

# SOMERSAULT

NOVEMBER 2015

VOL 38, No 6

SIGNALLING RECORD SOCIETY OF VICTORIA



## SOCIETY CONTACT INFORMATION

Published by the Signalling Record Society Victoria Inc (A0024029F)

EDITOR: Andrew Waugh, 28 Amelia St McKinnon, VIC, 3204

Phone (03) 9578 2867 (AH), (03) 9348 5724 (BH), email [andrew.waugh@gmail.com](mailto:andrew.waugh@gmail.com)

PRESIDENT: David Langley, P.O. Box 8, Avenel, VIC, 3664, Phone (03) 5796 2337

SECRETARY and MEMBERSHIP OFFICER: Glenn Cumming,

Unit 1/4-6 Keogh St, Burwood, VIC 3125. Phone (03) 9808 0649 (AH)

NSW CONTACT: Bob Taaffe, 63 Hillcrest Rd, Tolmans Hill, TAS, 7007, Phone: (03) 6223 1626

QUEENSLAND CONTACT: Phil Barker

PO Box 326, Samford, QLD, 4520, Phone: (07) 3289 7177, email: [signal-1@bigpond.com](mailto:signal-1@bigpond.com)

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.)

## MINUTES OF MEETING HELD FRIDAY 18 SEPTEMBER 2015, SURREY HILLS NEIGHBOURHOOD CENTRE, 1 BEDFORD AVENUE, SURREY HILLS

- Present: – Phil Barker, Robert Bremner, Wilfrid Brook, Glenn Cumming, Graeme Dunn, Michael Formaini, Ray Gomerski, Chris Gordon, Judy Gordon, Chris Guy, Graeme Henderson, David Jones, Keith Lambert, David Langley, Andrew McLean, Michael Menzies, Colin Rutledge, Laurie Savage, David Stosser, Bob Taaffe and Andrew Wheatland.
- Apologies: – Ken Ashman, Graeme Cleak, Brian Coleman, Steven Dunne, Bill Johnston, Chris King, Steve Malpass, Tom Murray and Andrew Waugh.
- Visitor: – Paul Horder, Neil Lewis.
- The President, Mr. David Langley, took the chair & opened the meeting at 20:04 hours.
- Minutes of the July 2015 Meeting: – Accepted as read. David Stosser / Wilfrid Brook. Carried.
- Business Arising: – Nil.
- Correspondence: – Letter to David Ward at Metro Trains seeking permission for the Signal Box tour on Saturday 19 September 2015.
- The invoice for the “Signalling Record” for 2014 was received from the SRSUK and payment was sent. Andrew Wheatland / Keith Lambert. Carried.
- Reports: – Glenn Cumming reported on final plans for the signal box tour tomorrow.
- Archives. David Langley advised that the SRSV Committee had accepted the proposal tabled at the previous meeting and had approved a budget for the scope of works.
- Colin Rutledge reported on progress with the archives room works. The new floor has been laid. The South Yarra power frame was under construction. Thanks to the Members who have assisted. Further works sessions are planned to complete the South Yarra power frame, complete the remaining building works and erect the shelving. Plans for the future include sorting the documents already on site and preparation for scanning.
- Glenn Cumming noted that many members had provided positive feedback about this project.
- General Business: – Keith Lambert provided details about various works in the Metropolitan District. A summary of the discussion follows: –
- A five day shutdown of the Glen Waverley Line commences on Sunday for grade separation works at Gardiner.
  - Minor works associated with the grade separation works at Ormond will commence soon.

*(Front cover). The grade separation works on the Frankston line at North Road (Ormond), McKinnon Road (McKinnon), and Centre Road (Bentleigh) have now commenced and the level crossings are currently scheduled to be taken out of service by mid 2016. The signalling on this section is relatively recent, being installed in 1987 with the provision of the third track between Caulfield and Moorabbin. The signalling uses audio frequency track circuits, relays, and GEC modular signal heads. It is believed, however, that the boom barrier/flashing light masts at McKinnon date from 1974 when the mechanically operated booms were replaced. In recent years the original gongs on both sides have been replaced by electronic sounders. (Photo Andrew Waugh)*

- A proposal for grade separation of the Mountain Highway level crossing at Bayswater has been prepared.
- Planning has commenced for the removal of nine level crossings between Caulfield – Dandenong.
- A proposal for rationalisation of Oakleigh including remote control from Caulfield in 2016 has been prepared.

Laurie Savage noted that the grade separation at Burke Road Gardiner will be rail under road.

Michael Menzies reported that abolition of the signals and interlocking at Meredith was awaiting approval.

Andrew McLean asked for details of gauge convertible low-profile concrete sleepers.

David Stosser asked for details of a new design of turnout. Colin Rutledge reported on a prototype Vossloh dual gauge turnout with five blades.

Graeme Henderson reported on work in progress for the Epping (NSW) – Thornleigh (NSW) three track project.

Bob Taaffe advised that the mechanical interlocking at Katoomba Signal Box will be abolished in the next few months to be replaced by remote control from Blacktown.

Phil Barker provided details about various works in Brisbane QLD. A summary of the discussion follows:

- A new control centre is being constructed at Mayne.
- Progress on the construction of the Petrie – Kippa-Ring Line.
- Digital train radio is being rolled out.
- Planning for the introduction of ETCS Level 2.

Chris Gordon reported on re-signalling works between Richmond – Camberwell. The relay interlocking at Burnley will be replaced by a “Smartlock” CBI.

Syllabus Item: – The President introduced Member Bob Taaffe to present the Syllabus Item.

Bob addressed the meeting on the subject of “The Evolution of Electric Staff Design”.

Bob shared the results of research on a topic that he has studied for many years, noting that the research is not yet complete. Bob described what he had discovered along with the successes and failures in his research.

The presentation was accompanied by a variety of images showing examples of electric staff instruments around the world, drawings, extracts from patents and other illustrations.

An excellent presentation was thoroughly enjoyed by those present.

At the completion of the Syllabus Item, The President thanked Bob for the entertainment & this was followed by acclamation from those present.

Meeting closed at 22:40 hours.

The next meeting will be on Friday 20 November, 2015 at the Surrey Hills Neighbourhood Centre, Bedford Avenue, Surrey Hill, commencing at 20:00 hours (8.00pm).

## SIGNALLING ALTERATIONS

*The following alterations were published in WN 34/15 to WN 40/15 and ETRB A circulars. The alterations have been edited to conserve space. Dates in parenthesis are the dates of publication, which may not be the date of the alterations.*

<b>13.08.2015</b>	<b>Hattah</b>	<b>(TON 481/15, WN 34)</b>
	On Thursday, 13.8., No 2 Road was booked out of service. TON 458/15 is cancelled.	
<b>21.08.2015</b>	<b>Caulfield</b>	<b>(SW 322/15, WN 35)</b>
	On Friday, 21.8., the Through Siding was booked back into service.	
<b>24.08.2015</b>	<b>Cheltenham – Mentone – Parkdale</b>	<b>(SW 305/15, WN 33)</b>
	On Monday, 24.8., the stopping and express warning times for the following level crossings were increased: Park Road (Up and Down); Charman Road (Up and Down); Latrobe Street (Up and Down); and Balcombe Road (Up only). The Up stopping and express warning time for the Mitchell St pedestrian crossing was increased. The interlocking between Automatic F796 and the Alameda St pedestrian crossing was modified.	
<b>(25.08.2015)</b>	<b>Stratford – Hillside</b>	<b>(SW 120/15, WN 34)</b>
	Diagram 14/15 (Stratford – Hillside) replaced 2/12 (Stratford) as in service.	
<b>30.08.2015</b>	<b>Yarraville</b>	<b>(SW 314/15, WN 34)</b>
	On Sunday, 30.8., the Down warning times for Anderson Street were increased.	

- 30.08.2015 Spotswood (SW 314/15, WN 34)**  
On Sunday, 30.8., the control of Up Automatic W348, situated at the Up end of the Up platform, was modified to require the boom barriers at Hudson Road to be horizontal before the signal can clear.
- (01.09.2015) North Ballarat (SW 123/15, WN 35)**  
The West Line Siding between Doveton Street and Gillies Street has been permanently placed out of use together with the Flour Mill sidings. The portion of the West Line between Macarthur Street and Creswick Road has been abolished.  
Points 9 leading to the West Line Siding at Doveton Street, and the associated Catch 9, have been secured normal. The signs relating to the operation of a Rail Tractor at the Flour Mill siding have been abolished. The board relating to movements on the West Line approaching Macarthur Street has been abolished.  
Amend Diagram 4/13 (North Ballarat Junction). Operating Procedure 72 (see SW 87/11) was cancelled. SW 56/09, TON 173/11, and TON 188/13 were cancelled.
- 04.09.2015 Somerton – Bright Steel Siding (TON 491/15, WN 36)**  
On Friday, 4.9., Bright Steel Siding was booked out of service due to missing signalling signage. The points giving access to the siding have been secured normal.
- 07.09.2015 Ouyen (TON 492/15, SW 129/15, WN 36)**  
On Monday, 7.9., No 2 Road was booked out of service due to poor sleeper and rail condition. The points leading to No 2 Road have been secured away from the line. No 3 Road is to be used as the crossing road and must be kept clear of vehicles. Operating Procedure 90 will continue to apply, except that references to No 2 Road will be taken to apply to No 3 Road.
- 07.09.2015 Parkdale (SW 334/15, WN 35)**  
On Monday, 7.9., the Up stopping warning times for Alameda St pedestrian crossing were increased.
- 07.09.2015 Mordialloc - Aspendale (SW 334/15, WN 35)**  
On Monday, 7.9., the Up express and stopping warning times for the Wyuna Ave/Retreat Ave pedestrian crossing were increased. Up and Down holding circuits were provided.
- 07.09.2015 Edithvale (SW 334/15, WN 35)**  
On Monday, 7.9., the Up stopping and express warning times for Edithvale Road were increased.
- (08.09.2015) Ardeer – Rockbank (SW 128/15, WN 36)**  
Diagram 26/15 (Ardeer – Rockbank) replaced 86/14 as in service.
- (08.09.2015) Wyndham Vale (SW 128/15, WN 36)**  
Diagram 126/14 (Wyndham Vale) replaced 120/14 as in service.
- 11.09.2015 North Ballarat (SW 125/15, WN 36)**  
On Friday, 11.9., boom barriers were provided at the existing flashing lights at Heinz Lane (159.441 km) on the Maryborough line. The boom barriers will be operated by a level crossing predictor. RFR predictor boards were provided. Trains travelling at more than 49 km/h at the predictor boards may increase speed before reaching the level crossing.  
Amend Diagram 4/13 (North Ballarat).
- 13.09.2015 Centrol, Ballarat (SW 127/15, WN 36)**  
On Sunday, 13.9., the signalling VDUs at Centrol and Ballarat were updated to indicate the status of the boom barriers at Manns Rd. The indications will not become operational until the boom barriers are commissioned.
- 14.09.2015 Altona Junction – Westona (SW 339/15, WN 36)**  
On Monday, 14.9., the following alterations were carried out to allow the introduction of Xtrapolis trains:
- Automatic WR574 was interlocked with Civic Pde.
  - The warning time for Down trains at Millers Rd was increased.
  - The warning time for Up trains at Pier St was increased.
  - The warning time for Down trains at Upton St pedestrian crossing was increased.
  - Automatic WR613 will be approach operated by occupancy of the Altona station platform track for stopping trains.
  - The warning time for Down trains at Grieve Pde was increased.
  - The warning time for both Up and Down trains at Maidstone St was increased, and the interlocking with Home WTO710 was altered.
  - Automatic WR608, and Homes WTO704, WTO704P, & WTO705 were converted to LED.
- (15.09.2015) Bank Box (SW 130/15, WN 37)**  
The occupation crossing at 69.133 km on the Down side of Bank Box Loop was closed. The passive level crossing signage was removed. Amend Diagram 102/12 (Bacchus Marsh – Bank Box Loop).



- 15.09.2015 Ingliston (SW 127/15, WN 36)**  
On Tuesday, 15.9., boom barriers were provided at the passive crossing at Manns Rd (71.060 km). The boom barriers will be operated by a level crossing predictor. RFR predictor boards and remote monitoring were provided. Trains travelling at more than 49 km/h at the predictor boards may increase speed before reaching the level crossing.  
Amend Diagram 102/12 (Bacchus Marsh – Bank Box Loop).
- 20.09.2015 Collingwood (SW 349/15, WN 38)**  
On Sunday, 20.9, Down Automatic S115 was relocated 5 metres in the Down direction and provided with a U2L style co-acting signal (S115P) on the mast. Diagram 29/15 (Jolimont – Merri & Westgarth) replaced 112/12.
- 21.09.2015 Melton (SW 134/15, WN 38)**  
On Monday, 21.9., Siding A was restored to normal use. The dual control point machine for Catch 25 was restored to use. SW 83/15 and TON 457/15 were cancelled.
- (22.09.2015) Maintenance of points at unattended locations (SW 131/15, WN 38)**  
Commencing forthwith the existing procedures for maintenance of Staff, Annett, or Master Key locked points at unattended locations (Book of Rules, Section 27, Procedure 30) will be cancelled on the V/Line network. All such maintenance must be carried out under the provisions of Book of Rules, Section 15.
- 23.09.2015 Newport Workshops (SW 355/15, WN 39)**  
On Wednesday, 23.9., the train stabling compound gates and keyswitches adjacent to the Yardmaster's office within the Newport Workshops sidings were removed. New gates are to be installed.
- 23.09.2015 Maryborough – Ararat (SW 133/15, WN 38)**  
On Wednesday, 23.9., the Train Staff & Ticket System for the section Maryborough – Ararat was abolished. The line is now operated under an Absolute Occupation.  
The existing baulks adjacent to Home MYB2 at Maryborough and at 274.270 km (near the Albert St bridge) at Ararat will remain. The level crossing protection equipment at Derby Rd (188.504 km), Pyrenees Highway (191.237 km, 224.683 km, 234.802 km, & 242.773 km) and Sunraysia Highway (211.992 km) are disconnected from the electrical supply.  
TON 156/13 was cancelled.
- 28.09.2015 Newport - Williamstown (SW 351/15, WN 38)**  
On Monday, 28.9., the following alterations were carried out to allow the introduction of Xtrapolis trains:
- The warning time for Down trains at Ferguson St was increased.
  - The approach clearing conditions for WMN741 was altered to require the Giffard St approach track circuit to be occupied for 21 seconds and the boom barriers proven horizontal.
  - Up Home WMN742 was replaced by a new LED mast.
- (29.09.2015) North Melbourne – Macaulay (SW 366/15, WN 39)**  
Diagram 9/15 (North Melbourne – Macaulay) replaced 39/14 as in service. The alterations shown are the provision of TPWS at NME461 & NME562, and the provision of approach operation of NME461.
- (29.09.2015) South Kensington (SW 368/15, WN 39)**  
Following two over-speed diverging movements when the route has been set from the Up Main Suburban Line to the Up Through Suburban Line, the following instructions must be observed. When it is necessary to route a train from the Up Main to the Up Through Suburban Lines at South Kensington, Up Homes SKN754 and SKN756 must be held at Stop. When the approaching train has arrived at SKN754 it may be cleared to allow the train to approach SKN756. When the train has arrived at SKN756 the route may be set for the train to proceed to the Up Through Suburban Line. Homes SKN754 and SKN756 must not be set to ARS (automatic route setting) mode, but may be placed in 'fleeting' mode.
- 04.10.2015 St Albans (SW 360/15, WN 39)**  
On Sunday, 4.10., No 2 (Down) platform was closed to traffic and no Down trains will stop at St Albans. The level crossing equipment at Main Road will only operate in 'Express' mode and the selection will be disabled. It is expected that St Albans will reopen to Down trains on Friday, 30.10.
- 05.10.2015 Melbourne Yard – Steel Terminal (SW 137/15 & 138/15, WN 40)**  
From 1300 hours on Monday, 5.10., the Melbourne Steel Terminal was closed to all rail traffic. The following alterations took place:
- The hand points in advance of Dwarf MYD108 were secured to lie for the South Hump Avoiding track.
  - Points MYD103 in the Reversing Loop were secured normal.
  - The hand points in the North Lead at Stop Board 2 were secured to lie towards Dwarf MYD104.

- Baulks were provided on: the approach to Dwarfs MYD100 & MYD102; in the broad gauge tracks leading towards the Steel Terminal; and in the standard gauge South Canal Lead opposite Stop Board C.
- Dwarfs MYD100, MYD102, and MYD230 were secured at Stop.
- Dwarfs MYD104 and MYD106 cannot be cleared for moves towards the Steel Terminal
- The Annex or Empty Returns Siding will be closed to traffic and the points secured away from the siding.
- Stop Boards 2, 3, 5, & C were abolished.

The standard gauge South Canal Lead will be retained between Stop Boards A/ B and the baulk opposite Stop Board C to provide an engine release for shunting moves. No vehicles may be stabled on this track. Permission to pass any of the Stop Boards is now given by the RRL Train Controller, and the Train Controller need not refer to the local shunt crew in granting this permission.

Amend Diagrams 122/14 (West Tower) and 124/14 (Moonee Ponds Creek). Operating Procedure 132 (Melbourne Yard) was reissued and SW 129/12 was cancelled.

**05.10.2015 Richmond (SW 362/15, WN 39)**

On Monday, 5.10., a LED '65' indicator was provided on the co-acting Automatic 679P on the Up Caulfield Through line.

**(06.10.2015) Manual operation of points on the RRL Corridor (SW 135/15 & 136/15, WN 40)**

The padlocks on the selector and hand throw levers on the dual control point machines on the RRL corridor can only be unlocked by Signal Maintenance Technicians. This applies from Southern Cross Platforms 15/16 to Spion Kop Junction; to the Regional Access Lines and North Melbourne Flyover from Franklin St Junction to Spion Kop Junction, and on the RRL between Spion Kop Junction and Deer Park Junction.

The padlocks on the point mechanism at Wyndham Vale South and Manor Junction can be unlocked by operational staff.

Operating Procedures 54 (Werribee – Geelong Defective Signals) and 55 (Deer Park Junction – Manor Junction) were reissued. SW 136/14, 12/15 and 17/15 were cancelled.

**(06.10.2015) Tottenham – Tottenham Yard Access (SW 139/15 & 140/15, WN 40)**

An electronic 5P keyswitch has been provided to operate the Tottenham Yard Access level crossing at 8.520 km. Operating Procedure 13A (South Kensington – Sunshine RRL lines) was reissued. SW 230/14 was cancelled.

**(06.10.2015) Ouyen – Carwarp (SW 143/15, WN 40)**

Diagram 10/15 (Ouyen – Carwarp) replaced 8/07. Alterations include: alterations to Post 3 at Ouyen (SW 160/15); the abolition of the siding at Kiamal (91/09); and the abolition of the Up end points at Hattah (SW 91/09).

**(06.10.2015) Mangalore – Creighton (SW 142/15, WN 40)**

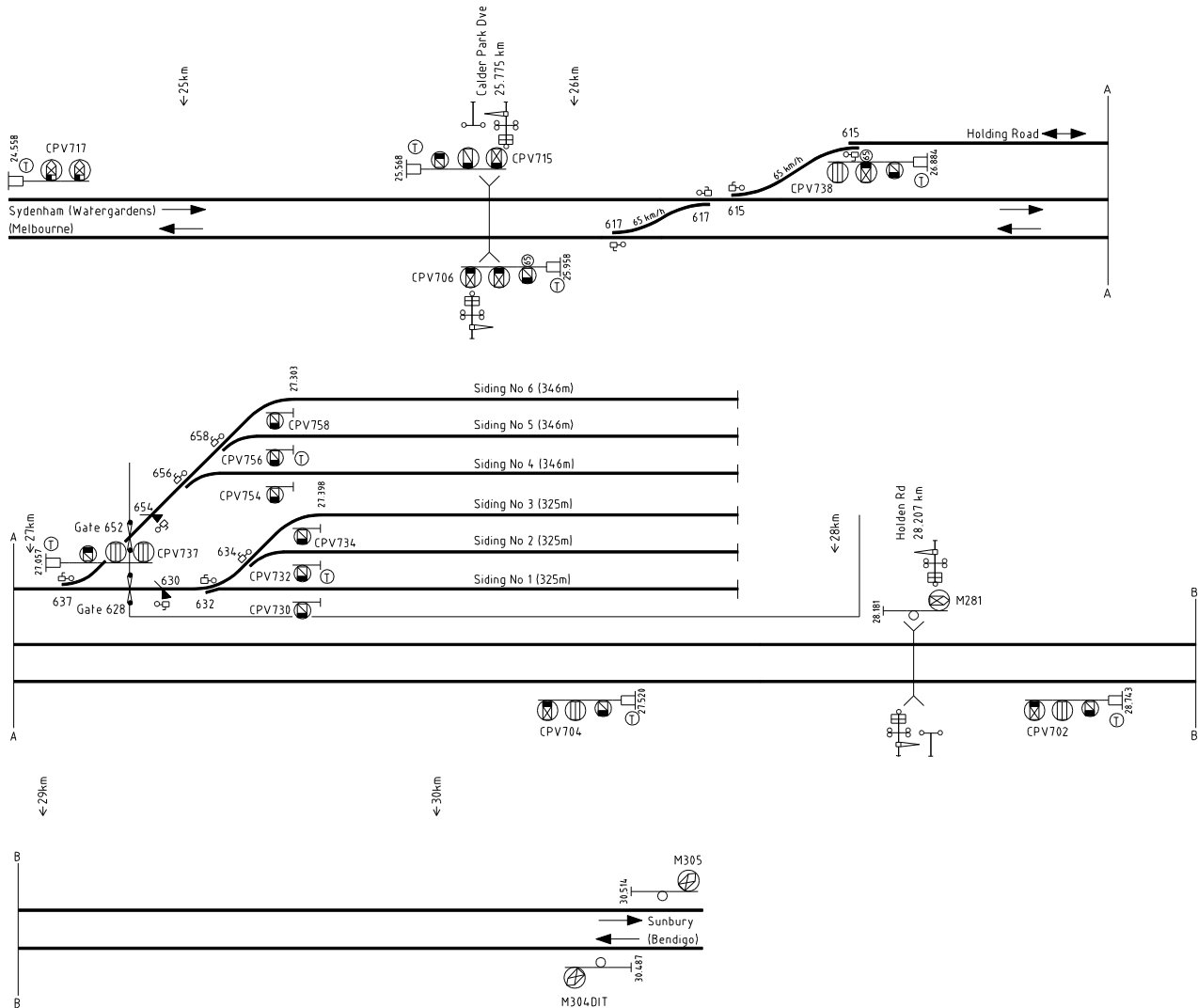
Diagram 18/15 (Mangalore – Creighton) replaced 6/12 as in service.

**12.10.2015 Calder Park Sidings (SW 359/15, WN 40)**

On Monday, 12.10., additional sidings (Nos 4 to 6) were commissioned at Calder Park. Each siding can hold two 6 car EMU sets. The following alterations took place:

- Points CPV637, CPV656, & CPV658 and Hayes Derail/Crowder CPV654 were provided. Hayes Derail/Crowder CPV654 will auto-normalise. All points and derails are equipped with dual control point machines.
- Dwarfs CPV754, CPV756, and CPV758 were provided. These signals are LEDs
- Train Stabling Gate No 652 was provided.
- Up Automatic M266 was redressed as a Home and renumbered CPV706. It is equipped with TPWS TSS and OSS. This signal is a LED.
- Axle counters are provided within the new sidings to detect stabled trains.
- An emergency control panel was provided in the SMs office at Watergardens. This will consist of two WestCAD screens and one alarm screen. Changeover between the main control panel at Craigieburn and the emergency panel will be by a 5P keyswitch.
- The panels at Craigieburn, Centrol, and Bendigo were updated.

Diagram 37/15 (Watergardens – Clarkefield) replaced 49/14.



## Calder Park Stabling Sidings (2015)

Based on WN 40/15 and Diagram 37/15

### 12.10.2015 Parkdale – Chelsea

(SW 363/15, WN 39)

On Monday, 12.10., the warning time for both Up and Down trains at the following level crossings was increased: Parkers Road (Parkdale); McDonald St (Mordialloc); Bear St; Station St; Swanpool Ave; Chelsea Rd (Chelsea). This is in preparation for the introduction of Xtrapolis trains.

### (13.10.2015) Gheringhap – Barwon Park Loop

(SW 144/15, WN 41)

Diagram 12/14 (Gheringhap – Barwon Park Loop) replaced 80/12 as in service.

End£

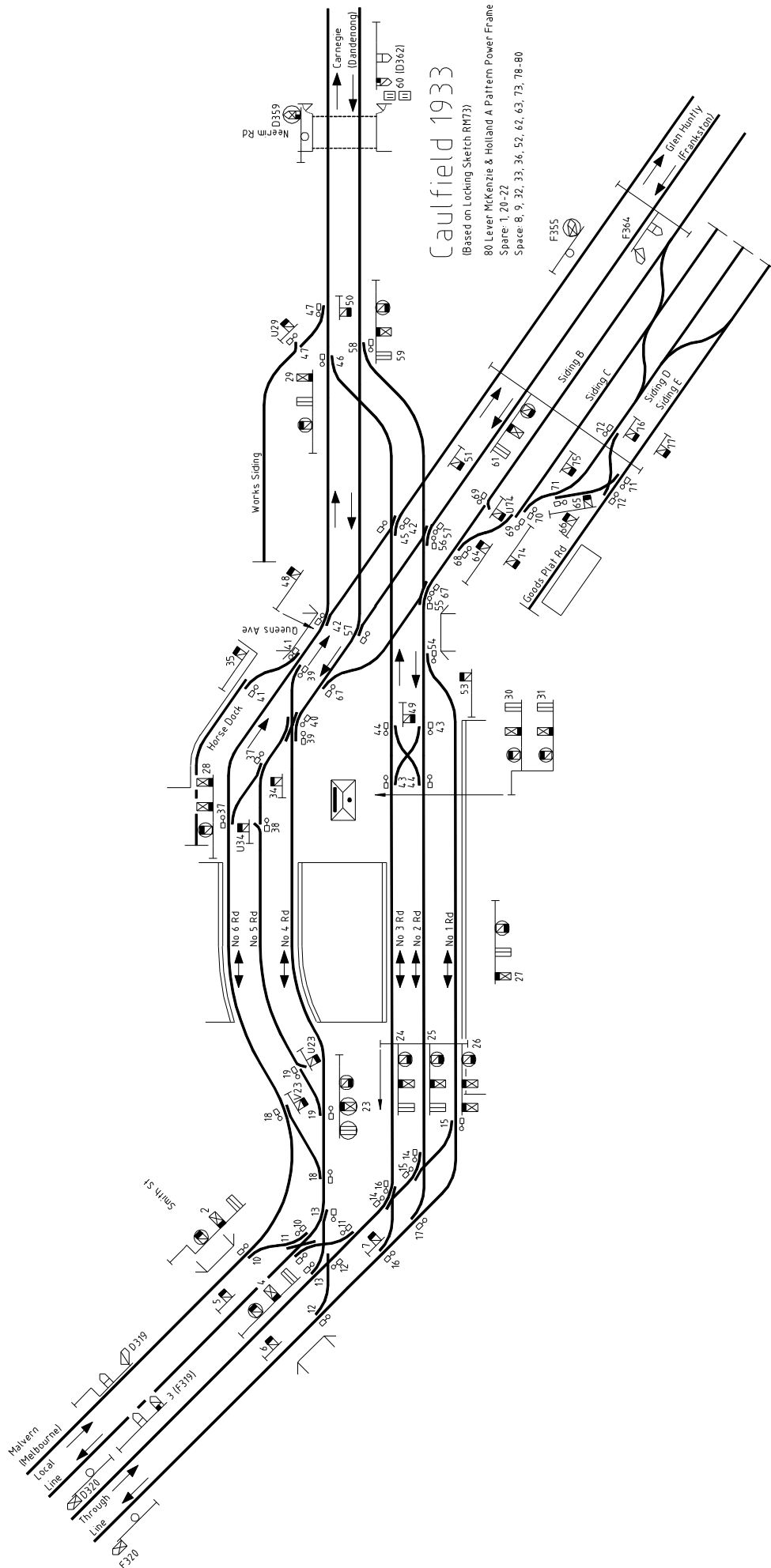
## CAULFIELD

Andrew Waugh and Keith Lambert

**Caulfield (Power Box)**

- 26.11.1933 Power signalling replaced mechanical signalling. Three position signalling replaced double line block Caulfield B - Carnegie and Caulfield B - Glen Huntly. New brick box provided at Down end of island platform with 80 lever McKenzie and Holland A Pattern Power frame Old 'A' and 'B' boxes abolished. (WN 49\*, IR)
- (17.09.1940) If Dwarf 34 or V23 fails it must be treated as a Home signal (vide Regulation 95 clause c). (WN 38)
- (11.10.1949) Telegraph instrument removed (WN 41 extracts)
- 27.09.1959 Alterations and renewals of points at Down end of Nos 4, 5, & 6 Roads. The points leading to the Horse Dock were relocated 110 feet in the Up direction. The crossover leading from No 4 Road to the Down Dandenong line was relocated 90 feet in the Down direction. Dwarf 35 was relocated 112 feet in the Up direction (WN 40)
- 13.06.1960 Works Siding wired (WN 25 extracts)
- 05.04.1961 The Works Siding (former Horse Dock) was extended 70 yards beyond the crossover at the Down end. Dwarf 35 will still only apply to moves towards the main line. Track circuit control of Crossover 41 provided. (WN 16, CI)
- 22.10.1962 Alterations to signalling, telephones, etc account conversion of old substation to W&W depot (CI)
- 10.04.1964 Works Siding shortened by 100 feet (CI)
- 23.04.1964 Control provided over Down Automatic D359 (lever 32) to prevent operation of boom barriers at Grange Road during shunting operations. (WN 18, IR)
- 20.09.1968 Down platform extended by 47 feet at Up end (CI)
- 06.09.1970 Points 46 renewed and relocated 42 feet in Up direction (CI)
- 14.03.1977 Closed for goods (WN 10)
- 20.04.1980 Signalling altered to improve Up headways. Up Home 27 (halfway along No 1 Road) was abolished. A new light Up Home 27 was provided at the entrance to No 1 platform and new Up Home 36 (light) was provided at the entrance to No 4 Road. A speed proving train stop was provided for movements from the Dandenong or Frankston lines towards Home 36. The Medium Speed Warning aspect on Down Homes 59 and 61 and Down Automatics D362 and F364 are now approach operated. The Normal Speed Warning aspect on Automatic D319 and F319 are now are approach operated. The normal speed aspect on Home 26 will only apply to the Up Through Line and the normal speed aspect on Home 28 to the Down Frankston line. Down Dwarf 34 (No 4 Road) was replaced by a light Home signal located on the right hand side of the line 3 metres from the island platform. Dwarf 50 (Down Dandenong line to Works Siding) was replaced by a light signal. Tracks 1 to 6 were renumbered 1, 1A, 2, 3, 3A, and 4 (respectively). Diagram 32/79 replaced 6/74. (WN 18, IR)
- 22.06.1980 Posts 2 & 4 raised. (CI)
- 22.08.1982 Up Automatics D362 and F364 converted from semaphore signals to light signals (WN 40 extracts; CI also has 3.10)
- 02.06.1985 Sidings C, D, E, and the S&C Siding (Works Siding) were abolished. Points 47, 68, 70, 71, and 72 were abolished. Dwarfs U29, 64, 65, 66, 74, 75, 76, and 77 were abolished. Dwarf U74 renumbered 74. Levers 47, 65, 66, 68, 70, 71, 72, 76, and 77 were sleeved normal. Lever 64 became a pilot lever. Diagram 33/85 replaced 32/79. (WN 22, IR)
- 29.07.1985 The Through Siding (Siding B) was baulked on the Up side of Neerim Road. Siding B has a clear standing room of 620 metres (WN 30)
- 22.07.1986 Point 68 were renewed. Catch 69 was replaced by a Derail and Wheel Crowder. Levers 64, 67, 69, and 74 were sleeved normal (WN 28, IR)
- (20.01.1987) No 1 Platform (Race Platform) reduced in length to 160 metres (WN 2)
- 09.05.1987 Diagram 25/87 replaced 33/85. By this date Up Automatic F364 relocated to a ground mast on right hand side of line (WN 19)
- 20.06.1987 Frankston line resignalled for new three track running (not yet in use). Up line became the bi-directional Centre line, and the Through Siding became the new Down Line. Note: the single compound at the Down end of Points 52 and the Up end of Points 57 were spiked to give access from the FM line to Nos 3, 3A, and 4 Tracks. The Frankston line was resignalled out to Neerim Road level crossing. Down Automatics F355 and F377 were replaced by new Automatics F353, F365, and F373. Up Automatic F364 was replaced by Automatic FM366. Up Home 61 was replaced by a new signal 30 metres further out. Dwarf 53 was replaced by a Down Home (light) signal to allow running moves from No 1 Track to the Frankston line.

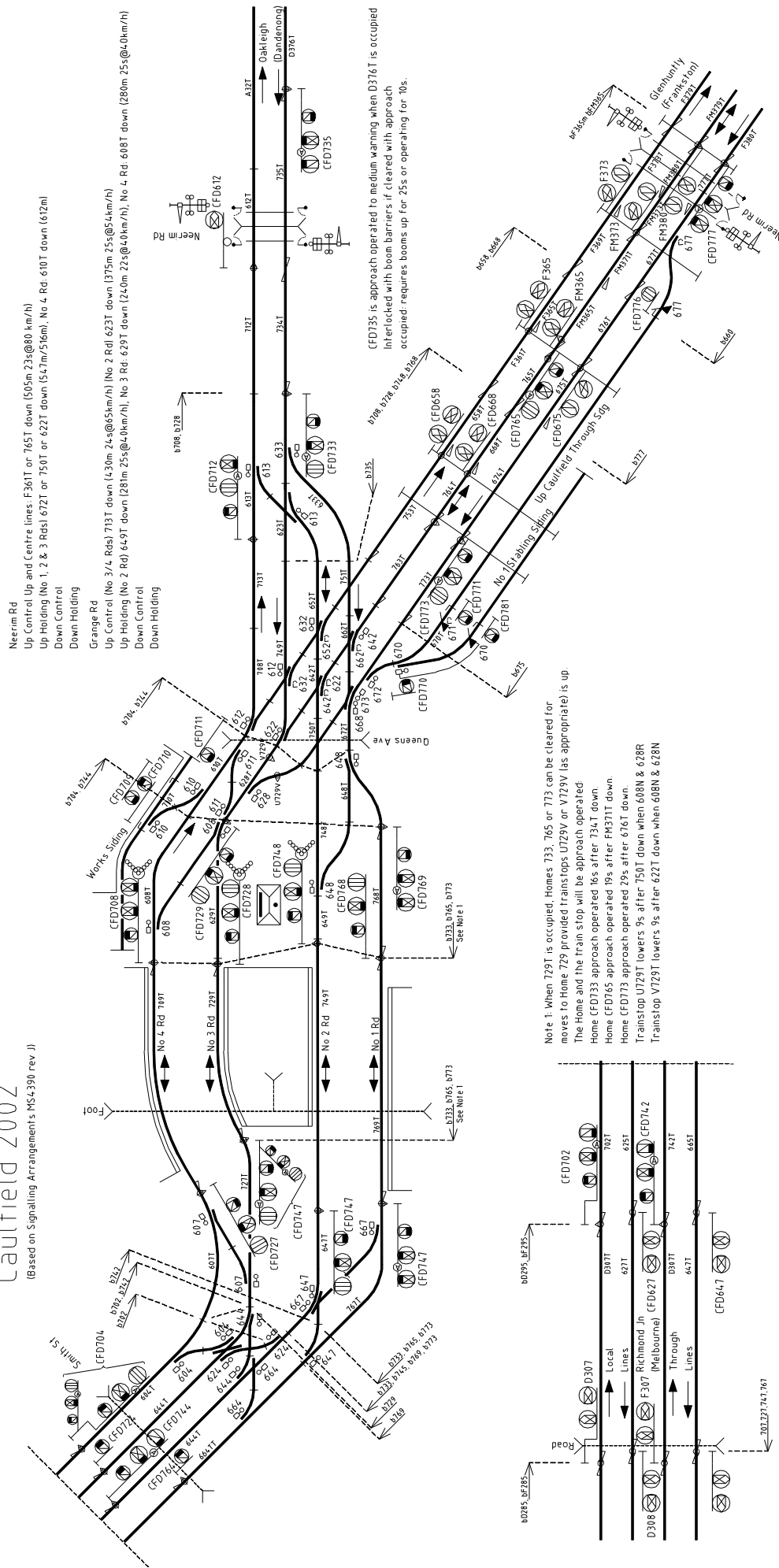






## Caulfield 2002

(Based on Signalling Arrangements MS4390 rev J)



- New Up Caulfield Through Siding and No 1 Stabling Siding provided with (light) Dwarfs 64, 75, and 76 protecting movements to and from the sidings. Derails and Wheel Crowders are provided in the sidings operated by levers 69 (Through Siding) and 70 (Stabling Siding). Dwarf 49 was abolished. Express/Stopping interlock was provided on Homes 28, 30, 31, 34, U34, and 53 for movements to the Down Frankston line. A new signalling diagram was provided in the box. Diagram 29/87 replaced 25/87. (WN 25, IR)
- 27.06.1987 New Up Frankston line commissioned. Up Homes 74 and 77, Up Automatic F366, and Down Dwarf 81 (fixed at Stop) were provided. Points 52, 57, and 72 were provided. Remote control of points and signals at Moorabbin was provided (WN 26)
- 28.06.1987 All Up Frankston line trains from 0600 will use new Up line. Down trains will continue to use Down line. Middle line is out of use. (WN 26)
- 23.06.1991 Up Home 61 was relocated 379 metres further out and Automatic FM366 was abolished (WN 23)  
(18.05.1993) Overhead removed from No 3A road. (WN 17\*)
- 26.06.1995 Power frame (working Caulfield) and panel (working Moorabbin) replaced by new panel in existing signal box working an SSL. All upper quadrant semaphores were replaced by colour light signals. Dwarfs 7 and 50 were abolished. Dwarf CFD709 was provided for Up movements in the Works Siding. The diamond crossover was replaced by two separate Crossovers (623 and 632). Automatics D319, F319, and D362 were replaced by Homes CFD702, CFD742, and CFD735 respectively. Dwarf V23 has been replaced by Home CFD707 located 10 metres further out. Homes 24 and 26 on the signalbridge have been replaced by ground masts CFD747 and CFD767. Homes CFD708, CFD728, and CFD748 are provided with feather type point indicators. The indicator for CFD728 is located on a separate post due to clearance issues. Home 30 replaced by a new mast (CFD748) located 20 metres on the Down side of the platform, and Home 53 by a new Post CFD768 located on the left hand side of the line 25 metres from the platform. All points and signals have been renumbered. Diagram 7/95 replaced 11/93. (WN 25)
- (22.08.1995) Permission granted to issue Caution Orders via the post telephones at Caulfield and Moorabbin. All messages transmitted by the post telephones are recorded (WN 33)
- 08.08.1999 'Hatchet' handlocking bars were fitted to Points 604U, 604D, 608U, 608D, 612U, 612D, 623, 633, 642U, 644U, 644D, 648U, 648D, 652, 667U, 667D, 673, and 677D. (WN 32)
- 13.07.2002 Dwarf CFD770 was replaced by a new two metre mast and the light unit refocussed. (WN 26)
- 23.11.2002 Co-acting signal provided for Home CFD 727 at the Up end of No 3 Track. The co-acting signal is mounted on the mast of CFD 727. Amend Diagram 7/95. (WN 45)
- 04.02.2003 Diagram 33/02 replaced 7/95 as in service. (WN 5)
- 22.02.2003 Automatics CFD612, D387, D407, D376, D390, and D410 equipped with Westinghouse 17 dot LED marker lights. (WN 8)
- 04.05.2003 Signal heads on Automatics CFD612, D376, D387, D390, D397, D407, and D410 were replaced by Westinghouse tri-colour LED units. The signal heads on Up Home CFD735 were replaced with a Style L, RX8, LED units including a 90 dot LED 'C' arm. (WN 17)
- 22.06.2003 PC based Train Number Transmitter trialled at Caulfield, Cheltenham, Mordialloc, and Frankston. (WN 25)
- 13.12.2003 Hand locking 'flaps' installed on clamp lock points 622D, 642U, 662, 677D to secure the points normal or reverse as required. (WN 50)
- 27.02.2005 Additional track circuits (Nos 623, 670, 750, & 751 tracks) were provided for the turnout fouling project. (WN 8)
- 17.04.2005 Additional track circuits 608A, 624A, 647A, and 648A were provided. (WN 15)
- 30.04.2005 An indication for Up Automatic F584 at Moorabbin was provided on the panel. (WN 17)
- 17.06.2006 Homes CFD748 and CFD768 were converted to LED. A Theatre route indicator was provided on Down Home CFD748 and will display 'D' for movements towards Dandenong and 'F' for movement towards Frankston. (WN 24)
- 18.06.2006 Homes CFD769, CFD675, and CFD765 were converted to LED. The 'b' arms on Posts CFD675 and CFD765 were replaced with an 8 inch tri-colour LED. (WN 24)
- 17.10.2006 Diagram 1/06 replaced 33/02 as in service. (WN 41)
- 21.12.2007 Commencing with the first Up train on Friday, 21.12., all Up Long Island freight trains, Stony Point changeover trains, or any non electric train must be routed via the Up line between Moorabbin and Caulfield. Such trains must be held at CFD777 until the preceding train is clear of CFD769, CFD747, or CFD729 and the route is set. Alternatively, such trains can be worked via the Through Siding. (WN 1)
- (08.01.2008) Down Dandenong trains must not be signalled towards CFD612 (at Grange Rd) until that signal is at proceed. (WN 1)
- 16.01.2008 Westinghouse Tri-colour LED units in the A lights of the following signals were replaced by United Group Mark 3 TC1 Tri-colour LED units: CFD612 (WN 3)
- (22.01.2008) Special instructions issued on 8.1.08 cancelled (WN 3)

- 26.02.2008 Signal units on Home CFD765 and Automatic CFD675 were replaced by United Tri-colour MK3 TC2 units. (WN 9)
- (27.02.2008) Westinghouse Tri-colour LED units of the following signals were replaced by United Group Tri-colour Mk3 TC2 LED units: CFD612, D376, D387, D390, D397, D407, D410, D417, D420, D427, D441, D442, and D456. (WN 7)
- (04.03.2008) Special instructions issued on 21.12.07 cancelled. (WN 9)
- 12.04.2008 Unit lever control panel working Caulfield and Moorabbin was replaced by a VDU based workstation. (WN 15)
- 30.01.2012 Diagram 3/12 replaced 1/06 (WN 3)
- 03.07.2013 EMUs must not be routed into the Through Siding from the Down end. (WN 27)
- 05.10.2014 Sigview train number server was commissioned at Oakleigh for use between Caulfield and Dandenong. The train number function is integrated into the Sigview train control systems at Caulfield and Dandenong. The existing Train Number Transmitter between Caulfield – Oakleigh – Dandenong will remain operational for a short period. (WN 40)
- 23.08.2015 Homes CFD708 and CFD728 were converted to LED heads and the associated feather type route indicators replaced by theatre type route indicators. The route indicators will display 'F' for movements to the Frankston line and 'D' for movements to the Dandenong line. Amend Diagram 3/12. (WN 33)

### Grange Road (7 miles 4 chains)

- 09.02.1923 Gatekeeper provided with control over Down Starting signal on Post 29 and a new Up Home provided on Post 30. Signals worked from 2 lever ground frame (WN 8\*)
- 01.09.1925 Bell communication with return ringing facilities provided. Departure of each Down train signalled from Caulfield B. (WN 36)
- (25.10.1927) Controlled wickets provided (WN 43\*)
- 26.11.1933 Three position signalling provided between Caulfield and Carnegie. Gatekeeper provided with control over D359 and D362 (WN 49\*)
- 20.03.1951 Provision of stick relays in controls of signals at Grange Rd (CI)
- 23.04.1964 Boom barriers replaced the hand gates. The boom barriers will operate automatically for all trains. (WN 18)
- 16.08.2002 Pedestrian gates commissioned at Grange Road. Diagram 33/02 will be issued soon to replace 7/95. (WN 31)
- 11.09.2011 Traffic light co-ordination provided (WN 36)

## BOOK REVIEWS

### My Railway Days

John Dare, Along the Line Publishing, 2015

ISBN 9780-646-93135-7

RRP \$75. Available direct from the publishers (at <http://myrailwaydays.com.au/>), or from retailers.

Some people have an eye for photographic composition. John Dare is one such, and this book of his photographs contains a selection of wonderfully evocative photos of Victorian railway scenes between 1970 and 2007.

The 160 pages is divided into a number of thematic chapters, including main line, branch lines, suburban, railway stations, infrastructure, loco, named trains, multi units, freight, and special workings.

Although perhaps best thought of as a photographic album, the photographs have detailed captions and there are lengthy textual sections, including a time line of railway history over the period of the book. The photographs are mostly in colour. The production quality of the book is excellent, particularly the reproduction of the photographs.



## AN UNUSUAL SEMAPHORE QUADRANT



*This interesting semaphore quadrant is in the Echuca Discovery Centre – the old wharf precinct – underneath the footbridge in the ‘railway yard’. The plate on the quadrant shows that it was manufactured by McKenzie & Holland Melbourne. The quadrant consists of two cast iron quadrant plates (unfortunately cracked) surrounding a large diameter pulley. A ratchet is cast into one side of the pulley. A lever is provided between the pulley and the left hand quadrant. Two catches are provided on the lever (left). One catch is foot operated and is used to hold the lever reverse – two of the reverse notches can be seen in the photo (there was probably at least one other reverse notch in the portion of the quadrant that has been broken off). The other catch is on the other side of the lever and clearly works in the ratchet cast on the side of the*

*lever. With the second catch down, reversing the lever would rotate the pulley, drawing the signal wire in. The ratchet mechanism allows the pulley to rotate independently of the lever, and it is possible that this would allow the pulley to be rotated to take in or let out slack in the signal wire. Given that most of the exhibits in the Echuca Discovery Centre are from the local area, it is possible that this quadrant was originally from the Deniliquin and Moama Railway. (Photos: Andrew Waugh)*



## THE 2015 SIGNAL BOX TOUR



The 2015 tour started at Glenhuntly signal box (above). The tiny Glenhuntly signal box and its panel dates from May 1987 when the triplification between Caulfield and Moorabbin was commissioned. Glenhuntly's only purpose is to control the rail/tram crossing which accounts for its unusual position – facing the roadway instead of the tracks. The signaller, however, is very busy in peak hour with a 10 minute stopping service, a 10 minute express service, the counter moves, and tramway traffic. Caulfield (below) couldn't be a greater contrast. Housed in a 1933 brick signal box, the power frame was replaced by an SSI in June 1995. Control at this time was from a panel. The VDU workstation (the two lower central screens) replaced the panel in April 2008. The workstation displays the local Caulfield area and the three track section onward to Moorabbin. The screen at the left shows the status of the four track section to South Yarra. The smaller upper screen is the train describer to Oakleigh, and the larger screen shows the timetable.







The third stop was the 1966 signal box and unit lever panel at Burnley (above). Provided for the quadruplication from Richmond, additional levers were provided in 1997 for the stabling sidings on the Glen Waverley line – these control an SSI. On the right is a repeater screen for Metrol, showing Burnley and the lines towards Flinders St. On the right are the box-to-box phone (lower) and the new GSM-R communications system. (Below) The next signal box is Camberwell. This is located in a 1924 built brick signal box which is on its third control system. The first was an electromechanical frame dating from 1924, which was subsequently converted to purely power frame. It was abolished in November 1964 and replaced by an OCS route setting panel – the first in Victoria. This had a life only one year greater than the power frame, being replaced in April 2005 by this NX panel driving an SSI. Camberwell is a very rare example of an NX panel in Victoria – the other examples being Metrol and Epping. Subsequent resignalling schemes have used VDU based workstations to drive the interlocking. Around the panel are grouped screens showing (from left to right) the timetable status, the Metrol controlled area and the line from Burnley, CCTV security camera display, and the train describer.



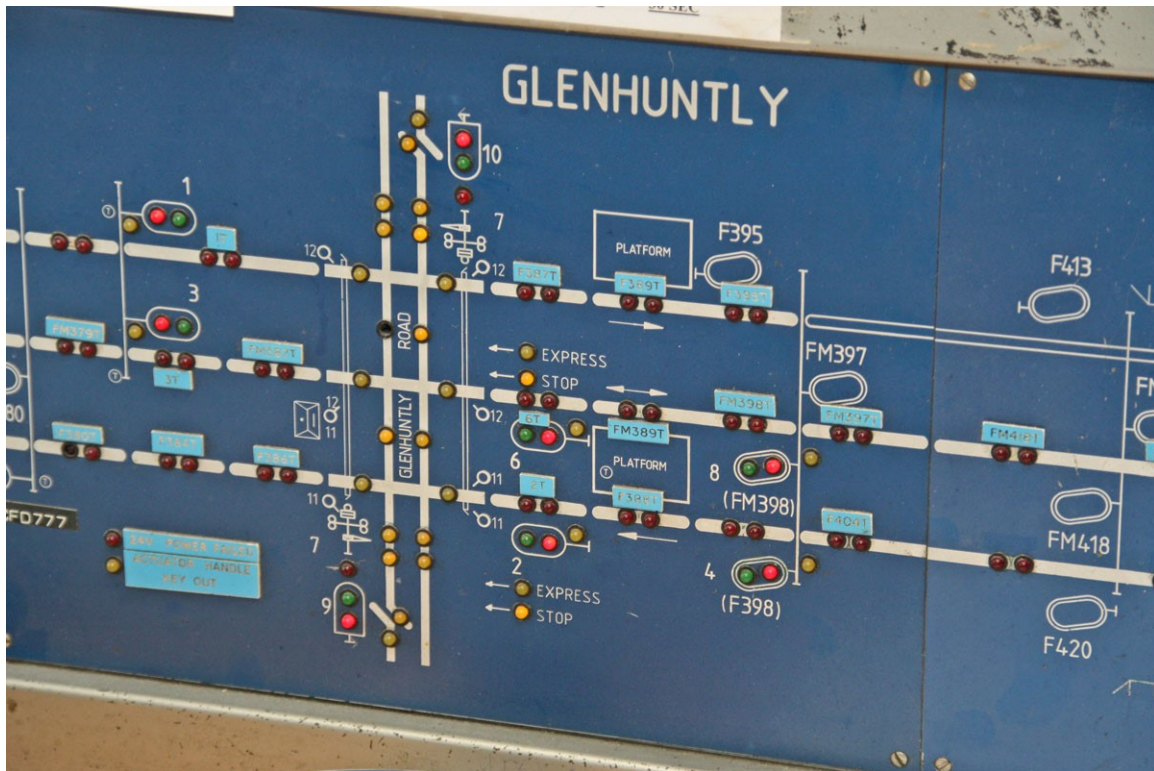




The oldest signal box visited during the day was Riversdale. This, with its cam and tappet frame, was provided in December 1916 in conjunction with interlocked gates (the tramway predates the box by about two months). Ninety nine years later, the box and frame are still in use to control the tramway crossing and the bi-directional line to Camberwell. (Below) The tiny panel at Ashburton spends most of its time switched out with the interlocking working automatically. The panel was provided in 1977 when the points at the end of the line were motorised, the line to Alamein was track circuited, and automatic operation provided. Unusually the panel itself has not been altered in the nearly 40 years since then. The left hand phone is the general phone concentrator – post phones, phone to Riversdale signal box, and normal phone to Centrol. The phone on the righthand side of the panel is the CEPAC Metrol phone, while the modern phone at the extreme righthand end is the new GSM-R phone.







Detail of Glenhuntly panel (above) and Camberwell panel (below). The Glenhuntly panel is typical of those provided in Victoria in the late '80s. The Camberwell panel is a rarity in Victoria being an NX panel. The entrance and exit push buttons are located on the track diagram, but no indications are provided. Above the track diagram are located the individual point levers. The two levers in the centre of the row with the white spine are for the gates. It is possible to set up through routes – for example from the Down line to the Riversdale line overpass – and the stack of indicators at the left hand and centre portions of the panel show if any through route has been stored. The Ashburton photo by Chris Gordon, all other photos are by Andrew Waugh.

