

SOMERSAULT

JANUARY 2000

Vol 23, No 1

SIGNALLING RECORD SOCIETY OF VICTORIA INC



The unique panel at Gowrie with the route set up for an Up train to depart from the Back Platform. On the right hand door can be seen the curved slot and the handle that controlled Crossover F to the Back Platform Road. The handle is in the reverse position. To the right of the point handle is the Annett key in its lock. At the top of the left hand door are the Normal and Reverse indications for the points. Under these is a push button to release the lock on the point handle, and below that a 'Points free' indication. Finally there are two thumb switches; the Down Home is on the left, the Up Home from the Back platform on the right. Each has switch Normal and Reverse indications. Above the panel on the right is the Down Approach indicator, while below the panel on the right is the emergency point crank. The crank allowed the point motors on Crossover F to be manually operated. Note that no official diagram of the points and signals was provided; the framed diagram above the panel actually showed the overhead switching arrangements. The staff had produced their own unofficial version (not shown in this photo). The photo was taken on the SRS Tour on 26 July 1990.

SOCIETY CONTACT INFORMATION

Published by the Signalling Record Society Victoria Inc (A0024029F)

EDITOR: Andrew Waugh, c/o CSIRO, 723 Swanston St, Carlton, 3053.

Phone (03) 9457 3795 (AH), (03) 8341 8215 (BH) Fax (03) 83418222

PRESIDENT: David Langley, P.O. Box 8, Avenel, 3664,

Phone (03) 5796 2337 (AH), (03) 5792 3288 (BH)

SECRETARY and MEMBERSHIP OFFICER: Glenn Cumming,

19 Peace St, Glen Iris, 3146. Phone (03) 9885 8546 (AH), (03) 9623 2289 (BH),

NSW PRESIDENT: Don Allitt,

8 Whites Ridge Road, Annangrove, NSW, 2156. Phone (02) 9679 1741

NSW GROUP SECRETARY: Bob Taaffe,

12 Western Crescent, Westleigh, 2120, Phone: (02) 9481 9994.

Unless articles use copyrighted information, articles may be reprinted without prior permission but acknowledgment is required. Opinions expressed in articles appearing in *SOMERSAULT* or supplements are not necessarily those of the S.R.S.V. (Inc.)

SIGNALLING ALTERATIONS

The following alterations were published in WN 39/99 to WN 49/99. The alterations have been edited to conserve space. Dates in parenthesis are the date of the Weekly Notice.

- 11.09.1999 **St Albans - Sydenham** (WN 41)
From Saturday, 11.9., Bayside Trains took control of the line between St Albans and the Up side of the Keilor - Melton Road level crossing at Sydenham.
- 19.09.1999 **Burnley** (SW 1251/99, WN 41)
On Sunday, 19.9., Up Home BLY381 was converted to a LED signal.
- 23.09.1999 **Heidelberg** (WN 39)
On Thursday, 23.9, No 3 Track (Siding A) was abolished to allow for cable trenching for the new signalling. Points 11 and 21, Derails 11 and 21, Down Dwarf 13, and Up Dwarf 19 were abolished. Levers 7, 11, 13, 19, 21, and 27 were sleeved normal. Amend Diagram 27/95.
- 28.09.1999 **Nar Nar Goon** (SW 1241/99, WN 39)
On Tuesday, 28.9, the crossover and siding were taken out of service. Crossover 29, Points 27, and Catch 27 were spiked normal. Levers 27 and 29 were sleeved normal. Levers 4, 24, 28, 32, and 34 were sleeved reverse. Amend Diagram 8/86.
- 28.09.1999 **Trafalgar** (SW 1242/99, WN 39)
On Tuesday, 28.9, all points and sidings were taken out of service. Crossovers 5 (Up end) and 23 (Down end), Points 9 (Up end) and 21 (Down end), and Catches 9 and 21 were spiked normal. Levers 5, 6, 9, 14, 20, 21, 23, and 26 were sleeved normal. Levers 2, 4, 12, 18, 22, 28, and 30 were sleeved reverse. Amend Diagram 6/94.
- 29.09.1999 **Benalla** (WN 39)
On Wednesday, 29.9, a new level crossing (Delatite Shire Bypass Road) was provided at 200.074 km on the Yarrawonga line. The crossing is equipped with Flashing Lights controlled by a level crossing predictor.
- 30.09.1999 **Train Control - Western Line** (SW 1250/99, WN 40)
As from 2359 hours, Thursday, 30.9., the Western Line CTC panel and all associated Train Control functions were transferred to the ARTC Train Control Centre at Mile End.
- 02.10.1999 **Nar Nar Goon** (SW 1248/99, WN 40)
On Saturday, 2.10., Crossover 29 and Points 27 were removed.
- 03.10.1999 **Trafalgar** (SW 1248/99, WN 40)
On Sunday, 3.10., Crossovers 5 and 23 and Points 9 and 21 were removed.
- 03.10.1999 **Carrum** (SW 1242/99, WN 41)
On Sunday, 3.10., Up Home 18 was converted to a LED signal.
- (04.10.1999) **Maribryong River Line - "C" Siding** (SW 1243/99, WN 39)
Shunting in Siding C are conducted by National Logistics using a road tractor. A notice board is provided on the Up side of Footscray Road instructing train crews to obtain permission from the Signaller West Tower prior to proceeding. Permission is not to be granted if shunting operations are underway. Prior to shunting operations commencing, National Logistics must obtain permission from the Signaller West Tower. The Signaller must be advised when shunting operations have ceased. The times shunting commences and ceases must be recorded in the Train Register Book.

(04.10.1999) Maryvale - Gippsland Intermodal Freight Terminal (SW 1233/99, WN 39)

The Hazelwood Siding is used by National Logistics as part of the Gippsland Intermodal Freight Terminal. Gates for rail access in the security fence are provided at each end of the siding. Hand operated Derail blocks with 'Derail' indicators are provided between the gates and the catch at each end of the siding, and may be locked on or off the rail by a 4D padlock.

Prior to commencing work in the operating area, the National Logistics employe in charge must obtain permission to lock the derails on the rail from the Signaller at Morwell. No train requiring to shunt the siding is allowed to leave Morwell or Traralgon once permission has been granted to lock the derails on the rail. The National Logistics employe is to notify the Signaller once operations have been completed and the derails are locked off the rail.

Train crews must open and close the access gates as required.

(Add as Operating Procedure 128A).

(04.10.1999) Morwell Briquette Siding (SW 1233/99, WN 39)

The Morwell Briquette Siding is operated under siding conditions. Permission must be obtained from the Signaller Morwell before any train, light engine, or rail/road vehicle departs from the Morwell Briquette Siding. Each time a movement is made to or from the Morwell Briquette Siding, the Signaller must record the time permission was granted, the Driver's name, and the locomotive number. The time the movement arrived at Morwell or Morwell Briquette Siding must also be recorded.

At Morwell Briquette Siding a hand locking bar is provided on the Up end points to secure the points for No 2 Siding. This bar is locked by a 4D padlock, the key to which is held by the National Logistics Shunter. A notice board at the boundary fence instructs the train crew of Down movements to obtain permission of the Shunter prior to entering the Briquette Area. The Shunter must ensure the points are set for No 2 Siding and all other operations have ceased before granting permission. A notice board facing Up trains is provided at the Down end of No 1 and 2 Sidings requiring permission to be obtained prior to any rail operations along No 1 Siding, No 2 Siding, or the Hazelwood Siding.

Shunting within the Morwell Briquette Area is performed by a Rail Tractor operated by National Logistics. Prior to operating the Tractor, permission must be obtained from the Signaller Morwell. No train, light engine, or road/rail vehicle must be allowed to depart from Morwell until the Signaller is advised that the Tractor has ceased operations and is secured. Permission must be separately obtained to operate the Tractor past the notice board at the Down end of the Sidings. A notice board lettered 'Limit of Tractor Shunting' is provided on the Down side of the Commercial Road overpass and the Rail Tractor is not be operated past this board.

(Add as Operating Procedure 128B)

06.10.1999 Benalla (SW1247/99, WN 40)

On Wednesday, 6.10., the signalbox (Benalla A) was abolished. Benalla was abolished as a Train Order Crossing Station and is now either an Attended or Unattended Junction Station. The Train Order sections are Riggs Creek Loop - Bowser Block Point, and Benalla - Yarrawonga. A train order may be issued to an Up Oaklands line train to proceed to Benalla at the same time a train order is outstanding on the main line, but a train order cannot be issued to shunt or depart Benalla while there is an outstanding train order on the main line.

Track 2 was abolished. The points leading to Track 2 were spiked to lie for Track 3, and Tracks 3 - 5 were renumbered 2 - 4.

Posts 1, 1B, 2, 3, 4, 7, 7B, 8, 29B, 33, and 34 were abolished. A Stop board lettered 'Stop. Do not proceed without permission of the Train Controller' was erected at 196 km on the Oaklands line. Location Boards were provided 2000 metres from the main line points and 2000 metres from the Stop board.

The former Crossover 22/26 at the Up end remains. The main lines points are worked by a non-trailable point machine rodded to the points in Y and secured by a ST21 miniature Master Key. The E pattern Annett Locks on the points to the Turntable Track and the crossover leading from the main line to N at the Down end of the yard have been replaced by ST21 locks.

Harmon Level Crossing Predictors (HXPs) were provided at Arundel and Nunn Streets. The Flashing Lights at Arundel Street will work automatically for all Up and Down movements, and a notice board lettered 'Shunting trains must not enter roadway until flashing lights are operating' is provided on the Down side of the crossing. At Nunn Street, the boom barriers operate automatically for Up and Down Through movements. For stopping Up Trains on the main line, and Up movements from the goods yard towards Y, V5PSW key switches were provided to start the Nunn Street boom barriers. Key switches are provided at the Up end of the platform and near the points in No 2 Track leading to the goods yard. Notice boards lettered 'Stop. Do not proceed until the booms are horizontal' are erected near the key switches. Operation of the Nunn Street booms will be automatic for Down movements along Y, but the speed must not exceed 10 km/h. A suitable notice board is erected adjacent to the points leading to the main line.

10.10.1999 Gisborne (SW 1244/99, WN 40)

Commencing Sunday, 10.10, the block hours will be:

Monday - Friday 0510 hours to 1005 hours or clearance of Train 8022
 1600 hours to clearance of 8048 and 8049
 Saturday, Sunday Switched out.

10.10.1999 **Somerton** (SW 1244/99, WN 40)

Commencing Sunday, 10.10, the block hours will be:

Monday 0340 hours to 1200 hours
 Tuesday - Friday 0400 hours to 1200 hours
 Saturday, Sunday Switched out.

10.10.1999 **Donnybrook** (SW 1244/99, WN 40)

Commencing Sunday, 10.10, the block hours will be:

Monday - Thursday 1330 hours to 2000 hours or clearance of Train 9319
 Friday 1330 hours to 2000 hours or clearance of Train 8338
 Saturday 1800 hours to clearance of Trains 8329 and 8322
 Sunday Switched out.

10.10.1999 **Wallan** (SW 1244/99 & SW 1261/99, WN 40 & 42)

Commencing Sunday, 10.10, the block hours will be:

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

10.10.1999 **Kilmore East** (SW 1244/99, WN 40)

Commencing Sunday, 10.10, the block hours will be:

Monday - Thursday 0535 hours to 2245 hours or clearance of Train 9430
 Friday 0535 hours to 2000 hours or clearance of Train 8329
 Saturday 0700 hours to clearance of Train 8308
 1800 hours to clearance of Trains 8329 and 8338
 Sunday 1800 hours to 2300 hours or clearance of Train 9430

10.10.1999 **Broadford** (SW 1244/99, WN 40)

Commencing Sunday, 10.10, the block hours will be:

Monday - Friday 0535 hours to clearance of Train 8314
 Saturday, Sunday Switched out.

(11.10.1999) **Absolute Occupation of Running Line (Rule 8e, Section 15, Book of Rules)**

New forms have been issued for the absolute occupation of running lines in areas controlled by Metrol. All information required for an absolute occupation has been included on one form. The Signaller need only record that an absolute occupation has been issued at a particular location in the logbook. Amend Rule 8e, Section 15.

(e) Area controlled by Signaller, Metrol

When the area is controlled by the Signaller, Metrol, the Absolute Occupation order may be obtained by:

- by signal post telephone;
- by recorded telephone line to the panel concerned
- by proceeding to Metrol

When issuing the Absolute Occupation over the telephone, the Signaller must dictate the details to the person requiring the occupation. The details must be entered onto the special form and repeated back. The names of both employees must be exchanged and entered on the form. If issued personally at Metrol, the employee obtaining the form must sign the form in the space for Supervisor.

When an Absolute Occupation is required over an area covered by more than one panel, the O circular will specify the panel that will issue the order. Before issuing the order, the Signaller on that panel must contact the Signallers on the other panels who must ensure that the occupation is protected in their areas and countersign the Absolute Occupation.

When cancelling an Absolute Occupation the lower half of the form must be filled in and telephoned to the Signaller who must record the details, as dictated, on the Absolute Occupation form. Both employees must exchange names, entering them on the form.

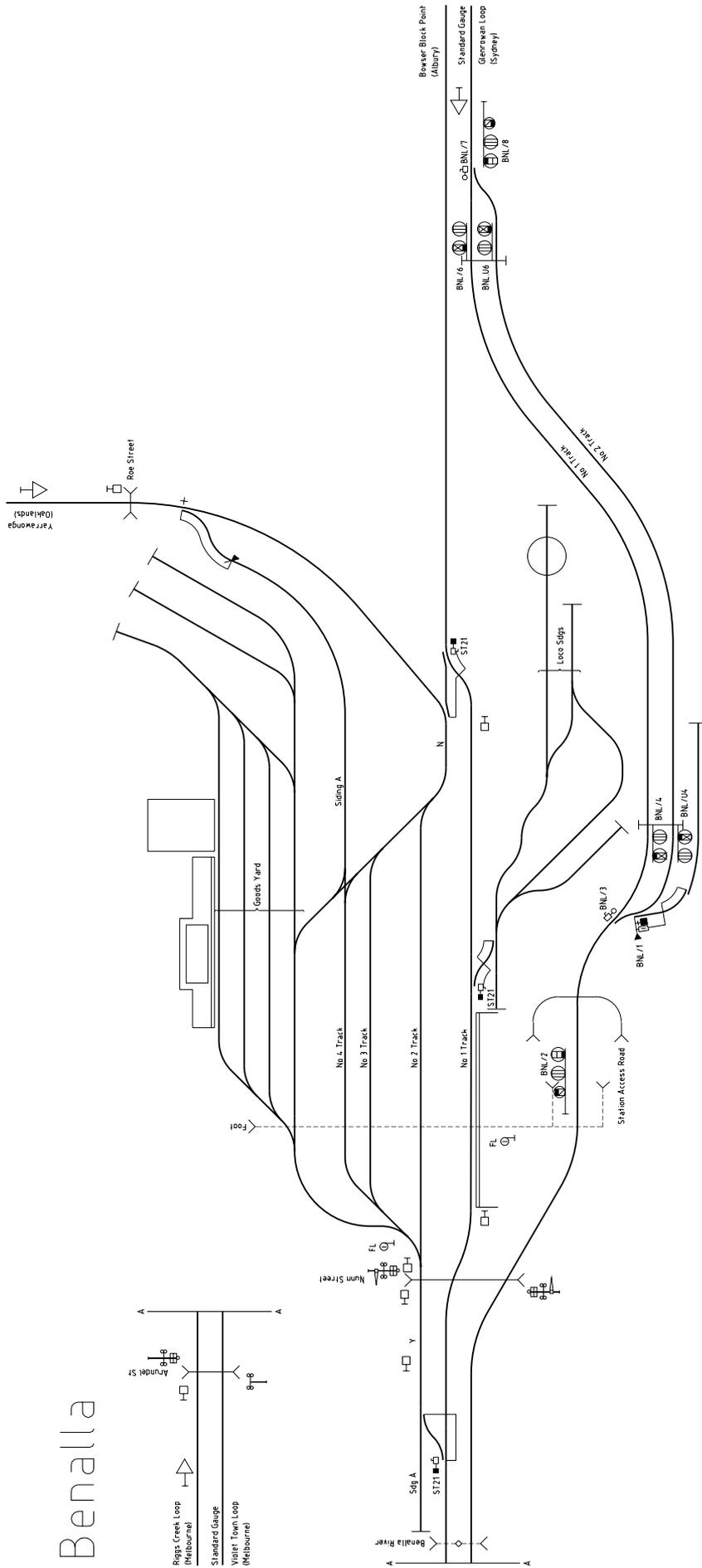
16.10.1999 **West Tower** (SW 1256/99, WN 42)

Between 2200 hours Friday, 15.10., and 1800 hours Saturday, 16.10., new interlocked Crossovers were provided between the BG Transfer Track, the Reversing Loop, and the North Lead.

Crossover 103 leads from the Broad Gauge Transfer Track to the Broad Gauge Reversing Loop, and Crossover 105 leads from the Broad Gauge Reversing Loop to the North Lead. All points are fitted with Dual Control Point Machines. Up Dwarfs 104 (North Lead to Transfer Track or Reversing Loop) and 106 (Reversing Loop to Transfer Track or Reversing Loop), and Down Dwarfs 230 (Transfer Track to North Lead or Reversing Loop) and 232 (Reversing Loop to North Lead or Reversing Loop) were provided.

The operation of Dwarfs 104 and 106 for moves to the Broad Gauge Transfer Track is controlled by a 4D keyswitch located near the Dwarfs. The keyswitch has two positions 'West Tower Control' and 'BHP Control'. The Signaller at West Tower can only clear Dwarfs 104 and 106 for moves towards the Broad Gauge Transfer Track when the keyswitch is in the 'West Tower Control' position. It must be placed to the

Benalla



'BHP Control' position when BHP operations are being carried out in the Gantry Crane area.

- (18.10.1999) **Metrol** (SW 1231/99, WN 41)
 Add the following as a new clause (e) in Procedure 1, Section 34, Book of Rules
 (e) Point Sleeving of Double Ended Points
 Where the two ends of a crossover are worked from separate panels, the Signaller requiring the crossover to be sleeved must: sleeve the points controlled from their panel; request the Signaller working the end of the crossover to sleeve their points; and then personally check that the other Signaller has applied the point sleeve command. Both Signallers must endorse the log books.
 Should any Signaller be unable to apply a point sleeve command, the points must be considered to be unsleeved. If the a computer system fails causing the loss of a point sleeve command, the Signaller controlling the other end must be informed. When the points are to be unsleeved, both Signallers must come to a clear understanding prior to removing any sleeves.
- (18.10.1999) **Corio - Elders IXL Sdg** (SW 1255/99, WN 41)
 This siding has been booked out of service due to derailment damage.
- (18.10.1999) **North Geelong C** (SW 1254/99, WN 41)
 North Geelong C may be unattended whilst a train is operating in the Grain Loop. Prior to leaving the signalbox, the Signaller must obtain permission to switch out on the Standard Gauge, inform the Signallers at North Geelong A and B, and 'call forward' the phone to North Geelong A box.
- (18.10.1999) **Morwell - Morwell Industrial Siding** (SW 1238/99, WN 41)
 This siding is in service. The siding was formerly the Morwell Shire Industrial Siding.
- 20.10.1999 **North Geelong B** (SW 1260/99, WN 42)
 On Wednesday, 20.10., Posts 27 and 37 were provided with red reflectorized arms as a trial
- 22.10.1999 **Metrol** (WN 43)
 On Friday, 22.10., Metrol was permanently transferred to Level 5 Transport House.
- 24.10.1999 **Flinders Street** (SW 1248/99, WN 42)
 On Sunday, 24.10., Home Signals 739 and 745 were converted to LED signals and the co-acting masts (739P and 745P) were removed. Amend 41/99.
- 24.10.1999 **Melbourne Yard - Great Northern Terminal** (SW 1266/99, WN 43)
 On Sunday, 24.10., the Broad Gauge Great Northern Terminal Siding (formerly TNT Contrans Sdg) was brought into service. Points 145 and Dwarf 132 were returned to service. Points 147 and 149 (leading to the former Outside Goods Lines) were spiked reverse. (Note: in addition, Home 290 and Dwarfs 202 and 288 at the Moonee Ponds Creek end of the Outside Goods Lines are no longer shown on the Diagram). Diagram 20/99 replaced 18/99.
 Before signalling any movement into the Great Northern Terminal, the Signaller West Tower must obtain permission from the Terminal or Deputy Manager. Before the departure of any train from the terminal, the Terminal Manager must contact the West Tower Signaller.
 Diagram 20/99 was issued.
- (25.10.1999) **Broadford** (SW1261/99, WN 42)
 The block hours will be:
 Monday - Friday 0535 hours to clearance of Train 8307
 Saturday, Sunday Switched out.
- 04.11.1999 **Melbourne Yard - South Dynon** (SW 1273/99, WN 45)
 On Thursday, 4.11., the Broad Gauge Crossing Loop at South Dynon was abolished. The CCW points at both ends were removed and the Up line will be removed. Stop Board 9 remains in use. Delete procedure 8.0 from the West Tower Operational Procedures. Amend Diagram 6/98.
- 07.11.1999 **Flinders Street** (SW 1263/99, WN 42)
 On Sunday, 7.11., Home 347 was converted to a LED signal.
- (08.11.1999) **Melbourne Yard - West Tower**
 The operational procedures for West Tower were republished and SW 163/94, 194/94, 223/95, 261/95, 419/95, 039/96, 075/96, 134/96, 323/96, 324/96, 387/96, 398/96, 463/96, 584/96, 671/96, 295/97, 1019/99, 1176/99, & 1266/99 were cancelled.
- 08.11.1999 **Sale - Hillside Intermediate Siding** (SW 1275/99, WN 45)
 Commencing Monday, 8.11., trial freight services will be run between Sale and Hillside Intermediate Siding by the RTL. The primary form of Train communication between Sale and Hillside is via SMR. The Train Crews are responsible for advising the Train Controller of the arrival and intended departure times at Hillside.
 A Signaller must be in attendance at Sale when opposing trains are to simultaneously approach. The Train Register must be used to record all movements over the Sale - Hillside section. The Train Controller must inform the Signaller of the arrival and departure of trains at Hillside for this to be done. Permission for Road/Rail movements must be referred to the Train Controller in the usual manner, and the normal rules for the granting of track permission will apply, subject to opposing train movements. Upon the arrival of

an Up train at Sale, the Driver may operate the points leading to the Freightgate sidings once obtaining permission from the Signaller. The points are to be restored to normal and relocked after use.

The line between Sale and Hillside is operated under siding conditions. Up Home (light) Post 3 at Sale was recommissioned for use, but Down Starting (light) Post 2 remains out of use. The level crossing protection equipment on the line has not yet been recommissioned and all level crossings must be protected for all movements. The fixed signals at Stratford and Fernbank are out of service. The points at Hillside are secured by Master Key Locks.

15.11.1999 **Westall** (SW 1279/99, WN 46)

On Monday, 15.11., a point motor was fitted to Catch 7 and the rodded connection from Points 7 was removed. Amend Diagram 9/98.

21.11.1999 **Laverton** (SW 1284/99, WN 47)

On Sunday, 21.11., Up Home 20 was converted to a LED signal.

21.11.1999 **Sydenham** (SW 1268/99, WN 46)

On Sunday, 21.11., Post 8 (the Down Starting signal, Home 12) was relocated 7.5 metres in the Up direction to allow the installation of pedestrian gates at the Melton Road level crossing. Amend Diagram 20/98.

21.11.1999 **Upper Ferntree Gully** (SW 1277/99, WN 46)

On Sunday, 21.11., Dwarf 26 (No 3 or 4 Tracks to Upwey or Siding C) was relocated to the opposite (Up) side of the line to improve signal sighting. Diagram 45/99 replaced 19/99.

(22.11.1999) **Werribee** (SW 1280/99, WN 46)

Commencing forthwith, the signalbox hours will be from 0650 hours Sunday to 0115 hours the following Sunday.

(22.11.1999) **Eaglehawk** (SW 1278/99, WN 46)

To prevent delays to traffic, permission is granted for Train Orders to be issued to Up trains approaching Eaglehawk on both the Piangil and Inglewood lines simultaneously provided a Signaller is continuously in attendance at Eaglehawk until the second train has departed Eaglehawk.

The instructions for Up Inglewood line trains at Eaglehawk (Book of Rules, Section 34) have been amended.

Prior to issuing a Train Order for a train from the Inglewood line to Bendigo, the Train Controller must arrange for a Signaller to attend Eaglehawk to set the points for the Inglewood line and clear the Up Home signal from Inglewood. After being informed that the points have been set and checking that the last Down Piangil line train has cleared Eaglehawk complete (if applicable), the Train Controller may issue a Train Order for the train to proceed to Bendigo.

A through Train Order may be issued from Inglewood or Bridgewater to Bendigo provided a Signaller is continuously in attendance at Eaglehawk and the points have been set for the Inglewood line.

The Train Controller may issue a Train Order for a train to proceed from Dingee to Eaglehawk whilst the through Train Order from Inglewood or Bridgewater to Bendigo is current provided a Signaller is in continuous attendance at Eaglehawk. The Up Home from the Piangil line must remain at Stop until the Inglewood line train has arrived complete at Bendigo and the Train Order fulfilled.

24.11.1999 **Shepparton** (SW 1289/99, WN 48)

Commencing Wednesday, 24.11., a Signaller will be in attendance for the arrival and departure of all trains. 'Driver in Charge of Signalling' operation on Saturdays and Sundays is cancelled.

25.11.1999 **Morwell Industrial Siding** (SW 1295/99, WN 49)

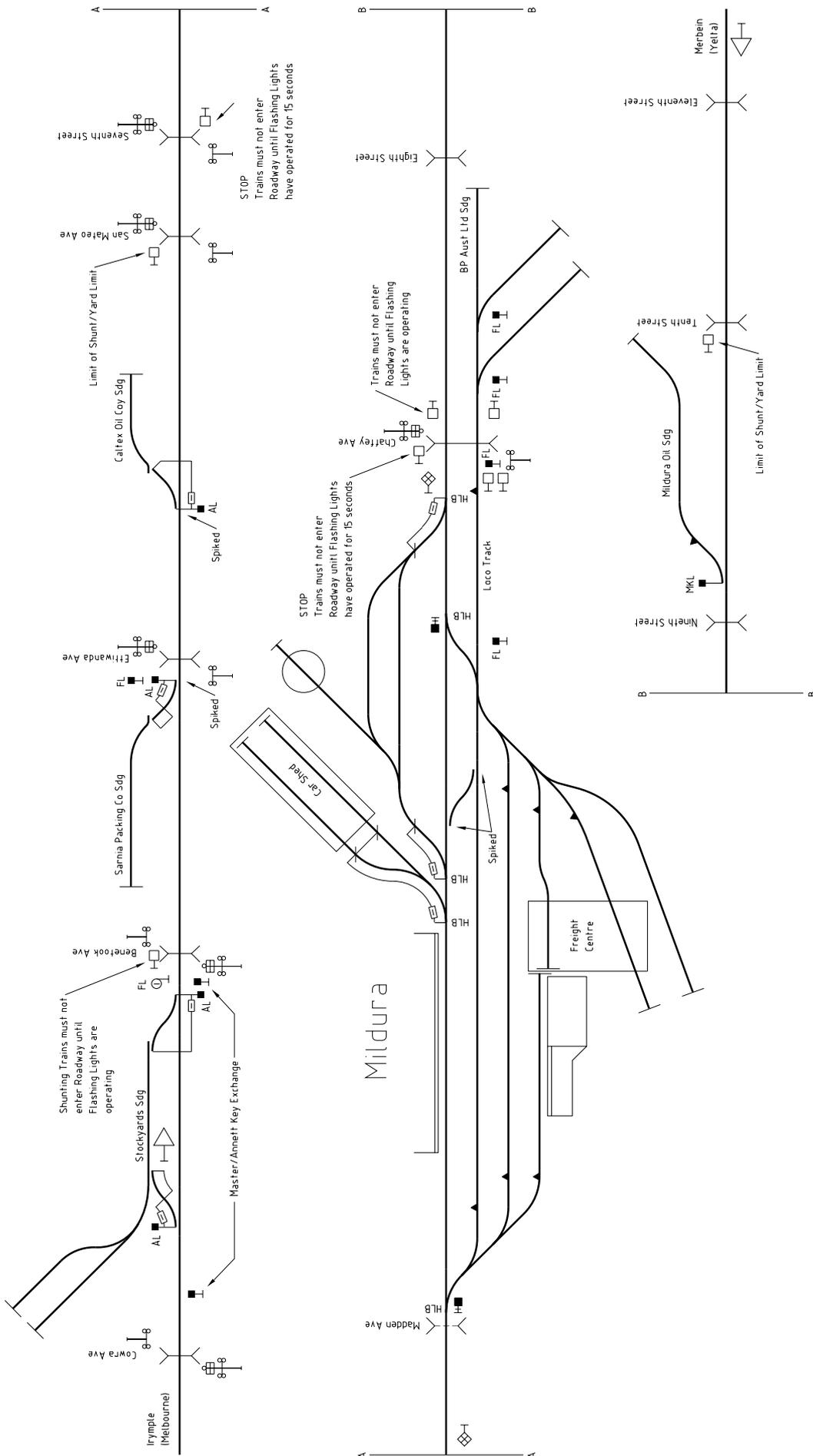
On Thursday, 25.11., an additional Intermediate Electric Staff instrument was provided in the Morwell - Traralgon section at Morwell Industrial Siding. The instrument is situated in a Safeworking Cabin on the Up side of the siding at the Down end. The Intermediate instrument at Maryvale APM Siding remains in use. A new, suitably engraved, Master Key will be provided

26.11.1999 **Mildura** (SW 1282/99, WN 48)

On Friday, 26.11., the control panel was abolished together with all associated signalling. Mildura became an unattended intermediate siding in the Yatpool Block Point - Yelta section. Trains are not permitted to cross at Mildura, however, a train may stable at Mildura in which case the Train Order must instruct it to lock away.

Home signals A (Post 1), B (Post 2), D (Post 3), F (Post 4), and G (Post 5) were abolished. Yard Limit/Limit of Shunt boards were provided on the Up side of San Mateo Avenue and the Down side of Tenth Street to define the extent of the Mildura yard. The Yard Limit board is white with black lettering and faces trains arriving into Mildura. The Limit of Shunt board is white with black lettering and faces trains departing from Mildura. Location Boards were provided 2000 metres in the rear of the Yard Limit boards. Each Location Board is a yellow triangle containing the text '2000 metres' with a white rectangle 'Mildura' below.

The Master/Annett Key Exchangers located at each end of the Stockyards Siding have been altered to allow operation using a standard Corridor Master Key. A pushbutton is provided on the Up side of Benetook Avenue to control the operation of the flashing light equipment whilst shunting takes place in the Cement Siding (former Stockyards Siding). A Notice Board (yellow triangle with white lettering)



lettered 'Trains must not enter roadway until flashing lights are operating' has been provided facing Down trains.

The points to the Sarnia Packing Co Siding and the Caltex Oil Siding were spiked normal.

The Up approach to Seventh Avenue has been shortened to 20 metres and a Notice Board lettered 'Trains must not enter roadway until flashing lights are operating' has been provided facing Up trains.

The Plunger locks on Points C and E were replaced by Hand Locking Bars and padlocks. The associated signal repeaters were abolished, but the 'standard plunger point indicator' was retained on Points C. A Hand Locking Bar and padlock is provided on Points H. The Annett lock on the points to the Car Shed was removed. The Annett locked Crossover from No 1 Track to No 2 Track has been spiked out of use. The Annett Lock, point lever, and rodding have been removed. The Annett lock at each end of the Loop Siding have been replaced by a hand locking bar, however the points continue to be worked from small point levers and remain rodded to derails in the siding.

The Up and Down approaches to Chaffey Avenue have been shortened to 20 metres and Notice Boards have been provided on each side of the level crossing. The board facing Down trains is a red circle with white lettering 'Stop - Trains must not enter roadway until flashing lights are operating', while the board facing Up trains is a yellow triangle with black lettering 'Trains must not enter roadway until flashing lights are operating'. A hand operated Hayes Derail was provided on the Loco Track on the Up side of Chaffey Avenue. A Derail noticeboard is provided adjacent to the Derail.

Local Master Keys 47 and 48 were withdrawn.

Replace Operating Procedure 93 with the following:

93. Mildura - Operating Procedures

The maximum line speed within the Yard Limit boards is 15 km/h.

Trains may shunt within the Yard Limit/Limit of Shunt Boards without the Driver being in possession of a Train Order. However, prior to fouling No 1 Track, the Driver must advise the Train Controller who will endorse the Train Graph accordingly. The Driver must advise the Train Controller when shunting operations have been completed and the Train Controller must again endorse the Train Graph accordingly.

Vehicles are not permitted to be stabled in No 1 (Platform) Track. Upon completion of shunting operations, the competent employee assisting the shunting must ensure that all vehicles are secured within the sidings and all derails and locking bars applied.

Granting Track Permission for Road/Rail Journey

Track permission may be granted through Mildura provided shunting operations are not taking place within the Yard Limit boards. Prior to on tracking within the Yard Limit boards, permission must be obtained from the Train Controller. Track Permission must be obtained prior to passing the Limit of Shunt boards for the onward journey.

Track Warrants are not to be issued within the confines of the Yard Limit Boards.

Diagram 14/99 replaced 2/98.

- 26.11.1999 **Hurstbridge** (SW 1291/99, WN 48)
On Friday, 26.11., Flag type Hayes Derails replaced the existing Derails in Nos 2, 3, 4, 5, and 6 Sidings.
- 28.11.1999 **Northern Loop** (SW 1287/99, WN 47)
On Sunday, 28.11., Homes 411 and 418 (Flagstaff) and 427 and 438 (Melbourne Central) on the Northern Loop were altered to be capable of showing Clear Normal Speed to improve headway.
- 30.11.1999 **Ararat** (SW 1297/99, WN 49)
On Tuesday, 30.11., the Down end main line points and No 3 Road were booked out of service. Access to the Maryborough line is only available from the Up end, and a Supervisor will be in attendance at Ararat for movements to and from the main line.
No 2 Road has been baulked at the Down end. The Down end points have been spiked normal and the A pattern Annett Lock has been removed. The B pattern Annett Lock at the Up end has been replaced by an A pattern Annett Lock and the key is normally secured in the Safeworking Telephone cabinet at the Up end.
- 01.12.1999 **Sydenham** (SW 1287/99 & 1300/99, WN 48 & 49)
On Wednesday, 1.12., pedestrian gates were commissioned on the Up side of Melton Road level crossing. Home 12 (Down Starting) is electrically locked normal until Home 2 (Down Home) has been reversed, the push button release is operated, and the booms have been detected horizontal. Diagram 22/99 replaced 20/98.
- 02.12.1999 **Heidelberg** (SW 1293/99, WN 48)
On Thursday, 2.12., Crossover 24 (Down Main to No 1 Platform Track) was spiked normal. Plunger 25 was abolished. Discs 29 and 30 (Post 2) were abolished. Levers 24, 29, and 30 were sleeved normal, and lever 25 became a pilot lever.
- 03.12.1999 **Violet Town** (SW 1298/99, WN 49)
On Friday, 3.12., flashing lights were provided at Hurst Street (171.556 km) on the Down side of Violet Town account the extension of the Standard Gauge loop in the Down direction. The flashing lights are

controlled by track circuits for Standard Gauge moves and a Harmon Crossing Predictor (HXP).

05.12.1999 **Northern Loop** (SW 1286/99, WN 47)

On Sunday, 5.12., Homes 447 and 456 (Parliament) on the Northern Loop were altered to be capable of showing Clear Normal Speed to improve headway.

05.12.1999 **Wodonga Loop - Wodonga A - Wodonga Coal Sdgs - Albury South** (SW 1294/99, WN 49)

On Sunday, 5.12., control of the through Standard Gauge section Wodonga Loop - Albury South was transferred to ARTC Train Control at Mile End. Wodonga A was equipped to switch-out in the Standard Gauge section and will only be switched in on the Standard Gauge when it is necessary to perform Freight Victoria train or shunting movements at Wodonga or Wodonga Coal Sidings.

Up Through Trains

To signal a train from Albury South Box to Wodonga Loop, the ARTC Train Controller must clear the Up Home Arrival signal WOD 8 at Wodonga Loop. This will set up all Up signals between Wodonga Loop and Albury South and release Home 58 at the later box.

Down Through Trains

To signal a train from Wodonga Loop to Albury South Box, the ARTC Train Controller will request control from the Signaller at Albury South. This will be granted by reversing lever 14. This will set up all Down signals between Wodonga Loop and Albury South and release WOD 6 and WOD U6 at Wodonga Loop.

Switching In/Out Wodonga A and Wodonga Coal Sidings

It is necessary to obtain a release from the ARTC Train Controller before switching Wodonga A in.

Once Wodonga A is switched in, all points, signals, controls, and releases will operate as previously. In particular, it is possible to switch Wodonga Coal Sidings in. It is not possible to switch in Wodonga Coal Sidings unless Wodonga A has been switched in.

The Signaller at Wodonga A must obtain permission from the ARTC Train Controller before switching out. Once permission has been obtained, the Signaller must check that Wodonga Coal Sidings is switched out, check that all levers controlling Standard Gauge functions are normal, and reverse levers 8 and 18. The ARTC Train Controller will then operate the Wodonga A switch out function and check that control between Wodonga Loop and Albury South has been transferred.

Signal repeaters for signals WOD 6, WOD U6 and WOD 8 have been provided at Wodonga A box.

Block Hours

The block hours for Wodonga A will be:

- Monday 0610 hours to 2230 hours
- Tuesday - Friday 0330 hours to 2230 hours
- Saturday 0330 hours to 1130 hours and 1550 hours to 2130 hours
- Sunday 0725 hours to 0815 hours, 1230 hours to 1715 hours, 2125 hours to 2205 hours

(06.12.1999) **Bendigo - Echuca**

Commencing forthwith, return Train Orders may be issued to passenger trains between Bendigo and Echuca.

06.12.1999 **Appleton Dock - Coode Road** (SW 1303/99, WN 49)

On Monday, .6.12., Coode Road level crossing was closed to road traffic. Amend Diagram 6/98.

XANTHUS

At 1706 hours on 18 August 1999 the Westbound Indian Pacific (3AP88) collided with an Eastbound Freight train (3PW4N) standing in the crossing loop at Zanthus. Zanthus is situated on the Trans Australian Railway 1572 km west of Port Augusta, roughly one third of the distance between Kalgoorlie and the South Australian border. Forty five passengers and crew reported sustaining injuries or side effects, of whom 21 were conveyed to Kalgoorlie Hospital by the Royal Flying Doctor. Two were held in hospital overnight for observation, with one remaining in hospital for some weeks. Damage to the Indian Pacific was estimated at \$5 million, and damage to the locomotives is estimated at close to \$1 million. The independent investigation found that the collision resulted from a crew member from the Freight train reversing the main line points as the Indian Pacific approached. The points were not fitted with any form of locking to prevent the points being moved in the face of an approaching train.

This article is based the official Independent Investigation Report of the accident. The report is available from WA Department of Transport's Web site (<http://www.dot.wa.gov.au/linking/pdfs/zanthus.pdf>).

Zanthus

The layout at Zanthus is shown in the following diagram.

Each end of the crossing loop is fitted with motor operated self restoring points. Reversing the points for a movement to or from the loop is controlled locally from a control box mounted on the wall of the equipment room. The points automatically restore themselves to the normal position after the passage of the train. No approach or track locking is provided.

The main line points are fitted with a standard mechanical point indicator showing a green arrow when the points are set for the main line and a yellow dumb-bell when set

for the loop. In addition, a 'flashing light indicator' is provided to provide a long range indication of the position of the points. The aspects displayed by this indicator are:

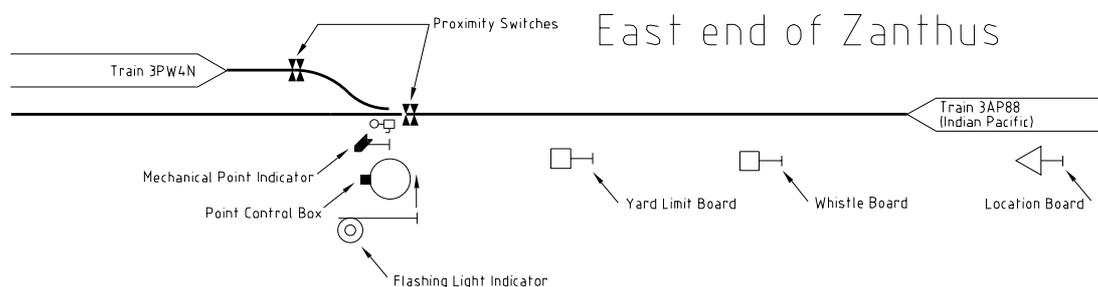
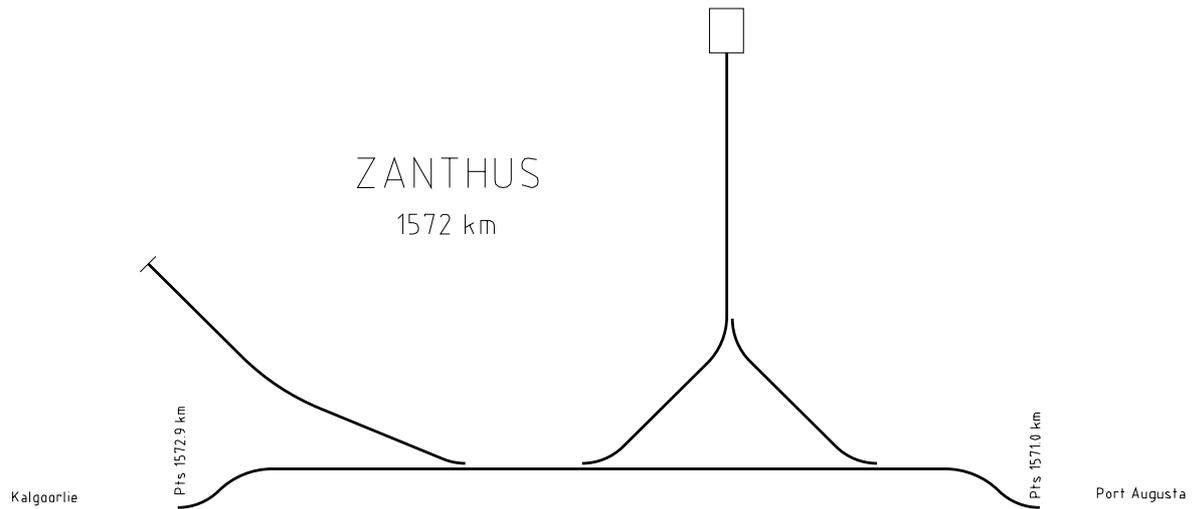
Flashing Green	Both the facing and trailing points are set and locked for the main line
Flashing Green then Red	The facing points are set and locked for the main line, but the trailing points are not set and/or locked for the main line.
Flashing Yellow	The facing points are set and locked for the crossing loop. (The trailing points are not detected.)
Flashing Red	The facing points are not set or locked normal or reverse

It should be noted that the 'flashing light indicator' is not a signal. The aspects are not in conformity with signal aspects, they are not classified as absolute or permissive signals, they are not fitted with marker lights or disks, and are not numerically identified.

In addition to the point indicators, a 'Yard Limit' board is provided 160 metres in advance of the facing points, and a Location board two kilometres in advance of the Yard Limit board.

No track circuits are provided. Four proximity switches are fitted; two near the toe of the points and two in the crossing loop. These detect the passage of wheels and the points restore to normal when the same number of axles counted in have been counted out.

Operation of trains through Zanthus was governed by the following instructions (the report does not explicitly acknowledge the source, but presumably these are from the rulebook).



Trains Crossing at Unattended Locations on Train Order Territory with Flashing Light Indicators and Self Restoring Points First Train is to take the Crossing Loop.

- (a) When the train crew have established that the train to take the crossing loop will enter the yard first, or when the train crews involved are not able to communicate, the train crew of the train to take the crossing loop must:
- Stop the train before the counters at the facing points
 - Reverse the facing points and observe the correct flashing light indication is displayed
 - Give an admittance signal and then rejoin the engine
 - Enter the crossing loop and stop before the fouling point at the far end of the loop
 - Report train arrival to the Train Controller
 - Confirm that the points ahead are correctly set for the main line
 - Give an admittance signal to the train crew of the train to take the main line
- (b) The train crew of the train to enter the main line must:
- Not pass the yard limit board until admitted by the train crew of the opposing train
 - Enter the main line on receipt of an admittance signal observing that the correct flashing light indication is displayed
 - Confirm that the train on the crossing loop is complete
 - Fulfil any other instructions contained in their Train Order for that location
 - Obtain a Train Order
 - Proceed in accordance with their Train Order.
- Note:** The train crew may traverse the main line at a speed not exceeding 50 km/h until such time as the train has passed beyond the standing train.
- (c) The train crew of the train on the crossing loop must:
- Confirm that the train traversing the main line is complete
 - Fulfil any other instructions contained in their Train Order for that location
 - Obtain a Train Order
 - Set the points for departure
 - When the train crew has rejoined the engine, proceed in accordance with their Train Order.

Sequence of events

At 1620 hours on Wednesday, 18 August 1999, eastbound NRC Freight train 3PW4N was admitted to the crossing loop at Zanthus to fulfil a cross with the westbound Indian Pacific 3AP88. Train 3PW4N was hauled by NR51 and consisted of 27 wagons and was 542 metres in length for a gross weight of 713 tonnes. It was crewed by three drivers with two Drivers in the cab and the third resting in the crew van. As previously arranged, a crew rotation took place upon arrival at Zanthus with the new Driver being briefed on the current Train Order and crossing arrangements.

The westbound Indian Pacific consisted of 19 coaches and was being hauled by NR15. It was 469 metres in length and had a gross weight of 713 tonnes. Around 1650 the crew of the Freight train sighted the headlights of the approaching Indian Pacific and one of the Drivers got off the locomotive to check the lay of the east end points and perform a roll-by inspection.. The Driver walked to the east end points and then moved to the equipment room and stood near the point control box. The Driver on the locomotive noticed him open the control box..

At approximately 1652 Freight 3PW4N received and confirmed a new Train Order from Train Control for travel

east of Zanthus. Around 1658, the Indian Pacific received and confirmed a new Train Order for travel west of Zanthus. When the Indian Pacific was some 7 to 8 kilometres from Zanthus, the crew contacted Freight 3PW4N and requested admittance to the main line at Zanthus. The Driver on the loco confirmed that the east end points were set for the main line and that the Indian Pacific could proceed. When the Indian Pacific was around 2 kilometres from Zanthus, the crew could see the light point indicator flashing green, indicating that the points were set and locked for the main line.

The Driver on the ground opened the control box, and without knowing why, and not realising he was doing it, pushed the button to reverse the points for the loop. When he heard the point motor running, he immediately pushed the button to restore the points for the main line, but the points continued to run until they were fully reversed.

Still approaching Zanthus, the Indian Pacific was being braked to a speed of 50 km/h to perform the roll-by inspection. Both Drivers noticed the light point indicator change from flashing green to flashing red (indicating loss of detection) when the locomotive was between 50 and 150 metres from the points. The brakes were immediately applied in emergency, but thirteen seconds later the Indian Pacific collided with the Freight in the loop. Impact speed was 27 km/h.

The Driver in the cab of the freight noticed the points beginning to run, and, realizing what was about to occur, jumped clear of the locomotive.

Findings

The immediate cause of the accident was the inadvertent operation of the points by one of the Drivers of the Freight train.

The report noted that this was likely to have been a 'skill based' error. Such an error occurs where a person regularly performs a routine series of actions, with the result that the actions are performed by habit with little conscious control. If it is necessary to perform a different series of actions, but the operator is distracted and fails to consciously modify their behaviour, then the habitual, but undesired, action sequence may be performed instead. In this case, it appears that the habit of the Driver was to open the box and immediately push the button to reverse the points.

The Driver's error in moving the points at the wrong time was not an isolated event. In April 1996 a freight train was derailed at Malbooma when the points were moved as the train was passing over them. In the course of the Zanthus investigation, information was given that several Drivers have nearly pushed the reverse button, but stopped themselves from doing so at the last moment.

The report noted that it is undesirable that a single human error should be able to result in a major accident, and the system in place at Zanthus placed excessive reliance on the human element.

There was no approach locking preventing the operation of the points in the face of an approaching train. Although not specifically discussed in the report, this is a surprising omission. The provision of approach locking is standard practice in the control of motor operated points for two reasons: the relatively long time most point motors take to reverse points compared with mechanical operation; and the ability to control the points remotely. Both factors applied at Zanthus. The operator immediately realised his mistake and attempted to restore the points, but the lengthy delay in running the points prevented him from doing so. The control box was located on the west side of the equip-

ment cubicle. From photographs included in the report, it appears that an approaching train would not even be visible to the Driver standing at the control box.

Lacking any electrical control preventing inadvertent operation of the points, the report notes that one way of improving safety would be to institute a more precisely defined procedure for performing crosses. The current rules, for example, list the actions to be taken but do not enforce a particular order in which they should be taken. These procedures can be drawn up to minimise the risk of mistakes occurring. The report even suggests checklists to be filled out by the train crews during crosses. Whether this approach would be successful in a railway environment is debateable.

Although not commented upon in the report, one surprising aspect of the working of the two trains was the issue of the forward section Train Orders before the opposing train had been shown to be complete, indeed before the west-bound Indian Pacific had even cleared the section.

Equipment Upgrade

On 27 April 1999, ARTC advised operators over the Trans that:

Track Access commenced a review of the current self restoring points on the TAR prior to the take up of ARTC and since that time considerable research has been undertaken into the upgrading of the existing system to provide a viable system. Whilst the present system has proven the viability of operation of self restoring points with limited technology it has reached the end of its economical life. At no time has a wrong side failure with the system been proven, however the system has not been as reliable as it should have been due to a number of factors including train length and speed over the current counters.

The major alteration was to be the provision of track circuits in lieu of the proximity switches. The track circuits will track lock the points and prevent accidental movement of the points while a train movement is actually passing over the points. Approach locking, however, was not provided. Main line movements will be able to operate at up to 110 km/h.

The 'flashing light indicators' will be renamed 'Light

indicators' and the aspects shown will be altered to:

Steady Green	Points set and locked for the main line throughout, train may proceed at normal speed.
Steady Yellow	Facing points set and locked for main line, points at far end of the yard not correctly set and locked for the main line.
Steady Red	Facing points not set or locked for the main line - points at the far end of the yard may also not be set and or locked for the main line
Flashing Yellow	Facing points set for the crossing loop

Finally, the signage will be relocated to give greater braking distances. The Yard Limit boards will be 100 metres from the facing points (unless a greater distance is required for any regular shunting, but in no case will be more than 250 metres from the facing points). Location boards will be placed 2500 metres from the Yard Limit boards. The 'light indicators' will be upgraded with new lens visible for 2500 metres and repeaters will be installed at 31 locations.

Trials of the new arrangements started at Tent Hill on 19 May 1999. Conversion of the existing loops started at Parkeston (Kalgoorlie) and worked eastwards. Conversion is expected to be completed in December 1999.

After the accident, the ARTC varied the upgrade to include unconditional approach locking .

The points will be approach locked for a fixed time period once the door to the point control box is opened, with the control system not accepting point control commands until the timer expires. Opening the door to the control box will set the Light Indicator to show steady red. The time delay is expected to be 90 to 120 seconds, but must clearly be long enough for an approaching train to either stop short of the points, or to track lock the points, before the timer expires.

In addition, there is a useful psychological effect to these changes. Opening the control box door will drop the Light Indicator to steady red, an effect not appreciated by the Driver of the approaching train. Drivers will consequently leave the control box door shut until they actually need to reverse the points.

GOWRIE

It was not until the railway line north of Fawkner was reopened on 5 March 1928 that any passenger facilities were provided in the Box Forest road area, although hand gates had probably been provided at the level crossing at 8 miles 74 chains (later Box Forest road) from the opening of the line until closure in 1903.

Of Rail Motor Stopping Places

When the Somerton Railmotor was provided on 5 March 1928, a Stopping Place (No 13) was provided at Box Forest Road (9 miles). A second Stopping Place (No 21) was opened a quarter of a mile further north in the middle of October 1928. This second stopping place would have been located in the vicinity of the subsequent platforms at Gowrie, probably near the current foot crossing at the northern end of the platform where Wells Court provides access from Sydney Road.

The Commissioner's Reports give traffic figures for RMSP 13. Traffic for the first full year was nearly 4,500 passengers (around 14 passengers per workday), but this quickly fell to around 800 passengers in the early thirties, climbing back to around 2000 passengers just before the war. The only year RMSP 21 was mentioned was in 1938/39 when a grand total of 8 passengers was recorded. Traffic at RMSP 13 was still around 2000 passengers in 1945/6, but fell back to around 800 passengers for the remainder of the forties. From 1950/1, traffic figures for RMSP 21 were again quoted. In that year RMSP 13 had 771 passengers and RMSP 21 had 360. The figures climbed throughout the first half of the fifties, and in the final full year of operation were 6660 (RMSP 13) and 1962 (RMSP 21). Both Rail Motor Stopping Places were closed with the withdrawal of the railmotor service on 5 May 1956.

Opening of Gowrie

The line was electrified and reopened a second time on 17 August 1959, however the train service was only provided to carry workman to and from the new Ford factory at Upfield. No station was provided at Box Forest road.

As from Monday, 17 May 1965 a regular suburban service was finally introduced north of Fawkner. In conjunction with the new service, a new station was provided north of Box Forest Road. The new station was named 'Gowrie'.

Gowrie consisted of a 480 foot island platform constructed on the location of the original line. The main line was slewed to run on the western side of the island platform while a spur back platform road served the eastern face. A stabling siding lead south from the back platform road towards Box Forest Road. Two trains could be stabled at Gowrie. Gowrie was opened as a Train Staff and Ticket station (sections Fawkner - Gowrie - Upfield) the day before it was officially opened for traffic.

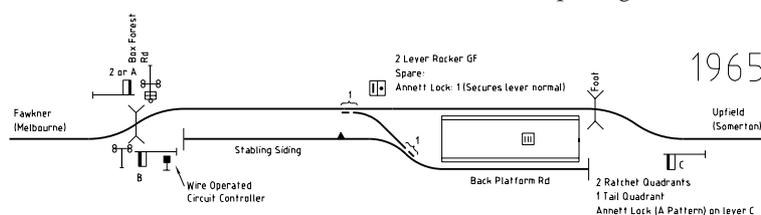
Instructions were issued for shunting trains to and from the stabling sidings. When shunting a train from the main line platform to let the following train pass, the procedure was to push the train clear of the points then drive into the back platform. The crew changed ends, and when the through service had passed, the set was driven to the main line and pushed back into the platform. When stabling or docking a train, the procedure was always to drive the train towards a dead end. Stabling a train in the stabling siding consequently required the crew to push from the platform towards Box Forest Road, drive into the back platform,

change ends, and finally drive to the dead end.

The signalling at Gowrie was brought into service the day before opening, on 16 May 1965. Three Home signals were provided, all worked from levers on the platform. The main line points leading to the Back Platform were secured by an Annett lock, with a duplicate locks on the levers working the Up and Down Home signals. The Up Departure Home was provided to suppress the operation of the flashing lights at Box Forest Road (brought into service on 27 May 1965) during shunting movements.

On 13 June 1965 the back platform was upgraded from a siding to a running line when a self contained 2 lever rocker ground frame was provided to work the crossover. Lever 1 worked the crossover and facing point locks (provided at both ends of the crossover). Lever 2 worked the Down Home for moves into the back platform. Movements from the back platform had to be hand signalled. A derailment occurred of a train departing from the back platform on 7 July 1970 and instructions were subsequently issued that the Signalman was to inspect the Down end of the crossover before hand signalling the train out of the platform.

The first WTT I have after the reopening is from the 4



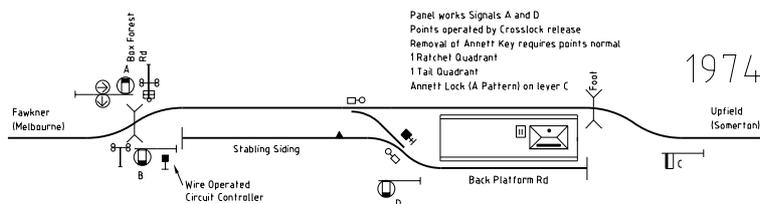
October 1965, and this shows 59 trains each weekday to Gowrie, of which 23 continued to Upfield (giving a roughly 20 minute off peak service to Gowrie, and an hourly service to Upfield). It appears that the back platform was not heavily used as the off-peak timetable was arranged such that only one train was beyond Fawkner at any one time. One train was stabled overnight at Gowrie; this formed the last Down Upfield at night and the first Up Upfield the next morning and ran empty to and from Gowrie. The timetable was essentially unaltered in May 1972, except that there was now 24 trains to Upfield.

Gowrie was an immediate success. In the first full year of operation, 418,692 passengers were carried. Unfortunately, the railways then ceased publishing traffic figures and subsequent traffic development cannot be followed.

Homes A and C (protecting Box Forest Road) were converted to light signals on 19 May 1974. They continued to be worked from the conventional levers on the platform, and wire operated circuit controllers were provided near Box Forest Road.

Interlocking

According to 'The Electric Railways of Victoria', the off-peak timetable north of Fawkner was revised on 10 December 1973 and henceforward every second train ran through to Upfield. The timetable shows a basic 20 minute weekday off-peak service to Gowrie with every second train extended to Upfield (61 trains per day to Gowrie, and 32 to Upfield). The last Down Upfield train still stabled overnight at Gowrie, forming the first Up Upfield train the next morning. The provision of a 40 minute service required lengthy standing times at both Gowrie and Upfield. The Gowrie local would terminate in the back platform where it would stand for twenty nine minutes. Nine minutes after its arrival, the Up



Upfield train would pass through on the main line. This would cross the next Down Upfield between Batman and Merlynston. The Down Upfield would pass through Gowrie, crossing the Gowrie local (still in the back platform). Nine minutes later, the Gowrie train would depart for Melbourne and cross the next Gowrie local. The same basic approach was still used as late as 1989.

To provide for signalled moves to and from the back platform, Gowrie was 'interlocked' on 28 November 1974. Interlocked in quotes as it was a unique arrangement done on the cheap (the estimated cost in April 1974 was \$17,000).

The crossover was fitted with point motors. A two position Up Home (light) 'D' was provided for movements from the back platform to the main line. The existing Down Home (light) 'A' was equipped with arrow type route indicators and would clear for moves to the main or back platforms. When cleared for moves to the back platform, the signal was approach operated and time delayed (i.e. would only clear after the approaching train had been on the track circuit for a certain time). Both of these light signals, and the crossover, were operated from a 'panel' in the station building.

Homes B and C continued to be operated from the levers on the platform; Home C through the via the wire operated circuit controller. Home 'B' continued to be secured normal by an Annett Lock.

No signals were provided for movements to and from the stabling siding and these continued to be hand signalled. Shunting moves to the stabling siding required the train to pass Home D at danger, and the signaller was instructed to check that the motor operated points had been detected normal before authorising the move. A point indicator was attached to the Down end of the crossover. It is to be noted that no interlocked catch points or derail block was ever provided in the stabling siding.

The 'panel' in the station building was unique. It was, in fact, one of the station cupboards, suitably adapted for its new role. Homes A and D were operated by two standard thumb switches provided with the normal 'N', 'R', and route proving lights.

The crossover was worked from an adapted 'Annett Lock Electric Crosslock'. These are normally used to electrically release an Annett key ground frame. Internally, the crosslock comprises a standard lever lock which is operated by moving a handle through 90 degrees in a slot.

At Gowrie the crosslock was used as a point lever with the normal point controls applied to the lever lock. The handle was locked in the normal and reverse indication positions until the point motor had been proved normal or reverse (respectively). It was also locked full normal or reverse while a train was on the points, or a signal had been cleared for a train to approach. The 'point lever' was provided with a push button to operate the lever lock, 'N', 'R', and 'Free' lights.

When the handle was normal (and the points consequently set and locked normal) a separate Annett Key could be removed and used to unlock the Up Home for a train to

approach from Upfield.

Unlike all other Victorian panels, no illuminated diagram or list of pulls were provided.

Twenty five years

Gowrie change little during the next twenty five years. A Down approach annunciator was provided on 11 January 1978, and a post phone at

Home A on 14 December 1984. From 10 January 1990 the Staff Ticket Boxes for the Gowrie - Upfield section was removed and all trains were required to carry the Train Staff.

By 1989, two trains each night were stabled at Gowrie, and these formed the first two Up Upfield trains the next weekday morning.

As from Monday, 5 November 1990, the line north of Gowrie was temporarily closed to allow construction of a bridge over the new Western Ring Road just south of Camp Road. The main line was baulked on the Down side of Gowrie. The service to Upfield was restored on 22 July 1991, with the line technically reopening the previous day. In preparation for the reopening, the mechanical arm on Up Home B was replaced by a light signal on 19 July. During the closure, the overhead had been renewed and it was discovered during trials that the new steel stanchions obscured the mechanical signals.

With the reopening, running times between Fawkner and Upfield were reduced (from 9 minutes to 7 minutes on the Down, and from 9 minutes to 6 minutes on the Up), allowing a round trip to Upfield to be completed in less than 20 minutes. All trains were consequently extended to Upfield and use of the back platform ceased for terminating trains. Two trains continued to be stabled at Gowrie overnight, however, and the back platform continued to be used for this purpose.

As from 15 November 1993 Staff Ticket Boxes were restored to use on the Gowrie - Upfield section.

Resignalling

The resignalling of the Upfield line involved duplication between Fawkner and Gowrie. The end of the double line is situated north of the platform, with both platform faces in use.

In preparation for this work, the Back Platform was booked out of service from Tuesday, 12 August 1997. Gowrie was closed as a Staff station on 28 September 1997. The motor operated points and all signals except for Post 69 were abolished. Post 69 was converted to a Two Position Automatic signal and was renumbered C.574.

On 6 September 1998 boom barriers and automatic pedestrian gates were provided at Box Forest Road. Box Forest Road was one of the last level crossings in the metropolitan area not protected by boom barriers, and the railways had come under pressure due to the number of accidents that occurred at the crossing. Earlier in 1998, fatal accidents had occurred at the crossing on successive days; the second accident being to a street sweeper cleaning up the debris left from the accident the previous day.

The new signalling at Gowrie was brought into use on 16 November 1998. Double track, controlled by three position automatic signalling, was provided between Fawkner and Gowrie. The end of double track was immediately on the Down side of Gowrie platform. The signalling at Gowrie was controlled from the new SSI panel at Upfield.

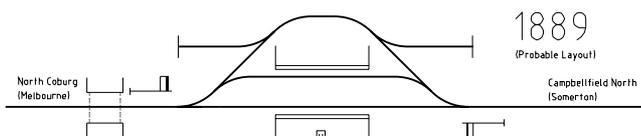
CAMPBELLFIELD

Campbellfield is the perfect mirror to Gowrie. Opened with the line for both passengers and goods, it deteriorated to a Rail Motor Stopping Place and was permanently closed in 1956. Apart from Fawkner (which was resited), it is the only station on the Upfield line to have been closed.

The village of Campbellfield was situated on the Hume Highway, probably to the north east of the station. In 1886, it was described as an agricultural village with a population of around 150. The population was served by two chapels (Presbyterian and Primitive Methodist) and three hotels with the wonderful names of 'Wheatsheaf', 'Plough', and 'Waggoner's Arms'. There was a local state school (No 143) with an average attendance of 52 pupils. Visitors to Campbellfield could walk the two miles from Broadmeadows station, or catch the daily 'car' from Melbourne at a fare of 2s 6d one way.

As a station

Campbellfield station was opened with the line on 8 October 1889 for passengers and light goods not requiring shed accommodation or crane power. The station was situated between what are now known as Camp Road and Thompson street, however it appears that the station was immediately south of Thompson street, from which access to the station was provided. Hand gates were probably provided at Camp Road, but Thompson street passed under the line.



The first full year of operation (1890/1) saw 12,806 passengers, 878 tons of goods inwards and 174 tons of goods outwards. Detailed reporting of traffic then ceased until 1897/8.

Campbellfield was apparently a Staff and Ticket station from opening. Around 1890 it was recorded that the sections were North Coburg (Merlynston) - Campbellfield with a No 3 Pattern Staff, (blue ticket box with white lettering), and Campbellfield - North Campbellfield (Upfield) with a No 4 Pattern Staff, (red ticket box with black lettering). Single line block was provided with the same sections.

Bradshaw's shows that the original service was 10 passenger trains each weekday. There would have been at least one goods train daily, but, of course, this is not shown in Bradshaw's. The timetable was halved as from 2 September 1890. The May 1892 WTT still showed 5 weekday passenger trains and also showed 2 through NE line Goods (Down direction only), and a single daily roadside Goods which departed Campbellfield at 0715 on the Down and 0818 on the Up. No use was made of Campbellfield as a Staff station or Block post in any of these timetables.

Campbellfield North was closed as a Staff station on 9 May 1892, the section then becoming Campbellfield - Somerton. Campbellfield, in turn, was closed as a Staff station on 23 March 1893; the section becoming Coburg - Somerton.

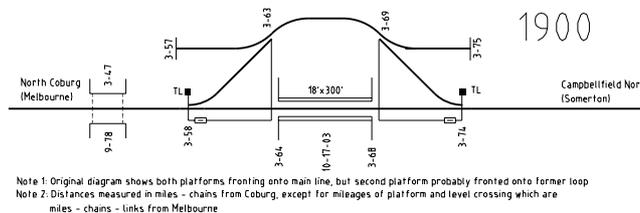
By the May 1894 WTT two of the five daily passenger trains had been cut back to terminate at Campbellfield, leaving only three services continuing on to Somerton. By this date, Campbellfield was the only staffed stations north of Coburg. On 1 January 1896, a women was placed in charge

of Campbellfield. Campbellfield was supervised by Coburg.

On 19 November 1896 the points were secured by 'No 1 Pattern' Tablet Locks rodded to catch points. The signals had been taken out of use on 21 August 1895.

By December 1896 three of the five daily passenger trains terminated at Campbellfield, leaving only two (one in the morning and one in the evening) running to Somerton.

In 1897/8, the Commissioners' Report started giving traffic details again. Campbellfield was shown as originating 6818 passenger and 201 tons of goods. It received 484 tons. These traffic returns remained stable until the turn of the century. The description of Campbellfield in the 1898 Australian Handbook was largely unchanged from 1886, except that the population had increased to 213, a post office had been opened, and potteries erected. One of the hotels, however, had succumbed and the other two had been renamed; now being named the 'Cyclist's' and the other 'Campbellfield'. A measure of the benefit of the coming of the railway can be noted from the reduction in cost in reaching the village. It had been reduced from 2s 6d before the railway to 10.5d (first) or 8.5d (second).



Note 1: Original diagram shows both platforms fronting onto main line, but second platform probably fronted onto former loop
Note 2: Distances measured in miles - chains from Coburg, except for mileages of platform and level crossing which are miles - chains - links from Melbourne

A diagram from around the turn of the century shows an unusual layout, with two timber faced earth platforms - one on each side of the main line - with a siding looping behind the platform. One explanation for this odd layout is that the diagram is not quite accurate; with the Down side platform actually situated further from the main line on a lifted loop.

Traffic began to increase after 1900/01. In the last full year of operation before closure on 13 July 1903, Campbellfield had 8479 passengers, 256 tons of goods out, and 961 tons inwards. Although still low, the passenger traffic was easily double that of all the other stations north of Coburg combined.

On 9 May 1900 Campbellfield was established as a Temporary Train Staff and Ticket station for ballast trains. The sections were Coburg - Campbellfield - Somerton. The tablet locks were disconnected and replaced by hand locking bars. Hand signalmen were provided to act as Home signals. Campbellfield was closed as a Staff station in late June 1900 and the Tablet locks reconnected.

The 1901 WTT shows that an additional Campbellfield train had been added, giving four trains to that station with an additional two trains running through to Somerton. This basic timetable remained until closure.

With the closure of the railway Campbellfield went backward. The 1906 Municipal Directory notes the population as being 195 and omits mention of the potteries. Access to the village was by Cab from Brunswick, twice daily.

Rail Motor Stopping Place

Campbellfield was reopened for passenger and parcels traffic when the line was reopened for the railmotor service on 5 March 1928. The new Campbellfield was a pair of low level platforms on the Down side of Camp Road with a shel-

ter shed on the western side of the line. A lovely photograph of the beetle at Campbellfield appears on the inside front cover of 'Victorian Railways Railmotors' edited by Neville W. Gee and John Sargent.

The 1928 Munciple Directory gives a snapshot of the village just prior to the re-opening of the line: 'Agricultural township on Merri creek with post and telegraph office, State school, two churches, cemetery, police station, and two hotels. Tennis, social, and cricket clubs, recreation hall and ground. Population 243.' By 1930, the population had increased to 257. Although few in number, the residents certainly used the railmotor. In the first full year of operation (1928/9) a grand total of 21,737 passengers were recorded. This peaked at 24,000 the next year before falling to a low of 14,000 in the middle of the depression. Traffic then recovered to 19,000 for the second half of the thirties and peaked just before the war at 24,000. During this period, traffic at Campbellfield was between three and four times the traffic at the next busiest stopping place on the line.

A second Rail Motor Stopping Place (No 18) was opened in late April 1928 at 10 1/2 miles. This would have been to the north of the original station, probably at either Thompson or Sunshine streets. This stop was almost unused compared with Camp Road; the most passengers recorded was 566 in 1928/9. This had dwindled to just 19 passengers in 1932/3. No further passenger traffic was recorded, but the stop remained open until the rail motor was withdrawn.

During all this, the goods siding remained intact. Its removal was notified in the Weekly Notice in early March 1941. A lot of under utilised sidings were removed around this time, probably because the railways were finding it difficult to obtain rail due to the war.

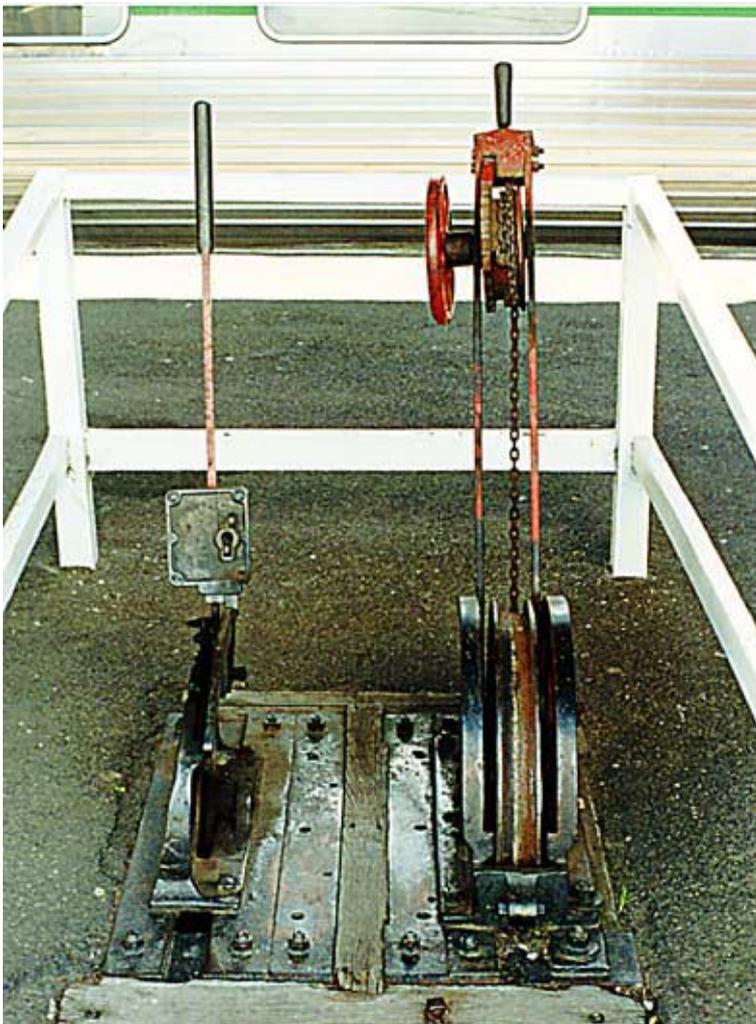
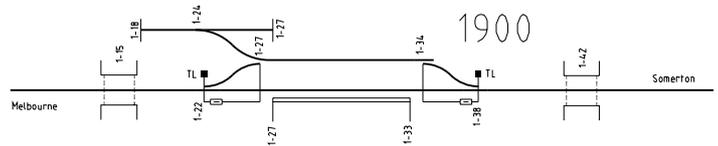
After the war traffic fluctuated between 21,000 (in 1946/7) and 30,000 (in 1949/50). The troubles of the early fifties saw this drop to 18,000 in 1951/2 before recovering to 23,000 the next year. It remained at roughly this level until the stopping places were closed with withdrawal of the railmotor on 5 May 1956.

Campbellfield was not reopened with the provision of the suburban electric service in 1965. Today, the site of the original Campbellfield station is marked by a substation built on the former platform mound.

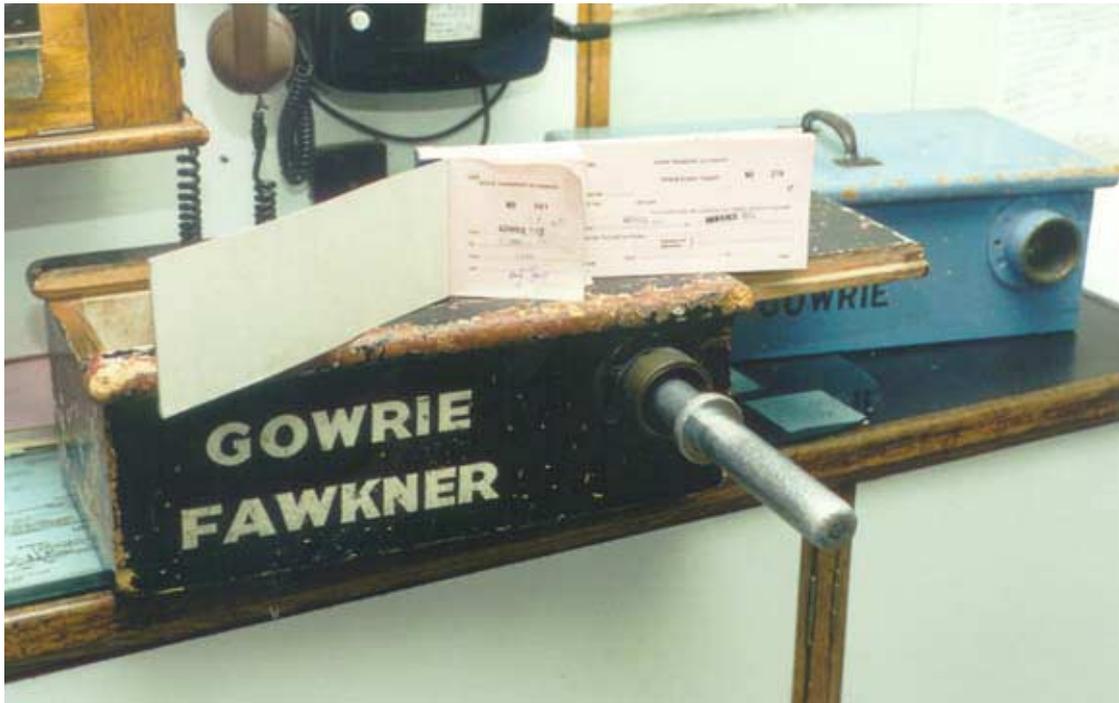
Flashing lights were provided at Camp Road on 12 November 1963, and boom barriers on 20 May 1979.

ERRATA

Michael Guiney has kindly forwarded some diagrams of the station layouts north of Coburg. The diagrams were drawn around 1900 to record details of the track at locations. Diagrams were prepared for North Coburg, Campbellfield, and Campbellfield North; suggesting that Bell Park and Fawkner had lost their sidings by that time. The diagram for Campbellfield is included in this issue, and that for Campbellfield North will be included in the next installment. The diagram for North Coburg (Merlynston) is included below.



The two mechanical signal levers that were on the platform at Gowrie prior to its abolition as a Staff and Ticket station in 1998. The lever on the left works Up Home B and the Annett Lock that secures the lever normal can be clearly seen. The lever on the right works Up Home C protecting the flashing lights at Box Forest Road. The left hand lever is of the type known as a 'Tail Quadrant' as the signal wire is directly connected to the tail of the lever below ground level. This type of lever is used where the distance between the signal and the lever is small enough that it is not necessary to regularly alter the length of the signal wire due to temperature changes. The righthand lever is a 'Ratchet Quadrant' which is used where it is necessary to regularly take in or let out the signal wire. The signal chain passes round a large drum at the base of the lever and then around the small drum at the top of the lever. This small drum can be wound up (tightening the wire) by means of the small handwheel on the left of the lever. The ratchet, of course, holds the small drum in place once the adjustment has been made. In the middle can be seen the mounting plates where the third lever, another ratchet quadrant, was mounted before provision of the panel.



The Staff and Ticket Boxes at Gowrie in 1997. The top photo shows the Gowrie - Fawkner Ticket box (black with white lettering). The Staff is in the lock and the Ticket Box is open with the Ticket Book open on top of the box. The Upfield - Gowrie can be seen behind the Fawkner box, and another photo is shown below. The Upfield - Gowrie Ticket Box was Blue with Black lettering. The Gowrie - Fawkner Staff is a modern Duraluminium Staff, while the Upfield - Gowrie is a very battered Steel Staff with Brass rings. In front of the Upfield - Gowrie box can be seen the A Pattern Annett Key used to unlock the Up Home signal.

