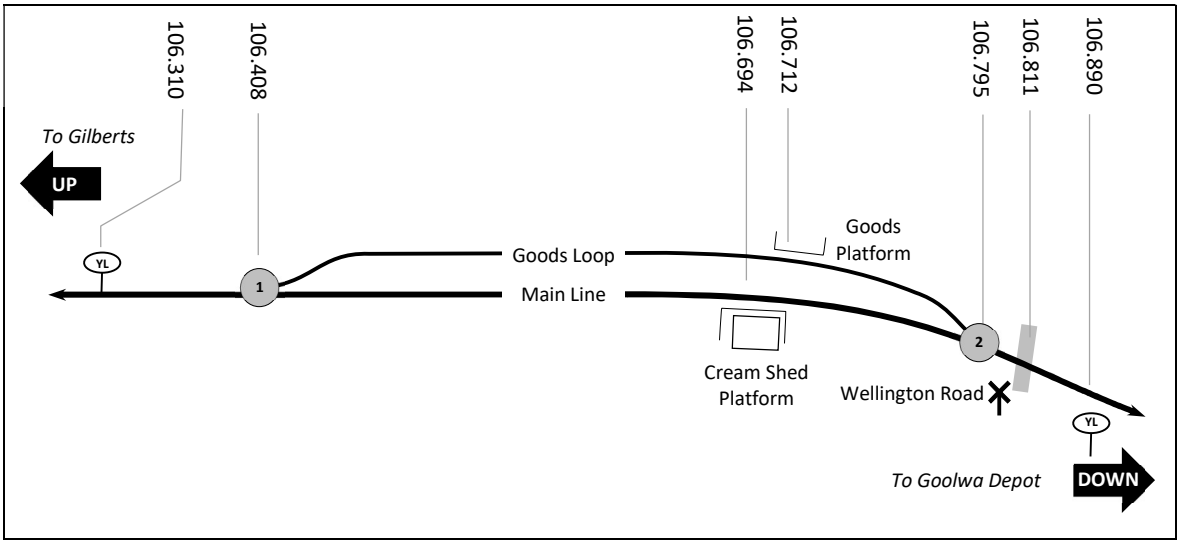
(a) a Main Line extending through the station Yard Limits;

(b) a Goods Loop;

(c) a goods platform servicing the Crossing Loop;

(d) a platform and Take Out Shed (or Cream Shed) servicing the Main Line;

(e) High-Type Points Stands are provided on Main Line points 1 and 2.



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Currency Creek Yard

Standing Room:

Between Yard Limit signs	*580 metres*
Main Line - In Clear of Crossing Loop	*330 metres*
Goods Loop – In clear of Main Line	*330 metres*
Main Line Platform length	*6 metres*
Centre of Main Line platform to Down-End Fouling Point	*61 metres*
Siding Platform Length	*10 metres*
Centre of Siding platform to Down-End Fouling Point	*43 metres*

Additional Information:

The Cream Shed platform is unsafe for passenger use at the time of publication.

NOTE – No runaway protection is provided on the Goods Loop, and any detached vehicles MUST be secured using handbrakes, chocks, sprags and if necessary, chains.

3.1.11 GOOLWA DEPOT – 112.350 km

GOOLWA DEPOT is an unattended crossing Station.

Within Yard Limits trains can cross, pass, terminate, or reverse their direction of travel.

The additional tracks within the limits of GOOLWA DEPOT are not running lines, are considered to be outside of the limits of Train Order Working Territory.

Rail traffic must not enter the Main Line from the confines of the Goolwa Depot without the permission of the Train Controller.

Yard Limit Signs are located at 112.00 km (Up-End) and 112.650 km (Down-End).

Location Ahead signs are located at 111.000 km (Up-End) and 113.750 km (Down-End).

Railway infrastructure at GOOLWA DEPOT comprises:

(a) a Main Line extending through the station Yard Limits;

(b) High-Type Points Stands are provided on Main Line points 1 and 2.

(c) Six (6) tracks within the Depot precincts for storage and maintenance

(d) A triangle

(e) Water tank and column

(f) Coal Bunker and loading ramp

Standing Room:

Between Yard Limit signs	*615 metres*
Main Line - In Clear of Triangle Points	*327 metres*
1 and 2 road north of shed	*54 metres*
1 and 2 road (within Carriage Shed)	*40 metres*
3 and 4 road (within workshop)	*40 metres*
1 road (UP end of Carriage Shed to in clear of 2 road)	*71 metres*
2 road (UP end of Carriage Shed to in clear of 3 road)	*14 metres*
3 road (Rollingstock Workshop building to clear of 2 road)	*43 metres*
4 road (workshop shed to in clear of 3 road)	*72 metres*
4 road (workshop shed to in clear of triangle)	*131 metres*
UP-end triangle leg (in clear of Main Line and DOWN leg)	*252 metres*
Triangle apex	*45 metres*
DOWN-leg of triangle (in clear of UP leg to gate)	*113 metres*
DOWN-leg of triangle (in clear of UP leg and 6 road)	*176 metres*
DOWN-leg of triangle (in clear of UP leg and 4 road)	*216 metres*
DOWN-leg of triangle (in clear of UP leg to Main Line STOP Sign)	*260 metres*
5 road (in clear of 6 road)	*87 metres*
6 road (in clear) (suitable ONLY for track machine or light vehicles)	*87 metres*

Additional Information:

Main Line Points:

The Main Line points at Goolwa Depot are provided with bolt locks, and may be traversed when set for the Main Line at Normal Speed.

Loco Workshop Building:

4 Road within the building is used for the stabling of locomotives between services.

Other than as approved by the Mechanical Services Manager, steam locomotives must not be lit up within the building, but towed outside for that purpose.

A small pit is located on 4 Road, approximately 5 metres inside the rail access door.

This pit must be kept clear when possible, and the guard ropes provided must be installed.

An area to the west of 3 Road within the Loco Workshop Building is reserved for administrative and meal facilities. This area must be kept clear and tidy.

Toilets are located on the outside western wall of the Loco Workshop Building.

NOTE: Much of the floor within the building is comprised of wooden sleepers and these are not level. Care must be exercised when moving around dur to the potential for trips and falls.

Loco Servicing Facilities:

An overhead water tank and loco water column is located on 4 Road, 100 metres inside the southern rail access gate and 57 metres from the front of the Rollingstock Workshop doors.

Water is pumped to the overhead tank from a ground level holding tank in the South-Eastern corner of the depot block.

Separate instructions detail the management of water supply to the overhead tank.

Loco ashes are usually dropped on 4 Road, in the vicinity of the Water Column.

Ashes must be removed from the track and dumped in the area behind the Loco Service Store.

The Loco Service Store and Wood Store are converted louvre vans, located on the southern side of the water column, on 4 Road.

The Loco Service Store contains locomotive lubricating oils and water treatment chemicals for steam locomotives.

A small Oil Storage Shed is located on the eastern outside wall of the Carriage Shed contains compressor, converter and engine oil for 300/400 class railcars.

Also located on the eastern outside wall of the Carriage Shed, and adjacent to the Oil Storage Shed, an elevated gravity-feed diesel fuel tank is provided, for fueling track maintenance vehicles and rail cars.

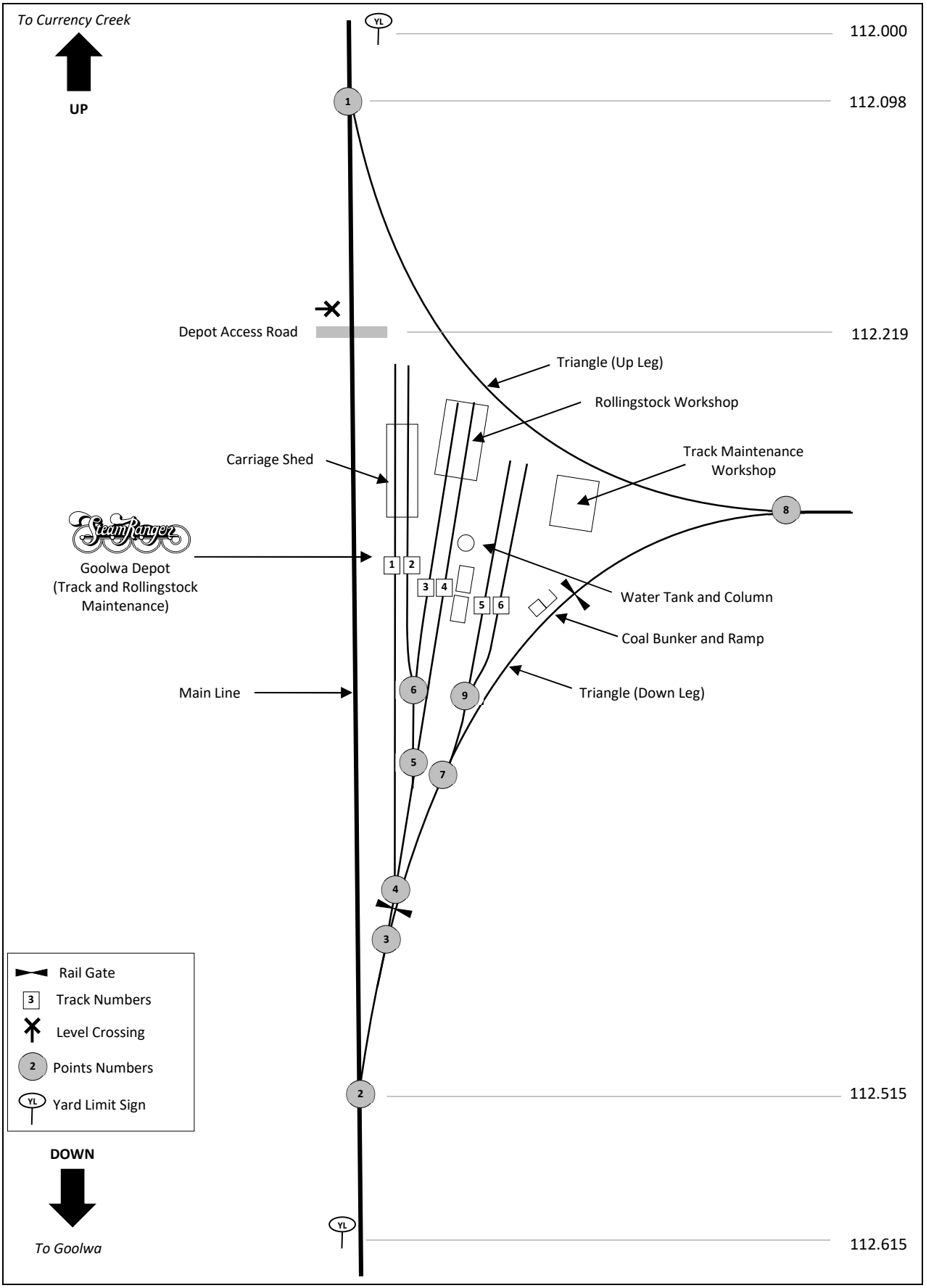
A coal bunker and loading ramp is located on the DOWN-leg of the triangle, east of 6 Road.

Track Maintenance Workshop:

A track maintenance workshop building is located to the east of the fenced compound, and is used for the storage and maintenance of track vehicles and equipment.

This building is not serviced by a rail connection.

Goolwa Depot Yard Layout



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3.1.12 GOOLWA – 114.377 km

GOOLWA is a crossing Station, provided with a Main Line, Crossing Loop and Goods Siding., and is normally unattended.

Within Yard Limits, trains can cross, pass, terminate, and reverse their direction of travel.

Yard Limit Signs are located at 114.098 km (Up-End) and 114.620 km (Down-End).

Location Ahead signs are located at 113.000 km (Up-End) and 115.750 km (Down-End).

Railway infrastructure at GOOLWA comprises:

(a) a Main Line extending through the Yard Limits;

(b) a Crossing Loop;

(c) a dead-end Goods Siding accessed from the Crossing Loop, at the Up-End;

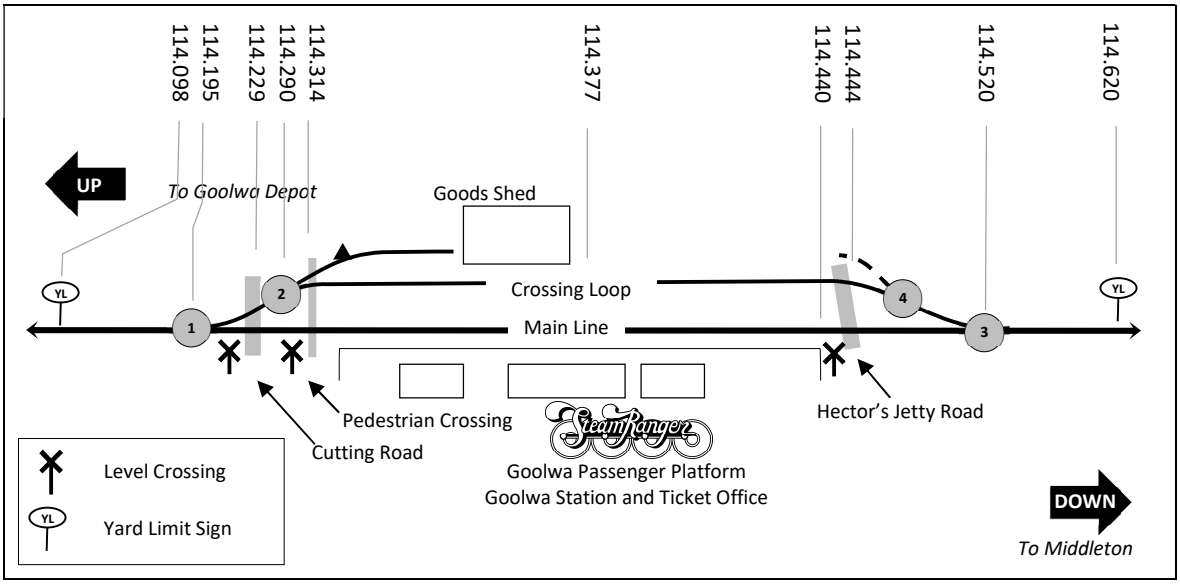
(d) a platform, Station building and passenger shelter servicing the Main Line;

(e) a Low-Type Points Stand provided on Number 1 Up-End Main Line points;

(f) a High-Type Points Stand provided on Number 3 Down-End Main Line points;

(g) a Cheese Knob points mechanism is provided on Numbers 2 points leading to the dead end Goods Siding;

(h) a throw-over type derail provided at the Up-End of the Goods Siding.



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Goolwa Yard

Standing Room:

Between Yard Limit signs	*522 metres*
Main Line - In Clear of Crossing Loop	*213 metres*
Crossing Loop - In Clear of Main Line	*213 metres*
Goods Siding – In clear of Crossing Loop	*28 metres*
Main Line Platform	*126 metres*

Additional Information:

A road level crossing is located at each end of the Goolwa Platform.

A pedestrian crossing is located at the Up-End of the Goolwa Platform.

Care must be exercised when passing through Goolwa Yard Limits because of potential for heavy vehicle and pedestrian traffic.

Points are still in place leading to the Down-End of the Goods Loop, but these have been decommissioned, locked and spiked for the Crossing Loop.

Attended Status:

GOOLWA is normally unattended but may from time to time become attended for train operation, as required.

When attended, all movements within Yard Limits are under the direction and authority of the Station Master, or delegate.

3.1.13 MIDDLETON – 122.480 km

MIDDLETON is an unattended crossing Station, provided with a Main Line and Crossing Loop.

Within Yard Limits trains can cross, pass, terminate, and reverse their direction of travel.

Yard Limit Signs are located at 122.250 km (Up-End) and 122.820 km (Down-End).

Location Ahead signs are located at 121.250 km (Up-End) and 124.000 km (Down-End).

Railway infrastructure at Middleton comprises:

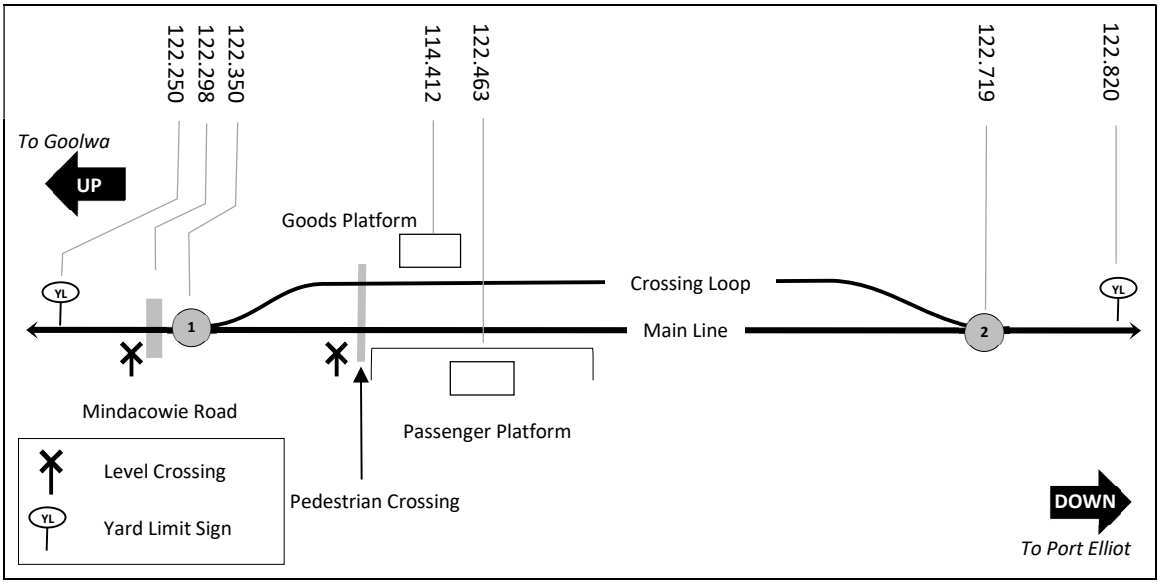
(a) a Main Line extending through the station Yard Limits;

(b) a Crossing Loop;

(c) a passenger platform and shelter servicing the Main Line;

(d) a platform (formerly the goods platform) servicing the Crossing Loop;

(e) High-Type Points Stands on Main Line points 1 and 2.



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Middleton Yard

Standing Room:

Between Yard Limit signs	*570 metres*
Main Line - In Clear of Crossing Loop	*270 metres*
Crossing Loop - In Clear of Main Line	*270 metres*
Main Line Platform	*76 metres*
Crossing Loop platform	*10 metres*

Additional Information:

To avoid unnecessary extended operation of the active-control level crossing at 121.600 km (Victor Harbor - Goolwa Road), when trains cross at Middleton, the UP movement must, wherever possible, occupy the Main Line, and the DOWN movement the Crossing Loop.

3.1.14 PORT ELLIOT – 125.670 km

PORT ELLIOT is an unattended crossing Station, provided with a Main Line and Goods Sidings.

Within Yard Limits, trains can cross, pass, terminate, and reverse their direction of travel.

Yard Limit Signs are located at 125. 500 km (Up-End) and 126.080 km (Down-End).

Location Ahead signs are located at 124. 500 km (Up-End) and 127.100 km (Down-End).

Railway infrastructure at PORT ELLIOT comprises:

(a) a Main Line extending through the Yard Limits;

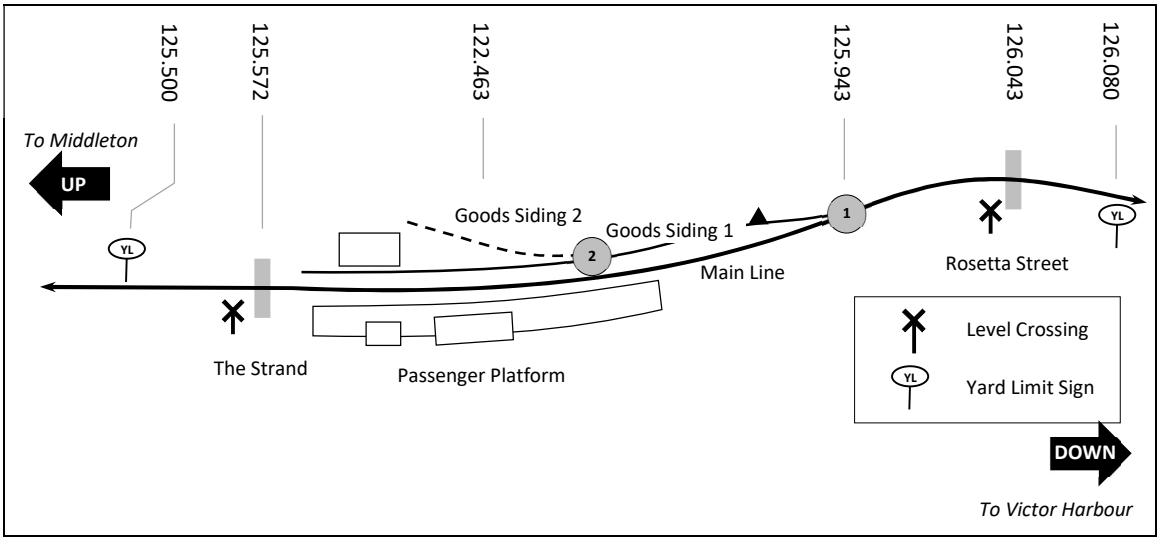
(b) two Dead-End Goods Sidings (Both currently out of order):

(c) a platform, Station building and passenger shelter servicing the Main Line;

(d) a High-Type Points Stand provided on Number 1 Down-End Main Line points;

(e) a Cheese Knob points mechanism provided on Number 2 points leading to Number 2 Goods Siding;

(f) a throw-over type derail provided at the Down-End of Number 1 Goods Siding.



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Standing Room:

Between Yard Limit signs	*580 metres*
Main Line -In Clear of Goods Siding 1 and The Strand Level Crossing	*305 metres*
Goods Siding 1 - In Clear of Main Line (Out of Order)	*260 metres*
Platform	*128 metres*

Additional Information:

The Strand level crossing is an active-protected level crossing located immediately at the Up-End of the Port Elliot Platform.

Up trains must attempt to minimise standing time at the Port Elliot platform to reduce the operation of the active-control level crossing at 125.572 km (The Strand), and unnecessary detention of road traffic.

Number 1 Main Line Points are set, spiked and clamped for the Main Line.

3.1.15 VICTOR HARBOUR – 131.980 km

VICTOR HARBOUR is a crossing Station and is normally attended.

Within Yard Limits trains can cross, pass, terminate, or reverse their direction of travel.

Yard Limits are defined by Home Signal 1, located at 131.535 km (Up-End) and an End of Main Line sign and timber baulk, located at 132.174 km (Down-End).

A Location Ahead sign is located at 130.200 km (Up-End)

Railway infrastructure at VICTOR HARBOUR comprises:

(a) a Main Line extending through the Yard Limits;

(b) a Crossing Loop opposite the Passenger Platform

(c) a Holding Road

(d) a dead-end Stock Siding (out of service)

(e) two Dead-End Loco Sidings

- Loco Road 1 incorporates an ash pit (fenced)
- Loco Road 2 is out of service.

(f) an electrically operated turntable (26 metres long)

Standing Room:

Between Home Signal and Dead End	*639 metres*
Main Line - Clear of No 9 points and Coral Street Gates	*198 metres*
Main Line – Clear of No 9 and 6 points – Foul of Coral Street	*216 metres*
Main Line - Clear of No 2 and 7 points – Foul of Eyre Terrace	*171 metres*
Main Line - Clear of No 7 points to Eyre Terrace	*98 metres*
Main Line - Clear of No 2 points to Eyre Terrace	*45 metres*
Main Line - Clear of No 8 points to end of Main Line	*36 metres*

Crossing Loop - Clear of No 9 points and Coral Street Gates	*198 metres*
Crossing Loop – Clear of No 9 and 6 points – Foul of Coral Street	*216 metres*

Holding Road - Clear of No 2 points to Eyre Terrace	*42 metres*
Holding Road - Clear of No 2 and 7 points – Foul of Eyre Terrace	*170 metres*
Holding Road - Clear of No 7 points to Eyre Terrace	*101 metres*

Stock Siding (currently out of service)	*41 metres*

Loco road 1	*41 metres*
Loco Road 2 (currently out of service)	*40 metres*
Loco Access Road – Eyre Terrace to derail	*28 metres*
Turntable Road - Clear of No 1 points and Turntable (foul of Stock Siding)	*45 metres*

Platform	*146 metres*

Additional Information:

The spelling of the railway facility "Victor Harbour" is different from the spelling of the township (now City) of "Victor Harbor".

The South Australian Railways used the conventional Australian-English spelling of "Harbour" from the establishment of the railway into "Port Victor" (as the town was known) in 1884.

This spelling was continued by Australian National Railways, and is still observed by the SteamRanger Heritage Railway out of respect for the heritage name given to the Station by its original builder and operators.

Attended Status:

VICTOR HARBOUR is normally attended for train operations.

When attended, all movements and occupancies within Yard Limits are under the direction and authority of the Station Master, or delegate.

When unattended, all movements and occupancies within Yard Limits are under the direction and authority of the Train Controller.

Operation of Turntable:

A 26 metre electrically powered turntable is located on a siding at the north-eastern end of the yard.

The controls for the turntable are located within the cabin on the turntable platform.

The isolation circuit breakers are located in the junction box on the south-western side of the turntable pit.

Both plunger locks must be engaged before ant attempt is made to move any locomotive or vehicle onto the table.

Movements onto the turntable must exercise caution due to the short overrun track, and the 1.5 m vertical drop onto Eyre Terrace.

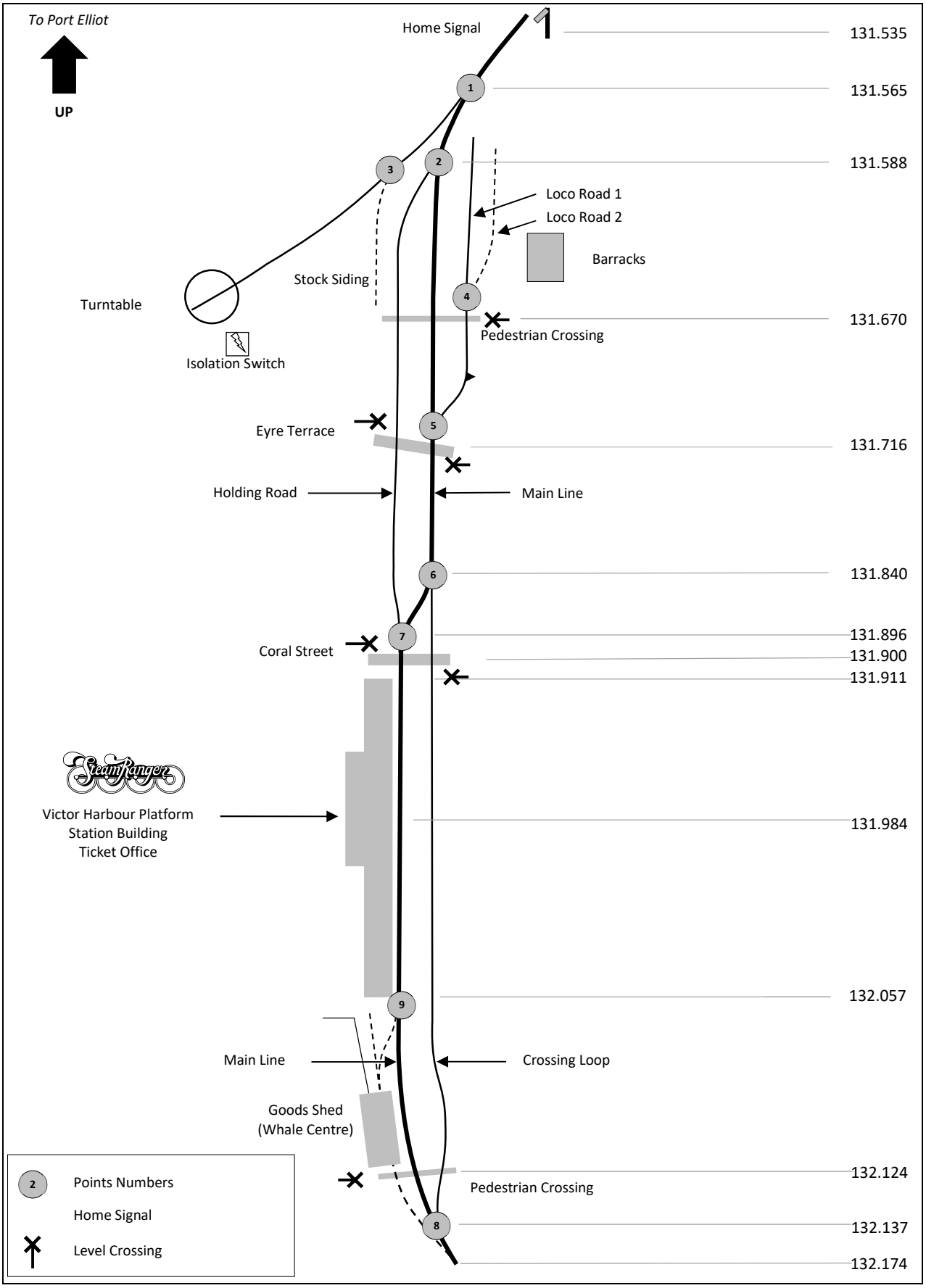
Coral Street Level Crossing:

Rail traffic arriving from Port Elliot must not proceed past the vicinity of Number 6 points (at 131.840 km) until the Coral Street Level Crossing gates are open, and an All-Clear Hand Signal is displayed from the vicinity of the Coral Street Level Crossing.

This must be displayed by the Station Master (or delegate) if VICTOR HARBOUR is attended, or a member of the rail traffic crew if unattended.

The Coral Street Level Crossing gates must be opened for road traffic when not immediately required for the movement of rail traffic.

Victor Harbour Yard Layout



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3.2 Level Crossings

3.2.1 Level Crossing Types

Level crossings on the Railway are classified as either Public or Occupational crossings.

Public level crossings are provided for public roads, and occupational crossings exist to provide access to (usually) farm properties along the Railway.

Protection for the level crossing is classified as “passive” (signs) or “active” (level crossing lights and bells).

The protection is classified as follows (from Australian Standard AS1742.7):

PASSIVE – TYPE RX1

PASSIVE – TYPE RX2

ACTIVE – TYPE RX5

3.2.2 Level Crossing Locations

Level crossings are located on the railway as follows:

	Rail Km	Road Name	Reference	Protection	GPS Coordinates	
Mt Barker Junction – 50.000 km						
THIS SECTION IS DORMANT	*50.400*	*Occupational Crossing*	*Not in Use*	*Passive (RX1)*	*35.025926° (S)*	*138.860799° (E)*
	50.591	*Junction Road*	*RLX0104*	*Passive (RX1)*	*35.028927° (S)*	*138.861176° (E)*
	50.950	*Occupational Crossing*	*Not in Use*	*Passive (RX1)*	*35.032158° (S)*	*138.860692° (E)*
	51.235	*Occupational Crossing*	*Not in Use*	*Passive (RX1)*	*35.034609° (S)*	*138.862061° (E)*
	51.696	*Easlea Road*	*RLX0105*	*Passive (RX1)*	*35.038326° (S)*	*138.863607° (E)*
	52.163	*Occupational Crossing*	*Not in use*	*Passive (RX1)*	*35.042788° (S)*	*138.863878° (E)*
	53.283	*Cleggett Road*	*RLX0106*	*Passive (RX1)*	*35.049403° (S)*	*138.858596° (E)*
	Littlehampton – 53.500 km					
	53.641	*North Terrace*	*RLX0107*	*Active (RX5)*	*35.053161° (S)*	*138.856875° (E)*
	54.440	*Cameron Street*	*RLX0108*	*Passive (RX1)*	*35.059447° (S)*	*138.860444° (E)*
Mount Barker – 55.000 km						
	55.450	*Dutton Road*	*RLX0109*	*Active (RX5)*	*35.0667° (S)*	*138.8666° (E)*
	56.000	*Fletcher Road*	*RLX0061*	*Passive (RX2)*	*35.0717° (S)*	*138.8658° (E)*
	56.366	*Alexandrina Road*	*RLX0059*	*Active (RX5)*	*35.0744° (S)*	*138.8651° (E)*
	56.741	*Wellington Road*	*RLX0110*	*Active (RX5)*	*35.0780° (S)*	*138.8642° (E)*
	57.148	*Pedestrian Crossing*	*-*	*Maze*	*35.0826° (S)*	*138.8631° (E)*
	57.300	*Hurling Drive*	*RLX0111*	*Active (RX5)*	*35.0839° (S)*	*138.8631° (E)*
	57.150	*Fidler Lane*	*RLX0112*	*Passive (RX2)*	*35.0955° (S)*	*138.8675° (E)*
	60.400	*Native Avenue*	*RLX0113*	*Passive (RX2)*	*35.1105° (S)*	*138.8682° (E)*
Philcox Hill – 61.550 km						

Rail Km	Road Name	Reference	Protection	GPS Coordinates	
Philcox Hill – 61.550 km					
62.980	Occupational Crossing	-	None	35.1294° (S)	138.8703° (E)
63.500	Bonython Road	RLX0114	Passive (RX2)	35.1340° (S)	138.6742° (E)
63.950	Bugle Range Road	RLX0115	Passive (RX2)	35.1370° (S)	138.8741° (E)
Bugle Ranges – 64.071					
65.450	Pursell Road	RLX0116	Passive (RX2)	35.2063° (S)	138.9166° (E)
66.200	Wakefield Road	RLX0117	Passive (RX2)	35.1542° (S)	138.8784° (E)
67.600	Occupational Crossing	-	None	35.1622° (S)	138.8870° (E)
67.900	Tarrawatta Road	RLX0118	Passive (RX1)	35.1672° (S)	138.8866° (E)
68.715	Long Valley Road	RLX0119	Active (RX5)	35.1738° (S)	138.8900° (E)
Gemmells – 70.100 km					
70.200	Stirling Hill Road No 1	RLX0120	Passive (RX2)	35.1837° (S)	138.8978° (E)
71.800	Stirling Hill Road No 2	RLX0121	Passive (RX1)	35.1943° (S)	138.9039° (E)
74.200	Stirling Hill Road No 3	RLX0122	Passive (RX2)	35.2063° (S)	138.9166° (E)
76.750	Burnside Road	RLX0123	Passive (RX1)	35.2251° (S)	138.9159° (E)
78.800	Swamp Road	RLX0124	Passive (RX1)	35.2433° (S)	138.9110° (E)
80.916	East Terrace	RLX0125	Active (RX5)	35.2575° (S)	138.8980° (E)
81.120	Murray Street	RLX0126	Passive (RX2)	35.2582° (S)	138.8966° (E)
81.226	High Street	RLX0127	Active (RX5)	35.2589° (S)	138.8950° (E)
81.436	South Terrace	RLX0128	Active (RX5)	35.2601° (S)	138.8935° (E)
Strathalbyn 81.500 km					

Rail Km	Road Name	Reference	Protection	GPS Coordinates	
Strathalbyn 81.500 km					
81.727	Milnes Street	RLX0129	Active (RX5)	35.2625° (S)	138.8907° (E)
81.830	Lime Street	RLX0130	Passive (RX2)	35.2638° (S)	138.8897° (E)
83.000	Dunreath Road	RLX0131	Passive (RX1)	35.2726° (S)	138.8910° (E)
84.600	Michelmore Road	RLX0132	Passive (RX1)	35.2889° (S)	138.8892° (E)
85.200	Greenway Road	RLX0133	Passive (RX1)	35.2923° (S)	138.8879° (E)
85.600	Gale Road	RLX0134	Passive (RX1)	35.2963° (S)	138.8863° (E)
87.000	Lowanna Road	RLX0135	Passive (RX1)	35.3077° (S)	138.8819° (E)
87.500	Occupational Crossing	-	None	35.3208° (S)	138.8768° (E)
89.250	Occupational Crossing	-	None	35.3270° (S)	138.8744° (E)
Sandergrove – 89.800 km					
90.500	Tucker Road	RLX0136	Passive (RX1)	35.3379° (S)	138.8697° (E)
92.200	Occupational Crossing	-	None	35.3510° (S)	138.8630° (E)
93.700	Occupational Crossing	-	None	35.3639° (S)	138.8520° (E)
96.000	Occupational Crossing	-	None	35.7661° (S)	138.8344° (E)
Finniss – 97.040 km					
97.500	Main Road	RLX0137	Passive (RX1)	35.3831° (S)	138.8242° (E)
99.180	Gilberts Siding Road	RLX0138	Passive (RX1)	35.3935° (S)	138.8059° (E)
Gilberts – 99.250 km					
104.903	Strathalbyn Goolwa Road	RLX0139	Active (RX5)	35.4353° (S)	138.7774° (E)
105.820	Occupational Crossing	-	None	35.4414° (S)	138.7708° (E)
106.200	Adelaide Place	RLX0140	Passive (RX1)	35.4431° (S)	138.7687° (E)
Currency Creek – 106.700 km					

Rail Km	Road Name	Reference	Protection	GPS Coordinates	
Currency Creek – 106.700 km					
106.799	*Wellington Road*	*RLX0141*	*Passive (RX1)*	*35.4476° (S)*	*138.7630° (E)*
107.275	*Frome Road*	*RLX0142*	*Passive (RX1)*	*35.4505° (S)*	*138.7591° (E)*
108.467	*Mt Compass Road*	*RLX0143*	*Active (RX5)*	*35.4609° (S)*	*138.7559° (E)*
109.119	*Airport Road*	*RLX2285*	*Passive (RX1)*	*35.4658° (S)*	*138.7593° (E)*
110.191	*Goolwa - Strathalbyn Road*	*RLX0144*	*Active (RX5)*	*35.4733° (S)*	*138.7667° (E)*
111.300	*Occupational Crossing*	*-*	*None*	*35.4805° (S)*	*138.7704° (E)*
111.500	*Occupational Crossing*	*-*	*None*	*35.4848° (S)*	*138.7727° (E)*
112.050	*Goolwa Depot Access Road*	*RLX0145*	*Passive (RX2)*	*35.4901° (S)*	*138.7754° (E)*
Goolwa Depot 112.300 km					
112.768	*Corio Terrace*	*RLX0146*	*Passive (RX1)*	*35.4942° (S)*	*138.7776° (E)*
113.088	*Verco Terrace*	*RLX0147*	*Passive (RX2)*	*35.4965° (S)*	*1387794° (E)*
113.324	*Byrnes Road*	*RLX0148*	*Passive (RX1)*	*35.4972° (S)*	*138.7826° (E)*
113.700	*Fenchurch Street*	*RLX0057*	*Passive (RX2)*	*35.4991° (S)*	*138.7855° (E)*
113.938	*Liverpool Road*	*RLX0149*	*Passive (RX2)*	*35.5007° (S)*	*138.7867° (E)*
114.300	*Cutting Road*	*RLX0150*	*Passive (RX2)*	*35.5038° (S)*	*138.7858° (E)*
114.337	*Pedestrian Crossing*	*-*	*Maze*	*35.5041° (S)*	*138.786° (E)*
Goolwa 114.384					
114.491	*Hector's Jetty Access Road*	*RLX227*	*Passive (RX2)*	*35.5053° (S)*	*138.7848° (E)*
114.553	*Pedestrian Crossing*	*-*	*Maze*	*35.5064° (S)*	*138.7842° (E)*
114.936	*Olive Street*	*RLX0151*	*Passive (RX2)*	*35.5071° (S)*	*138.7811° (E)*

Rail Km	Road Name	Reference	Protection	GPS Coordinates	
115.208	Hutchinson Street	RLX0152	Active (RX5)	35.5049° (S)	138.7797° (E)
115.710	Foster Place	RLX0153	Passive (RX2)	35.5016° (S)	138.7767° (E)
115.868	Gardiner Street	RLX0154	Passive (RX2)	35.5016° (S)	138.7750° (E)
116.900	Skewes Road	RLX0155	Passive (RX1)	35.5027° (S)	138.7624° (E)
118.200	Houlden Road	RLX0156	Passive (RX1)	35.5039° (S)	138.7493° (E)
119.400	Boettcher Road	RLX0157	Passive (RX1)	35.5050° (S)	138.7360° (E)
120.600	Peterson Road	RLX0158	Passive (RX1)	35.5063° (S)	138.7225° (E)
121.600	Goolwa Road	RLX0159	Active (RX5)	35.5077° (S)	138.7117° (E)
121.850	Mill Terrace	RLX0160	Passive (RX1)	35.5084° (S)	138.7100° (E)
122.350	Mindacowie Street	RLX0161	Passive (RX2)	35.5112° (S)	138.7054° (E)
Middleton – 122.481 km					
122.991	Bassham's Beach Road	RLX0162	Passive (RX1)	35.5146° (S)	138.6997° (E)
124.305	Pt Elliot Caravan Park Road	RLX0163	Passive (RX1)	35.5270° (S)	138.6878° (E)
125.223	Strangways Terrace	RLX0164	Passive (RX2)	35.5306° (S)	138.6849° (E)
125.466	Murray Terrace	RLX0165	Passive (RX2)	35.5317° (S)	138.6824° (E)
125.392	The Strand	RLX0166	Active (RX5)	35.5322° (S)	138.6814° (E)
Port Elliot – 125.672 km					

Rail Km	Road Name	Reference	Protection	GPS Coordinates	
Port Elliot – 125.672 km					
126.043	Rosetta Terrace	RLX0167	Passive (RX2)	35.5350° (S)	138.6777° (E)
126.460	Pedestrian Crossing		Maze	35.5355° (S)	138.6730° (E)
126.784	Handby Street Pedestrian Crossing		Maze	35.5357° (S)	138.6694° (E)
126.880	Pedestrian Crossing		Maze	35.5357° (S)	138.6684° (E)
126.992	Mathew Street Pedestrian Crossing		Maze	35.5357° (S)	138.6672° (E)
127.107	Pedestrian Crossing		Maze	35.5356° (S)	138.6659° (E)
127.212	Francis Street Pedestrian Crossing		Maze	35.5355° (S)	138.6648° (E)
127.277	Pedestrian Crossing		Maze	35.5354° (S)	138.6641° (E)
127.657	Chiton Rocks Car Pk Pedestrian Crossing 1		Maze	35.5363° (S)	138.6600° (E)
127.769	Chiton Rocks Car Pk Pedestrian Crossing 2		Maze	35.5366° (S)	138.6589° (E)
127.833	Chiton Rocks Car Pk Pedestrian Crossing 3		Maze	35.5367° (S)	138.6582° (E)
127.788	Chiton Rocks SLSC Pedestrian Crossing		Maze	35.5368° (S)	138.6576° (E)
128.211	Pedestrian Crossing		Maze	35.5372° (S)	138.6541° (E)
128.544	Investigator Car Pk Pedestrian Crossing 1		Maze	35.5379° (S)	138.6505° (E)
128.617	Investigator Car Pk Pedestrian Crossing 2		Maze	35.5381° (S)	138.6497° (E)
128.805	Pedestrian Crossing		Maze	35.5385° (S)	138.6478° (E)
129.058	Pedestrian Crossing		Maze	35.5391° (S)	138.6450° (E)
129.244	Pedestrian Crossing		Maze	5.5397° (S)	138.6431° (E)
129.503	Pedestrian Crossing		Maze	35.5407° (S)	138.6405° (E)
129.747	Pedestrian Crossing		Maze	35.5417° (S)	138.6382° (E)

Rail Km	Road Name	Reference	Protection	GPS Coordinates	
130.028	Hayward Court Car Pk Pedestrian Crossing	-	Maze	35.5421° (S)	138.6351° (E)
130.470	Hindmarsh Estuary Pedestrian Crossing	-	Maze	35.5427° (S)	138.6305° (E)
130.670	Bridge Terrace Pedestrian Crossing	-	Maze	35.5450° (S)	138.6286° (E)
130.775	Pedestrian Crossing	-	Maze	35.5461° (S)	138.6274° (E)
131.400	Grantley Avenue	RLX0168	Passive (RX2)	35.5495° (S)	138.6248° (E)
131.670	Turntable Pedestrian Crossing	-	Maze	35.5518° (S)	138.6240° (E)
131.731	Eyre Terrace	RLX0169	Passive (RX2)	35.5523° (S)	138.6240° (E)
131.900	Coral Street	RLX0170	Gated	35.5538° (S)	138.6241° (E)
Victor Harbour – 131.984 km					
132.142	Whale Centre Pedestrian Crossing	-	Maze	35.5559° (S)	138.6245° (E)

3.3 Bridges

Major over and under bridges on the Railway are located as follows:

UP km	*DOWN km*	*Length*	*Name*	*Type*	*Latitude – Longitude (at Centre)*	
MOUNT BARKER JUNCTION						
54.030	*54.110*	*70 metres*	*South Eastern Freeway*	*Armco Tunnel – Rail under road*	*35.056659° (S)*	*138.858527° (E)*
MOUNT BARKER						
55.688	*65.702*	*24 metres*	*Mt Barker Creek*	*Ballast Deck – Rail over river*	*35.069216° (S)*	*138.866431° (E)*
PHILCOX HILL						
GEMMELLS						
79.008	*79.023*	*15 metres*	*Burnside Creek*	*Open Deck – Rail over river*	*35.244625° (S)*	*138.909903° (E)*
81.208	*81.242*	*42 metres*	*Angas River*	*Open Deck – Rail over river*	*35.259424° (S)*	*138.894379° (E)*
STRATHALBYN						
FINNISS						
98.329	*98.358*	*29 metres*	*Finniss River*	*Open Deck – Rail over river*	*35.389462° (S)*	*138.814133° (E)*
101.777	*101.855*	*78 metres*	*Black Swamp*	*Open Deck – Rail over river*	*35.413197° (S)*	*138.791817° (E)*
CURRENCY CREEK						
107.577	*107.657*	*78 metres*	*Currency Creek*	*Open Deck – Rail over river*	*35.453314° (S)*	*138.758131° (E)*
GOOLWA						
121.803	*121.811*	*8 metres*	*Middleton Drain*	*Open Deck – Rail over river*	*35.508737° (S)*	*138.709495° (E)*
MIDDLETON						
PORT ELLIOT						
127.365	*127.378*	*13 metres*	*Watson's Gap*	*Ballast Concrete Arch - Rail over river*	*35.535447° (S)*	*138.663016° (E)*
130.705	*130.759*	*54 metres*	*Hindmarsh River*	*Ballast Concrete Deck - Rail over river*	*35.544587° (S)*	*138.628873° (E)*
VICTOR HARBOUR						

3.4 Speeds and Exceptions to Maximum Speed

The overall Maximum Speed for the Railway is 70 kilometres per hour, however, parts of the Railway are subject to a lesser speed limit, determined by track curvature, precautionary concerns, level crossing sighting distances, or to enhance the journey for SHR customers.

In all cases, the maximum speed applicable for the type of rollingstock being operated must be observed.

NOTE	*Temporary Speed Restrictions may be imposed over any portion of the Network at any time and must be observed irrespective of any higher permanent speed applicable for that location.*

The maximum speed limit applicable for any train is determined by the lowest of:

- the permanent maximum speed applicable for the location;
- the permanent maximum speed applicable for the motive power or rollingstock type being operated, and;
- any Temporary Speed Restriction imposed for whatever reason.

3.4.1 Permanent Track Speed Limits:

Exceptions to the overall maximum speed of 70 km/h are imposed for various permanent conditions, as outlined below:

Speed	Up End	Down End	Reason
Mt Barker Junction			
30	*50.000*	*50.500*	*Curvature*
50	*50.500*	*53.000*	*Precaution*
30	*53.000*	*54.715*	*Curvature – Precaution — Level Crossing Sighting*
5			*Passage over Turntable*
Mt Barker Up End Yard Limits 54.715 km			
20	*54.715*	*55.325*	*All Tracks Within Yard Limits*
10	*54.715*	*55.325*	*All Tracks Within Buildings*
Mt Barker Down End Yard Limits 55.325 km			

Speed	Up End	Down End	Reason
Mt Barker Down End Yard Limits 55.325 km			
20	55.325	55.480	Level Crossing Approach – DOWN Trains only
50	55.325	58.000	Precaution
40	60.350	75.250	Curvature
50	75.250	77.500	Curvature
40	80.500	81.110	Level Crossing Approach – DOWN Trains only
Strathalbyn Up End Yard Limit 81.110 km			
30	81.110	81.920	Main Line Within Yard Limits
20	81.110	81.920	Other Tracks Within Yard Limits
10	81.110	81.920	All Tracks Within Buildings
Strathalbyn Down End Yard Limit 81.920 km			
Finniss Up End Yard Limits 96.700 km			
30	96.700	97.250	Main Line Within Yard Limits
20	96.700	97.250	Other Tracks Within Yard Limits
Finniss Down End Yard Limits – 97.250 km			
50	97.500	98.320	Curvature
15	98.320	98.365	Bridge
50	98.365	99.275	Curvature
50	101.175	101.750	Curvature
15	101.750	101.880	Bridge
50	101.880	102.800	Curvature
Currency Creek Up End Yard Limits – 106.325 km			

Speed	Up End	Down End	Reason
Currency Creek Up End Yard Limits – 106.325 km			
30	*106.325*	*106.840*	*Main Line Within Yard Limits*
20	*106.325*	*106.840*	*On Goods Siding*
Currency Creek Down End Yard Limits – 106.840 km			
50	*106.840*	*107.550*	*Curvature*
15	*107.550*	*107.680*	*Bridge*
50	*108.400*	*109.250*	*Curvature*
Goolwa Depot Down End Yard Limits – 112.000 – Up End Yard Limits – 112.615			
30	*112.860*	*114.050*	*Precaution - Level Crossings*
Goolwa Up End Yard Limits – 114.050			
30	*114.050*	*114.585*	*Main Line Within Yard Limits*
20	*114.050*	*114.585*	*On Crossing Loop*
Goolwa Down End Yard Limits – 114.585			
25	*114.585*	*115.050*	*Curvature*
40	*115.050*	*115.840*	*Curvature*
55	*121.620*	*121.820*	*Precaution – Mill Street Level Crossing*
Middleton Up End Yard Limits – 122.180 km			
30	*122.180*	*122.810*	*Main Line Within Yard Limits*
20	*122.180*	*122.810*	*Other tracks within Yard Limits*
Middleton Down End Yard Limits – 122.810 km			
30	*125.000*	*125.500*	*Precaution - Level Crossings*
Port Elliot Up End Yard Limits – 125.500 km			
30	*125.500*	*126.060*	*Main Line Within Yard Limits*
15	*125.500*	*126.060*	*Other tracks within Yard Limits*

Port Elliot Down End Yard Limits – 126.060 km			
Speed	**Up End**	**Down End**	**Reason**
Port Elliot Down End Yard Limits – 126.060 km			
50	*126.060*	*127.640*	*Precaution – Pedestrian Crossings*
40	*127.340*	*127.400*	*Bridge*
50	*127.400*	*130.000*	*Precaution – Pedestrian Crossings*
40	*130.000*	*130.770*	*Curvature – Pedestrian Crossings*
30	*130.770*	*131.000*	*Precaution – Pedestrian Crossings*
20	*131.000*	*131.530*	*Precaution – Urban Area – Grantley Avenue Level Crossing*
Victor Harbour Up End Yard Limits – 131.530 km			
20	*131.530*	*132.174*	*All tracks within Yard Limits*

3.4.2 Speed Over Points and Turntables

The maximum speed for all movements over all points and turntables is as follows:

Main Line Facing Points (set for Main Line) provided with Switch Stand	*30 km/h*
Main Line Facing Points (set for Main Line) provided with Switch Stand and Bolt Lock	*70 km/h*
Facing and Trailing Points provided with Cheese Knob mechanism	*15 km/h*
Facing and Trailing Points provided with Spring Lever mechanism	*15 km/h*
Trailing Points provided with Spring Lever mechanism when not set for movement	*5 km/h*
Moving on to, or off, or across a turntable	*5 km/h*

4.0 TRAIN NUMBERING AND SCHEDULES:

All trains operating on the Railway are identified by a numeric identifier (the primary identification), and the leading engine or railcar number (the secondary identification. Train numbers will usually comprise of three digits (and only use 4 digits if more than 5 trains operate between two locations in a single day). The practice of using "Day Numbers" (1 to 7 for the day of the week) will not be continued.

4.1 Location Code Numbers

Location Code Numbers are used to identify origin and destination locations for the purpose of allocating train numbers:

0	*Mount Barker*	*2*	*Strathalbyn*	*4*	*Currency Creek*	*8*	*Port Elliot*
0	*Philcox Hill*	*2*	*Sandergrove*	*5*	*Goolwa Depot*	*9*	*Victor Harbour*
1	*Bugle Ranges*	*3*	*Finniss*	*6*	*Goolwa*		
1	*Gemmells*	*3*	*Gilberts*	*7*	*Middleton*		

4.2 Train Numbering System

Train numbers identify the originating or terminating locations, and the daily sequence of departure:

First Digit - Origin	*Second Digit - Destination*	*Final Digit (or digits) - Sequence for the day and Direction of Travel*

The final digits also confirm the direction of travel:

DOWN = (Origin) + (Destination) + (1, 3, 5, 7, 9, 11, 13, and so on)	*UP = (Origin) + (Destination) + (0, 2, 4, 6, 8, 10, 12, and so on)*

Examples of Scheduled Train Numbers:

Train **091** is the 1st **DOWN** train for that day, operating from **Mount Barker to Victor Harbour** (Southern Encounter)

Train **900** is the 1st **UP** train for that day, operating from **Victor Harbour to Mount Barker** (Southern Encounter).

Train **591** is the 1st **DOWN** train for that day, operating from **Goolwa Depot to Victor Harbour** (Cockle Train).

Train **950** is the 1st **UP** train for that day, operating from **Victor Harbour to Goolwa Depot** (Cockle Train).

Train **5912** is the 6th **UP** train for that day, operating from **Victor Harbour to Goolwa Depot** (Cockle Train).

Train **200** is the 1st **UP** train for that day, operating from **Strathalbyn** (or Sandergrove) **to Mount Barker** (or Philcox Hill) (Strathlink).

Train **361** is the 1st **DOWN** train for that day, operating from **Finniss** (or Gilberts) **to Goolwa** (Finniss Flyer)

NOTE – *Some train numbers are reserved for use in the table of scheduled train services (eg 091/904 – Southern Encounter).*

4.3 Train Numbering Tables

4.3.1 Down Trains

	Destination	Philcox Hill	Bugle Ranges	Gemmells	Strathalbyn	Sandergrove	Finniss	Gilberts	Currency Creek	Goolwa Depot	Goolwa	Middleton	Port Elliot	Victor Harbour
Origin		**0**	**1**	**1**	**2**	**2**	**3**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Mount Barker	**0**	00X	01X	01X	02X	02X	03X	03X	04X	05X	06X	07X	08X	09X
Philcox Hill	**0**		01X	01X	02X	02X	03X	03X	04X	05X	06X	07X	08X	09X
Bugle Ranges	**1**			11X	12X	12X	13X	13X	14X	15X	16X	17X	18X	19X
Gemmells	**1**				12X	12X	13X	13X	14X	15X	16X	17X	18X	19X
Strathalbyn	**2**					22X	23X	23X	24X	25X	26X	27X	28X	29X
Sandergrove	**2**						23X	23X	24X	25X	26X	27X	28X	29X
Finniss	**3**							33X	34X	35X	36X	37X	38X	39X
Gilberts	**3**								34X	35X	36X	37X	38X	39X
Currency Creek	**4**									45X	46X	47X	48X	49X
Goolwa Depot	**5**										56X	57X	58X	59X
Goolwa	**6**											67X	68X	69X
Middleton	**7**												78X	79X
Port Elliot	**8**													89X

4.3.2 Up Trains

	Destination	Port Elliot	Middleton	Goolwa	Goolwa Depot	Currency Creek	Gilberts	Finniss	Sandergrove	Strathalbyn	Gemmells	Bugle Ranges	Philcox Hill	Mount Barker
Origin		**8**	**7**	**6**	**5**	**4**	**3**	**3**	**2**	**2**	**1**	**1**	**0**	**0**
Victor Harbour	**9**	98X	97X	96X	95X	94X	93X	93X	92X	92X	91X	91X	90X	90X
Port Elliot	**8**		87X	86X	85X	84X	83X	83X	82X	82X	81X	81X	80X	80X
Middleton	**7**			76X	75X	74X	73X	73X	72X	72X	71X	71X	70X	70X
Goolwa	**6**				65X	64X	63X	63X	62X	62X	61X	61X	60X	60X
Goolwa Depot	**5**					54X	53X	53X	52X	52X	51X	51X	50X	50X
Currency Creek	**4**						43X	43X	42X	42X	41X	41X	40X	40X
Gilberts	**3**							33X	32X	32X	31X	31X	30X	30X
Finniss	**3**								32X	32X	31X	31X	30X	30X
Sandergrove	**2**									22X	21X	21X	20X	20X
Strathalbyn	**2**										21X	21X	20X	20X
Gemmells	**1**											11X	10X	10X
Bugle Ranges	**1**												10X	10X
Philcox Hill	**0**													00X

4.4 Sectional Running Times

4.4.1 DOWN Direction:

(Assume no Temporary Speed Restrictions)

		Distance	Passenger - Railcar			Passenger – Loco Hauled			Goods – Loco Hauled		
MT BARKER JCT	***50.00***	*5.02*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
MOUNT BARKER	***55.02***	*6.45*	*14*	*19*	*48*	*15*	*21*	*50*	*18*	*24*	*56*
Philcox Hill	***61.55***	*2.52*	*5*			*6*			*6*		
Bugle Range	***64.07***	*6.03*	*9*	*27*		*10*	*29*		*12*	*32*	
Gemmells	***70.10***	*11.43*	*18*			*19*			*20*		
STRATHALBYN	***81.53***	*8.26*	*8*	*15*	*15*	*9*	*18*	*18*	*10*	*19*	*19*
Sandergrove	***89.79***	*7.25*	*7*			*9*			*9*		
FINNISS	***97.04***										

		Distance	Passenger – Railcar			Passenger - Loco Hauled			Goods – Loco Hauled		
FINNISS	***94.04***										
		2.26	***4***			***4***			***4***		
Gilberts	***99.30***										
		7.40	***8***	***19***		***10***	***22***		***11***	***24***	
CURRENCY CREEK	***106.70***				***24***			***27***			***29***
		5.60	***7***			***8***			***9***		
GOOLWA DEPOT	***112.30***										
		2.08	*5*	***5***		***5***	***5***		***5***	***5***	
GOOLWA	***114.38***										
		8.10	*14*	***14***		***15***	***15***		***16***	***16***	
MIDDLETON	***122.48***										
		3.19	*5*		***29***	***5***		***30***	***6***		***34***
PORT ELLIOT	***125.67***			***15 (*)***			***15 (*)***			***18***	
		6.31	*10*			***10***			***12***		
VICTOR HARBOUR	***131.984***										

(*) Does not include time stopped at Port Elliot

4.4.2 UP Direction:

(Assume no Temporary Speed Restrictions)

		Distance	Passenger - Railcar			Passenger – Loco Hauled			Goods – Loco Hauled		
VICTOR HARBOUR	***131.984***										
		6.31	***10***			***10***			***14***		
PORT ELLIOT	***125.67***			***15***			***15***			***20***	
		3.19	***5***		***29***	*5*		***30***	*6*		***36***
MIDDLETON	***122.48***										
		8.10	***14***	***14***		*15*	*15*		*16*	*16*	
GOOLWA	***114.38***										
		2.08	***5***			*5*			*5*		
GOOLWA DEPOT	***112.30***			***12***			*13*			*14*	
		5.60	***7***			*8*			*9*		
CURRENCY CREEK	***106.70***				*24*			*27*			*29*
		7.40	***9***			*10*			*11*		
Gilberts	***99.30***			***12***			*14*			*15*	
		2.26	*3*			*4*			*4*		
FINNISS	***94.04***										

		Distance	Passenger - Railcar			Passenger – Loco Hauled			Goods – Loco Hauled		
FINNISS	***97.04***										
		7.25	***8***	***16***	***16***	***9***	*19*	*19*	***10***	*20*	*20*
Sandergrove	***89.79***										
		8.26	***8***			*10*			*10*		
STRATHALBYN	***81.53***										
		11.43	***20***	***30***		*21*	*31*		*27*	*40*	
Gemmells	***70.10***										
		6.03	***10***			*10*			*13*		
Bugle Range	***64.07***				*49*			*51*			*68*
		2.52	***7***	***19***		*8*	*20*		*12*	*28*	
Philcox Hill	***61.55***										
		6.45	***12***			*12*			*16*		
MOUNT BARKER	***55.02***										
		5.02	*-*	***-***	***-***	***-***	***-***	***-***	*-*	***-***	***-***
MT BARKER JCT	***50.00***										

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NOTE

Sections 4.4 and 4.5 ARE NOT YET IN EFFECT

New pages 53 to 60 will be issued as an amendment insert, at a later date.

5.0 LOCOMOTIVE LOADS

5.1 DOWN and UP Direction

Section \ Locomotive		F 251	Rx 207/224	621	520	DE 351	DE 507	830 DE	930 DE	700 DE	Brill	3/400 RC	2000 RC
DOWN Direction	MOUNT BARKER JUNCTION	-	-	-	-	-	-	-	-	-	-		-
	MOUNT BARKER	125	145	200	270	35	145	200	400	550	57	32	45
	STRATHALBYN	190	200	300	400	65	200	400	400	700	71	32	45
	GOOLWA	190	200	300	400	65	200	400	400	700	71	32	45
	VICTOR HARBOUR	190	200	300	400	65	200	400	400	700	71	32	45
UP Direction	GOOLWA	190	200	300	400	65	200	400	400	700	71	32	45
	STRATHALBYN	125	145	200	270	35	145	200	400	550	57	32	45
	MOUNT BARKER	-	-	-	-	-	-	-	-	-	-		-
	MOUNT BARKER JUNCTION												

6.0 ROLLINGSTOCK PARTICULARS:

6.1 Motive Power Units

6.1.1 Steam Locomotives

Class	*Wheel Arrangement*	*Length (E+T)*	*Mass (Total)*	*Tractive Effort*
F	*Loco 4 – 6 – 2 (Tank)*	*12.4 m (40' 7.25")*	*59.946 tonnes (59 tons)*	*24843 N-m (18,335 lbs)*
Rx	*Loco 4 – 6 – 0 (Tender 2x4)*	*17.7 m (57' 11.75")*	*90.021 tonnes (88 ton 12 cwt)*	*28780 N-m (21,240 lbs)*
620	*Loco 4 – 6 – 2 (Tender 2x4)*	*21.3 m (69' 7.75")*	*143.008 tonnes (140 ton 15 cwt)*	*33875 N-m (25,000 lbs)*
520	*Loco 4 – 8 – 4 (Tender 2x6)*	*26.6 m (87' 3")*	*204.022 tonnes (200 ton 16 cwt)*	*44173 N-m (32,600 lbs)*

6.1.2 Diesel Locomotives

Class	*Wheel Arrangement*	*Length*	*Mass (Total)*	*Horsepower*	*Engine*
350	*Bo – Bo*	*11.5 m (37' 10")*	*50.167 tonnes (49 ton 7.5 cwt)*	*350*	*EE 6*
500	*Bo – Bo*	*12.6 m (41' 4")*	*57.101 tonnes 56 ton 4 cwt*	*500*	*EE 4 SKRT*
830	*Co – Co*	*13.5 m (48' 5")*	*75.2 tonnes (74 ton)*	*900*	*ALCO 6-251*
930	*Co – Co*	*18.0 m (58' 10")*	*107.59 tonnes (105 ton 18 cwt)*	*1600*	*ALCO 12-251*
700	*Co – Co*	*18.7 m (61' 3")*	*111.6 tonnes (109 ton 16 cwt)*	*2000*	*ALCO 12-251*

6.1.3 Diesel Railcars

Class	*Wheel Arrangement*	*Length*	*Mass (Total)*	*Horsepower*	*Engine*
400 Class	*1 A – A 1*	*20.1 m (66' 0")*	*43 tonnes*	*2 x 238*	*GM 6-71*
300 Class	*1 A – A 1*	*20.1 m (66' 0")*	*43 tonnes*	*2 x 238*	*GM 6-71*
Brill	*1 A – 1 1*	*17.4 m (57' 0")*	*25 tonnes*	*I x 200*	*Gardiner*
2000 Class	*B – B*	*24.8 m (81' 9")*	*65.0 tonnes*	*2 x 520*	*Cummins*

6.1.4 Locomotives and Railcars - Maximum Speed

The following speeds apply for locomotives and railcars on the railway.

The maximum speeds are applicable for various classes of locomotives and railcars.

Class	350	Brill / 500	Rx	F	520 / 620	830 / 930 / 700 / 2000	300 / 400
Speed	25 km/h	60 km/h	60 km/h Funnel First	70 km/h	70 km/h Funnel First	70 km/h	70 km/h
			40 km/h Tender First		40 km/h Tender First		

6.2 Passenger Rollingstock

Class	Description	Fleet Numbers	Length	Mass	Passengers
50 Class	Centenary Car	Nos. 52, 53, 54, 56	17.1 m (56' 0")	31 tonnes	59
60 Class	Centenary Car	Nos. 60, 61, 62, 65, 66	18.3 m (60' 0")	31 tonnes	64
70 Class	Suburban end & centre loader	Nos. 70, 71, 73	18.3 m (60' 0")	31 tonnes	76
80 Class	Suburban Baggage	No 82	18.3 m (60' 0")	31 tonnes	50
	Suburban Baggage (Refresh)	Nos. 81, 83	18.3 m (60' 0")	31 tonnes	40
500 Class	Steel First class carriage	No. 503	21.9 m (72' 0")	45 tonnes	42
600 Class	Steel Tavern Car Bowmans	No. 602	21.6 m (71' 0")	45 tonnes	16
700 Class	Steel Car	Nos. 701, 704, 706, 710	19.2 m (63' 0")	39 tonnes	56
Finniss	Sleeping Car	-	22.5 m (74' 0")	45 tonnes	36 (18 berths)
820 Class	Railcar trailer car	No.824	18.3 m (60' 0")	31 tonnes	56
860 Class	Railcar trailer car	No 875	17.1 m	29 tonnes	56
2100	Railcar Driving Trailer	No 2110	24.8 m	45 tonnes	85

6.2.1 Passenger Stock - Restricted Trailing Load Limits

No more than 320 tonnes is permitted to trail behind a 50, 60, 70 or 80 class carriage.

6.2.2 Passenger Rollingstock - Speed Limits

Wooden-bodied passenger carriages except 824, must not exceed a maximum speed of 65 Km/h.

Steel-bodied passenger carriages must not exceed a maximum speed of 70 Km/h

Railcar Trailers 824 and 875 may operate at up to 70 km/h when marshalled between 300 or 400 class railcars.

2100 class railcar trailer 2109 may operate at up to 70 km/h when hauled by railcar 2010.

6.3 Brakevans

Class	*Description*	*Fleet Numbers*	*Length*	*Mass*	*Passengers*
GB	*Composite Goods Brakevan*	*4420*	*12.8 m (42'2")*	*18 tonnes*	*10*
CGP	*Steel Passenger Brakevan*	*2*	*12.2 m (40'2")*	*23 tonnes*	*4*

GB 4420 must not exceed a maximum speed of 60 Km/h, and must not have a trailing load in excess of 320 tonnes.

6.4 Goods Rollingstock

Class	*Description*	*Fleet Numbers*	*Length*	*Tare*	*Gross*	*Notes*
OB	*Bogie Open*	*111, 169, 186*	*13.9 m (45'10")*	*17.8 t*	*62.5 t*	*RB*
OW	*Bogie Open*	*3144, 4018, 3149*	*13.1 m (42'10")*	*16.7 t*	*43 t*	*OOS*
OBf	*4-wheel open*	*300, 696*	*7.5 m (24'10")*	*8 t*	*24 t*	*RB, GCV*
OF	*4-wheel open*	*280, 64, 686, 630, 84*	*7.5 m (24'10")*	*8 t*	*24 t*	*OOS*
Y	*4-wheel open*	*3056*	*6.9 m (22'10")*	*8 t*	*24 t*	*OOS*
M	*Bogie Boxcar*	*7028, 7236, 7311, 730, 7345, 710, 7309, 7361, 708, 7200, 7216, 7369, 7089, 7205, 7342, 7261*	*11.8 m (38'10")*	*17.8 t*	*48 t*	*OOS*
FCS	*Bogie Flatcar*	*36, 37*	*13.9 m(45'10")*	*14.8 t*	*37.2 t*	*GCV*
FC	*Bogie Flatcar*	*56,*	*13.9 m(45'10")*	*14.8 t*	*37.2 t*	

Class	*Description*	*Fleet Numbers*	*Length*	*Tare*	*Gross*	*Notes*
AFFA	*Bogie Flatcar*	*8588, 8696, 8678*	*13.9 m (45'10")*	*17.0 t*	*72.0 t*	*8678 RB – Others OOS*
AFBA	*Bogie Flatcar*	*8553*	*13.9 m (45'10")*	*17.0 t*	*61.0 t*	*OOS*
FB	*Bogie Flatcar*	*8096*	*13.9 m (45'10")*	*17.3 t*	*67 t*	*OOS*
Z	*4-wheel Ballast Hopper*	*2694, 3199, 3209, 3211, 3239*	*7.4 m (24'4")*	*9.25 t*	*25 t*	*GCV, OOS*
BP	*4-wheel Ballast Plough*	*4121*	*6.9 m (22'10")*	*20.6 t*	*-*	*OOS*
TW	*Bogie Tank Wagon*	*4825 4829*	*11.8 m (38'10")*	*22.0 t*	*60.1 t*	*OOS*
DWf	*4-wheel Box Car*	*7719*	*7.5 m (24'10")*	*11.2 t*	*25 t*	*OOS*
ESV	*Employee Sleeping Van*	*8137; 8144, 8149, 8153, 8163, 8168*	*18.3 m (60' 0")*	*23.5 t*		*OOS (Goolwa Depot)*
PWK	*Kitchen Car*	*9*	*18.3 m (60' 0")*	*18.3 m*	*31 t*	*OOS (Goolwa Depot)*
PWA	*Ablution Car*	*3*	*18.3 m (60' 0")*	*18.3 m*	*25 t*	*OOS (Goolwa Depot)*
ASDA	*Bogie Sheep Van*	*9*	*11.8 m (38'10")*	*19.9 t*	*35 t*	*RB, GCV*
SLC	*Bogie Boxcar*	*1, 27*	*10.3 m*	*16.0 t*	*38.0 t*	*RB - OOS*
ACAA	*Bogie Cattle Van*	*6184*	*11.8 m (38'10")*	*17.8 t*	*35 t*	*OOS*
D	*Bogie Postal Van*	*1*	*19.3 m (63'3")*	*38.1 t*		*OOS*

NOTES: OOS = Out of Service; RB = Roller Bearing Axles; GCV = Grade Control Valve

6.4.1 Goods Stock - Maximum Speed

Four wheel freight wagons, and freight wagons with plain bearings must not exceed 50 Km/h.

Bogie freight wagons with roller bearings must not exceed 60 Km/h.

6.5 Per-Way Maintenance Vehicles

6.5.1 Section Cars

Description	Numbers	Length	Gross	Occupants
ANR 5-man Section Car	CC81-321	Unknown	Unknown	Driver + 4
ANR 5-man Section Car	CC81-323	Unknown	Unknown	Driver + 4
ANR 5-man Section Car	CC81-324	Unknown	Unknown	Driver + 4
ANR 5-man Section Car	CC81-325	Unknown	Unknown	Driver + 4
Tamper TMC-2 Section Car	CC81-351	Unknown	Unknown	Driver + 1
Tamper TMC-2 Section Car	CC81-351	Unknown	Unknown	Driver + 1
Tamper TMC-2 Section Car	CC81-351	Unknown	Unknown	Driver + 1
Fairmont ST2-H	F37	Unknown	Unknown	Driver + 1
Fairmont ST2-H	F157	Unknown	Unknown	Driver + 1
Fairmont M19 Series F	M52	Unknown	Unknown	Driver + 1
Fairmont M19 Series F	M68	Unknown	Unknown	Driver + 1
Fairmont M19 Series F	M194	Unknown	Unknown	Driver + 1

6.5.2 Self-Propelled Track Vehicles

Description	Numbers	Length	Gross	Occupants
Motor Inspection Car	MIC 3	Unknown	Unknown	Driver + 3
Plasser Track Recording Car	EM30	Unknown	Unknown	Driver + 1
Torsion-beam Tamper	TMS-01	Unknown	Unknown	Driver only
Spot / Switch Tamper	TMS-02	Unknown	Unknown	Driver only
Ballast Regulator	TMS-03	Unknown	Unknown	Driver only
Gemco Sleeper Inserter	TMS-04	Unknown	Unknown	Driver only
Comeng Sleeper Extractor TA-058	TMS-05	Unknown	Unknown	Driver only
Comeng Ballast Scarifier	TMS-06	Unknown	Unknown	Driver only
Canron Tie Crane	TMS-07	Unknown	Unknown	Driver only
Ballast Regulator Tamper BEA17	TMS-08	Unknown	Unknown	Driver only
John Deer/Plasser Tractor Tamper	TMS-11	Unknown	Unknown	Driver only
Ballast Regulator		Unknown	Unknown	Driver only
Plasser Tamper		Unknown	Unknown	Driver only

6.5.3 Road-Rail Vehicles

Description	*Numbers*	*UL*	*GVM*	*Occupants*
Toyota Landcruiser Traytop Ute	*WAP-991 (TMS-09)*	*Unknown*	*Unknown*	*Driver + 1*
Mazda Dual Cab Light Truck	*VHJ-964 (TMS-10)*	*Unknown*	*Unknown*	*Driver + 3*
Isuzu FVR 950 Tip-tray Truck	*XS38CT*	*8830 kg*	*12000 kg*	*Driver + 2*
Isuzu NPR 300 Tray Top Truck	*XS39CT*	*4950 kg*	*6500 kg*	*Driver + 4*

6.5.4 Trolleys, Trailers, Hauled Equipment

Description	*Numbers*	*Length*	*Tare*	*Comment*
Broomwade Air Compressor	*TMS-12*	*Unknown*	*Unknown*	
Trolley - T7 Fairmont Flat Top	*TMS-14*	*Unknown*	*Unknown*	
Trolley - Red Cab ex ST2	*TMS-15*	*Unknown*	*Unknown*	
Trolley - Yellow Cab ex ST2	*TMS-16*	*Unknown*	*Unknown*	
Trolley - Flat ex ST2	*TMS-17*	*Unknown*	*Unknown*	
Trolley - White cab ex M19	*TMS-18*	*Unknown*	*Unknown*	
Trolley - Cab ex ST2	*TMS-19*	*Unknown*	*Unknown*	*Brakes fitted*
Trolley - Gemco Sleeper	*TMS-20*	*Unknown*	*Unknown*	
Trolley - Spare Sleeper	*TMS-21*	*Unknown*	*Unknown*	
Trolley - Mesh top	*TMS-22*	*Unknown*	*Unknown*	
T7 Fairmont Flat Top	*TMS-23*	*Unknown*	*Unknown*	

7.0 TRAIN OPERATING INSTRUCTIONS

7.1 Brake Instructions

All trains operating on the railway must be provided with functional air brakes.

7.1.1 Brake Isolated Vehicles

A passenger train must not originate from a maintenance depot location (Mount Barker or Goolwa Depot) with any brake-isolated vehicles attached.

If the air brake needs to be isolated on a train whilst en-route, the following conditions apply:

- If the mass of the vehicle being isolated is no more than 10% of the gross hauled mass of the train, the train may operate without speed restriction.
- If the mass of the vehicle being isolated is between 10% and 20% of the gross hauled mass of the train, the speed of the train must be reduced to Restricted Speed:
    - when descending grades between Mount Barker and Strathalbyn, and
    - when approaching all level crossings.
- the number of brake-isolated vehicles on a train must not exceed 1 in 5 or 20% of the gross hauled mass of the train (whichever is the lesser).

If the above conditions cannot be met the train may proceed at Restricted Speed, and:

- the defective vehicle must be detached at the next station in advance, or
- a locomotive may be attached at each end of the train to provide effective braking control.

If a train includes a brake-isolated vehicle, and Grade Control Valves are available for use:

- all Grade Control Valves must be placed to the HP position when descending grades between Mount Barker and Strathalbyn, and
- all Grade Control Valves must be placed to the IP position, elsewhere.

If a train includes a brake-isolated vehicle and no Grade Control Valves are available for use, one or more handbrakes may lightly applied handbrakes to enable the safe control of trains on descending grades between Mount Barker and Strathalbyn.

Brake isolated vehicles must be marshalled with a brake-equipped vehicle on either side.

A brake isolated vehicle may be marshalled next to the locomotive.

The rearmost two vehicles must not under any circumstances be brake isolated.

7.1.2 Brake Testing

The function of the braking system must be tested, and the overall mechanical condition must be examined, by a Competent Worker, for each train consist.

This must be conducted within 24 hours of the operation of the train in service.

Brake Function Test

A Brake Function Test is performed to ensure that the Automatic Brake on a train operates correctly.

The Brake Function Test must include (but is not limited to) examination of correct:

- application and release of the brake, and;
- Brake Cylinder piston travels, and;
- Brake Pipe integrity (leakage).

A mechanical examination of the train, and where required, a Brake Retention Test may be conducted concurrently.

Brake Retention Test

A Brake Retention Test must be performed on all trains operating between Mount Barker and Strathalbyn, without a Guard.

The Brake Retention Test is performed to ensure that the brakes on the last two vehicles of a train remain applied for sufficient time to allow train crew to access, and secure the vehicles, in the event of the train parting.

Vehicles subject to a Brake Retention Test must be capable of retaining Brake Cylinder pressure, with the Brake Pipe exhausted, for no less than 20 minutes.

Brake Pipe Leakage Test

The Brake Pipe on any train must not exceed a leakage rate in excess of 35 kPa per minute (7 psi per minute).

The Brake Pipe pressure must be reduced by 100 kPa (or 10 psi) and the rate of leakage observed for one minute.

Mechanical Condition Examination

A Mechanical Condition Examination must be conducted to determine that mechanical devices are in serviceable condition, and must include (but is not limited to):

- Brake Block and Brake rigging condition, and;
- Wheel condition, and;
- Axle Box lubrication, and;
- Undercarriage condition, and;
- Coupler condition and engagement;

Brake Pipe Continuity Test

The Brake Pipe continuity must be performed each time that the Brake Pipe continuity is disrupted, including on each occasion that shunting occurs.

The Brake Pipe Continuity Test ensures that the driver retains full control of Brake Pipe function

7.2 Operation Multiple Locomotives on a Single Train

Multiple locomotives may be operated on a single train subject to the instructions contained in this document, either:

- operated independently, under the control of individual crews or;
- under the control of a single crew, via multiple unit controls (diesel locomotives and railcars) .

The following applies in all cases:

- The maximum total mass of the train must not exceed the combined maximum load allocated for each motive power unit.
- The control of the release of the Automatic Brake must be maintained by the driver in the leading cab (the driver of second or subsequent motive power unit must be able to apply the Automatic Brake as required);
- The driver of any second or subsequent motive power units must apply power as directed by the driver of the leading motive power unit;
- The leading motive power unit must be used to start the train in motion wherever possible,p before assistance is progressively provided by trailing motive power units.

NOTE

If locomotives (or railcars) are operated under the control of a single crew (via multiple unit controls), they are effectively operated as a single motive power unit.

7.2.1 Locomotives assisting from the front of a train

Wherever reasonably practicable, locomotives operated in multiple on a single train, must be marshalled:

- at the leading end, except as detailed in section 7.2.2 below, and;
- if steam locomotives are used in multiple, so that the smaller-powered locomotive is at the lead of the consist.

If the load for the locomotive at the front of a train exceeds 150% of its maximum capacity (requiring use of an assisting locomotive), the assisting locomotive must NOT be placed at the rear of the train.

EXAMPLES

If a train of 320 tonnes is being operated over a Section for which the leading locomotive's capacity load is 200 tonnes, the assisting locomotive MUST NOT be marshalled at the rear of the train, and MUST be marshalled at the front of the train.

If a train of 290 tonnes is being operated over a Section for which the leading locomotive's capacity load is 200 tonnes, the assisting locomotive may be marshalled at either the front or at the rear of the train.

NOTE

Diesel-electric locomotives may be marshalled in any order, with any other type of locomotive.

7.2.2 Locomotives assisting from the rear of a train

Locomotives may assist to propel a train from the rear either:

- in an unplanned circumstance where the motive power on the train is unable to move the train by itself and needs the assistance of a locomotive or another train at the rear, to clear the Section, or;
- when trailing loading limitations within the train consist prevent all motive power to marshalled at the front of the train consist, or
- when it is otherwise not reasonably practicable for the assisting motive power to be at the front of the train consist.

In all cases the conditions outlined in clauses 7.2 and 7.2.1 above, must be applied, and in addition, where a train is assisted from the rear:

- the locomotive at the front must perform the majority of the haulage task, and;
- the crew of the assisting locomotive at the rear must calculate the load that is in excess of the capacity of the lead locomotive, and modulate power accordingly.

EXAMPLE:

If a train of 250 tonnes is being operated over a Section for which the leading locomotive's capacity load is 200 tonnes, the assisting locomotive at the rear needs to apply sufficient power to propel only about 50 tonnes (plus its own mass), and must be operated accordingly.

WARNING

Excessive power must not be applied to the rear of a train as this has been demonstrated to increase the risk of compression derailments, particularly on tight curves and at speeds below 60 km/h. This risk increases as train length increases.

Only in the case of a leading locomotive on a train becoming completely disabled may high power output need to be utilised at the rear of a train, and then, only with extreme caution.

If a train consist includes any 4-wheel vehicles, it must not be propelled from the rear except:

- to set-back for short distances, and
- on gradients less than 1:80, and
- if the vehicle is carrying at least 50% of its capacity load, and
- for purposes such as ballasting or other work-train operations.

7.3 Passenger Car Security

All doors on passenger carriages that allow access from the Passenger Saloon to the outside of the carriage, must be closed before the departure of a train from any platform.

This is particularly important for doors on the sides of carriages that allow access from the saloon or vestibule to the outside of the carriage (such as on 500/600/700 class cars).

Passenger Attendants must indicate their readiness for departure to the Guard, step into the carriage, and close the door behind them as the Guard's Joining Signal (first Right-of-Way) is given.

Doors may be opened whilst en-route only:

- to allow the Guard to perform Safeworking tasks, or
- (for end doors) to allow limited access between carriages.

A door opened for these purposes must be closed again immediately after use.

Any door found open when a train is in motion must be closed.

If a door is repeatedly being opened without authorisation, consideration must be given to locking the door to prevent this.

Any security and safety devices such as locks, chains or gates must be in position whilst a train is in motion, to minimise the risk of a passenger falling from a train carriage.