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SOCIETY CONTACT INFORMATION

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MINUTES OF MEETING HELD FRIDAY 17 MAY 2019, AT THE SURREY HILLS NEIGHBOURHOOD CENTRE, 1 BEDFORD AVENUE, SURREY HILLS, VICTORIA

Present: – Noel Bamford, Glenn Cumming, Graeme Dunn, Michael Formaini, Chris Gordon, Judy Gordon, Andrew Gostling, Bill Johnston, David Jones, Keith Lambert, David Langberg, Neil Lewis, Phillip Miller, Colin Rutledge, Roderick Smith and Andrew Wheatland.

Apologies: – Robert Bremner, Brian Coleman, Warren Doubleday, Chris King, David Langley, Steve Malpass, Andrew McLean, Adrian Ponton, Laurie Savage, Peter Silva, David Stosser, Leon Tirel, Stuart Turnbull, Frank Tybislawski, David Ward and Andrew Waugh.

Visitor: – James Sinclair.

In the absence of the President, the Vice-President Mr. Bill Johnston, took the chair & opened the meeting at 20:11 hours (8.11 pm).

Minutes of the March 2019 Meeting: – Accepted as read. Phillip Miller / Michael Formaini. Carried.

Business Arising: – Nil.

Correspondence: – Notice of Special General Meeting sent to all SRSV members.

Membership application form sent to James Sinclair.

Phillip Miller / Graeme Dunn. Carried.

Reports: – David Langberg provided an update on the work he has been doing configuring the new large format scanner and documenting the processes for scanning documents. Planning for the purchase of a computer to compliment the scanner is underway. Much discussion followed.

General Business: – Phillip Miller provided a progress report for the works at Kananook. Track work for the new sidings is complete but overhead wiring has not yet been installed.

Keith Lambert described a proposal to provide additional signals for the crossover at Elsternwick to be controlled from a signal control panel that was previously in use at Berwick. The crossover will continue to be worked mechanically from the ground frame and a plunger will be provided on the Up end of the crossover for Down moves through the crossover. It is understood that point machines cannot be used because the signal power supply is still 25 Hz.

Keith Lambert noted that level crossing removal works at Cheltenham had commenced.

The use of absolute occupations and "shutdowns" for infrastructure maintenance was discussed.

Chris Gordon advised that the signal box at Darling would be abolished over the long weekend in June 2019 and will be replaced by remote control from Metrol.

(Front cover) Frankston is the last non preserved Victorian location with disc signals. Eight discs on four posts are used to signal shunting EMUs at the Up end of the yard. The cover photo shows Disc 63 on Post 7 cleared for a Down empty three car set to arrive direct into No 4 Road. This disc, unusually, is mounted on the front of the post, rather than on the side of the post. With the disc at clear, the age of this style of signal is apparent – it reaches back to the dawn of mechanical signalling. The design of the signal is centred around displaying a highly visible aspect – a red target - when the signal is at Stop. The aspect disappears when the signal is cleared. This harks back to the very early use of flag signals and very early UK running signals. The same idea can still be seen in German and French mechanical signalling. Most UK railways adapted these signals to display a positive clear aspect. Photo Andrew Waugh

Andrew Wheatland provided a progress report on the construction of the new signal box at Lakeside.

Michael Formaini reported on an accident on Hong Kong's MTR metro system in March 2019 when two trains collided on the Tsuen Wan Line. The collision occurred during testing of a new signalling system known as communication-based train control (CBTC).

Rod Smith advised that the new Sydney Metro Northwest line is planned to open on Sunday 26 May 2019.

Syllabus Item: – The Vice-President introduced Roderick B. Smith to present the Syllabus Item.

Rod presented the 29th annual screening of slides from the collection of the late Stephen McLean.

This year's presentation continued Stephen's first trip to North America in December 1981, accompanied by Rod Smith.

The slides showed views of Stephen and Rod's travel across Canada to Vancouver, then south along the west coast of the USA.

The presentation concluded with views of the RMS Queen Mary moored at Long Beach in Los Angeles.

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

Meeting closed at 22:05 hours.

The next meeting will be on Friday 19 July, 2019 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 27/19 to WN 31/19, 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.

29.06.2019 Marshal (SW 115/19, WN 27)

Commencing on Saturday, 29.6., commissioning of TPWS was begun.

- Signals MSL6, MSL10, MSL12, MSL26, MSL30, & MSL32 were provided with TPWS(TSS).
- Signals MSL6 and MSL10 were provided with three TPWS(OSS) sensors
- Signal MSL26 was provided with one TPWS(OSS) sensor
- Rail movements between 78.992 km and 80.065 km are limited to 55 km/h (passenger trains) and 40 km/h (freight trains). This is marked as a temporary speed restriction.
- The 'Start TPWS' board for Up trains at South Geelong Post 8 was abolished.
- The 'End TPWS' board for Down trains at South Geelong Post 2 was abolished.
- The 'Start/End TPWS' boards for Up and Down trains at Waurn Ponds Post WPD4 was abolished.

The temporary speed restrictions in TS 3/18 and TS 324/18 were cancelled

04.07.2019 Murrayville (SW 117/19, WN 27)

Commencing on Thursday, 4.7., the Down end main line points were relocated further out at 581.211 km. These points now form a crossover to the Down end dead end siding (the new points in the siding are at 581.118 km). The main line points remain worked by WSa levers and hand locking bars.

The broad gauge track between the current baulks at 582.020 km and 582.042 km was converted to standard gauge and the baulks were relocated to 582.042 km.

Amend Diagram 80/18 (Linga – Murrayville).

04.07.2019 Nullawil (TON 152/19 & TON 174/19, WN 28 & WN 31)

On Thursday, 4.7., the siding was booked out of service to allow the silos to be painted. The main line points have been secured normal. The siding was booked back into service on Thursday, 25.7.19.

06.07.2019 Metrol (SW 327/19, WN 27)

On Saturday, 6.7., the TCMS data was updated to support event 68 works, including track circuits D120T, D135T & D141T at South Yarra, and the removal of D170T.

(09.07.2019) Rockbank (SW 123/19, WN 28)

At the conclusion of the track and signal alterations published in SW 108/19, the existing platforms were replaced by new 180 metre platforms located on the Down side of Homes RBK710/RBK712.

Rockbank is temporarily closed to passengers, but the crossing loop remains available for use.

(()9.07.2019) Linga – Murrayville (SW 124/19, WN 28)

Diagram 52/19 (Linga – Murrayville) replaced 80/18 as in service.

10.07.2019 Ouyen (SW 120/19 & SW 131/19, WN 27 & 29)

On Wednesday, 10.7., Points G at the Down end of No 1 Rd were restored to use, together with Catch D at the Down end of No 2 Road.

Points G and Catch D were fitted with dual control point machines which are only available for hand operation. An F pattern Annett Key is fixed to the selector lever of the point machine at Points G, with the key secured in a duplicate lock secured to the sleepers opposite the catch points. An E pattern Annett Key is similarly fixed to the selector lever at Catch D, with the key secured in a cross lock on the interlocked frame.

The E pattern key can only be released if all the signal levers are normal. This will illuminate a push button, which, when pressed, will allow the key to be removed from the crosslock. Removal of the key will secure the Homes on Posts 5 & 6 at stop. The E pattern key can then be used to release and reverse Catch D. This will release the F pattern key, which can be used to release and reverse the point machine on Points D.

Operating Procedure 90 (Ouyen) was reissued. SW 405/18 was cancelled.

Diagram 50/19 (Ouyen) replaced 44/18.

12.07.2019 Bonbeach – Carrum – Seaford (SW 354/19, WN 29)

On Friday, 12.7., in conjunction with the closure of Carrum, the stopping/express selection of the Up Approach at Bondi Rd, Mascot Av, & Beach St, and the Down Approach at Eel Race Rd were altered to express mode only. The signal controls of Homes 6 and 16 at Carrum will be altered so that they are pre-cleared for express trains when Carrum is switched out.

14.07.2019 Flinders Street (SW 330/19, WN 27)

On Sunday, 14.7., Homes 585 and 586 (Platform 6) were relocated 20 metres in the Down direction (towards Richmond). The train stops were replaced.

TPWS was provided on Homes 585, 586, 733 & 736.

14.07.2019 Flinders Street – Richmond (SW 328/19, WN 27)

Between Saturday, 6.7., and Sunday, 14.7., TPWS was provided on signals 666, 690, 735, 737, & 775 (Caulfield Local Lines) and 741 & 743 (Caulfield Through Lines).

14.07.2019 Richmond – Toorak (SW 328/19, WN 27)

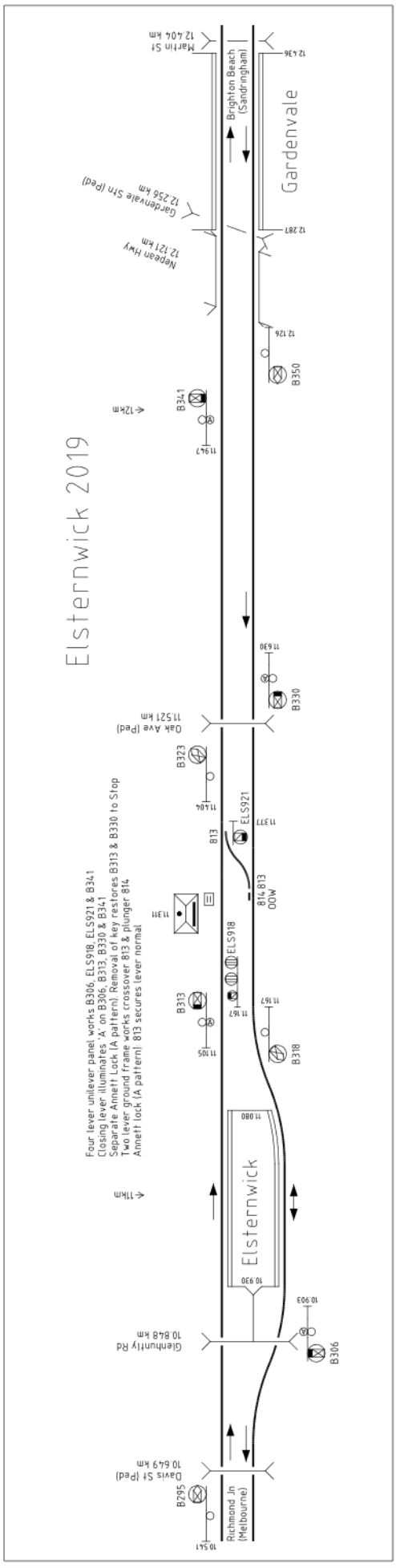
Between Saturday, 6.7., and Sunday, 14.7., the following alterations took place:

- Automatic D124 at South Yarra was replaced by a tilting mast located 6 metres in the Up direction.
- TPWS (TSS) was provided on Automatics D117, D124, D131, D140, D145, D152, D153, D161, D164, & D171.
- The train stops were replaced at Automatics D100, D114, D124, D131, D140, & D145.
- CSEE track circuits replaced the audio frequency equipment on D114T, D120T, D124T, D131T, D132T, D135T, D140T, & D141T.

15.07.2019 Elsternwick (SW 361/19, SWP 10/19 WN 28)

Between Saturday, 13.7., and Monday, 15.7., signalling was provided to signal terminating movements across the crossover.

- Up Automatic B306 was converted to a controlled Home and provided with an illuminated letter 'A'. This home is interlocked with the Glen Eira Road level crossing at Ripponlea.



- Down Automatic B341 was converted to a controlled Home and provided with an illuminated letter 'A'.
- A new Down Home ELS918 (11.146 km) was provided to control Down movements from Platform No 1 to the Down line. The signal is of the L4 style.
- A new Up Dwarf ELS921 (11.345 km) was provided to control Up movements from the Down line to Platform 1. This signal is of the U2L style.
- A control panel was provided in the signal cabin to work Homes B306, B341, & ELS918 and Dwarf ELS921. The panel also has normal, reverse, and points free indicating lights for Crossover 613, and a closing lever.
- The Annett lock containing the key to release the ground frame was relocated to the signal cabin.
- Trailing Crossover 613 continues to be worked from the two lever ground frame. The A pattern Annett lock is now fitted to the lever working the Crossover and secures the points normal. Points 613U are fitted with a plunger worked by lever 614 (the right hand lever in the ground frame).

Diagram 33/19 (Prahran – Sandringham) replaced 109/13.

Metro Trains Caulfield Group Operating Procedure 22 was reissued.

(16.07.2019) Tottenham Yard (SW 129/19, WN 29)

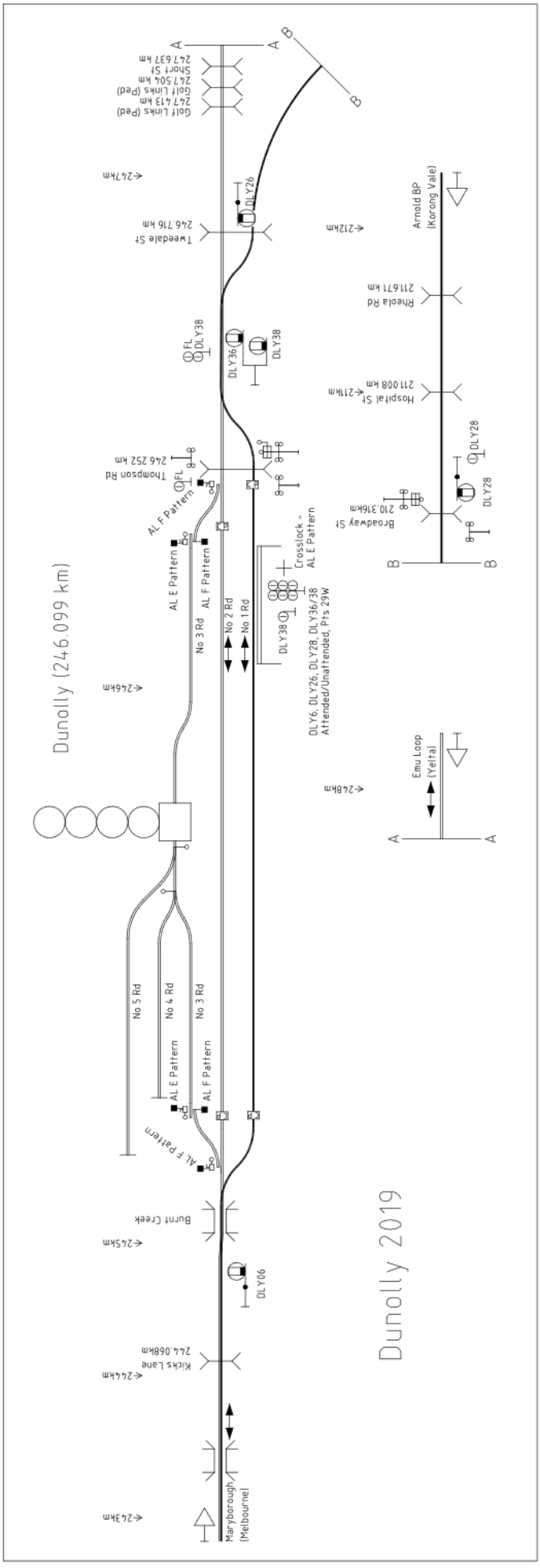
No 5A Road at the Up end of Tottenham West Yard has been extended and connected to No 5 Road at the Down end of West Yard to provide a new No 5 Road with a standing room of 1196 metres.

Amend Diagram 62/14 (West Footscray – Tottenham).

(16.07.2019) Dunolly
(SW 118/19, SW 127/19, & SW 131/19, WN 27 & 29)

Nos 3, 4 & 5 Roads were restored to use for standard gauge trains. The following track and signal alterations took effect.

- Catch 5D was provided at the Up end of No 3 Road, and Catch 15U at the Down end. No 3 Road has a clear length of 167 metres between the catch points and the points to No 4 Road and 429 metres between



the Up end of the Grain Shed and the Down end catch points.

- The Up end connection to No 4 Road was abolished, and No 4 Road is only accessible from the Down end. No 4 Road has a clear length of 163 metres.
- No 5 Road has a clear length of 303 metres.
- Points A at the Up end of No 2 Road was restored to use and renumbered Points 5U.
- Points G at the Down end of No 2 Road was restored to use and renumbered Points 15D.
- Points 5U & 15D and Catches 5D & 15U are fitted with dual control point machines which can only be operated in hand mode. The selector levers on Catches 5D & 15U are secured in the motor position by E pattern Annett locks. The E pattern Annett key is secured in a cross lock in the Signaller's key switch box on the platform. The selector lever on Points 5U & 15D are secured by F pattern Annett locks. The F pattern Annett keys are secured in duplicate sleeper mounted locks at the catch points. The keys can be removed when the catch points are reversed.
- The notice boards at the Down end of No 1 Road for Down broad gauge trains approaching Thompson Road, and at DLY26 for Up standard gauge trains approaching Thomson Road were abolished due to the provision of a posted 15 km/h speed limit between Homes DLY6, DLY26 & DLY 28.

To access the sidings, the Signaller must place the signalling into the attended mode and restore Homes DLY6, DLY26, & DLY28 to stop. A push button will then illuminate indicating that the E pattern Annett key is available. Pressing the push button will allow the E pattern Annett key to be turned and withdrawn. This will secure Homes DLY6, DLY26, & DLY28 at stop. The key can then be used to unlock the selector lever on Catch 5D or 15U. This will allow the catch to be reversed, which will release the F pattern Annett key from the lock adjacent to the catch points. The F pattern Annett key can then be used to unlock the selector lever of the associate points, which will allow them to be reversed.

(Note. These alterations were originally scheduled to be brought into use on Monday, 8.7.)

Operating Procedure 84 (Dunolly) was reissued. SW 141/18 was cancelled.

Diagram 28/19 (Dunolly) replaced 64/17.

(16.02.2019) Carwarp (SW 128/19, WN 29)

Commencing forthwith, Carwarp Loop has been restored to normal use. SW 126/19 is cancelled.

17.07.2019 Boort (TON 169/19, WN 30)

On Wednesday, 17.7., the Up end main line points were restored to use to allow No 2 Road to be used by track maintenance machines. The Down end points and Nos 3 & 4 Roads remain booked out. TON 110/19 is cancelled.

19.07.2019 Reservoir (SW 358/19, WN 30)

On Friday, 19.7., Reservoir was closed to passenger traffic.

The Down stopping/express selection for High St was modified and all Down trains will run under express conditions.

19.07.2019 Carrum (SW 362/19, WN 28)

On Friday, 19.7., Carrum was closed to passengers and all facilities were subsequently removed.

- The station platforms and buildings were demolished.
- The relay interlocking was abolished together with the signal control panel
- The stabling sidings (Siding Tracks Nos 3, 4, 5, & 6) were abolished. Points 7, 9, 11 & 13 were removed. Dwarfs 8, 10, 12, 14, & 20 were abolished.
- Down Home 4 and Up Home 18 were abolished. Up Automatic F1130 was abolished.
- Station St level crossing was closed. The boom barriers, flashing lights, and pedestrian gates were removed.

19.07.2019 Seaford – Kananook (SW 363/19, WN 28)

On Friday, 19.7., the existing signalling was abolished between Seaford and the Skye Rd viaduct.

The following signals were abolished: Down Automatics F1215, F1235, & F1281; Down Homes F1257, F1257P & F1315, Up Automatics F1218, F1238, F1264, F1286, & F1306, and Up Homes F1330 & F1352.

19.07.2019 Elsternwick (SW 380/19, WN 32)

On Friday, 19.7., the commissioning of the new signalling was completed (see SW 361/19).

The restriction on the use of the crossover for suburban train operations was removed. SW 85/19 was cancelled.

24.07.2019 Ararat (SW 111/19 & SW 133/19, WN 25 & 30)

On Monday, 24.7., a catch point was provided in the Ararat Yard lead between Points 7D and Stop Board 2 at 264.190 km (measured via Ararat Yard). The catch points will be secured closed and will be commissioned after the ARTC lease has been altered to include them.

Amend Diagram 26/19 (Ararat).

(Note that this alteration was originally scheduled in late June 2019, vide SW 111/19, but did not take place.)

27.07.2019 Carrum (SW 362/19, WN 28)

On Saturday, 27.7., the Up and Down lines were slewed between the Down side of the Patterson River Bridge (35.775 km) and the Up side of Eel Race Road (36.735 km). The slewed lines are on the Down (East) side of the former lines.

- A pedestrian crossing was provided at Stephens St (35.849 km) between the Patterson River and the former Station St level crossing. This is equipped with automatic pedestrian gates and emergency exit gates with electromagnetic latches.
- Down Automatic F1131 (35.993 km) and Up Automatics F1128 (35.944 km) & F1158 (36.851 km) were provided.

Diagram 31/19 (Bonbeach – Frankston) replaced 29/19.

27.07.2019 Seaford – Kananook (SW 363/19, WN 28)

On Saturday, 27.7., a Siding Track extending between the Down side of Seaford Road bridge and the Down end of Kananook platform was provided. This track will be used to stable up to six EMUs. Ultimately, this track will form the access to the new Kananook Stabling Sidings.

The following signalling was commissioned:

- Automatics F1184, F1202, F1209, F1220, F1225, & SEA627 and Homes SEA712, SEA727, KAN706, KAN710, KAN722, KAN726, KAN737, KAN741, KAN745, KAN749, KAN753, & KAN763 were provided. All signals are LEDs.
- Uncontrolled Home F1331 was redressed as an automatic and renumbered KAN626.
- Crossovers 653 & 658, Points 622 & 637, and Derail/Crowders 622 & 637 were provided. All points have 1 in 15 crossings and are equipped with in bearer electro-hydraulic point machines with matching back drive. The Derail/Crowders are electro-hydraulic point machines and auto-normalise.
- Train gates 620 & 630 were provided. These gates are motorised and auto-normalise.
- TPWS was provided on all main line signals.
- A Road/Rail access pad was provided between 40.600 km and 40.626 km.
- Theatre type indicators are provided on Homes KAN706 and KAN753. These indicators do not indicate a route. Instead they display a number 1 to 6 which indicates the stabling location in the Siding Track to be used by the arriving train. Boards are provided along the Siding Track indicating the stabling positions. A train standing within the Siding Track must not move towards the departure signal unless permission to do so has been granted by the Signaller.
- All train detection is by axle counters. On the Down line the axle counters extend from Automatic F1183 (37.503 km, at Coolabar avenue pedestrian crossing) to KAN626 (42.119 km, on the Up side of the Skye Rd viaduct). On the Up line the axle counters extend from the Up side of the Skye Rd viaduct (42.245 km) to F1184 (37.536 km on the Down side of Coolabar avenue). The axle counters are provided with 'supervisory reset', 'point supervisory reset', 'next train reset', and 'occupation reset'.
- The defined station limits for Kananook extend from SEA712 to KAN626 on the Down line, and from KAN763 to SEA627 on the Up.
- A new CBI was commissioned.
- A 'Rail View' signal control panel was provided at Frankston signal box to control the new signalling.

Diagram 31/19 (Bonbeach – Frankston) replaced 29/19.

Caulfield Group Operating Procedure 6 (Frankston – Kananook – Seaford, control of rail traffic movements) was reissued.

27.07.2019 Frankston – Stony Point (SWP 11/19 & SWP 13/19, WN 29 & WN 31)

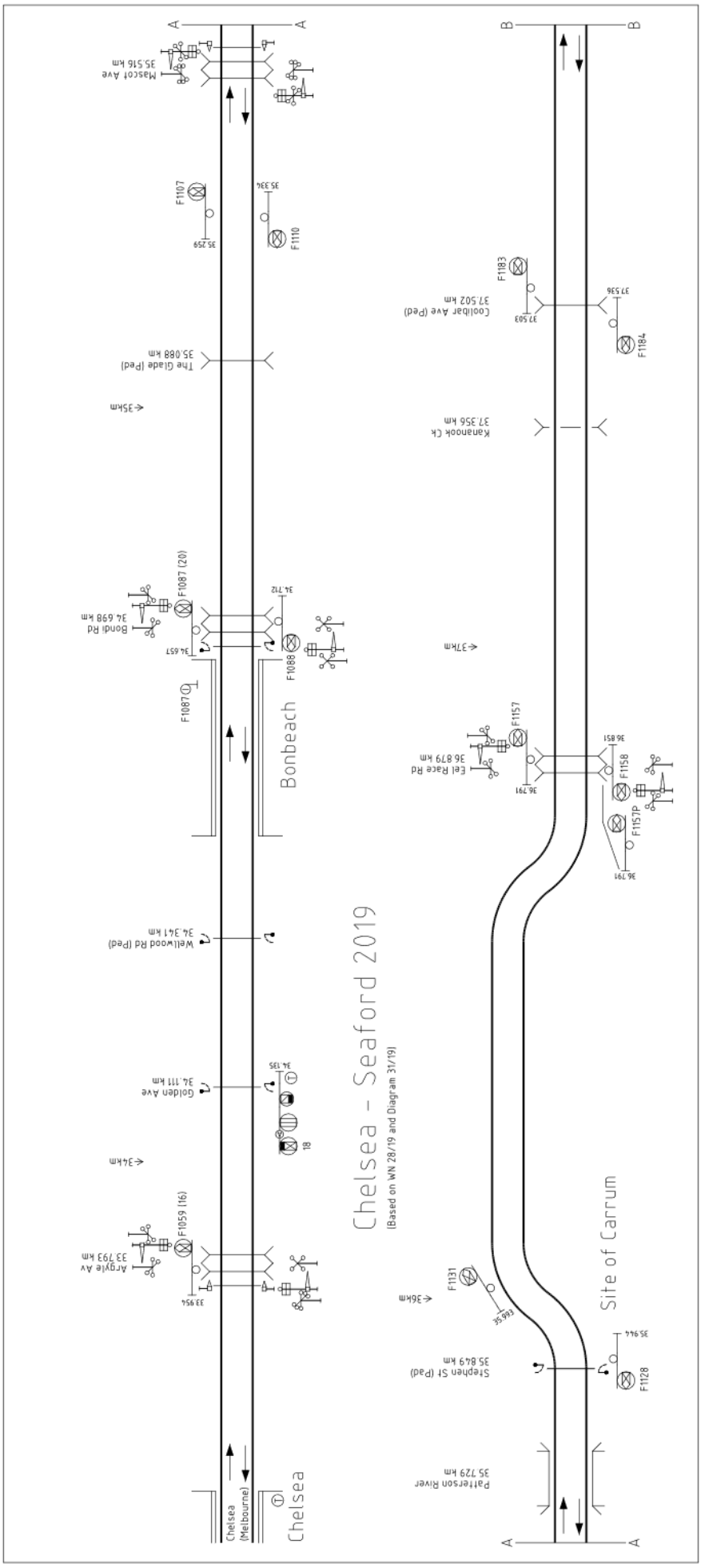
Caulfield Group Operating Procedures 7 (Frankston), 8 (Frankston – Stony Point, ATC section failure of signals), 9 (Frankston – Stony Point, axle counter system & reset procedures), 10 (Long Island), 11, (Stony Point, release of Up end Points C) and 12 (Stony Point Corridor) were reissued with minor amendments.

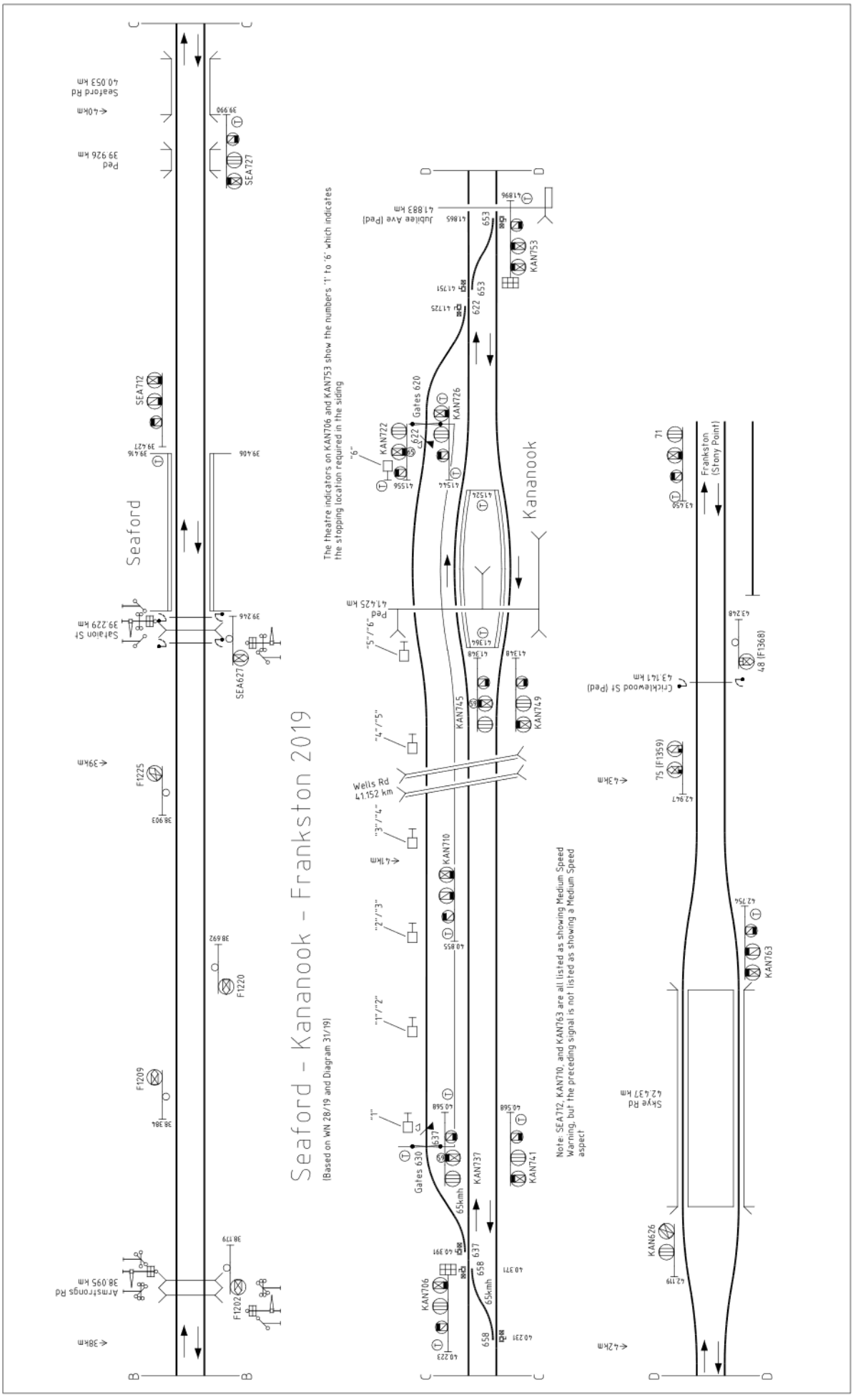
Operating Procedures 10A, 10B, 10C, & 11A were cancelled.

Note that Operating Procedure 7 was reissued twice, once on SWP 11/19 and a second time on SWP 13/19.

07.08.2019 Lalor – Epping (SW 306/19, SW 319/19, & SW 377/19, WN 25, 26, & 30)

On Wednesday, 7.8., traffic light co-ordination will be provided at Childs Road.


Chelsea - Seaford 2019
(Based on WN 28/19 and Diagram 31/19)
Chelsea
Chelsea (Melbourne)
Bonbeach
Site of Carrum
Patterson River
35.729 km
Stephen St (Pad)
35.849 km
F1128
35.944
F1131
Eel Race Rd
36.879 km
F1157
F1158
F1157P
36.851
36.791
Kananook Ck
37.356 km
Coolibar Ave (Ped)
37.502 km
F1183
F1184
37.536
The Glade (Ped)
35.088 km
Mascot Ave
35.516 km
F1107
F1110
35.259
35.334
Bondi Rd
34.698 km
F1087 (20)
F1087
F1088
34.657
34.712
Welwood Rd (Ped)
34.341 km
Golden Ave
34.111 km
34.135
18
Argyle Av
33.793 km
F1059 (16)
33.954
A
B
35km
36km
37km
34km


Seaford - Kananook - Frankston 2019
(Based on WN 28/19 and Diagram 31/19)
Seaford
Kananook
The theatre indicators on KAN706 and KAN753 show the numbers '1' to '6' which indicates the stopping location required in the siding
Note: SEA712, KAN710, and KAN763 are all listed as showing Medium Speed Warning, but the preceding signal is not listed as showing a Medium Speed aspect
Seaford Rd 40.053 km
Ped 39.926 km
Station St 39.229 km
Armstrongs Rd 38.095 km
Wells Rd 41.152 km
Ped 41.425 km
Jubilee Ave [Ped] 41.883 km
Crichtewood St [Ped] 43.141 km
Skye Rd 42.437 km
Frankston (Stony Point)
SEA727
SEA712
SEA627
F1225
F1209
F1220
F1202
KAN722
KAN726
KAN753
KAN745
KAN769
KAN710
KAN737
KAN741
KAN706
KAN626
KAN763
Gates 620
Gates 630
65kmh
71
75 (F1359)
48 (F1368)

End£

THE BAIRNSDALE GREAT VICTORIAN TRAIN AND BIKE RIDE

David Harvey

In 1986 the Great Victoria Bike Ride (GVBR) started at Bairnsdale, 275 kilometres east of Melbourne. This is the true account of how the railway ran 10 trains, that's five loaded passenger trains in one direction with 4 return empty car movements and an augmented Up regular service along the single line section that is 115 kilometres long from Traralgon to Bairnsdale using the large electric staff system.

A brief history of the Great Victoria Bike Ride

For more than thirty years mad keen cyclists from around Australia have been flocking to the State of Victoria to take part in what has turned out to be one of that State's biggest tourist draw cards which is the "Great Victoria Bike Ride." The first Great Victoria Bike Ride (GVBR) started off in 1984 with approximately 2100 riders travelling by bicycles along quiet country roads from Wodonga in what was supposed to be a one off event to commemorate the sesquicentennial (150th) anniversary of European settlement in Victoria, but was such a success that 34 years later it still runs each year to a new destination or returning to a destination that the GVBR has visited before. It was in 2004 that the GVBR reached a peak with 8,100 riders when it travelled along The Great Ocean Road over two weeks; it had become quite a logistic exercise. Thirty-four years later the event is still an experience, now taking up to ten days. You bring your bike and tent whilst the GVBR supply meals, portable showers, toilets, pick up and drop off luggage, entertainment some evenings, bike mechanic, and even a 'sag' wagon (support and gear) that will pick you and your bike up if you are struggling to keep up riding that day. You don't have to ride the whole tour if you don't want to, there are many options such as ride for a day or a week, even ride a certain area between adjoining towns, different packages to suit all budgets.

The first GVBR used rail to get to the destination of Wodonga. Three special trains, plus an augmented Down Albury pass were run from Spencer Street Station and one special train from Caulfield, complete with D vans and VLEX freight vans attached to accommodate the bicycles.

After the success of rail in 1984 the GVBR returned to rail in 1985 with Wodonga again being selected as the destination. Using rail as the form of transport to get to Wodonga seemed a logical move provided that the GVBR starting points and rail destinations were closely aligned and convenient. The GVBR ran special trains to the following rail locations; Wodonga in 1984 and again in 1985; Bairnsdale in 1986; Stawell in 1987; Swan Hill in 1988; Yarrawonga in 1989; Bairnsdale in 1990; Stawell in 1991 and finally Numurkah in 1992. Yarrawonga was probably the most challenging as the platform had to be extended as a temporary fixture and St. James, midway between Benalla and Yarrawonga, was reopened as a crossing station to facilitate the number of trains to be operated. Rail was the preferred method of travel for the GVBR but as destinations needed to become more varied, this also made the cost of running by rail prohibitive. For the final year by rail the costs were in excess of $100,000 and had been increasing every year. Therefore rail gave way to buses and trucks to ferry the cyclists and their steeds around the state. That is the end of the back ground notes on the GVBR.

What has the Great Victoria Bike Ride got to do with safe working?

In the mid-1980s, the rail system in Victoria was going through a period of great turmoil. Guards vans and guards were disappearing, loco crews were in some cases becoming driver only or becoming driver plus second person, branch lines were closing and disestablishing of electric staff stations on main lines was occurring. Crossing loops on the main lines were being rationalised creating, in some cases, long sections between passing loops, consequently running extra trains would most likely affect the timings of the regular services. In the majority of cases the system would not be able to cope with large numbers of special trains as there wasn't the infrastructure to handle any extra train movements.

In 1986 the hierarchy of the Great Victoria Bike Ride decided, instead of using up to fifty buses to transport the riders to Bairnsdale, they would engage V/Line to run a one-way service for them to their start destination of Bairnsdale, the commercial capital of East Gippsland. After all, the GVBR had used V/Line to cart the bikes and riders quite successfully for the 1984 and 1985 bike rides. The GVBR was to deliver the riders by train at Bairnsdale and they would ride back via Yarram, Foster, Leongatha, Korumburra, Warragul and Rosebud with a finish in central Melbourne.

Situated on the banks of the Mitchell River, Bairnsdale is located 275 kilometres east of Melbourne by rail and in 1986 had, for its then population of just over 10,000, three return passenger train services from Melbourne each weekday, with two return services on each Saturday and Sunday. The rail line continued on for another 100 kilometres to Orbost as a freight-only line with the main revenue being derived from timber traffic from Orbost, Waygara and Nowa-Nowa. Bruthen had limestone traffic which was bought in by road from Buchan as well as timber.

Bairnsdale was a depot station with at least two crews being rostered at that location, one crew running the passenger train whilst the other crew ran trains on the Orbost line. Freight wise Bairnsdale had timber, petrol, and freight centre loading.

The line between Traralgon and Bairnsdale kilometres was laid with 94lb rail sitting on blue metal ballast and had a posted speed limit of 100 kilometre per hours.

Would it be viable to send 2,500 riders, plus their bikes, luggage and support staff by rail?

Apparently, it was, for the State Transport Authority agreed to run four special trains, and to double the consist

Bairnsdale bound bike special No. 8435 passes through Rosedale and its disused goods shed hauled by T359 and T379 looking more like a freight train than a passenger train. Saturday 29th Nov 1986. Photo Dave Harvey

of the regular day return train (formerly known as the *Gippslander*) and add three extra louvre vans. The State Transport Authority issued an ''S" circular or special train notice to cover the movements and the timings of the trains.

The track from Melbourne to Traralgon is double line for most of the route, with a short single track section between Bunyip and Longwarry, west of Warragul, and single track beyond Moe. The double line between Melbourne to Moe was worked under three position automatic signals. The short single track section between Bunyip and Moe was worked by three position signals with trains being automatically signalled into the section on a 'first come, first served' basis. The single track between Moe and Morwell was worked under the Automatic and Track Control system (ATC) and had an intermediate crossing loop named Herne's Oak. This section was controlled from Morwell. From Morwell to Traralgon the single section was worked by Large Electric Staff.

From Traralgon to Bairnsdale, the line was single track and had been left reasonably untouched by the removal of crossing stations or infrastructure that had occurred elsewhere in the state. That could have been one of the reasons why ten trains could run and cross each other effectively.

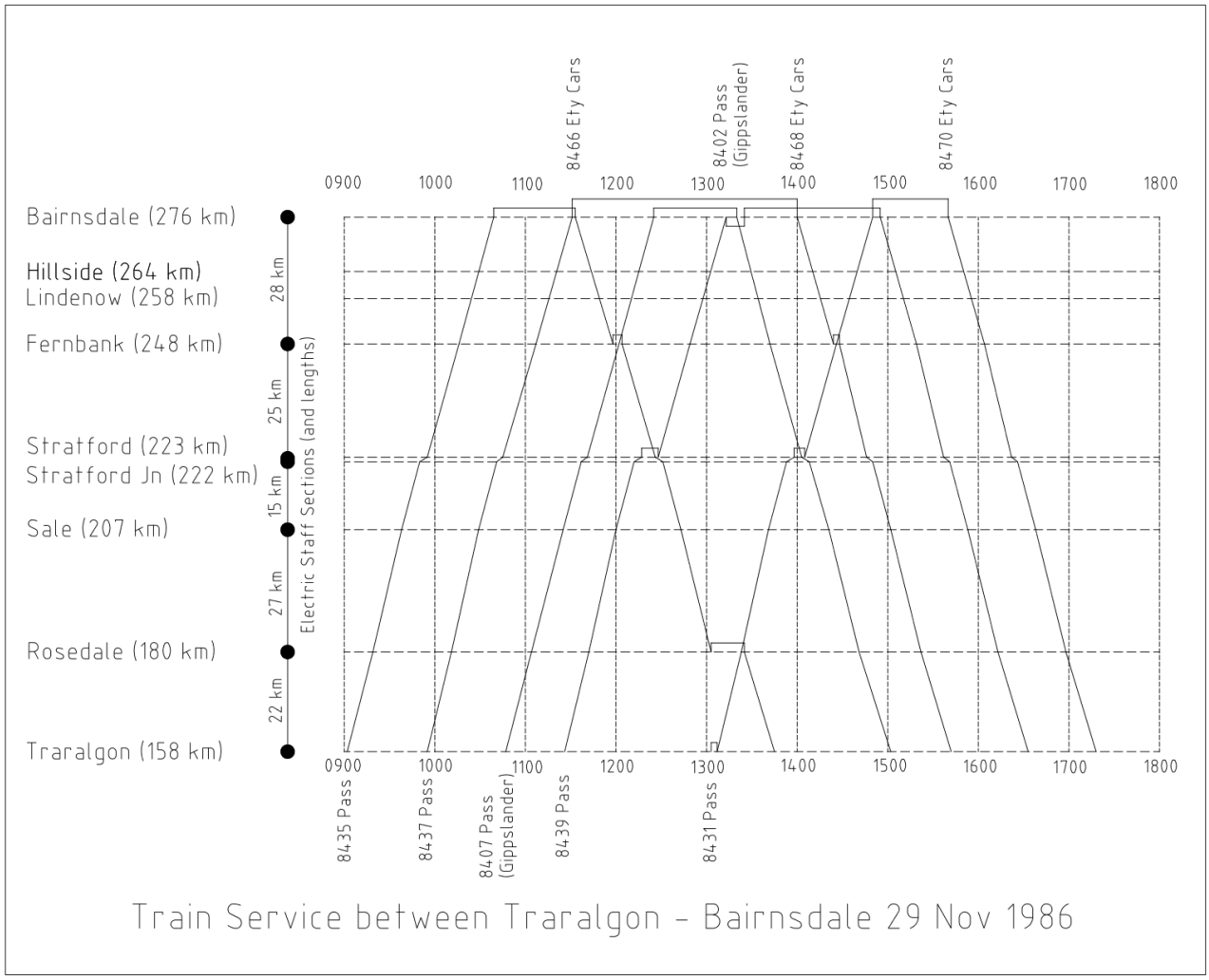
There were five electric staff stations between Traralgon and Bairnsdale, all using large electric staff. Sale was the most utilised for crossing, Rosedale and Fernbank being used occasionally with Stratford Junction for occasional follow on movement as it had no crossing facilities.

Traralgon and Stratford Junction were fully interlocked, the signal boxes at Traralgon had 68 levers and Stratford Junction had 15 levers. The remaining electric staff stations, Bairnsdale, Fernbank, Stratford, Sale, and Rosedale had plunger locked mainline points with hand bar and padlock securing the sidings. Except for Sale, all of these places had kerosene lit signals and some search light electric two position signals protecting road crossings.

What makes this whole exercise so interesting in running these 10 trains was that there were restricting factors that would be seen to be limitations in the running of today's railway and these limitations all have to do with two words - motive power. With the overhead 1500 volt DC wires being used for electrical traction between Melbourne to Traralgon, it was necessary to change to diesel haulage at Traralgon. Many of the English Electric L Class locos were on their last legs and numerous services had been handed over to diesel haulage by then. Larger diesels such as the B, N and X, class, however, could not haul the trains all the way from Melbourne to Bairnsdale due to axle load restrictions on the Avon River Bridge at Stratford, with only T and Y class locomotives permitted. One way around this was to run the train all the way with T class locos, but this imposed a speed limit of 100 km/h compared with the higher speed of 115 km/h of the larger locomotives. A blanket 15 km/h speed restriction for all passenger or goods trains was in force on the Avon River Bridge and its approaches. Maximum speed allowed for the T class was 100 km/h and the Y class was 70 km/h when hauling passenger trains between Traralgon and Bairnsdale.

The Special Train Circular comes to life.

So, it came to pass that on the Saturday 29 November 1986 four special trains plus the regular passenger service ferried 2,500 cyclists to Bairnsdale. The first GVBR special train that left Melbourne Flinders Street station was train No. 8435 at 05:35 hauled by T359 and T379 with a consist of freight vans VLEX, VLEX, VLCX, VLCX and passenger cars BN-BRN-ACN-BS-BS-BRS-ACZ. First stop was Warragul at 08:05 for a crew change. This train ran non–stop through Traralgon at 09:02, which was a rare happening at the time. In my stretch as a signalman at Traralgon no train ever ran through without a crew change or change of locos as they were electrically hauled on the Melbourne side and diesel hauled on the other. Train number 8435 arrived at Bairnsdale 10:39.



The second special left Flinders Street Station as train No. 8437 at 07:13 a.m. hauled by T396 and T405 with a consist of passenger cars BCH-BH-BTH-PH power van-BCH-BH-BTH, and freight vans VLCX, VLCX and VLEX. No. 8437 had a crew change at Traralgon with the locos running straight through to Bairnsdale. It must have been a memorable ride for the folk in this second GVBR consist as these cars were converted suburban stock. Once recognisable as the Melbourne's blue suburban Harris cars the H cars were converted under the new deal for country passengers, painted orange and pressed into short haul regional runs, the ride of which, in my opinion, is rough and quite noisy.

The third train from Flinders Street station, No. 8407, was an augmented timetabled day train hauled by N459, which arrived at Traralgon at 10:39. Here N459 was detached and two 3rd series T Class locos, T401 and T400, were attached. After a crew change and a modified brake test was carried out, departure was at 10:47 a.m., arriving at Bairnsdale at 12:25 p.m. The consist for the train was D van, passenger cars ACN-BRN-BN-ACN-BRN-BN plus three more D vans.

The fourth train left Spencer Street station at 07:22 as No. 8439 behind T375 and T399. It was another special run by GVBR but it stopped at Flinders Street and Caulfield to load passengers and bicycles. It arrived at Caulfield at 07:38. As departure was at 08:48, following a Down Dandenong suburban service, the signalman at Caulfield would have told train control that No. 8439 was 50 minutes van goods, (meaning 50 minutes to load the train). It then ran express to Moe, where it was scheduled to cross an Up passenger train. Arrival at Traralgon was at 11:22. Following a 4-minute crew change, the whistle blew and T375 and T399 got underway with their consist of three orange H cars, coded BCH-BH-BTH then a PCO power van, once used on the Overland between Melbourne and Adelaide, then a further three orange H cars BCH-BH-BTH and bringing up the rear was four freight louvre vans, two each of VLCX and VLEX.

Crossing the Special Trains at Non Interlocked Electric Staff Stations

Reproduced above is a representation of a train controller's graph of the train running between Traralgon and Bairnsdale on Saturday 29th November1986 for the GVBR. I decided to collate this information on the train running of the GVBR and that information formed the basis for the graph. This article plus the train running graph have really been inspired by the late SRSV member Mr Jack McLean who was a pioneer in recording rail movements.

When reading this graph, for train numbering, recording and train control purposes, Up trains travel to Melbourne with even numbers (e.g. 8498) and Down trains travel away from Melbourne with odd numbers (e.g. 8431).

At Stratford Junction, a wait ensued for No. 8439 Down special, which had run express through Sale around

T405 and T396 run past Stratford Junction on their way back to Traralgon. Saturday 29th November 1986. Peeling away in front is the line to Maffra, Heyfield and Cowwarr. Due to the condition of the bridge over the Latrobe River the line from Traralgon to Cowwarr was closed on 13th of January 1987. Photo Dave Harvey

midday. I waited near Stratford Junction, not far from the Down Home arrival signal on the Maffra Line, where the train would be slowing in readiness for the 15 kph speed limit on the Avon River Bridge. Whistling was heard in the distance as No. 8439 gingerly crossed the long timber trestle approaches that lead up to the Avon River Bridge. With a cross with the Up pass expected at Stratford I remained at the same spot as it offered elevation and a good sunny position in both directions, a top spot for photography. After a wait of about 10 minutes a headlight could be seen crossing the trestle bridges of the Avon River and soon No. 8458 Up empty cars hauled by T405 long end leading with T396 rushed past on their way back to Traralgon for a crew change then an express run back to Spencer Street.

The final Down special from Melbourne was No. 8431, which departed South Kensington at 09:32 a.m. as an empty cars behind T407 and T406, arriving at Spencer Street at 09:39 and departing at 10:20 after loading. An express run to Traralgon achieved an on time arrival at 13:03, some seven hours after the first train had arrived at Bairnsdale. The consist of this train had four louvre vans (1 x VLEX plus 3 x VLCX) and N cars BN-BRN-ACN-BN-BRN-ACN.

Meanwhile No. 8439 Down pass with T407 and T406 had long left Stratford and was well on its way to Bairnsdale with an arrival time of 13:13. The last of the Down passenger trains from Melbourne arrived at Traralgon at 13:03 and departed at 13:07 after crew change. No. 8431 Down bike special and No. 8432 Up Gippslander, the latter hauled by T400 and T401, both arrived at Stratford at 14:00 hours with the Up pass being held on the main line at the outer two position light signal till the Down special was turned into Number 2 Road.

Being a non-interlocked station without a signal box to control the points and signals, the Station Master (SM) had to operate the point levers in the yard along with the signal levers on the platform and as these levers are not interlocked with the other points and signals at non-interlocked stations, these stations are fitted with plunger locking and point detectors for the purpose of ensuring that the facing points are properly set. If any connections between the facing points and the lever working such points become disconnected, the points maybe set in an improper position but the point detector will prevent the working of the signal. In any case the signaller must examine the points and satisfy themselves that the points are fit for purpose. The signal wire between the lever and the detector and between the detector and the signal, must be kept in proper adjustment by means of screws provided for the purpose, so that when the signal is in the danger position, the part of the rotary detector known as wheel Stop A on will be hard up against the Stop B on the casting on the rotary detector wheel. If these detectors are not set in these positions, then the rodding that is connected to the point blades may be fouled by the recess in the wheel, in which case it will not be possible to move the points, when in the locked position. To secure the points, rodding is connected to a rotary detector. This rotary detector can be up to one or two metres from the running line and is about

T379+T359 on the Up empty Cars crossing T400+T401 on the Down Gippslander at Fernbank Saturday 29th of November 1986. Photo Dave Harvey Sept 1985

the same height as the rail. The rodding from the points has notches or a keyway cut out of it and when the signal lever is pulled, the signal wire moves and pulls through and rotates the detector through the keyway, this proves that the points are secured by plunger lock. If the points are set correctly, the detector rotates thus drawing the signal wire and pulling the protecting signal to proceed. If the plunger is out or the points are not set correctly, when the signal wire is pulled the detector rotates and will strike the keyway which will not be aligned as the rotary detector will not be able to rotate fully thus preventing the signal from going to proceed.

With the Pass now in Number 2 Road and the Up Bairnsdale Pass at the Stratford platform, van goods were completed and with a blow of a whistle and a wave of a flag, the Up pass was on its way to Sale at 14:03. The Stationmaster now made his way along the Down end of the Stratford platform where he climbed down into the yard and walked to the Down end plunger locked points. Before the train can move into the section, the driver of the train must also have in his procession the large electric staff for the section marked FERNBANK - STRATFORD. He then unlocked the points from Number 2 Road to Bairnsdale, removed the 5P padlock, lifted the securing latch, and secured the latch open. This freed the plunger so the points could be worked. There may be more than two rotary detectors at a set of points with two signal levers pulling the same signal wire. One lever from the platform and one lever at the set of points both going through a rotary detector. Once the plunger locking on the locked points was free, the Stationmaster reversed the points to let the Special out of Number 2 Road to the Down main line to Bairnsdale. Since this was a non-signalled move, the Stationmaster secured the point lever by holding it with one hand, then he held his other hand out parallel to the ground, which is the proceed indication or the all clear signal, to signal to the driver to proceed from Number 2 Road. The Down pass got away at 14:06, it would encounter two more bike trains, one at Fernbank and the other at Bairnsdale.

Meanwhile No. 8431 Pass was approaching Bairnsdale for its final cross with No. 8462 Up empty cars. As No. 8431 enters Bairnsdale, No. 8462 was already sitting in the No. 2 Road waiting to be released back to Traralgon. The two trains cross each other and the SM retrieves the FERNBANK - BAIRNSDALE electric staff from the driver and makes his way to the office to replace the staff into the electric staff instrument. With the co-operation of the SM at Fernbank, the SM at Bairnsdale will withdraw another electric staff, and the Up empty cars from Bairnsdale will soon be away on the up.

Postscript - the Eastern District shrinks; the Bike Specials come and go and Bairnsdale's passenger service ends

After the bike specials in 1986, the Bairnsdale line never saw traffic to that level again. The next great surge in traffic was when the Great Victoria Bike Ride again returned to Bairnsdale in 1990. The train services didn't reach the same level that happened in 1986 because Rosedale (19 June 1987) and Fernbank (1 December 1986) had both been disestablished making Sale and Stratford the only crossing station between Traralgon and Bairnsdale.

In fact, the Eastern District was beginning to shrink with the closing of the 98 km extension from Bairnsdale to Orbost on 24th of August 1987, with all the timber and limestone traffic lost to road transport.

The loop line that ran directly from Traralgon to Maffra was closed in sections with the last section closing by 31 August 1987. The condition of the bridge over the Latrobe River in the Traralgon to Cowwarr section caused the section to be closed on the 8 December 1986. I was on rostered on duty as a second class signalman at Traralgon on Saturday the 15 March 1986 when the last train to run to Maffra via Heyfield departed Traralgon at 06:05 hours as three light engines comprising T396, T405 and T407 with Driver Ferrier and 2nd person Dilena. The train arrived back at Traralgon at 11:35 with 15 mins set aside for brakes, 5 mins for a crew change and it was away at 11:50 headed for Appleton dock with export milk powder. The train was

equal to 70 vehicles. This was the last train to run from Maffra via Heyfield.

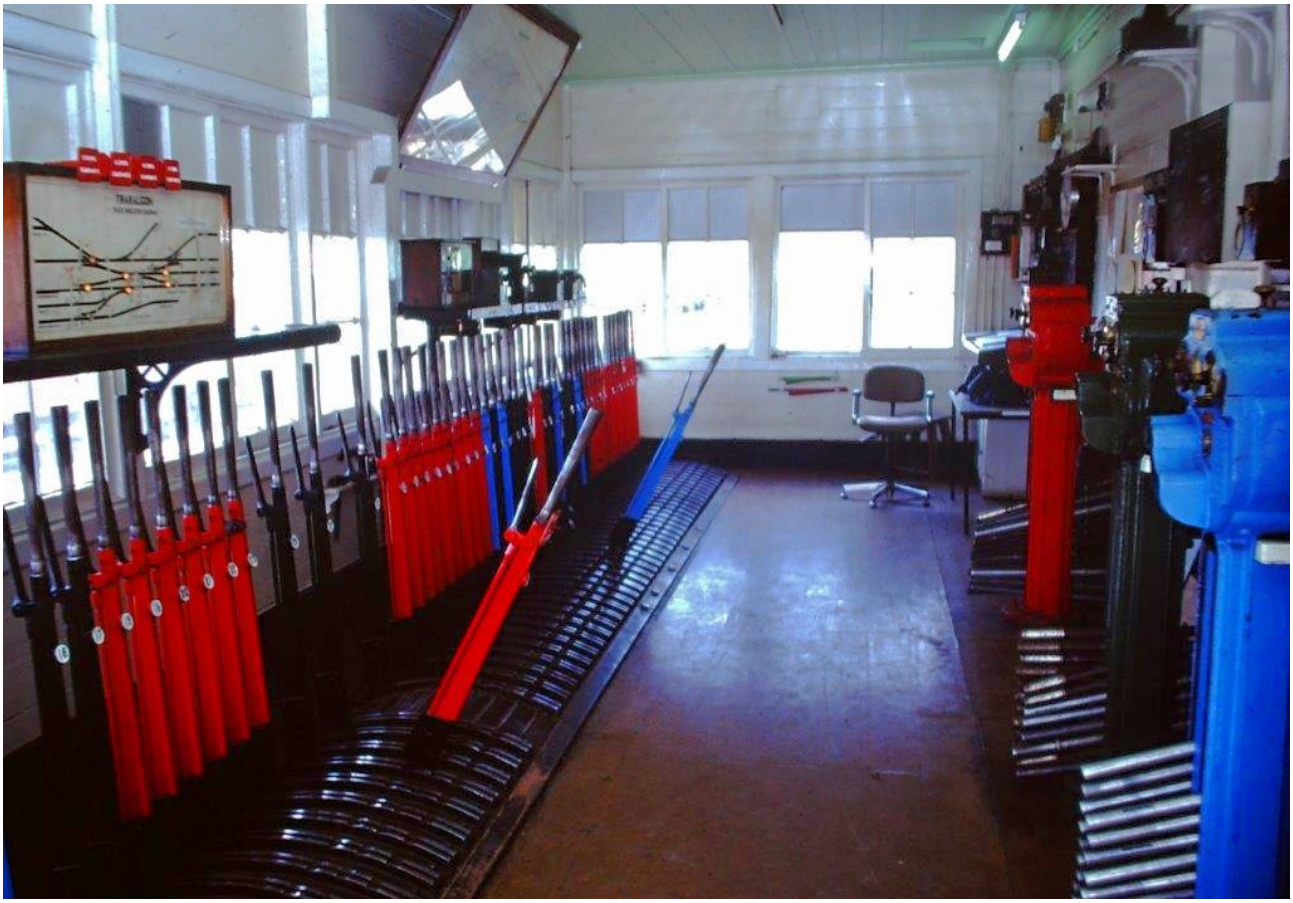
The loop line that ran from Traralgon to Stratford Junction via Heyfield was progressively closed in sections with Traralgon to Cowwarr section the first to close then Cowwarr to Heyfield. The line was then cut back to Maffra. The Maffra to Stratford Junction section was to see many more years of service as Murray Goulburn Butter and Milk Factory would continue to send their products by rail. The Goods to Maffra from Traralgon would run through Stratford Junction to Stratford to run around as Stratford Junction only had a trailing set of points facing for Up trains. At Stratford the engine would cut off, run around then join on to the other end. Then it is off to Stratford Junction where the points are now facing the train so it can take the right hand branch to Maffra. On the return journey it is in the reverse order with a run-around at Stratford. This safe working arrangement was handled under Train Order working with the train to Maffra taking a master key from Traralgon to work the points at Stratford Junction. The Maffra to Stratford Junction line lasted till 9 March 1995 when the line was closed.

Other lines that closed in the Eastern District were the Moe to Yallourn line on 8 December 1986. There were other lines that closed in the Eastern District but in this article, it is only focusing at the era around the 1986 Great Vic Bike Ride.

Passenger service between Bairnsdale and Sale lingered on until 22 August 1993 when it was replaced by buses and the railway line was cut back to Sale. Some years later public transport became a political item and, under a program called "Linking Victoria", the Mildura, Ararat and Bairnsdale line passenger services were promised to be restored by the government of the day. Fortunately, the Ararat and Bairnsdale line passenger services were restored but the Mildura passenger service is yet to come to realisation. Under the Murray Basin Project the standard gauge conversion to Mildura is likely to arrive long before the promised reinstatement of the passenger service to Mildura.

Passenger and goods service returned to Bairnsdale on the 3 May 2004 and today trains still run to Bairnsdale with three return services to Melbourne, five days a week. It is a very good and mostly reliable service. Traralgon is still a depot station but has been down-sized; Rosedale station building is intact and open for passengers. The old Sale station was demolished in 1983 to make way for a shopping centre while the new Sale station, built to replace it at the same time, had extensive yards and is the only crossing station between Traralgon and Bairnsdale. Stratford Junction was abolished with all signals and points removed. Stratford station remains intact and open for passengers. All that remains of Fernbank is little more than a grassy mound of earth where the platform used to be.

Traralgon Signal Box showing the large electric staff instruments from left to right; Red instrument to Rosedale, Green instrument to Cowwarr. Blue instrument to Morwell and Melbourne. Above the red instrument the Bank Engine Key can be glimpsed. Photo Dave Harvey



Some two-position signals may be found at the above mention locations but they protect road crossings.

2018 update between Moe and Traralgon

Moe (130km) has only a main single line that runs through Moe station. The single line ends at the Waterloo Road crossing where it turns into a double line. The former double line has now become two single lines that have two way running being signalled under the ATC rules. The former Moe yard and freight centre has been removed and replaced with a council run library. The former line to Yallourn is now a rail trail that goes right to the Yallourn power station. There are no remnants of the former narrow gauge line to Walhalla in the Moe yard. A skate park is built where the engine shed and turntable were located. There are signs of the branch line that went out to Thorpdale at the Down end of the yard. The passenger service between Traralgon and Southern Cross station, which has had a name change from Spencer Street is run mostly by Velocity railcars.

Hearnes Oak (140km) This is an intermediate crossing loop in an Automatic and Track Control System (ATC) section between Morwell and Moe. The crossing loop was extended in the 2000s to facilitate the running crosses with the introduction of a timetable that would see an hourly service between the hours of 06:00 hours and 19:00 hours Monday to Friday between Southern Cross and Traralgon Stations. The loop is controlled from Morwell.

Morwell (145km) has only two roads, the main line and a passing loop which extends down towards the State Electricity Commission (SEC) Railway overpass. The SEC Railway has been lifted and no track or limited ballast remains on the formation as it is used as a roadway now. The extension of Number 2 Road at the Down end is the railway to the Morwell Briquette Factory which extends a further 4 kilometres to the briquette factory. The line remains intact but a baulk is placed across the line just beyond the last crossover in the Morwell yard. The Briquette Factory no longer produces briquettes and the Morwell power station that produced the power for the plant is out of use. The railway to the factory has large saplings and trees growing through the sleepers and hasn't seen rail traffic for a considerable amount of time.

Maryvale (150km) The Australian Paper Mills(APM) have run their own 5.5 kilometre private branch line from the Maryvale Exchange Sidings (2 kilometres east of Morwell) to their paper mill at Maryvale since November 1938. The motive power had been a mixture of steam and earlier petrol driven engines which none were too successful until the APM purchased diesels from the Witcombe Locomotive Works of Rochelle, IIIinois, USA. The first unit appeared in 1949 and these Witcombe powered diesels lasted until they were both withdraw in 1987. They were replaced by V/line diesels including T342, Y142, Y173 and Y174. Mainline locos would still be replaced at the exchange sidings by the hired V/line diesels but this was to end in March 1993 when the rails were replaced into the mill area enabling heavier mainline locomotives access to the mill loading zone. This enabled the Australian Paper and the railway company of the day to run the trains directly to Maryvale from the docks without the need for a change of motive power at the exchange sidings. In the past, the main line trains were electrically hauled so when the overhead wires disappeared the need for change of motive power disappeared.

The Maryvale siding is one long loop road approximately 700 metres long with access to the Maryvale paper mill branch line leading off the Down end. Since the upgrade of the 5 kilometre Maryvale Mill Branch Line, the daily paper train from Melbourne runs directly to the mill being hauled by more powerful locos such as the V and G class.

Traralgon (158km) signal box was abolished on 14 June 1990 with the yard being rationalised down from 6 roads to 3 roads along with a new station being built in the yard on top of Numbers 4, 5, and 6 Roads. A new platform being built facing Number 3 Road right opposite the old station. The roads were then renumbered with Number 1 Road becoming Number 3 Road and Number 3 Road becoming Number 1 Road. The old station building was left in situ and became a community centre. The turntable has been retained in working order with the loco shed now being used by a local art group. The L class siding has been retained next to the turn table and the last remnants of the Maffra line exist, even if it is only an extension of Number 3 Road that runs parallel to the Sale line for several hundred metres. The car sidings that come off from the now abolished Maffra Dock are used each night to service the car sets and Velocity railcars each evening. The new station has an arcade entrance with shops that stretch along the Princess Highway with plenty of car parking places for shoppers. The entire goods yard has disappeared. When the Traralgon yard was in use there was a grave of a small child that was buried at the Down end of the goods yard. When the yard was decommissioned it was left in situ and now sits behind one of the shops. Back in 1986 there were 10 passenger trains to Melbourne on a week day but by 2018 it had had a massive increase to 20 per day one way each weekday.

Rosedale (180km) the yard and sidings have been abolished and the main line straight railed with no crossing facilities. The old goods shed and the derrick type crane in the yard are still standing. A wire fence has been built the length of the yard where Number 2 and 3 Roads were to prevent people from crossing the tracks. The station is open for passengers but isn't staffed by V/Line or any other employees. The original station building is still in use with the railway residence that is on the platform being occupied. The platform will fit a 4 carriage N set but if the train is longer announcements are made on board that customers detraining at Rosedale are to ensure that there is a platform for them to step on to be for stepping off.

Sale (207 km) station building is open for passengers and is staffed for all passenger and freight trains. There is a Number 2 and 3 Roads for crossing purposes plus at the Down end of the yard there are goods sidings and a freight centre shed which was part of the old railway line to the original Sale Station that was closed in 1983.

Stratford Junction (220 km) had major alterations on 20 September 1988 when the following alterations took place with the Intermediate Electric Staff Instrument being abolished. The Train Staff and Ticket system between

Stratford junction and Maffra was abolished and replaced and will be worked as a siding under siding conditions. The Up Home signal from the Maffra line was abolished. An A pattern Annett lock was provided on the point lever at Stratford Junction. The line to Maffra was closed on 9 March 1995. The old formation is easily identified as it forms part of the Stratford to Traralgon rail trail

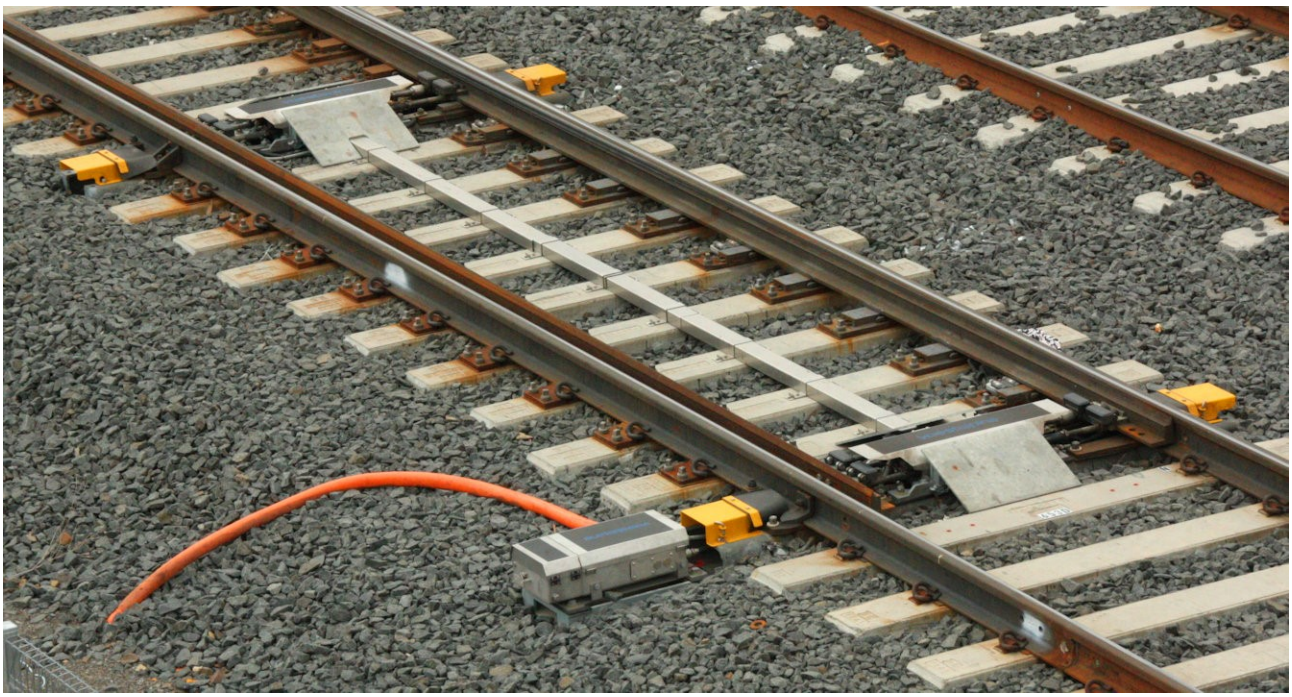
Stratford (222 km) is open for passengers with the station building waiting room and toilets being available but the building isn't manned by any staff. There is no yard or sidings at Stratford as the line has been straight railed through the station. A derrick crane remains at the Up end of the yard. The Princess Highway is protected by two, 2 position light signals one for each direction. The rail bridge over the Avon River at Stratford is believed to be replaced with work to start in 2019. The approaches to the Stratford Bridge has a speed restriction of 10 kilometres per hour due to the condition of the bridge piers.

Fernbank (248 km) closed for passengers on 5 October 1982 and was used as an electric staff crossing station for the GVBR in 1986. All that is left is a mound of earth where the platform once stood.

Lindenow (258 km) was disestablished as an electric staff station on 22 November 1981. It closed for passengers on 3 October 1982. The signals and points were abolished on 29 November 1984. All that is left is a mound of earth where the platform was and the customary peppercorn trees.

Hillside (264 km) siding is abolished, but remnants are to be found were the siding was. Bitumen was regularly railed to Hillside when the Country Roads Board operated the site, then it appears it was passed to Eastern Road Services (date unknown). Bitumen was railed in until the siding closed in 2003. The hoppers are still in use and the bitumen comes in by road tanker.

Bairnsdale (275 km) still retains its four roads and a lengthened No. 2 Road for crossing purposes with multiple cross overs but access to Number 3 and 4 Roads is prevented as the points are spiked. A goods road still runs through the freight centre shed, which has escaped demolition unlike most of the other freight centre sheds in Victoria that were built in the 1980s. It has three large off register VBCW high cube capacity freight wagons sitting under the shed cover. This type of louvre wagon regularly ran on the Ford train between Geelong and Upfield. There is also a VBBX louvre lurking behind the old goods shed. All two position mechanical home signals have been replaced by two position light signals. There is a key signal cabinet locked by a 5P padlock to control the departure and arrival signals from the platform. There is a signal control box in the crew meal room at the Bairnsdale Railway Station that controls the three home signals plus a set of motorised points named "***G***" that are located at the end of Number 2 Road toward the main line. There is a duplicate signal control box that is situated next to the Up side of the track at the end of Number 2 Road. This signal control box sits on a post which is the exact height as the cabin window of a locomotive, so a driver of an engine which is shunting can stop at the signal post, open the cabin window, then reach out and operate the points and signals without leaving the locomotive. All shunting and run around movements are carried out under 'Driver in charge' conditions. There is a train staff labelled ***Traralgon to Bairnsdale***, when this is worked as a long section. This staff is locked away when the intermediate station of Sale is being worked as a staff station. The sections then become ***Traralgon to Sale*** and ***Sale to Bairnsdale***. There are three return passenger trains between Bairnsdale and Southern Cross each weekday with two supplementing road coaches, one departing at 04:35 hours and the other at 15:10 hours. Velocity railcars now run the 07:20 hours and the 13:15 Down Southern Cross to Bairnsdale and the 12:45 hours and the 18:20 hours Up train to Melbourne. Freight trains don't run out of Bairnsdale or to the log yard at Bosworth Road Bairnsdale which is always full of saw logs but the logs all come in and go out by road. There are 2 position light signals way out at Bosworth Road that protects the unloading area with its large staff locked loop siding.



The running lines at Kananook appear to be equipped with Unistar HR point machines manufactured by Voestalphine. Installed on 1 in 15 turnouts, the machines include two drive/locking/detecting (DLD) units, both mounted between the rails, one at the toe of the points and the second acting as a back drive. Locating the DLD between the rails reduces the length of the drive and detector rods, minimising temperature variations. Both units are powered from single electro-hydraulic drive mounted outside the rails at the toe of the points. Note that both units are mounted on hollow steel inbearer sleepers, although the units could be mounted on concrete sleepers.