

SOMERSAULT

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SIGNALLING RECORD SOCIETY OF VICTORIA INC



An interior shot of Seymour C signalbox taken in August 1974 just prior the box's closure on 26 August 1974. Seymour C signalbox was opened on 26 June 1949 to control the entrance and exit to a new marshalling yard constructed to the north of Seymour. It was intended to use the new yard to remarshal all the Up traffic from the NE district, leaving the Down traffic to be dealt with in Seymour yard itself. In 1950, Seymour C was open each weekday from 1615 until 0430 the following morning. During this time all Up Goods from the North East terminated at Seymour C except 124 Fast Goods and 128 Fast Goods. A corresponding stream of Through Goods originated from the yard each night, starting at 2305 and then 0030, 0130, 0230, 0330, 0430 and 0515 - note that the last was 45 minutes after the box supposedly switched out. Unfortunately, the yard never lived up to its promise and was closed 'until further notice' in the middle of March 1955. This failure was, reputedly, largely due the difficulty in staffing the yard and it was subsequently used to store wagons. Subsequent WTT's simply noted that the box was switched in when so published. About half of the yard was lifted around 1960 to allow the construction of the standard gauge line - Seymour Loop was constructed on part of the yard - but the remainder survived another 14 years. The complete 20 lever A pattern frame can be seen in this photo - switched out, of course - with the two Winters Block Instruments on the shelf above. Note that no block switch was provided, instead a closing lever was provided in the frame. Photo David Langley.

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MINUTES OF MEETING HELD FRIDAY MAY 19, 2000,

AT THE SURREY HILLS NEIGHBOURHOOD CENTRE, 1 BEDFORD AVENUE, SURREY HILLS

Present: - J.Black, W.Brook, B.Cleak, G.Cleak, B.Crosby, G.Cumming, C.Gordon, W.Johnston, K.Lambert, J.McLean, A.Ratcliffe, B.Sherry, P.Silva, & R.Smith.

Apologies: - G.Candy, J.Churchward, D.Langley, R.Whitehead & A.Waugh.

Visitors: - V.Findlay & A.Wheatland.

In the absence of the President, the Vice - President, Mr. Bill Johnston, took the chair & opened the meeting @ 20:05 hours.

Minutes of the March 2000 Meeting: - Accepted as published. B.Sherry / J.McLean. Carried.

Business Arising: - Bob Crosby asked where Galvin is or was. An explanation of the location of Galvin was given.

Correspondence: - Payment for the use of the meeting room was sent to the Surrey Hills Neighbourhood Centre.

Payment for the 1999 issues of The Signalling Record was sent to the S.R.S.U.K.

A number of thank you letters for the 25th Anniversary Tour were sent.

The 1999 Annual Return was sent to Business Affairs Victoria.

Letters were sent to 4 people asking about membership of the S.R.S.V.

A completed membership application form & subscription was received from Iming Chan.

G.Cleak / A.Ratcliffe. Carried.

Reports: - A recent issue of The Signalling Record included an article on Egyptian railway signalling. Jack McLean was thanked by the author, Peter Kay, for the use of an Egyptian GA in the production of the article.

General Business: - Bob Crosby reported that level crossings at Bayswater, Mooroolbark & Lilydale had recently had the flashing lights on the cantilever masts converted to LED units. It was noted that this was part of an ongoing conversion programme.

Bob Crosby noted that the level crossing at Mont Albert Road, Mont Albert, uses tone generators rather than the traditional bells.

Bob Crosby spoke about watching a down SG train enter the level crossing at Maidstone Street, Galvin, 2 seconds after the booms were horizontal & wanted to know why? It was noted that this was unusual & an explanation was given of the expected warning times for level crossings fitted with boom barriers.

Alex Ratcliffe was in Sydney during March 2000 & noted that the Glenbrook Collision Enquiry was placing great emphasis on the telephone conversation between the driver of the inter - urban train & the other parties. Analysis & interpretation of the tone & meaning of the conversations was taking place.

Rod Smith advised that reports from the Ladbrooke Grove Collision Enquiry were now available on the internet.

Rod Smith reported that the motor points for the connection of the Appleton Dock Line were commissioned approximately 2 weeks ago.

Brett Cleak provided further information about the Appleton Dock Line. Movements along the line are now worked under an A.R.T.C. system known as "Access Authority Working". Nothing is known about this system. Does anybody have any information about "Access Authority Working"?

Bill Johnston & Chris Gordon reported on the use of LED on signals at South Dynon Junction.

Keith Lambert tabled a list of drawings & diagrams from the collection of Alan Jungwirth.

Keith Lambert advised that the report on the Ararat collision was now available on the internet or the

original is available from the Department of Infrastructure.

The contents of the report on the Ararat collision were discussed. The report reviewed the arrangements at 5 other junction locations. What are these locations?

Keith Lambert advised that there would be a weekend occupation at Broadmeadows during June 2000 for the installation of a new crossover.

Keith Lambert advised that Hillside Trains had proposed to resignal Camberwell in approximately 2 years. A proposal to resignal Jolimont - Victoria Park with possible re - arrangements at Victoria Park is being planned.

Keith Lambert noted that Up Departure Home Signal from platform No.1 at Glen Waverley can display medium speed aspects only, even though there is no diverging move on to the Up Line. Why can't this signal show normal speed aspects?

Rod Smith asked if similar arrangements existed at other automatic locations eg. Sandringham & St.Kilda?

Glenn Cumming asked when the Up & Down Repeating Signals at S.C.T. Siding were provided. It is believed they were commissioned before in December 1999.

Glenn Cumming noted that signal LAV20 at Aircraft had an LED unit fitted inside a Westinghouse K3 searchlight & that the route indicator on signal LAV16 at Laverton had been changed from a letter type indicator to a feather type indicator.

Jack McLean asked if the signals at S.C.T. Siding were Repeating Signals? Keith Lambert advised that as per the definition in the rule book, they are Repeating Signals.

Rod Smith noted that the last meeting of the A.R.E. featured John Phillips from the P.R.O. with a number of old slides where the location was not known.

Brett Cleak noted that the radio link at Long Island Junction to replace the aerial pole lines is to be commissioned this coming Sunday.

A circular has been seen stating that ex S.A.R. Red Hen railcars must only travel under absolute block working conditions in the metropolitan electrified area & that an engineer is to accompany the movement to observe the effects on the signals.

Rod Smith asked about crossing trains at Somerville. It is believed that Somerville is only attended as required. The points at Hastings & Crib Point are believed to be spiked.

Alex Ratcliffe noted that 1 of the 3 car shopping trains shunts to the Down Line at Camberwell during a 25 minute layover. It is believed that this is because there is no spare platform for the duration of the layover.

Jim Black tabled a cutting from a newspaper in the U.K. reporting on the demise of the signal boxes at Nairne in Scotland. Nairne featured 2 signal boxes at each end of the station worked by 1 man, requiring the use of a push bike ridden along the platform. Both signal boxes have been closed & the bike has been abolished.

Jack McLean & Brian Sherry noted that similar arrangements applied at Barker where there were gated level crossings at each end of the station platform.

Jack McLean also compared this with the arrangements when crossing trains at old Victorian crossing loops where 1 end of the loop was worked from a cross locked ground frame.

Jack McLean asked if anybody could provide him with a copy of a Victorian Working Time Table showing the operation of the A.E.C. railmotor service between East Camberwell & Deep Dene.

An alleged incident at Broadmeadows was noted.

Brett Cleak reported that Tasrail had converted from Train Order working to Track Warrant working in the last month. The differences between Train Order working & Track Warrant working were noted. used to draw a map of the locality of the collision.

Syllabus Item: - The Chairman introduced visitor Vance Findlay.

Vance presented a talk & slide show on the development & growth of railways in South- East Asia.

At the conclusion of the syllabus item, the Chairman thanked Vance for the entertainment and this was followed by acclamation from those present.

Meeting closed @ 22:26 hours.

The next meeting will be on Friday 21 July, 2000 at the Surrey Hills Neighbourhood Centre, 1 Bedford Street, Surrey Hills, commencing at 20:00 hours (8.00pm).

SIGNALLING ALTERATIONS

The following alterations were published in WN 10/00 to WN 22/00. The alterations have been edited to conserve space. Dates in parenthesis are the dates of the Weekly Notice

(06.03.2000) **North Dynon - Agents Area** (SW 31/00, WN 9/00)

Access to the North Dynon Agents Area will be co-ordinated by Great Northern Rail Services. The Signaller West Tower must not permit a movement into the Agents Area until permission has been obtained from GNRS.

Holyman Townsend Loading/Unloading Operations in Ladder and Middle Roads

The hand points giving access between the Ladder, Middle, and Fence Roads in the Centre Yard area have

been fitted with lockable chains. (the hand points between the Ladder and Middle Roads have been recommissioned.) The keys are held by Holyman Townsend. The chains must be applied before loading or unloading operations commence on the Down side of these points and be removed after operations have been completed. Agreement as to the proposed movements must be reached between Holyman Townsend and GNRS before the chains can be applied.

Manildra Siding

The hand points giving access to the Manildra Siding are normally secured towards K Track by a lockable chain. Loading and unloading operations may be performed while the points are secured towards K Track; the Manildra limit of shunt is marked by a white line at the fouling point. Before shunting the siding, permission must be obtained from the Manildra representative and the warning devices activated. The points may then be unlocked and must be relocked after shunting has been completed.

Fast Track Sidings

The hand points giving access to the Freight Victoria Fast Track Sidings are normally secured towards the Ladder Road by a chain or lockable collar. The key to the collar is held by the Freight Victoria representative who must lock the points with collar after movements have been completed.

(06.03.2000) **Newport** (SW 33/00, WN 9/00)

The signalbox hours will be from 0650 hours Sunday to 0100 hours the following Sunday or the clearance of Train 9792.

08.03.2000 **Rockbank** (SW 40/00, WN 10/00)

On Wednesday, 8.3., the searchlight heads on Down Home 6 were replaced by LED heads to improve signal sighting.

10.03.2000 **Brooklyn** (SW 44/00, WN 11/00)

On Friday, 10.3., a large Staff Lock was fitted to Points A leading to the Apex Siding. An F Pattern Annett Lock was fitted to the point lever operating points A. Removal of the Annett Key will secure the lever reverse.

Add the following as a new Operating Procedure in the Book of Rules.

20. Brooklyn - Operation of Apex Siding.

The following procedures will apply to allow the operation of a train from Sunshine to the Apex Siding, Brooklyn, while there is no signaller in attendance at Brooklyn.

Before ceasing duty, the Signaller at Brooklyn must ensure that there is a Staff for the Brooklyn - Sunshine section out of the instrument at Sunshine.

When the train for the Apex Siding is ready to depart Sunshine, the Signaller must obtain permission from the Train Controller for the departure. When delivering the Staff, the Signaller must also inform the Driver that there is no Signaller in attendance at Brooklyn. When the train arrives at Post 1, Brooklyn, the Driver must contact the ARTC Train Controller and request that the signal be cleared. When the signal is cleared, the Driver will draw forward and stop at the Apex Siding points (Points A). The points will be reversed in the normal manner, and the Driver must then remove the Annett Key from the point lever and retain it whilst shunting the siding.

When shunting is completed, the train must not pass the Approach Section Indicator Boards at Somerville Road until permission is obtained from the Signaller at Brooklyn. The Signaller is to obtain the Annett Key from the Driver and restore the points once the train is on the main line. If the train is to proceed into Brooklyn, the Signaller must hand the Staff to the Driver to allow the train to be shunted to the rear of Post 1. The signal on Post 1 must then be cleared in the usual way for the train to enter Brooklyn. If the train is to return to Sunshine, a fresh Staff must be obtained.

(13.03.2000) **Book of Rules** (SW 35/00, WN 10/00)

Rule 2B, Section 8, Rule 2G, Section 8, and Rule 42A, Section 10 are to be deleted. A new Rule 2I, Section 8, is to be added:

(I) Security of Siding Protection Devices

Siding Protection Devices are hand operated Derails, Scotch Blocks, and Hand Locking Bars.

At locations where an Officer in Charge or Signaller is on duty, it is their responsibility to ensure that all siding protection devices are locked on when not required and that all vehicles are placed within the protection devices at the completion of shunting. If a train is to arrive or depart from the location, the OiC or Signaller is responsible for removing the protection devices prior to the passage of the train. Drivers, however, must ensure that the devices are 'off' before arriving or departing from a siding.

Where an Officer in Charge or Signaller is not normally on duty, the competent employee assisting the shunting operations will be responsible for the operation of all protection devices, the working of fixed signals, and the securing of all vehicles left in the sidings.

19.03.2000 **Spencer Street No 1 - West Tower** (SW 49/00, WN 12/00)

On Sunday, 19.3., the control arrangements at Moonee Ponds Creek Junction were altered. The West Tower release for Dwarf 286 was removed. The control of Home 218 by Spencer Street No 1 was removed and the release for that signal by West Tower was converted to a control. The control lever for Points 215 (Spencer Street No 1 Box Points 213) was removed.

(20.03.2000) **Newport** (SW 46/00, WN 11/00)

The instructions for operating the release for broad gauge movements from the East or West lines to the Goods Line or Altona Siding No 2 (see SW 45/00) have been amended.

If the Signaller at Newport operates the Road Selection button, but does not give a release by reversing NPT707 or NPT709, the circuitry will allow the ARTC Train Controller to set the route and operate the signal. The signal will not clear, however, until the Signaller operates NPT707 or NPT709. If the Train Controller has operated the signal, the request indicating light will flash until the Signaller completes giving the release.

20.03.2000 **Burnley** (SW 48/00, WN 11/00)

On Monday, 20.03., the purple lens in Dwarf 321 was replaced by a red lens.

30.03.2000 **Newport** (SW 54/00, WN 14/00)

On Thursday, 30.3., the method of releasing broad gauge movements to the Goods Line or Altona Siding No 2 was altered. Instead of the Signaller selecting a road (using the Road Selection buttons) and then releasing either Home 707 or 709, the Signaller is provided with releases for moves to the Goods Line or Altona Siding. Releasing either route will allow the ARTC Train Controller to clear either Home 707 or 709.

The Road Selection buttons and releases 707 and 709 were removed from the panel. Releases 723 (Down Release to Altona Siding) and 725 (Down Release to Goods Line) were provided.

The ARTC Train Controller will advise the Signaller when a broad gauge train is approaching on either the East or West line. The Signaller will reverse either Release 723 (Altona Siding) or 725 (Goods Line). The Train Controller will set the points and operate the signals for the train. In an emergency the Signaller may restore the signals to Stop by restoring the release to normal. The passage of the train will cancel the release and the lever must be restored to normal and reversed before the signals can be cleared for a second movement. If it is necessary to expedite a train movement, the Signaller may instruct the Train Controller to set the route and operate the signal. The signal will then clear as soon as the release is given.

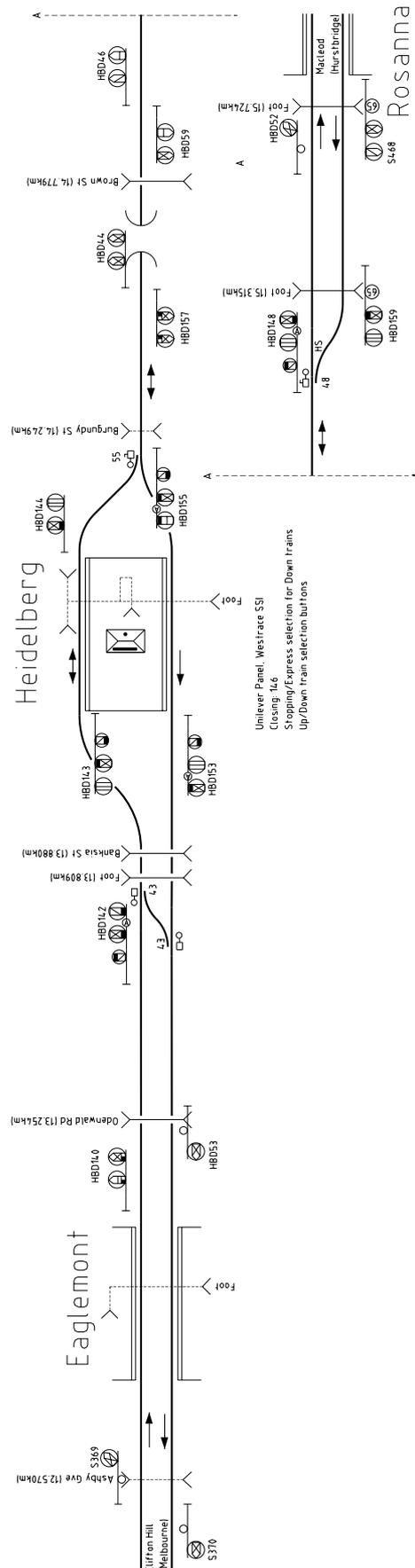
03.04.2000 **Heidelberg** (SW 52/00, WN 14/00)

On Monday, 3.4., the mechanical interlocking frame was replaced by an SSI operated from a panel in the Heidelberg station office. Diagram 07/00 replaced 05/00.

The tracks at Heidelberg remain unaltered, however No 1 Track may now only be used for Up movements. Terminating trains must use No 2 Track. All signals between S369/S370 (between Ivanhoe and Eaglemont) and S468 (at Rosanna) were replaced by new LED signals at or near the same locations.

At Rosanna Junction, Up movements onto the single line were previously governed by a Normal speed indication (75 km/h) even though the points were designed for 65 km/h. The Up Home now displays a Medium Speed indication with a 65 indicator.

The Fringe Signalbox equipment was relocated from Heidelberg to Greensborough and the JZA system was extended with associated modifications to the displays at Metrol and to the PRIDE system.



The existing instruction for Heidelberg in the Book of Rules is replaced:

Heidelberg,

A qualified Signaller must be in attendance at Heidelberg during normal train running times.

Switching In/Out

Heidelberg panel may be switched out. The panel may only be switched out when the single line section between Down Home HDB144 and Up Home HDB159 is clear.

When switched out operation of the single line section will be automatic. The Down route will be called when a Down train enters Eaglemont platform. The Up route will be called when an Up train enters Rosanna platform. If both Up and Down trains approach at the same time, the Up train will be signalled first. If two Down trains are running close together and an Up train has not yet entered the platform at Rosanna, both Down trains will be signalled through the single line section first. Similarly, two Up trains running close together will be signalled through if a Down train has not passed Down Home HDB142. Once a train is signalled the route can only be cancelled by switching in. However, if a track circuit intermittently drops in either approach section and causes the route to be called, it will cancel after 30 seconds to prevent locking out an opposing real movement.

The panel may also be placed in a 'switched out manual' mode. In this mode the Signaller controls the order of trains through the single line section by pressing the 'Up Move' or 'Down Move' buttons. If a move in one direction is selected, it may be reset to the other direction by pressing the button for the other direction provided a train is not on the approach locking section. If a train has entered the approach locking section the selected route can only be cancelled by switching in.

When switched in, the Express/Stopping selection for Down trains is interlocked with HDB144.

Speed Proving in No 2 Track

Two speed proving train stops have been provided in No 2 Track due to the short overlap in advance of Down Home HDB144. If Home HDB144 is at Stop, the first train stop will lower 11 seconds after the train enters the platform and the second 4 seconds later. The design speed for entering the platform is 35 km/h.

Failure of Signals

In the event of a failure of signalling equipment, the panel must be switched in.

If a train arrives at Homes HDB148 or HDB159 and the signal has failed at Stop, the panel must be switched in and lever 48 must be sleeved in the appropriate position. If the points have failed, the Driver will be instructed to operate the points manually. The Signaller will then dictate a Caution Order (2377) as authority for the Driver to pass the signal at Stop. The Driver will take down the Caution Order in the book provided in the telephone box. If a competent employee is in attendance, the operation of the points and delivery of the Caution Order will be undertaken by the employee under the direction of the Signaller.

Operation of Track Machines and Road/Rail Vehicles

When Track Machines or Road/Rail Vehicles are to operate between Heidelberg and Rosanna, the panel must be switched in prior to the machine or vehicle departing from the safeworking location in the rear.

09.04.2000

Signalbox hours

(SW 57/00, WN 18/00)

Commencing Sunday, 9.4., safeworking locations will be attended as follows:

Spencer Street No 1

A Signaller will be in attendance 0600 hours Sunday until 2345 hours the following Saturday

West Tower

A Signaller will be in attendance continuously

West Footscray

The block hours will be

Monday	2000 hours to 2400 hours
Tuesday - Friday	0001 hours to 0600 hours and 2000 hours to 2400 hours
Saturday	0001 hours to 0600 hours
Sunday	Switched out

Tottenham B

A Signaller will be in attendance 2200 hours Sunday until Train 9351 clears the following Saturday

Brooklyn

A Signaller will be in attendance for movements over the West Line and for movements between Sunshine and Brooklyn as follows:

Monday - Friday	0001 hours to clearance of Train 9140 and 1700 hours to 2400 hours
Saturday	0001 hours to 0700 hours

Lara

The block hours will be

Monday - Friday	0515 hours to 1315 hours
Saturday - Sunday	Switched out

Corio

The block hours will be

Monday - Friday	0500 hours to 1300 hours
Saturday - Sunday	Switched out

North Geelong A

A Signaller will be in attendance 0745 hours Sunday until 0400 hours the following Sunday.

North Geelong B

A Signaller will be in attendance 2100 hours Sunday until 0600 hours the following Saturday.

Geelong A

A Signaller will be in attendance 0700 hours Sunday until 0100 hours the following Sunday.

South Geelong

A Signaller will be in attendance:

Monday - Friday	Continuously
Saturday	0001 hours to clearance of Train 9220, 0830 hours to 1130 hours
.....	1430 hours to 2010 hours
Sunday	1900 hours to clearance of Train 8237

Winchelsea

A Signaller will be in attendance:

Monday - Friday 1230 hours to 1430 hours and 1800 hours to 2000 hours

Colac

A Signaller will be in attendance:

Monday - Friday	0700 hours to 1600 hours
Saturday	0700 hours to 1100 hours

Camperdown

A Signaller will be in attendance:

Monday - Friday 0645 hours to 1530 hours

North Geelong C

A Signaller will be in attendance:

Monday - Friday	0300 hours until passage of Train 9138
.....	0630 hours until passage of Train 9123
.....	1945 hours until passage of Train 9141

Maroona

A Signaller will be in attendance as required for local and branch line movements.

Murtoa

A Signaller will be in attendance:

Monday - Friday 0500 hours to 1300 hours and 1600 hours to 0001 hours next day

Dimboola

A Signaller will be in attendance:

Monday - Friday	Continuously
Saturday - Sunday	0001 hours to 0600 hours and 2200 hours to 2400 hours

Ballarat

A Signaller will be in attendance:

Monday - Friday	Continuously
Saturday	0001 hours to 1310 hours and 1345 hours to 2215 hours
Sunday	0630 hours to 2050 hours

Maryborough

A Signaller will be in attendance 2100 hours Sunday until 0500 hours the following Saturday.

Dunolly

A Signaller will be in attendance as required for branch line movements.

Donald

A Signaller will be in attendance as required for local movements.

Ouyen

A Signaller will be in attendance as required for local and branch line movements.

Sunshine

A Signaller will be in attendance 0730 hours Sunday until 0400 hours the following Sunday.

Melton

The block hours will be

Monday - Friday	0800 hours to 2030 hours
Saturday - Sunday	Switched out

Bacchus Marsh

A Signaller will be in attendance:

Monday	0340 hours until 2250 hours
Tuesday - Friday	0450 hours until 2250 hours
Saturday	0615 hours to 1435 hours and 1515 hours to 2150 hours
Sunday	0800 hours to 1435 hours and 1515 hours to 2035 hours

Sydenham

The block hours will be

Monday - Friday 0540 hours to clearance of Train 8051
 Saturday - Sunday Switched out

Diggers Rest

The block hours will be

Monday - Friday 0610 hours to clearance of Train 8011
 Saturday - Sunday Switched out

Sunbury

The block hours will be

Monday - Friday 0525 hours to clearance of Train 8053
 Saturday 0745 hours to clearance of Train 8034
 Sunday 1120 hours to clearance of Train 8036

Clarkefield

The block hours will be

Monday - Friday 0657 hours to clearance of Train 8022
 Saturday - Sunday Switched out

Gisborne

The block hours will be

Monday - Friday 0510 hours to clearance of Train 8022
 1600 hours to clearance of Train 8048
 Saturday - Sunday Switched out

Woodend

The block hours will be

Monday - Friday 0510 hours to clearance of Train 8024
 1135 hours to clearance of Train 8049
 Saturday 0955 hours to clearance of Train 8015
 Sunday Switched out

Kyneton

A Signaller will be in attendance:

Monday - Friday 0415 hours to clearance of Train 9080 next day
 Saturday 0600 hours to clearance of Train 8053
 Sunday 0700 hours to clearance of Train 9084

Castlemaine

The block hours will be

Monday - Thursday 0550 hours to clearance of Train 9084 the next day
 Friday 0550 hours to clearance of Train 8053
 Saturday - Sunday Switched out

Bendigo

A Signaller will be in attendance:

Monday - Friday Continuously
 Saturday 0001 hours to clearance of Train 9080 and 0640 hours to 2340 hours
 Sunday 0640 hours to clearance of Train 9084

Dingee

A Signaller will be in attendance as required.

Kerang

A Signaller will be in attendance as required.

Swan Hill

A Signaller will be in attendance:

Monday - Thursday 0535 hours to 1600 hours
 Friday 0535 hours to 1600 hours and 2030 hours to 2130 hours
 Saturday - Sunday As required

Echuca

A Signaller will be in attendance:

Monday - Friday 0330 hours to 2100 hours
 Saturday As required
 Sunday 1200 hours to 1955 hours

Somerton

The block hours will be

Monday 0340 hours to clearance of Train 9230
 Tuesday - Friday 0400 hours to clearance of Train 9230
 Saturday - Sunday Switched out

Donnybrook

The block hours will be

Monday - Thursday	0730 hours to clearance of Train 9319
Friday	0730 hours to clearance of Train 8340
Saturday	1800 hours to clearance of Train 8332
Sunday	Switched out

Wallan

The block hours will be

Monday - Friday	0550 hours to clearance of Train 8309
Saturday - Sunday	Switched out

Kilmore East

The block hours will be

Monday - Thursday	0535 hours to clearance of Train 9430
Friday	0535 hours to clearance of Train 8329
Saturday	0700 hours to clearance of Train 8308 and 1800 hours to clearance of Train 8329
Sunday	1800 hours to clearance of Train 9430

Broadford

The block hours will be

Monday - Friday	0535 hours to clearance of Train 8307
Saturday - Sunday	Switched out

Seymour

A Signaller will be in attendance:

Monday - Friday	Continuously
Saturday	To clearance of Train 9354 and 0215 hours to clearance of Train 8329
Sunday	0730 hours to 2400 hours

Wodonga A

A Signaller will be in attendance:

Monday	0610 hours to 2230 hours
Tuesday - Friday	0330 hours to 2230 hours
Saturday	0330 hours to 1130 hours and 1515 hours to 2130 hours
Sunday	0725 hours to 0815 hours, 1230 hours to 1715 hours and 2125 hours to 2205 hours

Wodonga Coal Sidings

The signal box will be switch in as required for local shunting moves.

Murchison East

A Signaller will be in attendance as required.

Shepparton

A Signaller will be in attendance:

Monday - Friday	0400 hours to 2130 hours
Saturday	0800 hours to 1530 hours and 2000 hours to 2100 hours
Sunday	1730 hours to 2045 hours

Warragul

A Signaller will be switched in:

Monday - Friday	0520 hours to clearance of Train 9242
Saturday	0620 hours to 1015 hours
Sunday	Switched out

Morwell

A Signaller will be in attendance:

Monday - Friday	0001 hours to clearance of Train 9462 and 0445 hours to 2400 hours
Saturday	0001 hours to clearance of Train 9462 and 0530 hours to 2115 hours
Sunday	0800 hours to 2130 hours

Traralgon

A Signaller will be in attendance:

Monday - Friday	0420 hours to 2315 hours
Saturday	0500 hours to 2130 hours
Sunday	0700 hours to 2130 hours

Sale

A Signaller will be in attendance:

Monday - Friday	0540 hours to clearance of Train 9242
Saturday	0540 hours to 0710 hours and 1040 hours to 1730 hours
Sunday	0735 hours to 1735 hours

ARARAT COLLISION

On 26 November 1999, Up Grain Train No 9784 travelling to Portland collided head on with Down Ballast Train No 9795 standing in No 2 Track, Ararat. The immediate cause of the collision was the operation of the Down end points at Ararat by a Freight Victoria employee without permission. However, the report identified the method of securing the Down end points as an underlying cause of the accident and, behind that, issues concerning the management of safety on the privatised railway.

This article is primarily based on the Australian Transport Safety Bureau's report R1/2000 'Collision Between Freight Train 9784 and Ballast Train 9795, Ararat, Victoria' (ISBN 0 642 27466 5) which is available on the ATSB's Web site at <http://www.atSB.gov.au/pdfrpt/ararat.pdf>

The trains involved

The Up Grain train was hauled by G517 and consisted of 21 VHGF grain wagons. The first 11 wagons were empty, and the rear 10 wagons were fully loaded with grain consigned from Rainbow to Portland. The train had a gross weight of 988 tonnes and was 337 metres in length, excluding the locomotive.

The Ballast train was hauled by G518 and consisted of 14 loaded AHWF and AHWL ballast hopper wagons. The train had a gross weight of 756 tonnes and was 166 metres in length, excluding the locomotive.

The location

Ararat is an unattended intermediate siding on the Western line. It is also the junction for the cross country line between Ararat and Maryborough. The track layout is shown in the figure.

The main line through Ararat is part of the ARTC network and is worked under the Section Authority System. Ararat lies in the Maroona - Pyrenees Loop section. The ARTC train controller, located at the ARTC Train Control centre at Mile End, Adelaide, is responsible for all activities related to movements on the main line, including granting permission to operate the main line points.

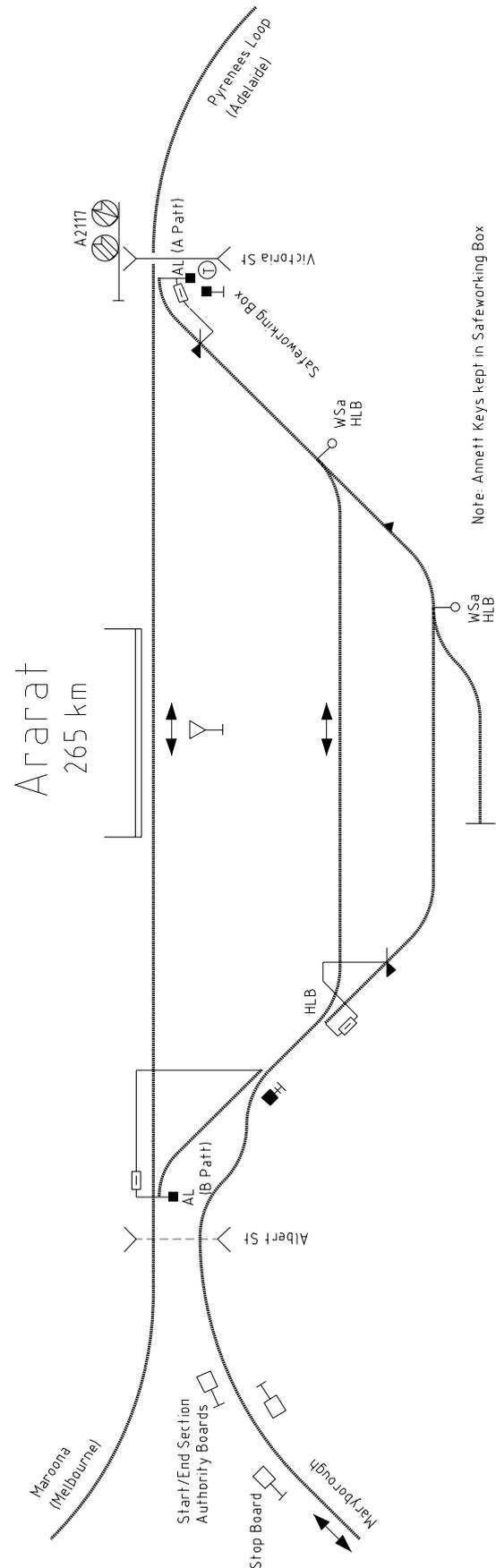
The branch line is part of the Freight Victoria network. It is worked by the Train Staff and Ticket System, however Staff Tickets are not used and all trains must carry the Train Staff. On occasions this requires the Staff to be transported by road between Ararat and Maryborough.

The main line points at Ararat are secured by Annett Locks. The Annett Keys are normally secured in a steel safeworking box adjacent to the points at the Down end. The box, in turn, is secured by a V5PSW lock. The safeworking box was also used to hold the Maryborough - Ararat Staff when it was necessary to leave the Staff at Ararat.

The accident

The Freight Victoria staff at Maryborough included one Train Examiner. In addition to performing train examining duties he also performed general duties in the Maryborough area, including transporting relieving train crews. Although employed on the railways for almost 35 years, the Train Examiner did not hold any safeworking qualifications.

Two days before the accident the Train Examiner was informed by the OiC Maryborough that he might be required to transfer the Train Staff from Ararat to Maryborough. The OiC advised the Train Examiner that if the train had departed Ararat by the time he arrived the Train Staff would be found in the Safeworking Box. The OiC described the Safeworking Box, the Train Staff, and the Ararat Annett Key.



The Train Examiner had been previously issued with a V5PSW key from the spare keys issued to Maryborough. The key was required to unlock a shed at Maryborough used to store the ETAS units, although normally only staff with safeworking qualifications were issued with these keys. .

On the following day (Thursday, 25 November), the Freight Operations Employee (FOE) on duty at Maryborough instructed the Train Examiner to transfer the Staff from Ararat.

However, the Train Examiner arrived at Ararat before the ballast train that was carrying the Staff. The Train Examiner then telephoned the FOE at Maryborough to ask for instructions. He was unsure what he had in his hand, but he thought it was the Ararat Annett Key. The FOE instructed the Train Examiner to immediately return the key to the box and to collect the Train Staff from the Driver of the ballast train when it arrived. The report noted that the Train Examiner was not supplied with a mobile phone, nor was the Freight Victoria phone in the centre of the yard working. The FOE noted this incident when handing over to his relief.

The ballast train subsequently arrived in No 2 Track and a Section Authority was granted for the train to proceed west on the main line. The Second Person alighted from the locomotive and handed the Train Staff to the Train Examiner. The Train Examiner then watched as the Second Person removed the Annett Key from the Safeworking Box, unlocked the points, and reversed them. The Train Examiner departed for Ararat shortly after the ballast train moved onto the main line.

On the day of the accident the Train Examiner was again instructed to transfer the Train Staff from Ararat to Maryborough. The Train Examiner arrived at Ararat around 2040. Once again, the Train Examiner had arrived before the ballast train, but he had no way of contacting the Driver of the ballast train, the Train Controller, nor Maryborough.

The ballast train had been delayed on the outskirts of Ararat when the Driver spotted a small girl walking beside the track. The Driver had stopped the train as he was concerned that the girl might fall under the moving train. The Second Person left the locomotive, but the girl fell into a dam before he could reach her. The Second Person rescued the girl and police and ambulance attended. This delayed the ballast train around half an hour.

At 2125 the Driver of 9795 (the ballast train) contacted Melbourne Train Control to inform them that the train had arrived at Ararat Stop Board, but could not contact the ARTC Train Controller to obtain permission to enter Ararat yard. The Melbourne Controller contacted the ARTC Train Controller who advised that there were no trains shunting in Ararat yard. The ARTC Train Controller further advised that train 9784 was ready to depart from Pyrenees Loop and that 9795 should enter Ararat yard cautiously as 9784 would shortly be passing through the yard. This information, together with authorization to pass the Stop Board, was immediately passed on from the Melbourne Controller to the Driver of 9795.

The ballast train then entered Ararat yard and came to a stand about a locomotive length clear of the Hayes Derail. Shortly after the train came to a stand, the Driver noticed that the derail block had come off the line and saw someone near the points. At the same time he observed the lights of a train approaching Ararat. Both the Driver and Second Person jumped from the cab and ran up the embankment. The Driver shouted towards the person at the points while doing so.

The line entering Ararat from the west on a curve and passes under a road bridge. Both features restrict visibility

for approaching trains. The Driver of 9784 reported that he saw the headlight of 9795 in the siding at Ararat, but was only able to observe the position of the points shortly before the collision. Once he realised that the points were reversed he applied the brake in emergency and braced himself behind the Driver's seat for the collision. The Second Person did likewise behind his seat.

The collision occurred at around 2135. The estimated impact speed was 74 km/h and Train 9784 pushed the stationary ballast train approximately 30 metres. The two locomotives locked together, but the anti-ride bars prevented either locomotive from riding over the other. The leading cabs largely retained their shape, though the remaining sections of both locomotives suffered extensive damage. The Driver of 9784 suffered head injuries and multiple lacerations and was admitted to Ararat hospital. The mountings of the Second Person's seat broke during the impact and the Second Person suffered serious chest and shoulder injuries. He was airlifted to the Alfred Hospital.

All of the empty wagons of Train 9784 (the first 11 wagons) and the first loaded wagon were forced over the top of G517 and came to rest in a mound of wreckage. Most of these wagons suffered extensive impact damage. G517 was extensively damaged by the impact of the wagons passing over it and from their undergear being deposited in the engine room. The fuel tank was ruptured, but fortunately there was no fire. G518 also suffered damage from the wagons passing over it, and the rear cab suffered severe damage from the leading ballast wagon. The second ballast wagon sustained damage to the underframe and drawgear at the leading end.

Although the Train Examiner was not interviewed as part of the investigation, the investigation report noted that he had, reportedly, explained to the OiC at Maryborough that his actions were motivated by a desire to help the crew and get the task done quickly. He also advised members of the joint internal investigation that having observed a train travelling west through Ararat at about the time he arrived there on the night of the accident, he did not anticipate that another train would be travelling through Ararat from the opposite direction for some time.

Point Operation at Ararat

Although the immediate cause of the accident was the unauthorised operation of the points by the Train Examiner, an underlying cause was the fact that he was able to operate the points at all without warning the approaching train.

Prior to the conversion of the Western line to Standard Gauge Ararat yard was fully interlocked and worked from Ararat A Box. The Down end of the yard was mechanically worked from the signalbox, while the Up end was worked from a small panel in the signalbox which had replaced Ararat B Box on 10 November 1984.

On 14 April 1995 the Western line beyond Ararat was closed for gauge conversion and Ararat A Box was abolished. The line was reopened for traffic on 23 May 1995. Ararat was now an intermediate siding in the Maroona - Pyrenees Loop Train Staff and Ticket section. The points at each end of the siding were secured by Staff Locks and were rodded to Hayes Derails and Crowdors. The Maryborough - Ararat line was reopened as a Construction Siding on 3 July 1995, but no physical connection was apparently made at Ararat until 6 December 1995 when the line was connected to the Up end of the siding. It is not recorded when the Maryborough - Ararat line was formally reopened for traffic, but this probably occurred on or around 23 March 1996 when the Dual Gauge line between Maryborough and Dunolly was commissioned for use. After reopening the

Maryborough line was operated by Train Staff and Ticket. Signalling and safeworking at Ararat was carried out by the Signaller at Pyrenees Loop. The Signaller had to be present for the movement of all trains to or from the Maryborough line. The Maryborough Train Staff had been altered so that it could not operate the main line points at Ararat.

The Train Staff and Ticket System between Manor Loop and Maroona was replaced by the Section Authority System on 5 June 1996, but the section between Maroona and Pyrenees Loop remained worked by Train Staff and Ticket as there was no interface between the CTC system and the Section Authority system. Although such an interface had been planned, technical difficulties were encountered in its implementation. The safety issue was that the departure homes at Pyrenees Loop were not interlocked with the issue of Section Authorities. The concern was that after travelling for hundreds of kilometres on signal aspect alone, train crews might overlook the requirement to get a Section Authority as well as a Clear aspect on the Departure Home signals at Pyrenees Loop before departing. In addition, there would be no indication to the Train Controller that a train had departed from Pyrenees Loop without authority.

During 1997 VicTrack proposed several solutions ranging in cost from \$40,000 to \$348,000 with potential annual savings of up to \$576,000 (the cost of six signalling positions at Maroona and Pyrenees Loop). Similar proposals were developed by the PTC Superintendent of Safeworking and the VicTrack Manager System Safety. All these proposals included the interlocking of the points at the Adelaide end of Ararat yard. However, no alterations were carried out.

On 28 June 1998 the Section Authority System was introduced between Maroona and Pyrenees Loop. The Signaller was retained at Pyrenees Loop to provide an independent check that a Section Authority had been issued before the Departure Signals were cleared and to raise an alarm should a train depart with proper authority. In preparation for this alteration the two Staff Locks at Ararat were replaced by A Pattern Annett Locks on 22 June 1998. The Annett Key was held by the Signaller at Pyrenees Loop who was now required to attend Ararat for all shunting movements as well as Maryborough line trains. Annett Locks were provided because VicTrack considered that the retention of Staff Locks presented a risk as a train crew could inadvertently use a Master Key to unlock the points.

ARTC assumed responsibility for the Western line on 1 July 1998, however most responsibilities were contracted to VicTrack as an interim measure until ARTC could become accredited in Victoria. This occurred on 1 May 1999; the same day that Freight Victoria assumed control of V/Line Freight.

In late 1998 ARTC sought advice from two independent consultants with experience in rail operations on dispensing with the Signallers at Pyrenees Loop. Both consultants agreed that it was safe to remove the Signallers provided that measures were implemented to remind or alert Drivers that they were entering a new safeworking system. One consultant reminded ARTC that they would need to conduct a risk assessment of the proposed change as part of their responsibilities as an accredited operator. No evidence was found that such an assessment was carried out.

On 8 April 1999, ARTC notified the Public Transport Safety Directorate that it would be withdrawing the Signallers from Pyrenees Loop on 1 May 1999. The proposed notification to operators, however, did not include details of the required changes to the operation of the points at Ararat. Agreement with Freight Victoria on the changes was reached on 20 May 1999 and the Signallers were finally withdrawn

from Pyrenees Loop on 24 May 1999.

The removal of the Signaller affected operations at Ararat and on the line to Maryborough. Operation of the main line points at Ararat was passed to the train crews and the Ararat Annett Key was secured within a locked box adjacent to the Down end points. The operating instructions required the train crews to obtain permission from the Train Controller before obtaining the Annett Key from the box to operate the points. In addition, the instructions required a train departing Ararat to obtain a Section Authority before operating the points (indeed, before requesting permission from the Train Controller to operate the points), and a train arriving at Ararat would not relinquish the Section Authority until the points have been restored for the main line. On the Maryborough line, the removal of the Signaller resulted in the Ticket Boxes for the section being withdrawn. The Staff was normally held at Maryborough and the Regional Manager was responsible for arranging for the Staff to be transferred if required.

Instructions were issued by ARTC on 24 May 1999 in Train Notice 3721 and by VicTrack in SW 1086/99. In Train Notice 3721 ARTC stated that 'special keys for access to Freight Victoria's network are in the custody of Freight Victoria and issue of those keys will need to be arranged by Operators with Freight Victoria'. An interface document (governing operations of the 'interface' between the two rail networks) was jointly produced by Freight Victoria and ARTC. After inspection, the Victorian Public Transport Safety Directorate notified ARTC by fax that it held some concerns about the implementation of the changes at Ararat and Pyrenees Loop. These concerns included issues of terminology, conflicting instructions to Train Controllers and Drivers, and delimitation of responsibility for the interface arrangements at Ararat. ARTC did not receive the letter. In addition, the Rail, Tram, and Bus Union raised the security of the facing points at Ararat with ARTC on 11 June.

The remaining changes at Ararat before the accident did not materially change the situation. On 2 July 1999 responsibility for the line between Newport and Pyrenees Loop was transferred to ARTC Train Control at Mile End, Adelaide. The ARTC Train Controller was now responsible for movements to and from the main line at Ararat. The CTC between Pyrenees Loop and Wolseley was not transferred to ARTC Train Control until 30 September 1999. On 1 September 1999, the A Pattern Annett Lock on the Up end points was replaced by a B Pattern Annett Lock. Both keys were normally kept in the Safeworking box at the Down end.

Analysis

The report contained a lengthy analysis of the accident using the 'Reason' model.

The unsafe act which precipitated the accident was the unauthorised action of the Train Examiner in moving the points to set the main line for the yard at Ararat. This action appears to have been a rule violation, that is, a conscious act which was contrary to procedures. His action appears to have arisen from a desire to assist, combined with a lack of knowledge and experience.

The ATSB identified several factors which increased the likelihood of the accident:

- * The lack of knowledge and qualifications of the Train Examiner.
- * Possession by the Train Examiner of a V5PSW key providing access to the box containing the Annett Key.
- * The storage of the Annett Key in a location where anyone with a V5PSW key could access it.
- * Self-imposed time pressure. The report states that 'the available evidence suggests that the Train Examiner, in

the 12th hour of his shift was looking forward to completing his duties and going home.'

- * Lack of radio communication. The absence of any ability to communicate with Train Control, Maryborough, or the train crew made it difficult for the Train Examiner to remain informed of the operational situation or to clarify aspects of his assigned task.
- * Layout of track. While the local geography was not necessarily an unsafe condition, the curve and overbridge approaching Ararat presented complications. The Train Examiner had a limited view to the west and was unable to see Train 9784 approaching. The descending grade made it difficult for a Driver to stop a train from the west.

Defences are safeguards built into a system to provide protection against foreseeable hazards. Defences serve a variety of functions: preventing an unsafe situation arising; warning of an unsafe situation; or containing the consequences of a hazard should all other measures fail. The report highlighted several areas where defences at Ararat were inadequate or circumvented. These were:

- * Inadequate prevention of unsafe act. There was no system in place at Ararat to prevent the points from being moved as a train was approaching.
- * Lack of adequate security for Annett Key. The Annett Key was stored, unsupervised, in a box which was secured by a key commonly possessed by rail personnel.
- * Procedures not followed. The procedures which clearly set out the steps to be followed to change the points, specifying that only Drivers or competent personnel are authorised to move the points, were not followed.
- * No warning to Driver of position of points. There was no system in place to warn the crew of an approaching train of the position of the points.
- * No warning to Train Control of position of points.

On the other hand, the report highlighted one defence that did work. The anti-ride bars on the locomotive, and the design of the cab, resulted in the two cabs retaining sufficient integrity to protect the train crew. However, the Second Person's seat broke off at the mounting contributing to the seriousness of his injuries.

The investigation team considered that most of the local factors and ineffective or absent defences reflected wider organizational issues. These were:

- * Poor hazard identification and risk assessment. The report was critical of the process of assessing the risks involved in the altered arrangements at Ararat with the withdrawal of the Signallers. The formal processes documented in AS 4292 Part 1 (the Australian Standard on railway safety management) were not carried out. The report pointed out that, while railways in Victoria have had a very safe record, modern operations bear little relation to former practices. This does not make modern practices unsafe, but does mean that historical accident probabilities may bear little relation to modern safety.
- * A lack of a clear division of responsibility for safety equipment at the interface between the ARTC controlled main line and the Freight Victoria branch line.
- * Lack of standardisation of procedures and safety systems. A lack of standardisation means that in designing a system for a specific location there is more likelihood that an uncontrolled risk will be introduced. Further, lack of standardisation makes it more difficult to monitor the operation of the system and increases the complexity of the work.
- * Lack of control on the distribution of safety-critical equipment. The distribution and management of V5PSW keys was considered to be inadequate.
- * The lack of safeworking training for the Train Examiner meant that he was in a somewhat ambiguous position between operational involvement and clerical duties. It was noted that a person with few qualifications is probably most in need of an awareness of the operational functions that they are permitted to perform, and the activities which they are not permitted to perform.
- * Safety oversight. The privatisation of the Victorian railway system meant that more formal oversight was required on design and practice. In particular, new operators should be carefully monitored to ensure that they understand and deal with safety matters thoroughly. In addition, the interfaces between operators require proper analysis and any ambiguities are resolved.

LETTERS TO THE EDITOR

Don Harrison writes:

Sale-Bairnsdale.

The baulk has been removed from Hillside at approx 264.5km and placed approx 10 yards on the up side of the Bodsworth Road level crossing at the approx site of the S.E.C. siding Bairnsdale (275 kms via Sale). The washaway at Hillside has been rebuilt and the "creek" crossing 200 yards on the up side of the flashing lights crossing on the Princes Highway, Bairnsdale, has been replaced with 4 "Rocla" concrete culverts.

In the week ending the 2nd June, the rail sections were replaced and welded, using a "V Line Hirail" vehicle.

At level crossings between Hillside siding (264 km) and S.E.C. Bairnsdale (275 km via Sale), drains and culverts were cleared and all trees removed 10 feet either side of the track bed around the same time.

Two "T" class locomotives (light engines) ran through the circuit and the bells and flashing lights were re-commissioned on Monday 5th June.

Bruce McLean writes:

In the current January 2000 issue of Somersault I note that the signalling diagram for Mildura perpetuates errors made in the Vic Track diagram.

I have enclosed an amended version for you and I would like you to consider publishing it in a future issue for the sake of historical accuracy. [The amended diagram is shown overleaf; the editor has also removed the short lived 'Yard Limit' boards and relocated the location boards.]

The split in No 4 road existed for a short time whilst the new goods shed was being built in 1985. The diversion in the track is to avoid the supports for the freight centre canopy.

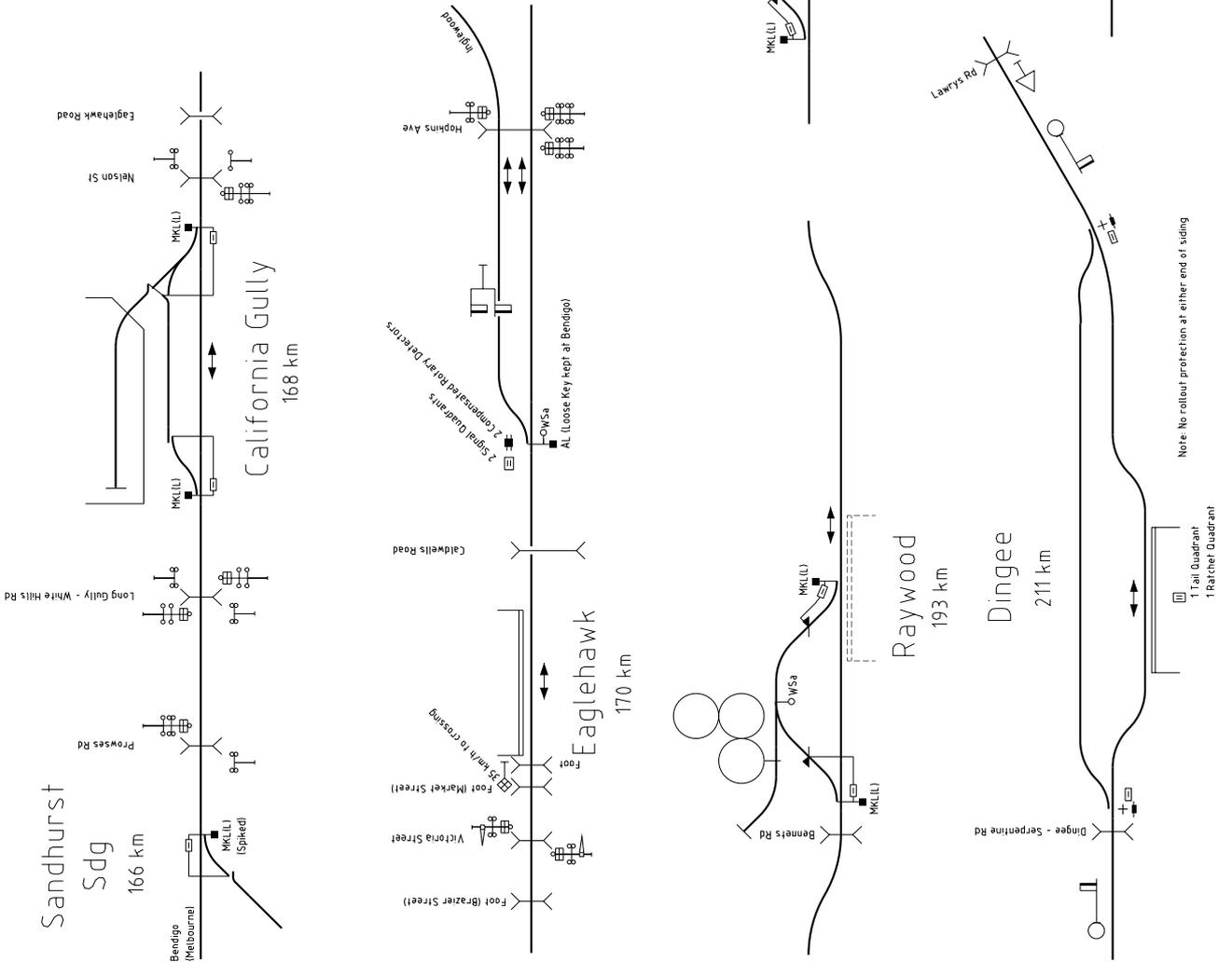
The turntable is actually an extension off the car shed No 2 road. Where the turntable shows on the diagram is the diesel loco service pit.

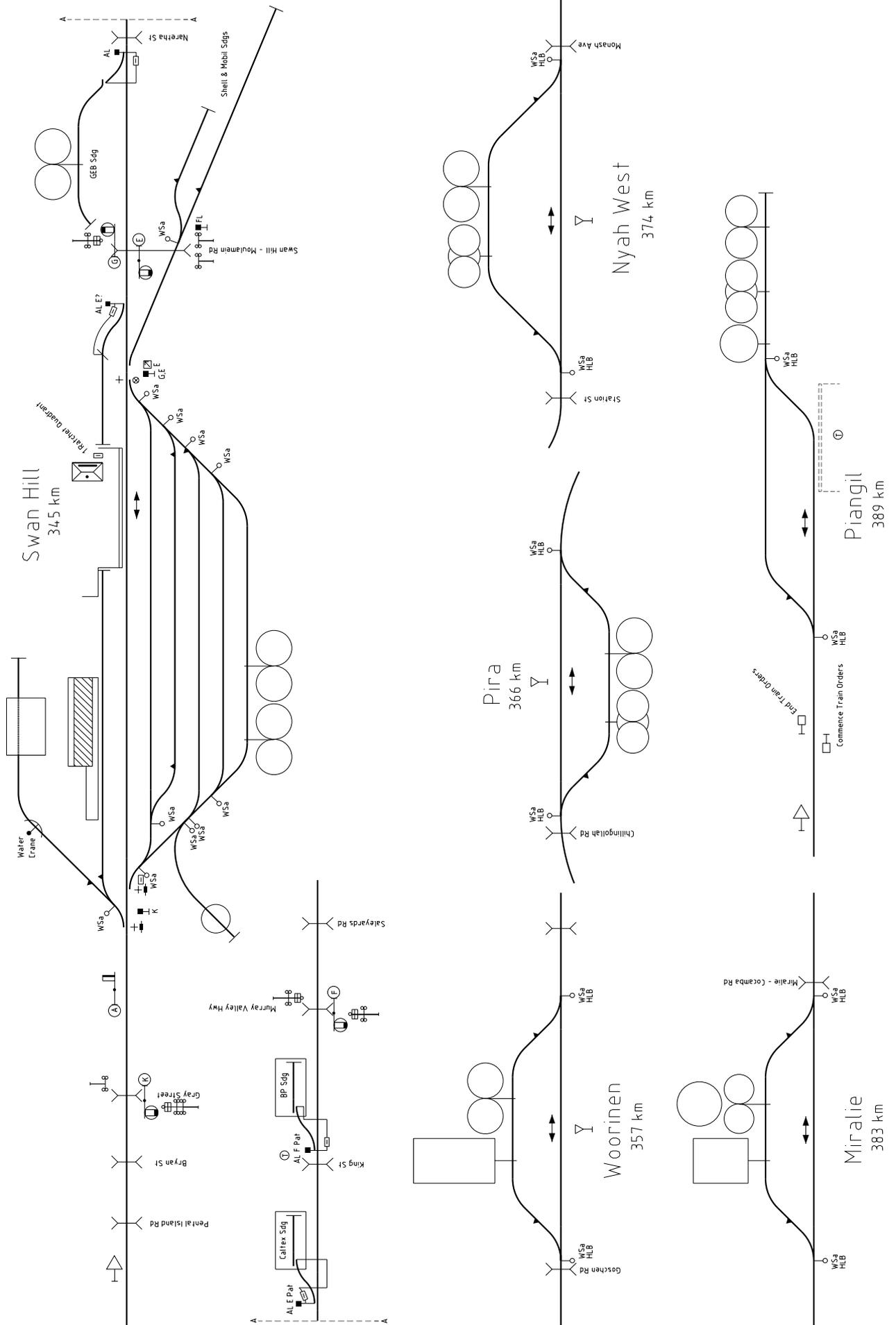
BENDIGO - PIANGIL MAY 2000

The following diagrams have been based on notes taken during a recent trip between Bendigo and Piangil. The diagrams have been augmented with information from signal arrangement diagrams. All locations were visited in late May 2000, except for the Down end of Kerang and Piangil itself, both of which were visited in April 1999.

The editor would gratefully receive corrections to the diagrams as it can be easy to miss details. In particular, it should be noted that it is easy to miss signage such as location boards and intermediate siding boards.

The editor would also gratefully receive details on other lines to allow current diagrams of other lines to be drawn.





SIGNAL ALTERATIONS

(Continued from Page 65)

- 12.04.2000 **Sunbury** (SW 59/00, WN 15/00)
 On Wednesday, 12.4., the interlocking was altered to permit the Down Home on Post 2 to be cleared without first clearing a signal on Post 3.
- (17.04.2000) **Seymour - Tocomwal (Issue of Train Orders to Murchison East Station)** (SW 55/00, WN 15/00)
 Because of communication difficulties at Murchison East Block Point, a Train Order may be issued for a Down train to proceed from Seymour to Murchison East Station while a preceding Down train is in operation on the Down side of Murchison East Block Point. The Train Order must not be fulfilled, however, until the train has proceeded through Murchison East Block Point and a "Train Complete" message is received.
- 13.05.2000 **Traralgon** (SW 69/00, WN 19/00)
 Commencing Saturday, 13.5., the following procedures will apply at Traralgon on Saturday evening when an additional passenger train is run for football traffic. The conductor of the passenger train will assume the role of the Signaller at Traralgon and must be appropriately qualified.
 Following the departure of Train 8431 the Signaller at Traralgon must check that all rail operations have ceased and No 2 Track is clear of vehicles. A Staff must then be released to Morwell and the Down Home on Post 1 cleared. The Signaller may then cease duty after obtaining the permission of the Train Controller and advising the Signaller at Morwell of a contact telephone number in case of emergency.
 The Signaller at Morwell must retain the Staff in the pocket of the instrument until required. The emergency contact number must be entered in the TRB. When the special passenger train arrives the Driver must be advised that the Conductor will act as Signaller upon arrival at Traralgon.
 Upon arrival at Traralgon the Conductor must restore the Down Home to Stop and ensure that the train has arrived complete with the Tail Signal attached to the rear vehicle. After obtaining the Electric Staff from the Driver the Conductor must sign on in the TRB, insert the Staff in the Instrument and send Train Arrival, complete the TRB, and sign off. The Conductor will assist with shunting and stabling the passenger vehicles. The Train Controller is to be advised of the train's time of arrival and time of ceasing duty.
 Should the passenger train arrive at Traralgon and find the Down Home on Post 1 at Stop, the Driver must challenge the Signal. If the Signal remains at Stop the Driver must communicate with the Train Controller. The Train Controller must ensure that Traralgon is unattended. If the station is unattended the Train Controller will verbally authorise the Driver to pass the Home at Stop. The Driver must ensure that all relevant points are in the correct position prior to passing over them.
- 14.05.2000 **Flagstaff & Melbourne Central (Clifton Hill Loop)** (SW 74/00, WN 20/00)
 On Sunday, 14.5., the approach operation of Homes 188, 189 (Flagstaff), 190 and 191 (Melbourne Central) were abolished. Homes 011, 018 (Flagstaff), 025 and 040 (Melbourne Central) were altered to allow them to display Clear Normal speed indications when required.
- 17.05.2000 **Appleton Dock Line** (SW 71/00, WN 20/00)
 On Wednesday, 17.5., the dual gauge Appleton Dock line between Sims Street Junction and Dwarf 140 at Footscray Road was converted to a Block Section. Movements will be controlled solely by signal indication and the signals are interlocked to prevent collisions. The line is controlled from ARTC Train Control, Adelaide.
 At Sims Street Junction the Annett Locks on the standard gauge connections to the Appleton Dock line were replaced by electric point machines. West Tower control of Dwarfs 132, Dwarf 136, and Home 160 was removed. Dwarf 132 was provided with illuminated V and S Route Indicators. The connections to the Appleton Dock line are worked from ARTC Train Control.
 At Footscray Road, Stop Board 8 was abolished. Dwarf signals U and D were renumbered 140 and 144 (respectively) and are now worked from ARTC Train Control.
 Movements on the Appleton Dock line beyond Dwarf 144 at Footscray Road are governed by 'Access Authority Working'. This is a new form of Siding Working and details are published in ARTC Train Notice No 6075. Commence and End Access Authority Boards were erected at Dwarf 144 and Enterprize Road respectively.
 Diagram 14/00 replaced 30/97.
- 14.05.2000 **Parliament (Clifton Hill Loop)** (SW 75/00, WN 20/00)
 On Sunday, 21.5., the approach operation of Homes 192 and 193 were abolished. Homes 049 and 056 were altered to allow them to display Clear Normal speed indications when required.