

# SOMERSAULT

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SIGNALLING RECORD SOCIETY OF VICTORIA



## SOCIETY CONTACT INFORMATION

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### MINUTES OF MEETING HELD FRIDAY 18 FEBRUARY 2022, AT THE SURREY HILLS NEIGHBOURHOOD CENTRE, 1 BEDFORD AVENUE, SURREY HILLS, VICTORIA.

The SRSV meeting scheduled for Friday 18 February 2022 was held on site and was broadcast as an online meeting on the internet using the 'ZOOM' application.

Present: – (On site). Glenn Cumming, Graeme Dunn, Michael Foley, Peter Gerandt, Chris Gordon, Judy Gordon, Andrew Gostling, Keith Lambert, Roo Richards, James Sinclair and Rod Smith. (11)

(Online). Ken Ashman, Phil Barker, Robert Bremner, Brett Cleak, Graeme Cleak, John Dennis, Michael Formaini, Graeme Henderson, Bill Johnston, Chris King, David Langberg, Neil Lewis, Andrew McLean, Bruce McLean, Eddie Oliver, Andrew Pardy, Laurie Savage, Peter Silva, Bob Taaffe, Rob Weiss and Andrew Wheatland. (21)

Apologies: – David Langley, Michael Menzies, David Stosser and Stuart Turnbull.

Visitors: – James Finch.

The Vice-President, Mr. Bill Johnston, took the chair and opened the meeting at 20:06 hours.

Minutes of the November 2021 Meeting: – Accepted as published. Neil Lewis / Phil Barker. Carried.

Business Arising: – Nil.

Correspondence: – Nil.

Reports: – A reminder that the next meeting is the Annual General Meeting.

General Business: –

Phil Barker described recent alterations at the yard at Clapham in Queensland. One of the local control panels has been abolished. Phil used the screen share facility on Zoom to display some images and diagrams of the Clapham QLD area including images of the original double-wire frame and signals, the previous local control panels and the current local control panels. Queensland now has 20 control panels remaining in service.

Keith Lambert noted that former Victorian Safeworking Superintendent Tony Palermo passed away in October 2021. It was noted that Tony had provided the SRSV with a lot of assistance over many years, especially with arranging signal box tours.

*(Front cover) The new Home signal at Victoria Park, VPK104, taken shortly after commissioning. In the background, civil work can be seen continuing on the new maintenance siding to the right of the stabling siding. This Home replaced a Dwarf signal, presumably for better sighting when shunting back into the stabling siding or maintenance. A theatre type route indicator is provided showing 'D' when the route is set to the Down line, 'S' for the stabling siding, and 'W' for the maintenance siding. A key reason for the provision of the route indicator is that the maintenance siding is unwired. Although shown on the diagram as a full sized Home signal, this Home can be seen to be smaller than normal. The mast is shorter, the A, B, and C heads are combined in one case, and the LED lights are masked by steel rings to reduce the apparent size of the lights. A problem with Victorian signal diagrams is that three position light signals have always been shown 'conventionally' on diagrams. The real signal often has the lights on the wrong side of the mast, or subsidiary indications (like '65' and 'A' lights) in non standard positions. In this case, for example, the theatre indicator is below the signal head, not above it as shown on the diagram. Photo Andrew Waugh*

Keith Lambert provided details about various projects in the Metropolitan District. A summary of the discussion follows: –

- The duplication of the line between Dandenong – Cranbourne has been completed and is now in service.
- The yard at Dandenong has been rationalised with some sidings having been removed.
- Preliminary works have commenced for the removal of the level crossing at Glenhuntly Road, Glenhuntly.

Chris Gordon advised that a ten (10) day occupation on the Mernda Line would commence on Thursday 19 May 2022 for level crossing removal works at Bell and Preston. This would be followed by a further occupation in October 2022.

Rod Smith advised that preliminary works had commenced for the removal of the level crossings at Union Road, Surrey Hills, and Mont Albert Road, Mont Albert.

Chris Gordon provided details about various projects in the Metropolitan District. A summary of the discussion follows: –

- A one (1) week occupation between Camberwell – Box Hill in five (5) weeks for level crossing removal works.
- A one (1) week occupation between Camberwell – Box Hill in July 2022 for level crossing removal works.
- A 92 day occupation between Camberwell – Box Hill commencing in February 2023 for level crossing removal works.
- The geographical relay interlocking at Box Hill will be replaced by a computer based interlocking and will be worked by remote control from Camberwell. The Signal Box and control panel at Box Hill will be abolished.
- Hallam Road level crossing will be abolished in two (2) weeks time.
- The new Hallam Railway Station will be opened in May 2022.
- Clyde Road level crossing was abolished in January 2022.

Ken Ashman asked if the electrification would be extended beyond Cranbourne. Chris Gordon replied that planning had commenced for an extension to Clyde but there was no time frame for completion.

Brett Cleak spoke about the testing of the Communications Based Train Control (CBTC) system. Additional testing will be conducted between Carnegie – Clayton. An arrangement to switch between the conventional signalling and the CBTC will be installed. It is expected that testing of the CBTC between Carnegie – Clayton will continue for the remainder of 2022 under the protection of absolute occupations.

Rod Smith asked if anybody was aware of a completion date for the new crossing loops at Murchison East and Boorcan. The answer was not known.

Bill Johnston noted that it had been reported in the United Kingdom that the mechanical interlocking at Shrewsbury Signal Box is expected to remain in service for another 15 years.

Graeme Henderson reported that management of the New South Wales Country Rail Network (CRN) had transferred from John Holland Rail to UGL. The interface boundary between the Sydney metropolitan network and the CRN at Bowenfels NSW had moved further towards Wallerawang NSW.

Graeme Henderson described changes at the UP end of Dubbo NSW including the relocation of the main line to accommodate construction of a new train maintenance centre.

Andrew Wheatland described works to replace the rails in the level crossings at Belgrave – Gembrook Road, Emerald, and Pakenham Road, Cockatoo, on the Puffing Billy Railway. These works involved the first use of glued insulated rail joints and thermit welded 94 pound rail on the Puffing Billy Railway. Andrew displayed some images showing the works in progress.

Peter Silva advised that boom barriers would be installed at the Healesville – Kinglake Road level crossing at Healesville on the Yarra Valley Railway.

**Syllabus Item:** – The Vice-President introduced Member Ken Ashman from Hamilton, New Zealand, to present the Syllabus Item.

Ken is the owner of the interlocking frame from Euroa which is now a part of his signalling museum at Hamilton, New Zealand.

Ken started his presentation with a brief history of signalling at Euroa with some historical photographs and the described how the interlocking frame was removed from Euroa and transported to New Zealand where it was erected inside Ken's museum.

Ken then detailed how the interlocking frame was incorporated into the computer simulator for the museum that was built by a local computer developer in Hamilton NZ to demonstrate much of the equipment in Ken's museum.

Ken described the interface between the signalling equipment and the computer simulator (inputs and outputs) and then outlined the operation of the simulator including the ability to 'build' a train by selecting various parameters for the trains that 'travel' between the various interlockings and stations in the museum.

At the completion of the presentation, Bill thanked Ken for the entertainment.

Meeting closed at 22:05 hours.

The next meeting will be on Friday 18 March, 2022 at the Surrey Hills Neighbourhood Centre, Bedford Avenue, Surrey Hill, commencing at 20:00 hours (8.00pm).

## MINUTES OF 2021 SRSV ANNUAL GENERAL MEETING HELD FRIDAY 19 MARCH 2021, AT THE SURREY HILLS NEIGHBOURHOOD CENTRE, 1 BEDFORD AVENUE, SURREY HILLS, VICTORIA.

The 2021 SRSV Annual General Meeting scheduled for Friday 19 March 2021 was held on site and was broadcast as an online meeting on the internet using the 'ZOOM' application.

Present: – (On site). Brett Cleak, Glenn Cumming, Graeme Dunn, Chris Gordon, Judy Gordon, Andrew Gostling, Bill Johnston, David Jones, Keith Lambert, David Langberg, David Langley, Neil Lewis, Andrew McLean, Roo Richards, Colin Rutledge, James Sinclair and Rod Smith. (17)

(Online). Ken Ashman, Phil Barker, Robert Bremner, Graeme Cleak, Michael Formaini, Phillip Miller, Eddie Oliver, Laurie Savage, Peter Silva, Bob Taaffe and Andrew Wheatland. (11)

Apologies: – Jon Churchward, Warren Doubleday, Michael Menzies, Steve Malpass, Brian Sherry, David Stosser and Andrew Waugh.

Visitors: – Floyd Bromley and Hugh Maguire.

The President, Mr. David Langley, took the chair and opened the meeting at 20:10 hours.

Minutes of the 2020 Annual General Meeting: – Accepted as published. Bill Johnston / Graeme Dunn. Carried.

Business Arising: – Nil.

President's Report: – The President, David Langley, presented the President's Report to the meeting.

Usually I have opened with something about the way things are going or not going right in the world of signalling or train running or such like. These observations are usually the result of my perambulations to and from Melbourne and other trips around Victoria.

But last year, or at least nine months of it, meant that activities and work, not that I know much about that these days, were seriously curtailed. The SRSV didn't escape because all meetings changed beyond recognition and were successfully conducted on line via a Zoom application. Any tours proposed were cancelled and there is the distinct possibility that they may not resume any time soon with the uncertainty about social distancing within work places. But that is yet to be tested.

Nonetheless the SRSV Committee continued to work towards furthering the societies success and hence I must thank Glenn, Peter, Bill, Colin and David for all the deliberations via the committees on line discussion list.

It is also pleasing to hear about the success of the Zoom meetings so I must thank all members for adapting to the different way the society has operated this year.

I move the report.

David Langley. President.

David Langley / Rod Smith. Carried.

Treasurer's Report: – The Treasurer, Peter Silva, presented the Treasurer's Report for the year ended 31 December 2020.

Peter provided a detailed explanation of the financial statements and the reasons for variances from the previous year. The SRSV recorded a net profit of \$591.12 for the year. The impact of the COVID-19 restrictions was noted.

Peter Silva / Rod Smith. Carried.

Phillip Miller suggested increasing membership fees.

Peter Silva responded that membership fees had increased last year and noted that the SRSV was in a sound financial position.

Tours Report: – The Tours Officer, Glenn Cumming, presented his report.

I regret to advise that the SRSV was unable to conduct any signal box tours during 2020.

This was due entirely to the restrictions imposed on public gatherings announced by the Victorian Government as a result of the COVID-19 pandemic.

The Tours Officer always welcomes suggestions & comments regarding the conduct of SRSV tours, especially ideas for future tours.

Glenn Cumming. Tours Officer.

Glenn Cumming / Bill Johnston. Carried.

Membership Report: – The Membership Officer, Glenn Cumming, tabled the Membership Report.

<u>Subscription Type.</u>	<u>2020.</u>	<u>2019.</u>	<u>Movement.</u>
Victorian (V)	58	60	– 2
Victorian & UK (K)	26	24	+ 2
UK Only (N)	2	2	–
Life Member (KL)	2	2	–
Honorary Victorian (VH)	3	3	–
Total	91	91	–

Analysis of Movement.

Additions: – Brett Cleak (K), Brett Leslie (V), Frank Strik (K)

Non – Renewals: – Vance Findlay (V), Gary Fyfe (V)

Transfers: – Nil

Final Departures: – Victor Isaacs (V)

Glenn Cumming, Membership Officer.

Glenn Cumming / Colin Rutledge. Carried.

Editorial Report: – In the absence of the Editor, Andrew Waugh, the Secretary tabled the Editor's Report for 2020.

All six issues of "Somersault" for 2020 were published during the year, albeit sometimes slightly late.

The January 2021 and March 2021 issues were posted on the Monday before the AGM and members should have received them by now, or will shortly.

I would like to apologise for the irregular running of "Somersault", unfortunately other activities sometimes take priority.

I would like to thank Chris Wurr, Ray Layton, Chris Gordon, Phil Barker and Dave Harvey for submitting material for publication.

A range of creators makes the magazine more interesting and, of course, reduces the load on the Editor.

Andrew Waugh. Editor.

Glenn Cumming / Bill Johnston. Carried.

Peter Silva thanked Andrew for his continued work and these comments were echoed by Ken Ashman.

SRSV President David Langley urged all SRSV Members to support "Somersault" and assist the Editor wherever possible.

Archives Report: – Colin Rutledge was asked to present a brief report on activities in 2020. Colin noted that he was submitting a 'nil return' due to a lack of activity as a result of the COVID-19 pandemic.

Colin Rutledge / Graeme Dunn. Carried.

Document Scanning Project Report: –David Langberg presented a report on this project.

Process established to digitally scan items held in the SRSV archives collection.

Around 1,600 items scanned to date using the SRSVs wide format scanner – Mostly signalling diagrams (lithographs), but also several hundred large items such as signalling arrangements, locking sketches and signal box diagrams.

A custom utility has been developed that automates most of the image file processing. This custom utility runs on the SRSVs desktop PC, and for each initial scan file creates an archive version (highest resolution TIFF format) and lower resolution versions (JPEG format). Lower resolution versions are significantly smaller files. These are intended for redistribution and are superimposed with an SRSV watermark.

A multi-tiered storage solution has been set up to keep copies and back-ups of all image files. Primary storage is on the SRSVs desktop PC, with secondary storage on SRSVs portable NAS drive – synchronised with Google Drive cloud-based storage.

A prototype catalogue database has been developed to manage information about the image files in the SRSV collection. Once this catalogue is integrated with the public-facing SRSV website, search functionality will be available so that items can be found, and low resolution versions of image files accessed by anyone over the internet (from the Google Drive storage). An initial version of the prototype was presented at the September 2020 SRSV meeting. This has since been refined and the schema simplified to ensure ease of ongoing maintenance.

Looking ahead, the following tasks are required:

- Prototype catalogue database to be finalised, ready for integration with the SRSV website (web development required).
- End-to-end scanning process documentation to be completed.
- Archives sessions held to sort, prioritise and prepare further items for scanning.
- Further scanning to be undertaken with full the end-to-end process in place.

David Langberg.

David Langberg / Colin Rutledge. Carried.

Elections: – The Vice-President, Bill Johnston, chaired the meeting for the election of the new Committee.

No written nominations were received.

The following verbal nominations were received at the meeting: –

President: – David Langley, nominated by Graeme Dunn and seconded by Rod Smith.

Vice President: – Bill Johnston, nominated by Colin Rutledge and seconded by Graeme Dunn.

Secretary: – Glenn Cumming, nominated by Andrew McLean and seconded by Rod Smith.

Treasurer: – Peter Silva, nominated by Bill Johnston and seconded by Neil Lewis.

Committee member: – Colin Rutledge nominated by David Langberg and seconded by Roo Richards.

Committee member: – David Langberg nominated by Colin Rutledge and seconded by Bill Johnston.

There being no further nominations, all nominees were declared elected to the position.

General Business: –

Ken Ashman expressed his appreciation to everyone for keeping the SRSV meetings going during the lockdown caused by the COVID-19 pandemic.

Meeting closed at 20:51 hours.

The 2021 SRSV Annual General Meeting was followed by the March 2021 SRSV Ordinary Meeting.

## SIGNALLING ALTERATIONS

*The following alterations were published in WN 48/21 to WN 5/22, 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.*

**(30.11.2021) Epsom – Echuca**

**(SW 220/21 & 221/21, WN 48)**

Diagram 74/21 (Epsom – Elmore) replaced 56/21 & 16/17 as in service. The main changes were alterations at Goornong (SW 204/21 & 216/21), but a number of other alterations have been made.



Operating Procedure 108A (Epsom – Echuca, Operation of sidings) was reissued account changes at Goornong. SW 139/18 was cancelled.

- (30.11.2021) Dandenong** (SW 786/21, WN 48)  
The overhead over the Bombardier Holding Road (sections 490/1/1/1/ and 490/1/1) is no longer available for electric traction and will be removed. Switch 490/1/1 on structure 1044 was secured open. The overhead terminating board was relocated to Points 673D.
- 30.11.2021 Goornong** (SW 224/21, WN 49)  
On Tuesday, 30.11., the siding was booked out of service due to track condition. The siding is available for stabling track machines.  
Amend Diagram 74/21 (Epsom – Elmore).
- (07.12.2021) Bendigo** (SW 225/21, WN 49)  
Operating Procedure 117 (Bendigo, Local Movements) was reissued account the provision of the Wayside Monitoring Building on the Independent Track, track reconfigurations in the Goods Yard, and the commissioning of the Bio Wash facility. SW 96/17 is cancelled.
- (07.12.2021) Beaconsfield** (SW 791/21, WN 49)  
A shared user path crossing over the railway at 48.200 km has been opened on or adjacent to the Princes Link Hwy.
- 07.12.2021 Diggers Rest** (SW 788/21, WN 49)  
On Tuesday, 7.12., the pedestrian emergency exit gates at Old Calder Hwy were equipped with electromagnetic latches.
- 07.12.2021 Murchison East** (SW 226/21 & 229/21, WN 49 & 50)  
At some point on or after Tuesday, 7.12., Up Home Post 3 was replaced by a new mast located 5 metres in the Down direction. The signal head is 5 metres from rail level.
- 09.12.2021 Hoppers Crossing** (SW 793/21, WN 49)  
On Thursday, 9.12., the Old Geelong Rd level crossing was closed to road traffic. A new overpass, Link Rd, was opened at 27.003 km. The old crossing remains open for pedestrians and the boom barriers and flashing lights will continue to operate.  
Amend Diagram 35/21 (Aircraft – Werribee).
- 12.12.2021 Goornong** (SW 232/21, WN 50)  
On Sunday, 12.12., the station was reopened for passenger traffic. The station is located at 189.821 km.
- 13.12.2021 North Melbourne** (SW 800/21, WN 50)  
On Monday, 13.12., the TPWS(TSS) at Up Home IAA510 was altered to be always armed when a route is set into the Northern underground loop irrespective of the indication displayed by the signal.
- 13.12.2021 Nagambie** (SW 217/21 & 223/21, WN 48)  
Between Tuesday, 30.11., and Monday, 13.12., the platform was extended 86 metres at the Up end.
- 13.12.2021 Murchison East** (SW 217/21 & 223/21, WN 48 & 49)  
Between Tuesday, 30.11., and Monday, 13.12., the following alterations took place:
- The Murchison – Violet Town Rd crossing (146.999 km) was widened to two tracks. The Up side boom barrier and flashing light masts were relocated 5.7 metres further from the line.
  - The platform was extended at the Up end by 45 metres.
  - The keyswitch for Home 3 was relocated 5 metres in the Down direction.
  - A signal bridge was provided at 147.137 metres spanning Nos 1, 2, & 3 Roads.
  - Crossover MUT15 facing Up trains was provided on the Up side of Murchison-Violet Town Road (146.925 km to 146.776 km) between the main line and crossing loop.
  - Points MUT19U (147.036 km) facing Up trains were provided in No 2 Road leading to No 3 Road on the Down side Murchison-Violet Town Road, with Catch MUT19D (147.154 km) in No 3 Road.
  - Hand Points MUT23 (147.424 km) facing Up trains were provided in No 3 Road leading to No 4 Road.
  - Crossover MUT21 facing Down trains was provided between No 2 and No 4 Road (147.429 km to 147.524 km).
  - All new points (including Points MUT23) were equipped with dual control point machines. All new points are secured out of use.
- Diagram 58/21 (Nagambie – Toolamba) replaced 50/21
- 13.12.2021 Shepparton** (SW 217/21 & 223/21, WN 48 & 49)  
Between Tuesday, 30.11., and Monday, 13.12., the existing Dookie line junction points on the Down side of New Dookie Rd were abolished. Points SHP51U (a right hand turnout facing Down trains) were provided at 184.997 km. The points are equipped with a dual control point machine and were secured out of use.  
The main line was slewed between 184.535 km and 185.225 km.

Diagram 64/21 (Mooroopna – Shepparton) replaced 62/61.

**13.12.2021 Armadale – Malvern (SW 789/21, WN 50)**  
 On Monday, 13.12., Down Automatic D249 on the Caulfield Local line was replaced by a new mast located 2 metres in the Down direction. This marks the removal of the last original power signal lattice mast from the South Yarra – Caulfield section.

Diagram 41/21 (South Yarra – Malvern) replaced 5/21.

**15.12.2021 Hunter Block Point (SW 231/21, WN 50)**  
 On Wednesday, 15.12., the block point signs were replaced. The new signs are reflective and consist of a white triangle with the location name in black.

**15.12.2021 Woodvale Block Point (SW 231/21, WN 50)**  
 On Wednesday, 15.12., the block point signs were replaced. The new signs are reflective and consist of a white triangle with the location name in black.

**17.12.2021 North Williamstown (SW 608/21, WN 50)**  
 On Friday, 17.12., the new rail underpass at Ferguson St (12.328 km) was brought into use. A new station was provided with 160 metre long side platforms.  
 Down Automatic W407 was redressed as uncontrolled Home NPT627. Down Automatic W451 was abolished. New Down uncontrolled Home NWN631 was provided.  
 The station limits of Newport now extend to Home NPT627.

Diagrams 47/21 (Newport) & 49/21 (North Williamstown – Williamstown) replaced 13/15 & 3/14 respectively.

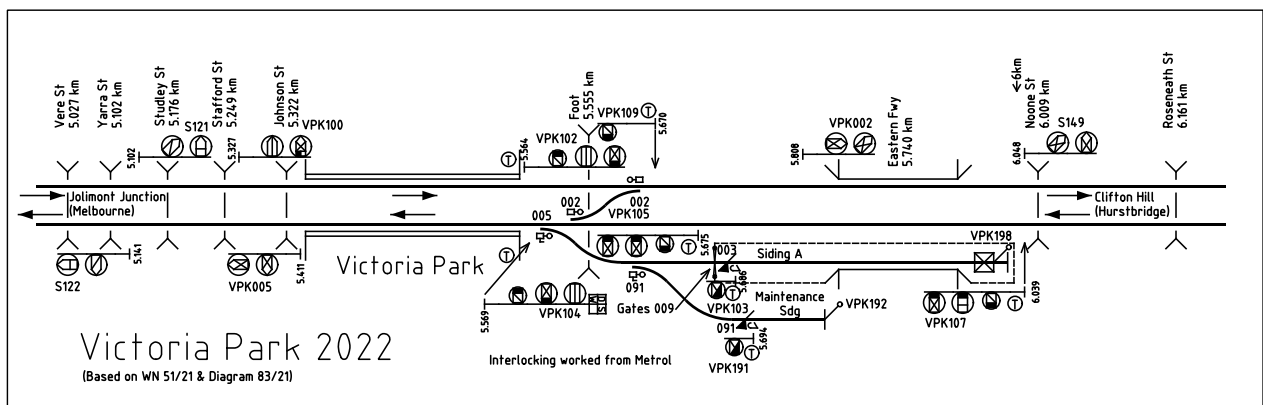
**17.12.2021 Williamstown (SW 608/21, WN 50)**  
 On Friday, 17.12., Homes WMN741 & WMN743 and Automatic W502 were converted to LED.

**17.12.2021 Geelong (SW 234/21, WN 51)**  
 On Friday, 17.12., alterations were made to the signalling logic. Before signals GLG150, GLG152, GLG154, GLG156, or GLG158 can be cleared for a movement towards South Geelong, all the track circuits in advance of these signals must be unoccupied.

**(21.12.2021) Edithvale – Bonbeach (SW 805/21, WN 51)**  
 Commencing forthwith, the pedestrian crossings at Lochiel Ave (31.212 km), Fraser Ave (32.085 km), Swanpool Ave (32.830 km) and Wellwood Rd (34.201 km) were opened.  
 The pedestrian crossings at Berry Ave and The Glade remain closed.

**10.01.2022 Victoria Park (SW 811/21, WN 51)**  
 On Monday, 10.1., a Maintenance Siding was provided. The 87 metre long siding leads off Siding A and is not track circuited nor wired. The following alterations occurred:

- Up Automatic VPK107 was replaced by a new Home VPK107 located 11 metres in the Up direction.
- Down Dwarf VPK104 was replaced by a new Home VPK104. The Home signal is equipped with a train stop and a theatre indicator. The theatre indicator will display 'D' for the Down line, 'S' for Siding A, and 'W' for the Maintenance siding.
- The point machine on Points 005 was replaced by an M23A dual control point machine.
- Points 091 were provided. They are equipped with an M23A dual control point machine.
- Derail/Wheel Crowder 091 and Dwarf VPK191 were provided at the exit of the Maintenance Siding. The Derail is worked by an electro-hydraulic point machine.
- Derail/Wheel Crowder 003 and Dwarf VPK103 were relocated 53 metres in the Down direction.
- A friction arresting buffer was provided in Siding A. The length of Siding A was reduced to 331 metres.

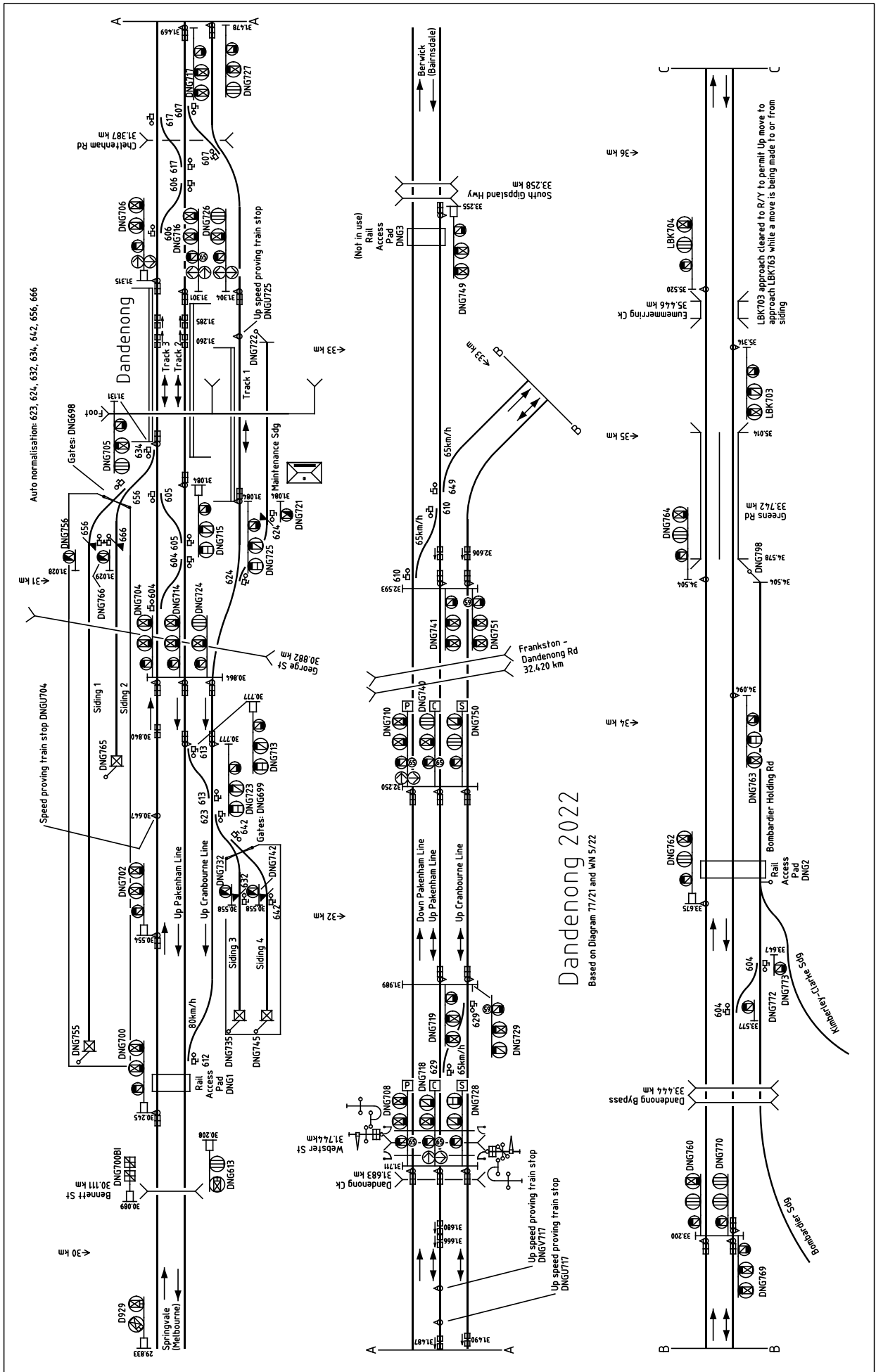


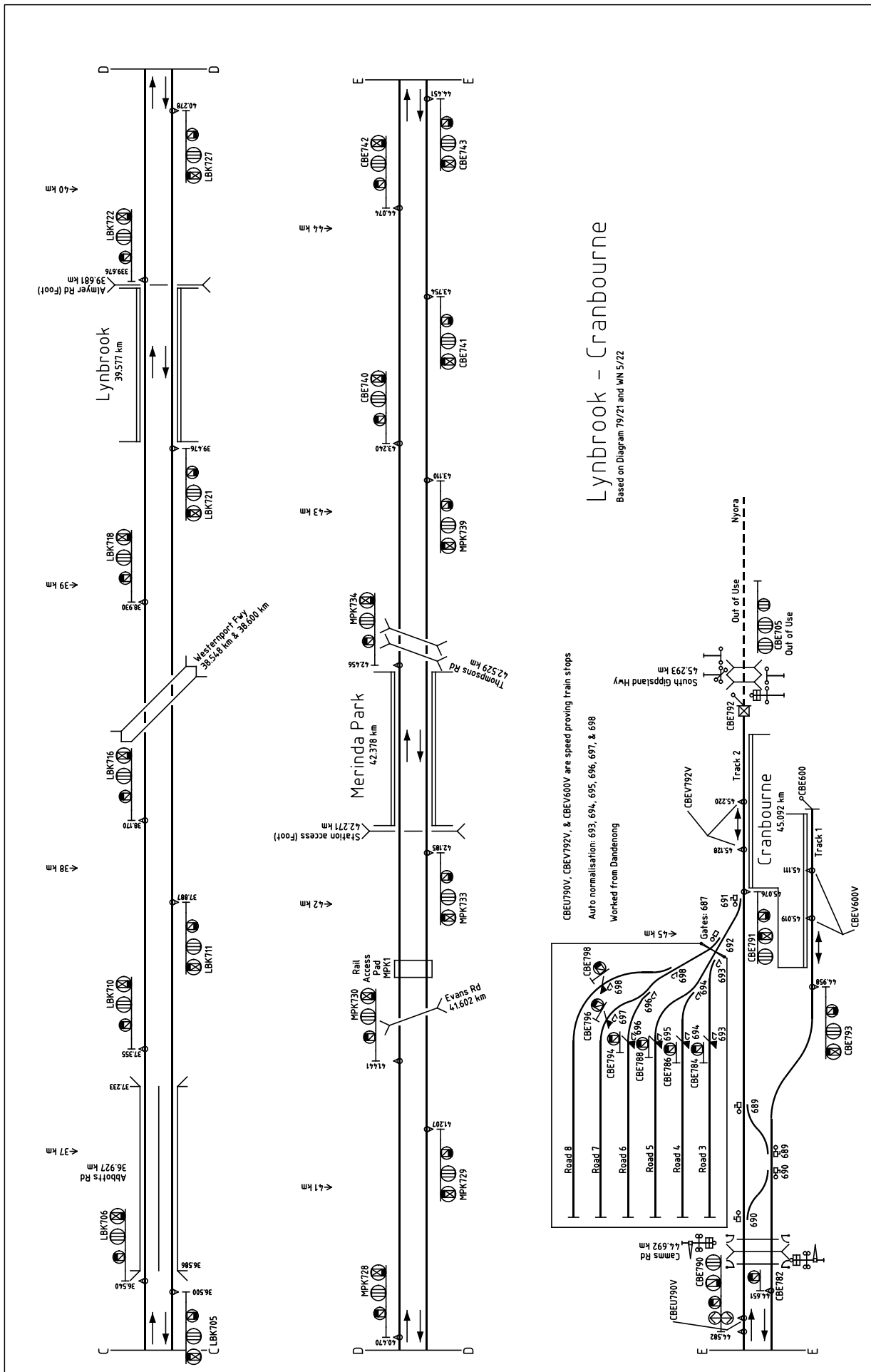


- Track circuits were provided in Siding A to indicate track occupancy.
  - The train security gates in Siding A were converted to motor operation.
  - Manual security gates were provided over the Maintenance Siding
- Diagram 83/21 (Jolimont – Westgarth & Merri) replaced 29/15.

- (11.01.2022) Somerton** (SW 821/21, WN 1)  
 The standard gauge track between Points 446 (on the Up side of Dwarf SOM/V4) to Dwarf SOM10 (the lead to the Upfield line crossing the broad gauge lead to the yard) has been booked out due to the condition of the track. Baulks have been provided at Points 446.  
 The broad gauge lead between the main line and Somerton yard remains in service.
- (11.01.2022) Aircraft – Werribee** (SW 817/21, WN 1)  
 Diagram 87/21 (Aircraft – Werribee) replaced 35/21 due to removal of the Old Geelong Rd crossing (SW 793/21)
- 11.01.2022 Morwell** (SW 2/22, WN 1)  
 On Tuesday, 11.1., No 2 Road was abolished for reconstruction, and the main line connections to the Morwell Briquette Siding were abolished.  
 Points A and B in the single line at the Down end of the platform were abolished, together with the rodded points in No 2 Road, the National Trackwork point levers, and the keyswitch releases and electric points locks.  
 Derail/wheel crowder 15 at the Up end of No 2 Road was secured normal.  
 Diagram 86/21 (Morwell - Morwell Industrial Siding) replaced 4/20.  
 TON 554/21 was cancelled.
- 12.01.2022 Berwick** (SW 19/22, WN 1)  
 On Wednesday, 12.1., the level crossing at Clyde Rd (44.341 km) was abolished. The level crossing protection equipment, including pedestrian gates, will be removed.  
 Train services were suspended between Westall and Pakenham from 11.1 until the grade separation was completed.
- 17.01.2022 Maryvale** (SW 3/22, WN 1)  
 Between Monday, 17.1., and Thursday, 20.1., the HLM MkI electric point lock and detectors on Points C, E, F, G & H were replaced by HLM MkII electric points locks and detectors.
- 14.01.2022 South Dynon** (TON 17/22, WN 2)  
 On Friday, 14.1., hand points VL09 have been booked out of use. Broad gauge access to the Down end of the dual gauge Bio Wash Road is not available. Baulks are provided on the broad gauge lead leading to the points.
- 24.01.2022 Ballarat East** (SW 6/22, WN 3)  
 On Monday, 24.1., Operating Procedure 73 (Ballarat East Locomotive Depot) was reissued. The changes relate to the introduction of the Wayside Monitoring Facility, and updated interface details between the Locomotive Depot and the Turntable Siding/Steamrail Depot. SW 4/21 is cancelled.  
 The turntable appears to have been restored to use after a change of Rail Infrastructure Manager effective 19.5.2021. TON 75/13 is cancelled.
- 25.01.2022 Meredith** (SW 10/22, WN 3)  
 On Tuesday, 25.1., boom barriers were provided at Staughton St (114.127 km). The crossing was converted to be operated by axle counters. Healthy state indicators, yellow whistle boards, and remote monitoring equipment was provided. A reset keyswitch is to be provided for the level crossing, but is not yet available for use, and on/off tracking of road rail vehicles at Staughton St is not permitted.  
 The double wire interlocking was abolished. The Up and Down end main line points were secured normal and will be removed.  
 Posts 1, 2, 3, 4, 5, & 6 were abolished. All double wire equipment at the Up end points were abolished. The plunger lock and signal quadrant at the Down end points were abolished. The interlocking frame and all associated signal box equipment was abolished.  
 Operating Procedure 75 (Meredith) was withdrawn.  
 Amend Diagram 4/99 (Bannockburn – Lal Lal). Circulars SW 3/16, 157/21, & 5/22 were cancelled.
- 28.01.2022 Warrnambool** (SW 11/22, WN 3)  
 On Friday, 28.1., a passive pedestrian crossing with maze was provided on the Up side of Gillies St (266.873 km).  
 Diagram 80/21 (Warrnambool to West Vic Siding) replaced 68/21.

- 28.01.2022 Berwick** (SW 19/22 & 49/22, WN 1 & 2)  
 On Friday, 28.1., a road underpass was brought into service at Clyde Rd (44.340 km) for pedestrian and road use. (Note the Network Configuration document continues to give the chainage as 44.322 km.) A Road/Rail Vehicle (RRV) access pad (BEW1) was provided at 44.200 km.  
 Berwick station itself is unchanged, including the terminating facilities and the pedestrian crossings accessing the island platform.  
 TCMS and CBI data at Dandenong will not be updated until the final commission works.  
 Diagram 1/22 (Narre Warren – Cardinia Rd) replaced 11/21. (Diagram 89/21 was issued and replaced before commissioning due to an error in labelling of Road/Rail access pad BEW1.)  
 Note the LXRA states that trains commenced running on Monday, 8.2.
- (01.02.2022) Ballarat** (SW 12/22, WN 4)  
 Operating Procedure 69 (Ballarat – Signalling and issue of Train Orders) was reissued. The changes relate to the provision of boom barriers at Lydiard St, and the introduction of the Wayside Monitoring Facility. SW 4/21 is cancelled.
- 08.02.2022 Book of Rules – Active Level Crossings** (SW 13/22, WN 5)  
 Effective at 0001 hours, Tuesday, 8.2., Operating Procedure 138 (Active Level Crossings) was issued and came into force. The new Operating Procedure combines SW 129/07, TON 400/08, & SW 32/19 into one procedure, and these Circulars have been cancelled. The procedures have been updated following a Network Control and Fault Management Centre review.
- 08.02.2022 Raywood** (SW 21/22, WN 5)  
 On Tuesday, 8.2., platform construction commenced. The new platform will be 180 metres in length, and will extended from 193.794 km (45 metres on the Down side of Inglewood Rd) to 193.974 km.  
 Amend Diagram 46/17 (Eaglehawk – Raywood).
- 08.02.2022 Dandenong** (SW 75/22, SWP1/22, WN 5)  
 On Tuesday, 8.2., a large number of alterations took place in conjunction with the duplication to Cranbourne.  
 In essence, Down trains to both Pakenham and Cranbourne continue to run via the Down line to Dandenong East Junction. Up Pakenham trains run via what used to be the Up line. Up Cranbourne trains run via what used to be the Cranbourne line to Dandenong, then via the back platform, and then via the third track almost to Bennett St where they rejoin the Up line. At the Down end the crossovers have been retained and it is possible to make any move between any platform and any of the three tracks. The Up Pakenham line is now signalled for bi-directional movements between Dandenong and Dandenong East Junction. At the Up end the crossovers have been simplified. Down trains cannot access the back platform, while Up trains from the back platform can only access the Up line at the extreme Up end of the yard. New Home signals were provided at the Up end, and many Homes at the Down end had their aspects changed, and arrow style indicators installed.
- Tracks 1 (the Down platform) & 3 (the back platform) were renumbered 3 & 1 respectively. To avoid confusion, Track 1 will be referred to as the Back Platform, Track 2 as the Up Platform, and Track 3 will be referred to as the Down Platform.
  - Siding A was converted back into a running line (the Up Cranbourne line) and reconnected to the Up line at the extreme Up end of the yard. Points 612 (a 1:21 turnout) were provided. Catch 622 and Dwarf DNG722 were removed. Points 622 were renumbered 623 and the lay was reversed.
  - All of the existing connections between the Up and Down lines and the Back Platform at the Up end were removed, including the out of use former Up end connections to the dismantled goods yard (Crossovers 602, 612, 625, 633, Points 642, & Catch 643).
  - Crossover 613 was provided between the Up Cranbourne line and the Up Pakenham line to allow shunting movements between Sidings 3 & 4 and the Down and Up Platforms.
  - Many of the signals at the Up end were replaced – some of these only dated from the last resignalling at Dandenong in 2018. The existing Homes DNG704, DNG711, DNG723, & DNG724, and Dwarf DNG714 were removed. New Homes DNG704, DNG713, DNG714, DNG723, & DNG724 were provided. Homes DNG704, DNG714, and DNG724 are mounted on a new signal bridge located on the Up side of the George St overbridge. Note that Homes DNG714 and DNG724 can only be approached by shunting movements from Sidings 3 and 4, but are Home signals and not Dwarfs.
  - Home DNG611 was renumbered DNG613.
  - Stabling Sidings 1, 2, 3, & 4 were provided with friction buffers and buffer lights DNG755, DNG765, DNG735 & DNG745. The Dwarfs controlling the exit from these sidings (DNG732, DNG742, DNG756 & DNG766) now display Clear Low Speed.





- A 188 metre unwired Maintenance Siding was provided adjacent to the Back Platform (replacing Siding A) and is accessible at the Up end. Points 624, Derail/Crowder 624, Dwarf DNG721, and Buffer lights DNG722 were provided.
- The aspects on Home DNG715 were modified.
- Home DNG725 was renewed.
- Homes DNG706, DNG716, & DNG726 were renewed. Arrow type route indicators were provided on all three masts.
- Arrow type route indicators were provided on DNG718.
- Down Homes DNG710 & DNG628/628P were replaced with a signal bridge with new Homes DNG710, DNG740, & DNG750.
- The aspects were modified on Homes DNG727, DNG729, DNG749, & DNG753. Home DNG729 was fitted with a '65' indicator.
- New Up Homes DNG741 and DNG751 were provided on a signal bridge just on the Up side of Dandenong East Junction.
- Between Dandenong and Dandenong East Junction, large fixed boards indicating the line the signal applies to have been provided on Down Homes DNG708 & DNG710 (P – Pakenham line); DNG718 & DNG740 (C – Cranbourne line); and DNG728 & DNG750 (S – Siding).
- Homes DNG760, DNG763, DNG764, & DNG769 were provided.
- The aspects on Homes DNG770 and DNG762 were altered.
- The end of the double line towards Cranbourne was removed. Homes DNG776 and DNG777 were removed. Points 642 were removed.
- All Home signals are equipped with TPWS(TSS).
- Speed proving train stop DNG704 were provided.
- TPWS(OSS) were provided on the approach to DNG704, DNG706, DNG716 (two), DNG717 (three), DNG727, DNG741, & DNG751.
- The speed through platforms 2 & 3 is restricted to 60 km/h, as is the speed from these platforms at the Up end and the speed to No 2 track at the Up end.
- Station limits in the Down direction are from DNG700 to DNG610/DNG760, and in the Up direction from DNG753/DNG6=763 to DNG613.

The Dandenong Signal Control Centre is responsible for all rail movements between Caulfield and Pakenham/Cranbourne. It consists of two panels: Westall and Dandenong. Westall panel controls from the Down side of Homes D612 and D376 at Caulfield to the Up side of Homes D920 & D929 at Dandenong. Dandenong panel controls from the Up side of DNG700 & DNG611 to Pakenham East and Cranbourne. Diagram 77/21 (Dandenong – Hallam) replaced 67/21. Operating Procedures 13 (Caulfield to Pakenham and Cranbourne Line Rail Corridor) and 17 (Dandenong) were reissued.

**08.02.2022 Beaconsfield (SW 44/22, WN 5)**

On Tuesday, 8.2., the emergency exit gates at the pedestrian crossing over the Down line at the station access were fitted with electromagnetic latches.

**08.02.2022 Dandenong – Cranbourne (SW 75/22, SWP1/22, WN 5)**

On Tuesday, 8.2., the single line between Dandenong East (33.850 km) and Cranbourne was duplicated. The Automatic & Track Control system on the sections Dandenong – Lynbrook Loop – Cranbourne was replaced by the Automatic Block Signalling system.

Homes LBK780, LBK781, LBK782, LBK783, & CBE790 were removed. Automatics LBK680, LBK681, LBK683, LBK691, & CBE682 were removed. Points 680 & 688 at Lynbrook loop, and 690 at Cranbourne were removed.

Homes LBK703, LBK704, LBK705, LBK706, LBK710, LBK711, LBK716, LBK718, LBK721, LBK722, LBK727, MPK728, MPK729, MPK730, MPK733, MPK734, MPK739, CBE740, CBE741, CBE742, CBE743, & CBE790 were provided. Dwarf CBE782 was provided. Note that all intermediate signals are controlled Home signals situated much closer together than the former signals.

The aspects on CBE791 & CBE793 were altered.

Crossovers 689 and 690 were provided at Cranbourne. Both have 1:9 turnouts and are equipped with dual control point machines.

The level crossing at Greens Road (34.742 km) was abolished and replaced by a U-trough viaduct extending between 34.578 km and 35.014 km.

Road/rail access pads were provided at 33.735 km (DNG2) near the entrance to the Bombardier Holding Road, and at 41.797 km (MPK1) on the Up side of Merinda Park. The diagram shows a third Road/Rail access pad at 38.152 km, but this has not yet been provided.

A new Up platform was provided at Merinda Park, and the existing platform became the Down platform. The level crossing at Camms Rd became double track. A pedestrian crossing with automatic gates was provided on the Down side of the road.

Axle counters were provided to detect rail vehicles between the Dandenong East Junction and Cranbourne, except in the Cranbourne stabling sidings. The standard axle counter resets are provided (Supervisor (automatic), Point Supervisor (automatic), Next Train (manual by SMT); and Occupation Key (direct manual by SMT). Full counting head control is provided.

Station limits at Cranbourne in the Down direction are from Home CBE742 to the buffer stops, and in the Up direction from the buffer stops to Home CBE743.

Diagram 79/21 (Lyndbrook – Cranbourne) replaced 61/21. Operating Procedure 18 (Cranbourne) was reissued.

**11.02.2022 Carnegie – Clayton (SW 45/22, WN 5)**

On Friday, 11.2., a changeover key switch was provided to transfer control of points and signals between Carnegie and Clayton between the existing Oakleigh interlocking and the Test CBTC interlocking. When operated the keyswitch will also isolate the Flora Avenue and Richardson St pedestrian crossings.

**14.02.2022 Kananook (SW 46/22 & 47/22, WN 5)**

On Monday, 14.2., Sidings 1 & 2 were extended by 155 metres. Buffer light KYS701 replaced KSY703 on No 1 Siding, and KYS703 replaced KSY709 on No 2 Siding. Additional notice boards were provided on both sidings.

The Kananook SCC and Frankston RailView CBI data was updated.

Diagram 3/22 (Bonbeach – Frankston) replaced 63/21.

**18.02.2022 Creswick (SW 19/22, WN 5)**

Between Monday, 14.2., and Friday, 18.2., the boom barriers at Gillies Rd (180.669 km) on the Down side of Clunes were altered to axle counter operation. The level crossing predictor indicator boards were abolished. A healthy state indicator, yellow whistle boards, and remote monitoring was provided.

A reset keyswitch is provided at the level crossing, but not brought into use and on/off tracking of road/road vehicles is not permitted.

Amend Diagram 146/12 (Creswick).

**18.02.2022 Clunes (SW 15/22 & 16/22, WN 5)**

Between Monday, 14.2., and Friday, 18.2., the boom barriers at Cemetery Rd (194.904 km) & Beckworth Court Rd (197.329 km) on the Down side of Clunes were altered to axle counter operation. The level crossing predictor indicator boards were abolished. A healthy state indicator, yellow whistle boards, and remote monitoring was provided.

Reset keyswitches are provided at both level crossings, but not brought into use and on/off tracking of road/road vehicles is not permitted.

Amend Diagram 148/12 (Clunes).

**18.02.2022 Talbot (SW 17/22 & 18/22, WN 5)**

Between Monday, 14.2., and Friday, 18.2., the boom barriers at Ballarat-Maryborough Rd (209.269 km) & Scandinavian Cres (209.531 km) on the Up side of Talbot were altered to axle counter operation. The level crossing predictor indicator boards were abolished. A healthy state indicator, yellow whistle boards, and remote monitoring was provided.

Reset keyswitches are not provided at either level crossing and on/off tracking of road/road vehicles is not permitted.

Amend Diagram 100/13 (Talbot).

**End£**

## DUNOLLY

(Continued from Vol 44 No 6 page 102)

### Section Authority Working

Section Authority Working replaced the Train Order System between Maryborough and Donald on Sunday 21 September 1997. The single line sections remained Maryborough – Dunolly – Emu. The line to Inglewood remained worked by Train Orders, and Begin and End Section Authority Boards and Begin and End Train Order Boards were provided on the Inglewood line at Post 4.

Dunolly was an open/close location in the Section Authority System. The open/close status related to whether a Signaller was in attendance; trains could cross at Dunolly irrespective of whether it was open or closed. Dunolly had to be open and attended for all trains to or from the Inglewood line trains, the arrival, departure, and shunting of all standard gauge trains, and while broad gauge trains were shunting on the main line. The status of Dunolly was indicated by the Section Authority trains received. When Dunolly was closed, the Section Authorities issued to trains showed 'Dunolly LP'<sup>1</sup>, and when it was open 'Dunolly'.

Dunolly could not be opened while a train was between Maryborough and Emu, or while a train with a directional block was standing at Dunolly. For this reason, Dunolly had to be attended and open before a Down Inglewood train departed from Maryborough, and before an Up or Down standard gauge train departed from Maryborough or Dunolly. It was not necessary, however, for Dunolly to be open or attended before a Train Order was issued for an Up train to proceed from Arnold Block Point to Dunolly.

Dunolly could not be closed while a train was standing on either the main line or loop at Dunolly, or when there were outstanding Section Authorities between Maryborough and Emu.

When Dunolly was open, the fixed signals were normally at Stop. Up trains from the Inglewood line could be brought into the yard without a Section Authority. When Dunolly was closed the fixed signals were at proceed and shunting movements could work in Nos 3, 4, or 5 Roads, but not foul either the main line or loop.

On 12 October 1997, Section Authority Working was extended from Donald to Yelta. At this time the instructions for Dunolly were cleaned up and reissued. The instructions now covered shunting standard gauge trains. The Section Authority could be relinquished once the Down standard gauge train was in clear in Siding B. The empty train would stand behind the platform while the vehicles were dropped down to be loaded. The loco would then pull the wagons back behind the platform and run around via No 1 Road.

The Section Authority System only lasted a short time on the Yelta line; it was abolished on 25 July 1999 and the Train Order System reinstated north of Gheringhap. The stated reason at the time was that there was not sufficient traffic on the line to warrant retaining the Section

Authority System. The sections under the reinstated Train Orders system remained Maryborough – Dunolly – Emu Loop.

### The struggle for unattended working

Under the Train Order System of working from 1999, Dunolly was required to be attended when a standard gauge train arrived, a broad gauge movement was made to or from the Inglewood line, when broad and standard gauge trains were simultaneously at Dunolly, or when shunting moves fouling Nos 1 or 2 Roads were to take place. The Signaller had to be in attendance 30 minutes prior to the arrival of the train, or, when a cross was to take place, 30 minutes prior to the issuing of the opposing Train Orders. In essence, the only train moves through Dunolly not requiring a Signaller to be in attendance were through movements on the Mildura line, including crosses, and shunting movements wholly within Siding B or Nos 3, 4, & 5 Roads. When the grain was running, there must have been a significant amount of staff time booked at Dunolly.

On 13 April 2003 instructions were issued to allow Through Train Orders to be issued on the Inglewood line. Through Train Orders could be issued for an Up train from the Inglewood line to Maryborough followed by a Down train to the Inglewood line; a single Down train to the Inglewood line; or two consecutive Down trains to the Inglewood line provided the first train had received a TAILS confirmation that the train was complete at Arnold Block Point. Inglewood line trains could not cross at Dunolly. The instructions suggest that the TAILS equipment at Dunolly had been withdrawn by this time. The Train Controller had to instruct the Signaller of the need to issue a through Train Order prior to the Signaller ceasing duty. The Signaller would set the junction for the Inglewood line and clear the necessary signals. The signals would be restored to stop when a Signaller next commenced duty. Obviously, once the junction was set for the Inglewood line no Mildura line trains could work through Dunolly until a Signaller resumed duty.

The standard gauge line between Ararat and Maryborough was booked out of use on 21 January 2005, which meant that no standard gauge trains could reach Dunolly, and the standard gauge portion of the yard was out of use. Clearly transshipping grain had ceased by this time, but exactly when and why is not known.

On 18 March 2009 the signals at Dunolly were replaced by LEDs. This particularly affected Post 2, where the two mechanical arms on the signal protecting the junction were replaced by LED units.

Around 24 June 2010 a derailment at Dunolly took out the track at the Down end of the crossing loop. Until this could be repaired, temporary signalling arrangements were put into place. All trains were run via No 1 Road. The plunger lock was removed from the junction points (Points C), and the points were secured by a point clip, and the

<sup>1</sup> It is likely that 'LP' indicated 'Loop'



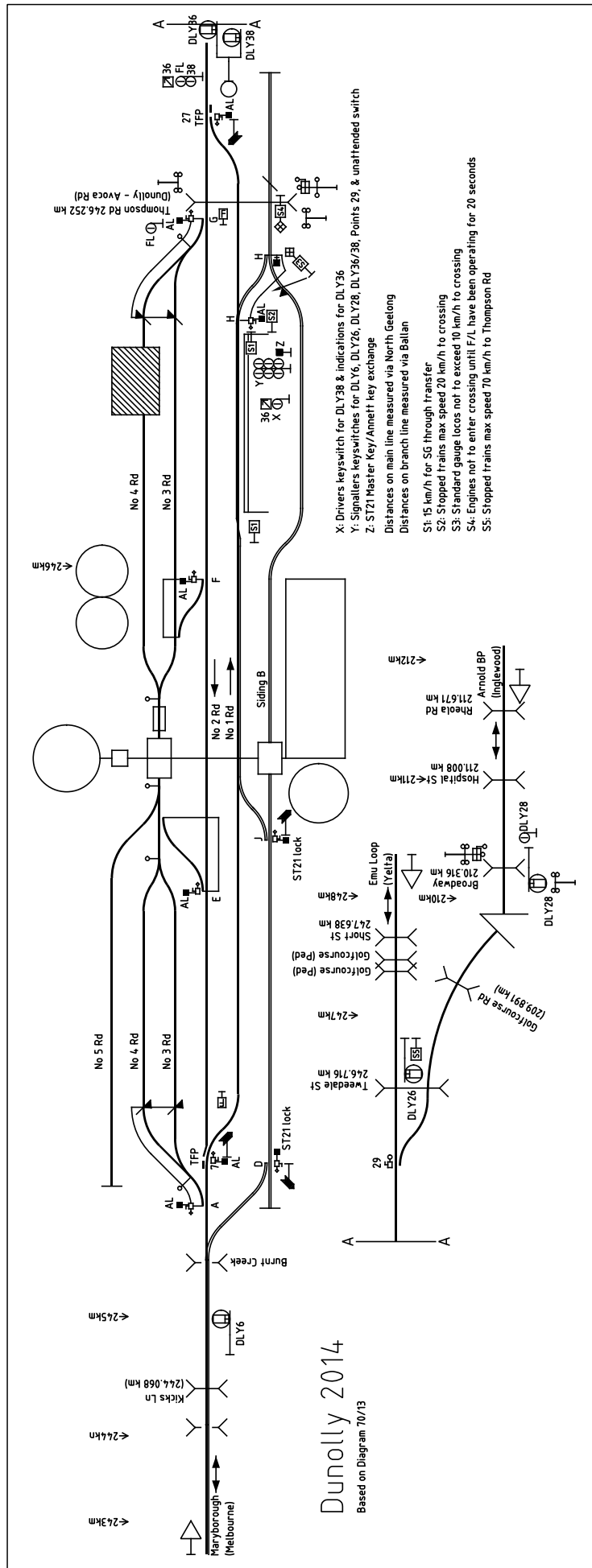
heads were removed from Post 2. Posts 3 and 4 were secured at stop. Dunolly was reclassified as an Intermediate Terminal Station and had to be attended for all movements. The signalling was not restored until 16 July 2010. No change was made after the restoration, except that the 5P keyswitches on the platform and at Points G & L were replaced by V5PSW keyswitches. (As far as I am aware, the keyswitches had nothing to do with the derailment.)

Massive flooding occurred in central Victoria in mid January 2011, and all lines north of Maryborough were booked out of use on the 15th of that month. The main line was booked back into use on 20 January (but only as far as Sutherland Loop). The line north of Sutherland Loop was booked back into use on 28 January, with trains recommencing on 29 January. The Inglewood line remained out of use with the points spiked until 3 June 2011.

In mid March 2013 the instructions for issuing through Train Orders were reissued. The first change was that permission to issue Through Train Orders had to be granted by the Manager Network Signalling. The three basic scenarios remained, but it was now allowed for trains to cross at Dunolly when proceeding to or from the Inglewood line. On the other hand, it was now specifically prohibited for Through Train Orders to be issued to trains that were required to shunt at Dunolly. A Signaller was required to be in attendance at Dunolly when trains were to otherwise operate to or from the Inglewood line, a train was to shunt Dunolly, or for the arrival or departure of trains from the broad gauge yard. The Signaller was not required to be in attendance while a train worked in the broad gauge sidings, unless a through train would work through while this happened.

New location boards, located 2,500 metres from the Home signals, were provided on all three approaches on 19 September 2012. Location clearance signs were provided on all three boards indicating that the TAILS system was definitely out of use by this date.

On 2 March 2014 the junction points were motorised and equipment provided so that the junction could be operated by Drivers. This avoided the need to roster a Signaller on at Dunolly for through movements on either the main or branch lines. A signaller was only necessary while shunting moves were taking place at Dunolly – either on through trains, or for the arrival and departure of trains originating and terminating at Dunolly. The Signaller had to be in attendance at Dunolly 30 minutes before the arrival or departure of the train, or, where trains were to cross, 30 minutes before the issue of the opposing Train Orders. It was not necessary for a Signaller to be in



attendance while a train was working within Nos 3, 4, or 5 Roads, unless another train was to pass through Dunolly.

The junction points (DLY29) were relocated 325 metres in the Down direction, close to Tweeddale St, and near the physical point of divergence of the branch. A new branch bracket home was provided. On the platform, an equipment cabinet was provided outside the 'signaller's building' at the Down end of the platform. Two boxes were provided on the cabinet. At one end was the Signaller's keyswitch box which contained controls for all of the signalling, including the junction points, and ST21, E, and F pattern Fortress locks. It also contained an 'attended'/'unattended' mode keyswitch. These controls replaced the former controls on the platform. At the other end of the equipment cabinet was the train crew's keyswitch box. This contained a keyswitch to call the junction points for the Korong Vale line, together with indications for DLY26.

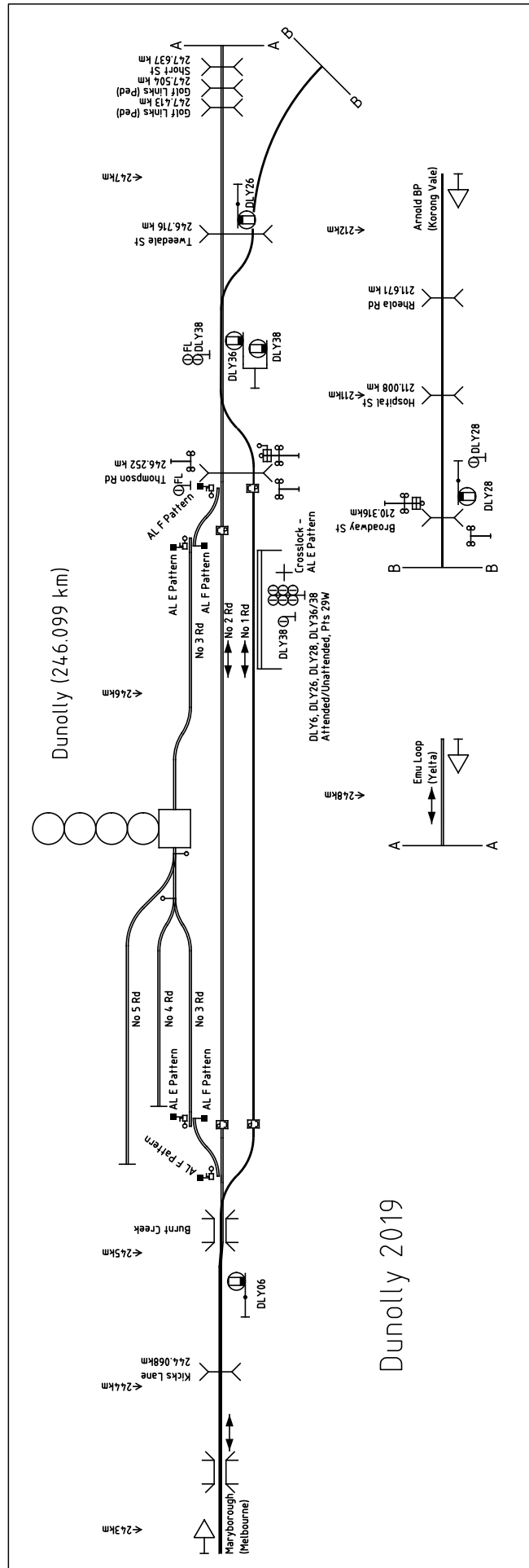
In operation, the junction was normally set for the Mildura line with the signals in both directions clear for that route. Down Korong Vale line trains would arrive in No 1 Road and stop at the platform. Provided the points were available, one of the train crew would then call the junction points reverse using the keyswitch on the platform. This would restore the Mildura line signals to stop, and, after a timeout, reverse the junction points. Home DLY38 would clear when the points were detected reverse. The junction points would self restore after the passage of the train and the signals for the Mildura line would reclear. Moves from the Korong Vale line were similar, but the junction was called from a keyswitch located at Home DLY28.

On 20 March 2014 Points E were booked out of use due to wear on the stock rail.

On 4 December 2014 (unspecified) alterations to the signalling was made. This affected operation when attended.

**Standardisation (well, partially)**

In the 2015 State budget, the government announced the Murray Basin rail standardisation project. The proposal that was eventually developed was to convert the Yelta, Ouyen to Murrayville, Dunolly to Manangatang, and Korong Vale to Sea Lake lines to standard gauge. The line from North Geelong through Ballarat to Maryborough would be converted to dual gauge (the government had re-instated a broad gauge passenger service between Ballarat and Maryborough in July 2010). The mothballed standard gauge Ararat - Maryborough line would be rehabilitated and reopened again to provide access to Portland. Work would commence with rehabilitation of the Ararat line, and the conversion of the Yelta and Murrayville lines north of Dunolly. The dual gauge line between Maryborough and Dunolly would be used in the interim to provide broad gauge access to the lines north of Korong Vale. The next stage would be the conversion of the lines through Korong Vale, and the final stage



would be the provision of dual gauge south of Maryborough.

After much preparatory work, standardisation commenced on 7 August 2017 when the Yelta line north of Dunolly was closed for gauge conversion. The broad gauge south of Dunolly was retained for access to the Korong Vale line. At Dunolly itself, the junction points were secured for the Korong Vale line with the Home signals to and from the Mildura line secured at Stop. Nos 1 & 2 Roads were retained as a crossing loop for the Korong Vale line, but the broad gauge sidings (Nos 3, 4, & 5 Roads) and the standard gauge siding was formally abolished. Dunolly was secured in unattended mode.

Just over two months later, on 14 October 2017, No 2 Road was abolished for conversion to standard gauge. Dunolly was closed as a crossing station and became an Intermediate Train Order Station. The signalling, however, remained operational. The existing gauge transfers were removed. Conversion of No 2 Road to standard gauge was completed on 4 December 2017. New gauge splitters were provided near the Burnt Creek bridge, and on the location of the former Down end points of the crossing loop (DLY27). The broad gauge line was extended to the Burnt Creek bridge. At the beginning of January 2018, the junction points (DLY29) were replaced by a gauge splitter.

On 8 February 2018 standard gauge construction trains were permitted north of Maryborough. The dual gauge track was restored to use between Maryborough and Dunolly. At Dunolly, the two gauges divided just north of the Burnt Creek bridge, with the standard gauge running along the former No 2 Road and the broad gauge running along the former No 1 Road. The two gauges rejoined at the former Down end of the crossing loop to form a second section of dual gauge track for the short distance to the junction, where the broad gauge split towards Korong Vale. Operation of Thompson St for standard gauge moves was by a level crossing predictor, however the speed limit on the standard gauge was limited to 15 km/h. Standard gauge points were provided for the future Nos 3 & 4 Tracks. There was no change to signals.

The absolute occupation north of Dunolly was returned on 7 May 2018. From a signalling or safeworking perspective little changed apart from the restoration of Homes DLY26 and DLY36 to use. The crossing loop was still out of service, with standard gauge trains running via No 2 Road and broad gauge trains via No 1 Road. The standard gauge sidings 3, 4, & 5 were still not in use and Points A and G in the standard gauge were secured normal. Train crew operation of the junction was restored to use, even though there were no longer any points. The signals were normally clear for Yelta line movements. Broad gauge trains had to stop at the platform or DLY29 and call the signalling for moves to and from the Korong Vale line. Dunolly remained an Intermediate Train Order Station.

The Grain Sidings were not restored to use until mid July 2019, and, even then, the signalling was in an incomplete state. Nos 3, 4, & 5 Roads were largely restored the way they had existed in broad gauge, however the connection at the Up end to No 4 Road was removed. Catch points were provided at both ends of No 3 Road, replacing the Hayes Derails and Crowders. The main line points (5, formerly A, and 15, formerly G) and the catch points were equipped with dual control point machines. These point machines, however, were only operated in hand mode. To work the siding, a Signaller had to be in attendance and the signalling placed in attended mode. After restoring the arrival homes to Stop, the Signaller could remove the E pattern Annett key from the Signaller's panel. This could be taken to the relevant catch point where an E pattern Annett lock was fitted to the selector lever on the point machine. Once unlocked, the point machine could be placed in the hand mode and the catch points closed. This released an F pattern Annett key located in an Annett lock mounted on the sleeper at the catch point. The F pattern Annett key could then be removed and taken to the points where the point machine could be similarly unlocked and the main line points reversed.

This remains the state today. The cost overruns on the gauge conversion of the Dunolly – Yelta and Ouyen – Murrayville lines were so significant that they absorbed most of the funds available for the full project. Conversion of the Dunolly – Sea Lake and Ultima lines was postponed indefinitely. Grain from the Yelta and Murrayville lines, on standard gauge, runs via Maryborough and Ararat. From Ararat it can be sent to either Melbourne, Geelong or Portland. Grain from the Korong Vale lines, on the broad gauge, can be sent via Ballarat to either Melbourne or Geelong. Dunolly only needs to be attended when standard gauge trains need to move to or from the sidings.

Minor updates to the operation of the local signalling took place on 5 September 2019, but no details are available.

As from late June 2020 Down trains terminating at Dunolly, or Up trains originating there, were not required to be issued with a corridor Master Key.

Dunolly is now a significantly reduced location, signalling and trackwise, compared to 2014. It remains to be seen if the branch lines through Korong Vale are ever standardised, the broad gauge abandoned at Dunolly, and the crossing loop and junction brought back into proper use.

#### **Errata**

In the previous issue it was stated that the non-trailable point machines installed in 1988 were fitted with switch stands showing a green diamond when secured for the straight and two red discs when set for the diverge. Chris Wurr has noted that these switch stands were never fitted.