Australian Railway Historical Society (SA)

ABN 36 611 842 947

operating as

SteamRanger Heritage Railway

ABN 24 530 998 354

Annual Safety Performance Report

for the year July 1, 2020 to June 30, 2021

report developed for the SteamRanger Board of Management and

onrsr **Office of the National Rail Safety Regulator**

Adelaide, South Australia

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1.0 EXECUTIVE SUMMARY

The Australian Railway Historical Society (SA Division) Incorporated (ARHS SA) is the accredited Rail Infrastructure Manager and Rail Transport Operator for the railway between Mount Barker Junction and Victor Harbour, in South Australia.

The railway is 82.274 kilometres long, and is of 1600mm gauge.

Like many businesses, the Railway has been severely challenged by the impositions of the COVID pandemic, but, reassuringly, has also been a beneficiary of the relative isolation from the worst effects of the pandemic, due to the Railway's location in South Australia.

For the period July 1, 2020 to June 30, 2021, SteamRanger operated on 183 days, and carried in excess of 280,000 passengers on approximately 1121 trains.

The Railway reported 8 Category B notifiable rail safety occurrences during the reporting period. No Category A notifiable rail safety occurrences were recorded.

The operable motive power fleet includes three steam locomotives, three diesel-electric locomotives and three Diesel Passenger Motors (DPM, or railcars).

This includes one additional steam locomotive – Rx224 – that was re-introduced to service, during the reporting period.

During the reporting period, SteamRanger initiated the replacement of its key operating Safeworking document, the Code of Practice for the Defined Interstate Rail Network, with a suite of Safeworking Rules and Procedures – called the Heritage Railways of South Australia Railway Safeworking Rules - developed in conjunction with personnel from the Pichi Richi Railway Preservation Society, in Quorn, South Australia, and intended to reflect the operating context of each Railway. ([1])

[1] At the time of preparation of this report, it is understood that PRRPS has elected to not adopt these rules and procedures for use on that Railway.

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2.0 DOCUMENT CONTROL:

This is version 1.0 of this document.

2.1 VERSION HISTORY:

Version	Date	Author	Reviewer	Issued
1.0	December 2021	RSM	RSC	For distribution

2.2 AMENDMENT DETAILS:

Version	Sections	Details
1.0	All	New document for distribution

3.0 ABOUT ARHS (SA) AND STEAMRANGER

The Australian Railway Historical Society (SA Division) Incorporated (ARHS SA) is the accredited Rail Infrastructure Manager and Rail Transport Operator for the railway between Mount Barker Junction and Victor Harbour, in South Australia.

SteamRanger operates the railway under a licence agreement with the Department of Environment, Water and Natural Resources.

The railway is 82.274 kilometres long, and is of 1600mm gauge.

This railway is known as the SteamRanger Heritage Railway (SHR) and is operated by the ARHS (SA) under the trading name of "SteamRanger".

ARHS (SA) and SteamRanger are not for profit organisations which derives income from ticket sales for services operated, as well as donations received, which are often directed towards specific projects according to the donor's wishes.

Services on the railway are operated almost exclusively for tourists, with the majority of patronage and train journeys conducted between Goolwa and Victor Harbour.

The business relies on the success of the tourist industry for its survival and can be affected by other external influences such as hot weather and fire bans in the Mt. Lofty Ranges fire district.

Like many businesses, the Railway has been severely challenged by the impositions of the COVID pandemic, but, reassuringly, has also been a beneficiary of the relative isolation from the worst effects of the pandemic, due to the Railway's location in South Australia.

The railway budgets its expenditure against derived income and all monies received are expended against the operational costs, upkeep and maintenance of the railway.

3.1 GOVERNANCE

3.1.1 ARHS (SA) EXECUTIVE COMMITTEE

In accordance with the Associations Incorporations Act (SA) and as provided for in the Constitution of the ARHS (SA), the governing body of the Society is the ARHS (SA) Executive Committee, which is elected by and from the members of the Society, for a two-year tenure.

For this reporting period, the members of the ARHS (SA) Executive Committee were;

Peter Charlson	President
Andrew McDonough	Vice President
Peter Schneider	Secretary
John Lambert	Financial Manager

All Executive positions fall vacant and due for election at the November 2021 AGM.

The members of the ARHS (SA) Executive Committee are also members of the SteamRanger Board of Management.

The ARHS (SA) Secretary serves as the Public Officer, as required by the Associations Incorporations Act (SA).

3.1.2 STEAMRANGER BOARD OF MANAGEMENT

The SteamRanger Board of Management consists of the members of the ARHS (SA) Executive Committee, and functional Managers appointed by the ARHS (SA) Executive Committee to manage operation of the railway.

The officers remain in their appointed positions until their retirement or removal by the ARHS (SA) Executive Committee.

Committees may be formed under the Chair of the relevant Manager for specific areas.

Sub Committees may be formed for a specific task such as a special event and are recommendatory only.

For this reporting period, the SteamRanger Board of Management comprised of members of the ARHS (SA) Executive Committee and in addition to the following functional Managers;

Andrew McDonough	Manager, Human Resources (*)
Craig Dunstan	Manager, Mechanical Services
Peter Michalak	Manager, Operations
Barry Walding	Manager, Rail Safety
Troy Barker	Manager, Rail Systems and Standards
Ben Greeneklee	Manager, Infrastructure
Steven Richardson	Manager, Marketing
David Beasley	Manager, Administration

(*) Mr McDonough is fulfilling the role of Manager, Human Resources in an acting capacity only.

The following persons/roles report directly to the SteamRanger Board of Management;

Troy Barker	Signals & Telegraph Coordinator
Peter Charlson	Rail Safety Co-ordinator

3.2 WORKFORCE

SteamRanger employs two full time and four part time employees.

This is unchanged from the reporting period 2020-2021.

Some of the workforce comprised, for the early part of 2021, of personnel provided via Centrelink and the Work for the Dole program, who use the time spent with SteamRanger to fulfil their co-commitment obligations for Centrelink payments.

This source of labour has ceased to be available to the railway, primarily due to the restrictions imposed by the COVID pandemic response.

The majority of the workforce is comprised of approximately 70 Rail Safety Workers who volunteer their time to perform Rail Safety tasks, as well as non-Rail Safety tasks including:

- Railway management (none of the ARHS (SA) Executive Committee or SteamRanger Board of Management are employees);
- track and infrastructure maintenance;
- locomotive and rollingstock restoration and maintenance
- train control;
- train operation;
- ticketing, rostering and marketing;
- staffing of stations.

3.3 SERVICES OPERATED

3.3.1 COCKLE TRAIN

The “Cockle Train” is a return service operating between Goolwa and Victor Harbour.

Services are operated each Sunday, Wednesday and daily during school holidays.

From October to April the service also operates on Saturdays.

The service is operated using steam or diesel locomotive power, or diesel self-propelled railcars.

The number of daily train departures varies between 3 and 6 return services (6 to 12 trains) according to the period of operation.

3.3.2 SOUTHERN ENCOUNTER

The “Southern Encounter” is a return service operating between Mount Barker and Victor Harbour.

This is SteamRanger’s premium service and offers First-Class passenger accommodation for limited services.

The service is scheduled to operate a twice per month service during winter and spring, and may operate more frequently if passenger bookings require it to do so.

The service is operated using steam or diesel locomotive power.

3.3.3 BUGLE RANGER

The “Bugle Ranger” is a short return service operating between Mount Barker and Bugle Ranges.

The service is scheduled to operate once per month between April and October.

Only limited operation of this service occurred during the reporting period.

The service is operated using diesel self-propelled railcars.

3.3.4 STRATHLINK

The "StrathLink" is a return service operating between Goolwa and Strathalbyn, which extends to Victor Harbour on its return.

The service is scheduled to operate once per month between April and October.

Only limited operation of this service occurred during the reporting period.

The service is operated using diesel self-propelled railcars.

3.3.5 SOUTHERN HILLS SPECIAL

The "Southern Hills Special" is a return service operating between Victor Harbour and Mount Barker.

The service is scheduled to operate only a few times each year according to demand.

Only limited operation of this service occurred during the reporting period.

3.3.6 FINNISS FLYER

The "Finniss Flyer" is a return service operating between Goolwa and Finniss, which connects with a Cockle Train service, from Victor Harbour.

Only limited operation of this service occurred during the reporting period.

3.3.7 HIGHLANDER

The "Highlander" is a return service operating between Mount Barker and Strathalbyn.

Issues with the capacity to run around the train consist at Strathalbyn, and to turn the locomotive has seen this service extended to Goolwa, operating as a "River to River" service (so named after the two rivers connected – the Angas River and the River Murray).

Only limited operation of this service occurred during the reporting period, however patronage on the "River to River" is encouraging.

3.3.8 ADDITIONAL SERVICES

Various services are conducted to cater for charter demand, and in addition, a small number of "one-off" special services are operated.

These include special services such as "Christmas in July" which operated from Mount Barker to Goolwa and return.

Ad-hoc services are operated to facilitate the transfer of rollingstock and locomotives between the Railway's two maintenance depots at Mount Barker and Goolwa.

No freight-only services were operated during the reporting period.

4.0 INTERNAL SAFETY PERFORMANCE MANAGEMENT

The Rail Safety Manager reports the status of rail safety matters to the SteamRanger Board of Management at each meeting.

This includes the review of any Rail Safety Occurrences, audits, observations and other concerns.

4.1 RAIL SAFETY INCIDENT REPORTING

The Railway reported 8 notifiable Category B rail safety occurrences during the reporting period:

ARHS-NO-06-20 Dec 20, 2020	Collision with road vehicle not on a level crossing	A road vehicle parked in the vicinity of 126.2 km at Port Elliot was struck by train 1551. No damage to railcar.
ARHS 2020-12-3 Dec 29, 2020	Lineside fire	Lineside fire in the vicinity of 123.400 km following passage of train 4562. Unconfirmed source of ignition.
ARHS-NO-01-21 Feb 10, 2021	Near hit	Road vehicle crossed in front of train 4555 at Murray Terrace level crossing, Port Elliot (RLX0165). Driver applied emergency brake no injuries incurred.
ARHS-NO-02-21 March 12, 2021	Abandoned vehicle on track	Vehicle abandoned on line at Junction Road level crossing (RLX0104), in the dormant Mount Barker Junction to Mount Barker Section.
ARHS-NO-03-21 March 21, 2021	Near hit	Train 1555 stopped because of traffic queued across Grantley Avenue level crossing, Victor Harbor (RLX0168).
ARHS-NO-04-21 April 3, 2021	Slip, trip & fall	A passenger with a pre-existing medical condition fell on Goolwa platform.
ARHS-NO-05-21 May 17, 2021	Safeworking rule breach	Number 2 Points at Mount Barker Depot run through when incorrectly set for the movement.
ARHS-NO-06-21 May 23, 2021	Running line collision with obstruction	Locomotive collided with temporary fencing (bunting) placed across pedestrian access point during heritage festival.
ARHS-NO-06-21 May 23, 2021	Theft of batteries	Signal cabinet broken into battery stolen at Strathalbyn.

There were no Category A rail safety occurrences during the reporting period.

4.2 KEY RAIL SAFETY PERFORMANCE INDICATORS

4.2.1 WORK HEALTH SAFETY AND ENVIRONMENT

SteamRanger's Worker Induction process is now well established, and addresses the requirement for workers to be aware of their obligations towards work health and a general safe environment.

The restrictions required due to COVID management protocols dictated a heightened focus on WHS matters, particularly with regards to cleaning of shared areas, and social distancing. The mandatory wearing of face masks has also been introduced in line with SA Government advice.

The need to improve the communication processes in relation to work health and safety issues was to have been a focus for the year 2019-2020, and this was brought into sharp focus as a result of COVID pandemic management requirements.

4.2.2 TRAINING

The provision of training has been largely restricted by the COVID pandemic.

Notwithstanding this, all Rail Safety Workers engaged in safeworking functions received classroom training and assessment in the Heritage Railways of South Australia Railway Safeworking Rules (HRSA Rules) adopted for use on the Railway, from March 22, 2021.

This consisted of gap training, to address any risks associated with differences between the content of the HRSA Rules and the Code of Practice for the Defined Interstate Rail Network (and addenda) that this replaced.

This also addressed the lag in Safeworking re-certification that had existed during the previous reporting period (2019-2020).

First aid training in the competencies of HLTAID001 (Provide cardiopulmonary resuscitation), HLTAID002 (Provide basic emergency life support) and HLTAID003 (Provide first aid) has continued with some delays caused through COVID restrictions.

No railway safety workers who are required to hold First Aid qualifications are without those qualifications.

The Railway continues to align its training curriculum with the requirements of the Transport and Logistics Industry, and ATHRA training packages, as required by Section 117 (4) (a)(b) of the Rail Safety National Law, although progress is not as rapid as would be hoped.

4.2.3 RAIL SAFETY WORKER HEALTH ASSESSMENTS

As was the case during the last reporting period, all rail safety worker health assessments have been completed prior to their due date before a rail safety worker undertakes rail safety work.

4.2.4 OPERATIONAL DOCUMENTATION

The key operational document change affecting the railway during the reporting period was the adoption of the Heritage Railways of South Australia Railway Safeworking Rules.

These Rules are largely based on the framework and principles outlined in the Australian Network Rules and Procedures documents, published by the Rail Industry Safety and Standards Board.

A companion General Instructions and Working Timetable document is under development, and is due for implementation in the first quarter of 2022.

A review of on-train recording documentation is underway.

The forms used for recording of train running (train running statement), train consist reports, and train inspection records are recognised to be poorly formatted, and inconsistent with providing accurate and appropriate data.

The information being managed will be assisted by the provision of significant detail within the General Instructions and Working Timetable document.

It is anticipated that revised on train documentation will be implemented in the first quarter of 2022.

4.2.5 INTERNAL AUDITS

The performance of internal audits have been identified as a shortfall in the Railway's process management during the reporting period.

In spite of this, audit and examination of processes associated with the following have indicated that the required time-frames have been adhered to:

- Worker competencies and health currency
- Rail Safety Worker Health and Fitness
- Currency of Boiler certificates for locomotives in use
- Level crossing signalling equipment audit
- Track integrity inspections
- Structures integrity inspections

It has been recognised and acknowledged that internal auditing performance has been less that optimal, and a full internal audit schedule has been developed for the year 2021-2022.

This has been provided to ONRSR for their information.

4.2.6 SAFETY MANAGEMENT SYSTEM REVIEW

In addition to the review and replacement of the Safeworking Rules for the railway (itself a fundamental component of the SMS) a review of the following SMS Documents was completed:

- AHRS-SMS-8 (Review of Safety Management System) – September 16th, 2020
- ARHS-SMS-12 (Management of Change) – August 23rd, 2020
- AHRS-SMS-24 (Rail Safety Worker Competence) – August 25th, 2020

Each of these documents is available for Rail Safety Workers to access on the Railway's Staff Access Page at:

https://www.steamrangerheritagerailway.org/safety-management-system/

4.2.7 SAFETY INITIATIVES

Safeworking Rules - Implemented

The adoption of the Heritage Railways of South Australia Railway Safeworking Rules for the railway, represents a significant safety initiative.

The HRSA Rules provide for a much clearer, simplified and contextually-appropriate suite of rules for the operation of this railway.

General Instructions and Working Timetable – Under Development

The implementation of the complimentary General Instructions and Working Timetable document will further augment this safety initiative, by simplifying operational instructions, whilst at the same time providing a single source of truth, in regards to configuration and operational parameters for the physical railway, and the operation of the services on it.

The General Instructions and Working Timetable document includes, for example, a listing of every road and pedestrian level crossing on the railway, inclusive of its location by rail kilometres and GPS coordinates, common name, the type of protection provided, and the RLX reference number.

An excerpt is shown below:

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					

Incident and Emergency Response - Track Location Guide – Under Development

A document entitled “Incident and Emergency Response Plan Track Location Guide” sets out to assist in the identification of locations along the railway, in the event of an incident requiring the assistance of external resources.

The document outlines:

- GPS coordinates for each kilometre and half kilometre post on the railway;
- GPS coordinates and name for each road level crossing on the railway;
- The distance and direction from each kilometre and half kilometre post to the nearest road level crossing on the railway;
- The name and kilometre references for roads that are closely adjacent to the railway;
- The rail kilometre reference and GPS coordinates for every Station on the railway;
- The rail kilometre reference and GPS coordinates for every major bridge structure on the railway

An excerpt is shown below:

MOUNT BARKER 55.000 km							
KM	Lat (S)	Long (E)	Nearest Level Crossing (Distance/Direction/Road Name/Reference/Latitude-Longitude)				
55.500	35.063890°S	138.863735°E	⬆ 84 metres	Dutton Road	RLX0109	35.066731°S	138.866665°E
55.693	Mount Barker Creek Bridge					35.069261°	138.866419°
56.000	35.071908°S	138.865795°E	⬆ 11 metres	Fletcher Road	RLX0061	35.071762°S	138.865790°E
56.500	35.076376°S	138.864590°E	191 metres ⬇	Wellington Road	RLX0110	35.078032°S	138.864184°E
57.000	35.080793°S	138.863523°E	⬆ 310 metres				
57.500	35.085243°S	138.863395°E	⬆ 138 metres	Hurling Drive	RLX0111	35.083986°S	138.863088°E
58.000	35.089529°S	138.865100°E	⬆ 638 metres				
58.500	35.093821°S	138.866810°E	211 metres ⬇	Fidler Lane	RLX0112	35.095571°S	138.867504°E
59.000	35.098110°S	138.868527°E	⬆ 289 metres				
59.500	35.102498°S	138.868882°E	⬆ 789 metres				
60.000	35.106891°S	138.867702°E	430 metres ⬇	Native Avenue	RLX0113	35.110530°S	138.868229°E
60.500	35.111346°S	138.868498°E	70 metres ⬇				
61.000	35.115431°S	138.870076°E	⬆ 570 metres				
PHILCOX HILL 61.450 km							

Safety Committee – Implemented

In recognition that the management of safety matters pertaining to the railway and its operation is a significant task, the SteamRanger Board of Management approved the appointment of a Safety Sub-Committee to assist in this matter.

This Safety Sub-Committee consists of 7 Rail Safety Workers under the chairmanship of the Rail Safety Manager.

The Safety Sub-Committee will meet periodically (at least 6 times per year) for consideration of rail safety and WHS matters affecting the safety of the railway and its stakeholders.

It is hoped that participation of an number of younger members of the SteamRanger workforce in this Sub-Committee will encourage them to engage in the management of the railway at a higher level.

The formation of the Safety Sub-Committee has initiated wider conversation about safety matters within the wider workforce, as the important message of “safety foremost”, is now being promoted by a larger sample of workers.

4.3 STATISTICAL DATA

4.3.1 RAILWAY NETWORK:

Length of Main Line running line	82.274 km
Station facilities – Crossing Locations	9
Station facilities – Non Crossing Locations	6
Road Level Crossings – Active Protection	16
Road Level Crossings – Passive Protection	59
Occupational Level Crossings	14
Pedestrian Crossings – (Not associated with road crossing)	28
Passenger Platforms in Service	8

This is unchanged from the previous reporting period.

4.3.2 ROLLINGSTOCK

Motive Power

Diesel-Electric Locomotives in Service	3
Diesel Passenger Motors (Railcars) in Service	4
Steam Locomotives in Service	3
Diesel-Electric Locomotives out of Service	3
Diesel Passenger Motors (Railcars) out of Service	4
Steam Locomotives out of Service	2

One Steam Locomotive has been placed in service since the previous reporting period.

Passenger Carriages

Passenger Carriages in Service	23
Passenger Carriages out of Service	2
Brakevans in Service	1
Brakevans out of Service	1

One Passenger Carriage has been placed in service, one out-of-service Passenger Carriage, and one out-of-service Brakevan has been disposed of since the previous reporting period.

Goods (Freight) Vehicles

Goods vehicles in Service	1
Goods vehicles out of Service	60

One out-of-service Goods vehicle has been disposed of since the previous reporting period.

Track Maintenance Vehicles

Track Maintenance vehicles in Service	17
Track Maintenance vehicles out of Service	24
Road-Rail Vehicles in service	2
Road-Rail Vehicles out of service	4
Track vehicle kilometres travelled	6739 km

Four track maintenance vehicles have been acquired since the previous reporting period but have not been placed in service.

4.3.3 PERSONNEL

The Railway utilises approximately 70 individual Rail Safety Workers to perform the functions required for the maintenance and operation of the railway.

Because many Rail Safety Workers perform multiple functions (there is, for example, a single rail safety worker who performs the roles of Train Controller, Guard, DPM driver and track worker) the following, with the exception of Drivers and Train Controllers is approximate.

Drivers (Steam locomotives)	4
Firemen (Steam Locomotives)	10
Drivers (Diesel Locomotives)	7
Observers (Diesel Locomotives)	14
DPM Drivers	8
Guards and Station Masters	12
Train Controllers	5
Rollingstock Maintenance Personnel	12
Track Maintenance Personnel	14
Passenger Attendants	16

4.3.4 PASSENGER TRAIN DATA

The following represents details of the number of days of operation of the railway, the number of trains operated, the distance travelled, and the number of passenger journeys (PAX).

	Days	Trains	PAX	Train KM
July 2020	18	108	20,838	2,088
August 2020	9	58	7,186	1,241
September 2020	10	53	9,502	1,990
October 2020	16	53	34,297	3,213
November 2020	10	66	8,867	1,313
December 2020	17	133	48,768	2,391
January 2021	27	172	66,193	3,251
February 2021	12	72	10,337	1,332
March 2021	15	90	16,458	1,554
April 2021	24	180	36,443	3,350
May 2021	12	74	13,415	1,530
June 2021	13	62	11,622	1,847
Total 2020-2021	**183**	**1121**	**283,926**	**23,787**

Note: The kilometres travelled by non-passenger trains has not been calculated, however it is included in the total trains operated data.

4.3.5 D&A TESTING

During the reporting period, 141 Blood Alcohol tests were conducted, and no readings above 0.000% BAC recorded.

5.0 LOOKING FORWARD

The ARHS (SA) recognises that there are initiatives that must be undertaken to further improve the safety performance, and most importantly, the safety culture of the organisation.

The ongoing (and mandated) review of Safety Management System documentation has stalled, however, there has been some level of progress made:

- a revised Incident and Emergency Management Plan is under development;
- a revised Fatigue Management Plan is under development;
- revised, appropriate Safeworking Rules have been implemented, and are in current use;
- revised supporting train operating documents, train schedules, Network configuration, and train operating instructions are to be implemented in the first quarter of 2022;
- a revised process for the dissemination of safety critical operational and safety information to Rail Safety Workers will be implemented during the 4th quarter of 2021;
- improved Train Controller coordination and handover has been enacted, with quarterly meeting of all Train Controllers now occurring;
- training is continually being reviewed to align with the Transport and Logistics Industry Training Package;
- the Railway is evaluating the Heritage Operations Processing System (HOPS) for the management of safety data, operating rosters, maintenance programming, rail safety worker competencies, and rail safety worker medical assessment;
- a review of Safety Interface Agreements is underway, and will be progressed during 2021-2022.

The ongoing effects of the COVID pandemic has created several difficulties, but it has also created opportunities to review “the way things are done” and to enable a more effective system of management to be adopted.

This document was prepared by the Rail Safety Manager and Rail Safety Coordinator for the SteamRanger Board of Management and the Office of the National Rail Safety Regulator.