

# SOMERSAULT

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SIGNALLING RECORD SOCIETY OF VICTORIA INC



*As mentioned in the January issue, the signalling for the Broad Gauge connection between Wodonga and Bandianna has been abolished. Here we see the junction of the Broad Gauge line from Wodonga (straight ahead) and the Standard Gauge line from Wodonga Coal Sidings (curving in from the right beyond Lawrence Street) in November 1995. The signalling here was interesting. There were no points, of course, at the 'junction' as it was merely a Broad and a Standard Gauge line coming together to form the Dual Gauge line to Bandianna. Home 106 was a three position signal with 'V' and 'S' indicators and was worked by two levers at Wodonga A: lever 106 for moves towards Wodonga and lever 108 for moves towards Coal Sidings. The signal was controlled by lever 32 at Coal Sidings for movements towards that box. There was no possibility of conflict between train movements towards the camera as the whole branch line was worked as a single Electric Staff section. The section was Wodonga A - Live Stock Siding with an intermediate instrument at Coal Sidings. The two Home signals at the junction were provided to prevent unnecessary operation of the flashing lights. Both Homes were two position light signals. Post 102 (on the Broad Gauge) was worked by lever 104 at Wodonga A, and Post 20 (on the Standard Gauge) was worked by lever 15 at Coal Sidings (note that the lever numbers did not match the post numbers). The signalling, in this form, dates from 1980 when the flashing lights at Lawrence Street were provided. According to the Weekly Notice, the recent alterations involved the removal of Post 102 and the indicators from Post 106. However, Home 106 is still officially worked from Wodonga A and merely controlled from Coal Sidings.*

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### MINUTES OF MEETING HELD FRIDAY MARCH 15, 2002,

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

Present: - J.Black, W.Brook, B.Cleak, G.Cleak, C.Gordon, G.Cumming, A.Gostling, W.Johnston, K.Lambert, D.Langley, B.McCurry, J.McLean, I.Michaelson, A.Ratcliffe, C.Rutledge, P.Silva, R.Smith, A.Waugh, A.Wheatland & R.Whitehead.

Apologies: - J.Churchward, A.Hinde, G.O'Flynn & B.Sherry.

The President, Mr. David Langley, took the chair & opened the meeting @ 21:02 hours, following the 2002 Annual general Meeting.

Minutes of the February 2002 Meeting: - Accepted as published. A.Ratcliffe / W.Johnston. Carried.

Business Arising: - Nil.

Correspondence: - A letter was received from member Philip Miller. Philip wishes to purchase a copy of the marketing brochure Thirsk, LNER published by the Westinghouse Brake & Signal Company in the UK in 1933. Can any member help?

A letter was received from member Reg Lloyd with a suggestion that this year's country signal box tour be to the Geelong district.

A reply was sent to Reg Lloyd indicating that planning was in hand for this year's tour to visit signal boxes between Broadmeadows - Seymour. This district has not been visited since the early 1990's while the Geelong district was last visited in February 2000.

Jack McLean commented about a recent telephone call on the subject of the magazine Green Over Red. This led to a discussion about the history of the magazine.

A letter was sent to the Friends of the National Railway Museum in York indicating that an order for Volume 2 of History of the Development of British Railway Signalling would be placed in May 2002.

A letter was received from member Tom Murray commenting on the lack of a syllabus item at the last meeting. A suitable reply was sent explaining the reasons behind the lack of any syllabus item.

A letter was sent to member Laurie Savage regarding a couple of membership matters.

T.Murray / A.Ratcliffe. Carried.

Reports: - Nil.

General Business: - Brett Cleak advised that electric locks & Repeating Signals would be commissioned at Westmere next Tuesday.

Brett Cleak also advised that power signalling between Maroona - Pyrenees Loop was scheduled to be commissioned on 23 March 2002 and electric locks & Repeating Signals at Inverleigh was scheduled to be commissioned a week after Easter.

Rod Smith noted that new signal posts had been erected at Manor Loop over the past two weeks.

Tom Murray advised that he expected electric locks & Repeating Signals to be commissioned at Inglewood on 27 March 2002 & at Eaglehawk on 25 March 2002.

Chris Gordon reported on the renewal of turnouts at the down ends of Greensborough & Mooroolbark.

This led to a discussion about heel less turnouts & swing nose turnouts. Colin Rutledge noted that turnout renewals were related to the amount of wear on the turnout.

Chris Gordon spoke about alterations to No.5 Road at Bayswater.

Colin Rutledge provided details about various designs & proposals for the Regional Fast Rail project.

Colin Rutledge reported on planning for work for the SG connection to the North Geelong grain loop. Colin Rutledge described drawings he had seen for a triangle connection at Ararat & re - commissioning of BG access. Included in the plans are remote control of the connections from ARTC Control in Adelaide & two BG / SG grade crossings.

Colin Rutledge was also able to report that the triangle connection to be built at the down end of Tottenham Loop would involve a 180 metre radius curve & a new bridge over Sunshine Road.

Rod Smith described the latest developments at the Portland Cable Tramway & the opening of the extension to Thompson on the Walhalla Goldfields Railway.

Alex Ratcliffe reported that white borders on signal targets had been sighted on some signals between Ringwood - Upper Ferntree Gully.

Bob Whitehead described a recent trip where an Up Kilmore East Sprinter was overtaken by the Up Shepparton Pass at Wallan using the hand operated crossover.

Keith Lambert tabled a number of circulars including alterations to a couple of Operating Rules and the abolition of the crossover & signal box at Seaford over the weekend of 6 & 7 April 2002.

Colin Rutledge discussed the report from the Footscray incident and the legal requirement for employees to be drug & alcohol free when on duty.

Alex Ratcliffe suggested that a tour to Greensborough & Eltham would be worthwhile prior to re - signalling.

Colin Rutledge tabled drawings of signals from the 1880's for the Editor to reproduce in Somersault.

Peter Silva reported that the John Buckland photograph collection in the National Library had been sorted & is available for perusal.

Andrew Wheatland described recent alterations at Belgrave at Puffing Billy & advised that gates at Lakeside were commissioned on 7 March 2002.

Tom Murray reported that the new grain loader balloon loop located 4.12 kilometres on the up side of Birchip had been commissioned and was used by a train yesterday.

Meeting closed @ 22:10 hours.

The next meeting will be on Friday 17 May 2002 at the Surrey Hills Neighbourhood Centre, 1 Bedford Street, Surrey Hills, commencing at 20:00 hours (8.00pm).

## SIGNALLING ALTERATIONS

*The following alterations were published retrospectively or have become available.*

- 22.08.2001 **Ballan** (SW 1065/01, WN 10/02)  
On Wednesday, 22.08., Flashing Lights were commissioned at Windle Street (78.944 km). Diagram 18/01 replaced 40/96. The Flashing Lights are operated automatically for all trains by a HXP level crossing predictor. The predictor had been installed on Sunday, 21.1.2001 and has been monitored continuously since that date to ensure correct operation.
- 22.09.2001 **Mildura** (SW 1085/01, WN 10/02)  
On Saturday, 22.09., Flashing Lights were commissioned at Ontario Ave (572.486 km via Ballan, 612.486 km via Lal Lal).
- 05.10.2001 **Deniliquin** (SW 1088/01, WN 10/02)  
On Friday, 5.10., Flashing Lights were commissioned at Ochertyre Street (305.172 km via Seymour, 321.932 km via Bendigo).
- 15.11.2001 **Ballan** (SW 1104/01, WN 10/02)  
On Thursday, 15.11., Flashing Lights were commissioned at Ingliston Road (78.166 km) on the Up side of Ballan. The Flashing Lights are operated automatically for all trains by a HXP level crossing predictor.
- 12.01.2002 **Belgrave** (A 1/02)  
On Saturday, 12.1., an S1 keyswitch was provided to control Down Permissive L1379. The new keyswitch is located on platform opposite the intermediate crossover. It is anticipated that Guards will find the new keyswitch convenient when attaching a locomotive to a short train and for shunting moves out of No 2 Road when at the Up end of a car set stabled in that road.  
The keyswitch has three positions: 'Stop', 'N', and 'Clear' and is operated in the same way as the existing pushbuttons.
- 13.01.2002 **Gembrook** (A2/02)  
From Sunday, 13.1., a Safeworking Fax was provided in the Safeworking Room. It will be used to send safeworking messages from Track Patrollers and Guards when operating under Guard in Charge conditions. It is not possible to receive messages as incoming calls cannot be directed to the machine.

*The following alterations were published in WN 7/02 to WN 12/02. The alterations have been edited to conserve space. Dates in parenthesis are the dates of publication, which may not be the date of the alteration.*

- 09.02.2002 **Belgrave** (A11/02)  
On Saturday, 9.2., the pushbutton controls for Down Permissive L1379 at the Down end of the platform and the ground frame were replaced by S1 keyswitches. The existing pushbuttons to control the flashing

lights at the ground frame were replaced by new pushbuttons.

10.02.2002 **Menzies Creek** (A3/02)

Commencing Sunday, 10.2., Menzies Creek will remain open continuously as a Temporary Staff Station until 30 April 2002. The frame will remain switched in and lever 8 will be secured reverse. The Stop Board at the Down end of No 2 Road is to be secured in the 'displayed' position. At the cessation of train operations each day, the Menzies Creek - Lakeside Staff is to be secured in the Staff Exchange Apparatus cupboard instead of being returned to Belgrave. The Down end points are to be left secured for No 2 Road and the Down Home to No 2 Road is to be secured reverse by means of a lockable lever sleeve.

To allow a double headed train to stop with all the vehicles in the platform, when a Signaller is on duty and a Down train of more than 14 vehicles arrives in No 2 Road, Down Permissive L1569 is to be placed at Stop and the Stop Board 'hidden' before the train arrives. The Signaller must verbally advise the Driver that the train may pass the location of the Stop Board in sufficient time for the Driver to act on the advice. The Stop Board must be restored to the Displayed position after the train departs.

22.02.2002 **Camberwell** (TS 5/02, WN 7/02)

On Friday, 22.2., the purple lens of Dwarf 24 at the exit of Siding A was replaced by a purple LED as a trial.

24.02.2002 **Hartwell** (SW 502/02, WN 7/02)

On Sunday, 24.2., pedestrian gates were provided at the Hartwell Hill Road foot crossing (13.328 km) at the Down end of Hartwell station.

03.03.2002 **Sydenham** (SW 21/02, WN 8/02)

On Sunday, 3.3., the dual carriage way at Melton Highway was brought into use, and the boom barriers over the northern carriageway were commissioned.

06.03.2002 **Sydenham** (SW 19/02, WN 8/02)

On Wednesday, 6.3., the boom barriers on the access road to the Stabling Sidings will be brought into service.

The road access to the Stabling Sidings crosses the Down line at the Down end of the station. The access is protected by boom barriers (which are pedestrian boom barriers with extended arms). The gates are normally lowered and, when raised, warning lights will operate for 7 seconds before lowering. The booms are operated manually by lever 633 on the console. A CCTV camera is provided to allow the Signaller to view the crossing. Telephones are provided on each side of the crossing connected to the post telephone system.

When it is necessary for a vehicle or pedestrian to cross the line the person should use the telephone to request permission from the Signaller to cross the line. Before granting permission the Signaller will sleeve Down Home SDM733 at Stop. The booms will then be raised by reversing lever 633. When the vehicle or pedestrian is clear of the line, the Signaller must be informed that the crossing is clear. The Signaller will then lower the booms.

If the booms fail in the lowered position and the booms are detected in the lowered position, Down Home SDM733 will clear normally. If detection has failed, the Low Speed aspect of SDM733 may be cleared, but the Signaller must first view the crossing using the CCTV and get confirming advice from the person using the crossing that the line is clear. The low speed aspect will not illuminate until after a 15 second delay and requires a train to be on the approach track section of SDM 733.

If the booms fail in the raised position, or a boom arm is broken, the line must be protected by securing a chain across the crossing. If it is necessary to use the crossing when the emergency chain is in use, the person requiring to use the crossing must collect the key to the chain padlock from the Signaller. Before handing over the key the Signaller must sleeve SDM733 at stop. The chains must be secured across the roadway after the movement has been completed and the key returned to the Signaller. The sleeve on SDM733 must remain applied until the Signaller has possession of the key, has been informed that the crossing is clear, and has checked that the crossing is clear by means of the CCTV.

The Signal Fault Centre must be notified immediately of any faults in the boom barriers.

Add as a new Operating Procedure in the Book of Rules (Rule 115B, Section 34).

07.03.2002 **Lakeside** (A 8/02)

On Thursday, 7.3., between 0900 and 1600 gates were provided at the pedestrian crossing over No 1 Road. The gates are motorised and are manually controlled by push buttons located in the station building and on the platform adjacent to the gates.

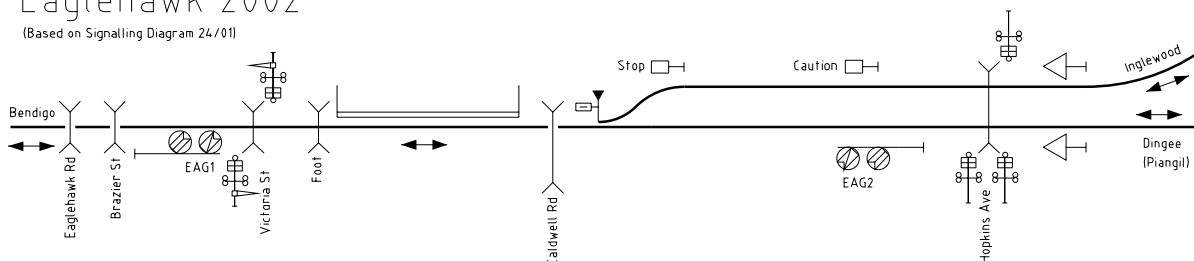
The gates are not track controlled in any way. A standard level crossing warning bell is provided, but this will only operate while the gates are closing and will be silent when the gates are actually closed. A Healthy State Indicator is provided to indicate that the gates are fully closed. If these are not illuminated, Drivers of all rail vehicles must stop and, if unable to close the gates, act in accordance with G.I. 7.7.

The gates are to be closed prior to any train, locomotive, or trolley movement over the crossing, and before any Down train is admitted to No 1 Road. The gates will be with Conductors and the Station/Kiosk staff. Should these people not be available, it will be the responsibility of the Fireman to close the gates and the Guard (Fireman of a light engine) to open them once the train has cleared the crossing.

- 08.03.2002 **Bayswater** (TS 8/02, WN 9/02)  
 On Friday, 8.3., No 5 Siding was booked out of service to allow the track to be raised for the X'trapolis Train Project. The points were secured by point clip for No 6 Siding.
- 10.03.2002 **Moreland** (SW 23/02, WN 8/02)  
 At 0700 hours, Sunday 10.3., the SSI program will be altered to improve train speed and the operation of the Moreland Road boom barriers.
- 17.03.2002 **Seaford** (SW 25/02, WN 9/02)  
 On Sunday, 17.3., the WRRS boom barrier mechanisms at Seaford Road were replaced by S-40 mechanisms.
- (19.03.2002) **Loose Shunting** (SW 1091/01, WN 10/02)  
 Loose shunting is banned at all locations in the Freight Australia network.
- (19.03.2002) **Somerton** (SW 1129/02, WN 10/02)  
 Due to locomotive radio access problems, the dedicated radio channel at Somerton has been changed from 102 to 160.
- 24.03.2002 **Greensborough** (SW 506/02, WN 11/02)  
 On Sunday, 24.3., Points 24 at the end of the single line were renewed and equipped with a point motor. Plunger 25 was abolished and lever 25 became a pilot lever. Points 24 are of 'tangential' type and cannot be secured with a standard point clip. A special point clip is provided at Greensborough.
- 24.03.2002 **Frankston** (SW 28/02, WN 11/02)  
 Commencing Sunday, 24.11., the signalbox will be attended continuously from 0620 hours Sunday to 0135 hours the following Sunday.
- 25.03.2002 **Eaglehawk** (SW 1029/02, WN 10/02)  
 Between the hours of 0800 and 1700 on Monday, 25.3., the junction points at Eaglehawk were secured by a switch lock for the Piangil line. Up and Down Repeating signals were provided on the Piangil line. The Down Repeating signal, EAG 1, is located 25 metres on the Up side of the Victoria Street pedestrian crossing. The Up Repeating signal, EAG 2, is located 100 metres on the Up side of Hopkins Ave. The existing Annett Lock and Up Home signals from the Piangil and Inglewood lines were abolished. The loose A pattern Annett Key at Bendigo was withdrawn. Diagram 24/01 (Eaglehawk - Korong Vale) replaced Diagram 19/82.  
 The equipment and instructions for Eaglehawk are the same as those at Toolamba (see Somersault Vol 25 No 1, page 7) except that a Through Train Order may be issued through Eaglehawk Junction for the secondary corridor (Inglewood line) provided that a Signaller is in attendance at the junction prior to the issue of the Train Order and that the points have been set for the secondary corridor. A Train Order may be issued on the secondary corridor as far as the 'Stop' Board at the junction whilst a Train Order is effective over the primary corridor through Eaglehawk. When a Train Order is effective from Bendigo to the secondary corridor (or vice versa), a Train Order may be issued for an Up train on the primary corridor as far as Woodvale Block Point.  
 A new instruction (118) has been issued for the Book of Rules.

### Eaglehawk 2002

(Based on Signalling Diagram 24/01)



- (26.03.2002) **Lilydale** (SW 507/02, WN 11/02)  
 On Diagram 01/01, Dwarf 311 (Siding B to No 1 Track) is incorrectly shown as Dwarf 313. Amend this diagram.
- 27.03.2002 **Inglewood** (SW 1029/02, WN 10/02)  
 Between the hours of 0800 and 1700 on Wednesday, 27.3., the junction points at Inglewood were secured by a switch lock for the Dunolly line. Up and Down Repeating signals were provided on the Dunolly/Korong Vale line. The Down Repeating signal, ING 1, is situated 700 metres on the Up side of the Calder Highway and the Up Repeating signal, ING 2, 20 metres on the Up side of Brook Street (Calder Highway). The existing Master Key Lock on the junction points and the Down Home signals from the Bendigo line were abolished. Diagram 24/01 (Eaglehawk - Korong Vale) replaced Diagrams 30/71 and 31/84.  
 The equipment and instructions for Inglewood are the same as those at Toolamba (see Somersault Vol 25 No 1, page 7). A Train Order may be issued on the secondary corridor as far as the 'Stop' Board at the junction whilst a Train Order is effective over the primary corridor through Inglewood. When a Train Order is effective from Korong Vale Loop to the secondary corridor (or vice versa), a Train Order may be

## PUFF IN 2001

Courtesy of Andrew Wheatland, here are the signalling alterations on Puffing Billy in 2001, together with a set of diagrams current in late March 2002.

03.01.2001 **Menzies Creek** (A1/01)

On Wednesday, 3.1., between 0800 and 1600 flashing lights will be commissioned at School Road at the Down end of Menzies Creek. Signalling Diagram 1/2001 will be brought into use.

Down Permissive signal L1569 was provided and is located on the Up side of the crossing. The signal is normally at clear, but may be placed at stop by pushbuttons located in the signalbox and in the telephone box at the crossing. This will allow trains to proceed past the Down end of the crossing without activating the flashing lights.

Illuminated indicators are provided under the block shelf in the signalbox to repeat the indication of L1569.

Operation of the flashing lights is automatic for all trains. For Down trains, operation of the flashing lights will commence once the train passes the approach section boards at the Down end of the platforms (provided L1569 is at clear). For Up trains, operation of the flashing lights will commence when the train passes a point 235' (71.5 metres) in the rear of Post 2, provided one of the Home signals on this post is at clear. If both Homes are at Stop, the flashing lights will commence operation when a Home signal is cleared (with a train on the approach) or the train passes Post 2.

Down trains may pass the approach section boards without activating the flashing lights provided L1569 is at Stop. If L1569 is restored to Stop after a train or locomotive passes the approach section indicator, the flashing lights will continue to operate for 20 seconds before ceasing. The indicator on the block shelf will flash until this timeout expires. If a train or locomotive is in advance of the approach section boards when L1569 is operated, the flashing lights will operate for 12 seconds before L1569 clears. During this delay the indicator on the block shelf will flash.

The approach of an Up train will cause L1569 to be restored to Stop. If the tail of an Up train clears the level crossing, but remains inside the Down approach section indicator, L1569 will remain at Stop and prevent the flashing lights from activating. G.I. 6.20.5 is amended.

The flashing lights are equipped with a healthy state indicator and pedestrian warning bell.

The Speed Boards and Approach Section Indicator Boards at the Down end of Platforms 1 and 2 will apply to all Down movements towards the level crossings. A permanent Stop Board was provided at the Down end of No 1 Platform and will apply to all Down movements irrespective of whether Menzies Creek is open as a Staff station. Hinged Stop Boards are provided at the Down end of No 2 Platform and at the Up end fouling point of No 1 and 2 Platforms. All these Stop Boards are lettered "STOP - Drivers must not proceed until authorised by signalman". The hinged Stop Boards may be secured open or closed by pins and padlocks.

Lever 9 (Override for flashing lights, School Road) was provided and is painted green. Reversal of this lever will cut out the flashing lights, restore L1569 to Stop, and lock both Up Homes on Post 2 at Stop. Restoring lever 9 to normal will restore the flashing lights to service and allow L1569 to be cleared (provided a track circuit failure is not holding the signal at Stop) and allow the Homes on Post 2 to be cleared. When not required to be used, lever 9 must be secured normal with the lockable lever sleeve. If the School Road Flashing Lights are operating continuously, either due to trains working or a disabled train, then either a hand signalman may be appointed to the crossing, or the override lever may be operated after ensuring that no train or rail vehicle is on the crossing or will enter the crossing. G.I.s 7.7.5 and 7.7.6 are modified.

10.03.2001 **Belgrave, Belgrave East** (A3/01)

On Saturday, 10.3., between 1200 and 1800 the Down Outer Home signal was relocated from Post 2 (at Old Monbulk Road) to the right hand doll of a new bracket post at Belgrave East. The Home continues to be worked by lever 4 in the Belgrave East ground frame. The new post is numbered Post 3, and the existing Post 3 was renumbered Post 4. The repeaters at Belgrave east for the Down Outer Home, the Up Outer Home, and the Up Disc Signal were abolished. The Home on Post 3 will be electrically lit.

28.03.2001 **Belgrave** (A8/01)

On Wednesday, 28.3., between 1000 and 1600 the CCW lever adjacent to the TR point will be replaced with a modified Ford Quadrant. The quadrant has been modified with a snib that secures the counterweight to bias the points towards the workshops area. The snib is locked with an S1 lock; releasing the snib will secure the key in the lock.

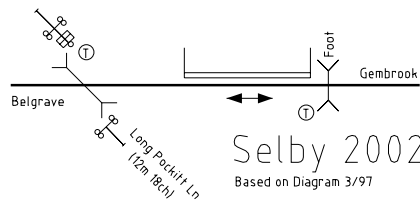
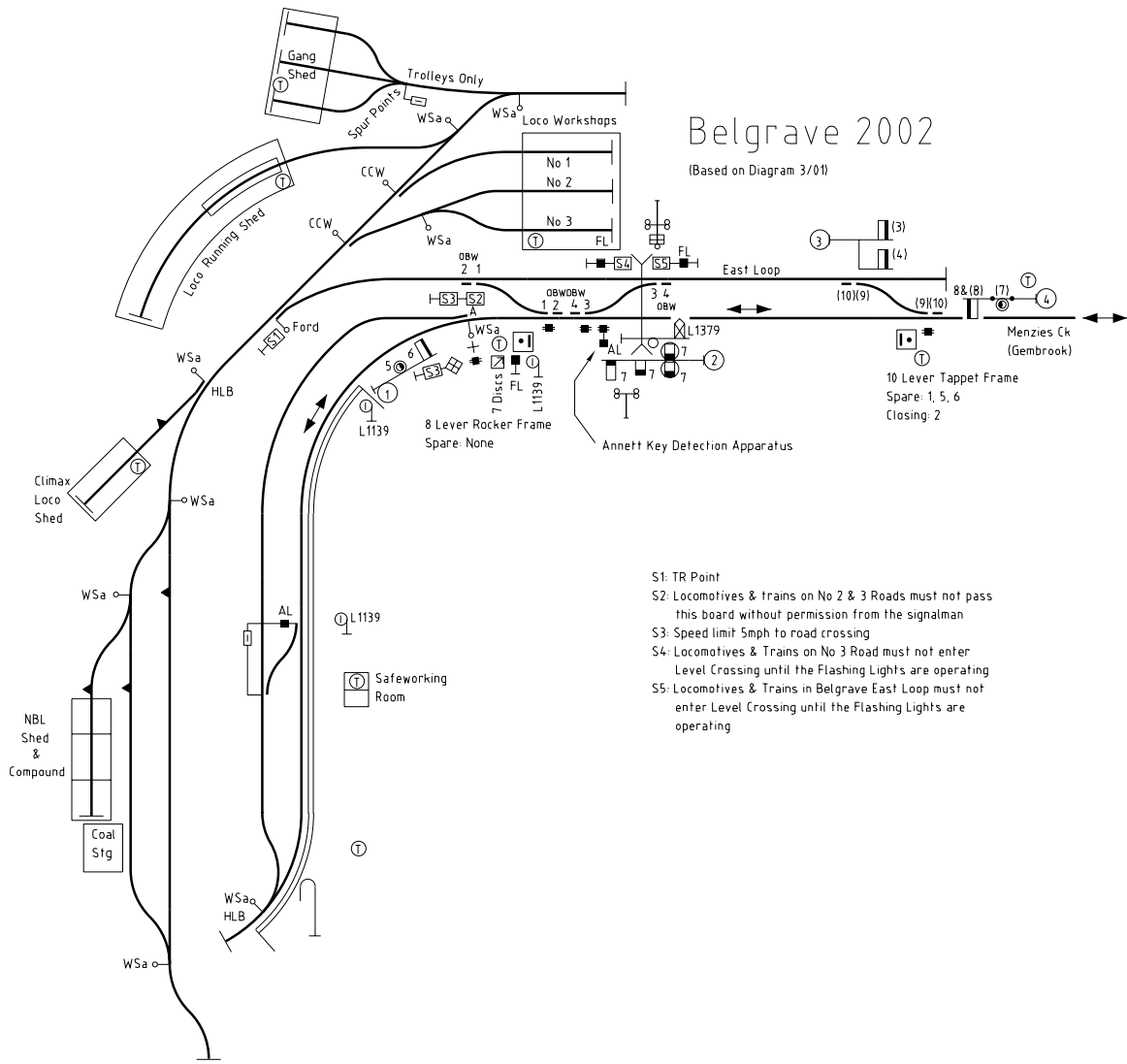
The points normally lie towards the Workshops area. They may be trailed through by locomotives proceeding from the main line to the servicing area. For all other moves, the snib is to be unlocked and the points reversed. Once the movement has been completed, the points are to be restored to the normal position and relocked. At the completion of the days running, they must be secured normal by the Hand Locking Bar and Padlock for the Workshop area.

29.03.2001 **Belgrave** (A6/01)

On Thursday, 29.3., between 0800 and 1600 Post 2 was replaced by a new post 4 feet further from the running line. No changes will be made to the application of this signal, and it will continue to be electrically lit.

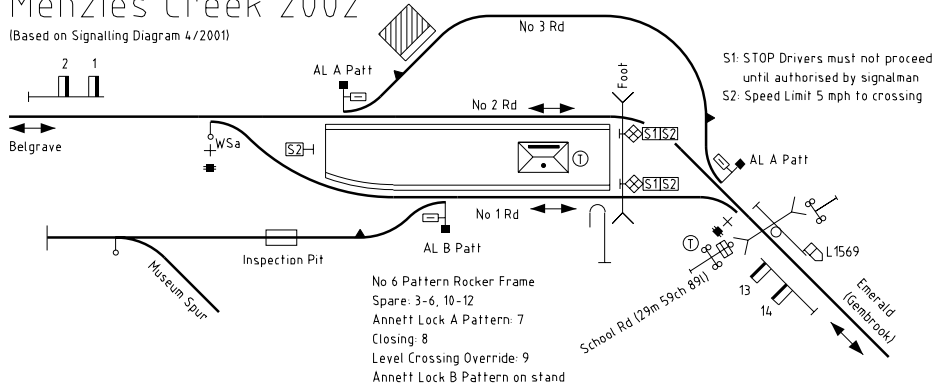


- 11.06.2001 **Belgrave** (A13/01)  
 On Monday, 11.6., between 1000 and 1800 the quadrant lever adjacent to the plunger locked points at the Down end of the platform was removed. Hand signals will be necessary to admit Up trains past the Up Inner Home to Nos 2 and 3 Road. The Hand Locking Bar on the No 1 to 2 Road points has been removed.
- 03.07.2001 **Belgrave** (A16/01)  
 On Tuesday, 3.7., between 1200 and 1600 a new Down Home signal was provided on the left hand doll of the bracket post at Belgrave East. The Home signal applies to moves from Belgrave East Loop to the main line. It is worked by lever 3 in the Belgrave East ground frame and requires levers 9 (Crossover) and 10 (plunger lock) reverse. The signal is electrically lit and detects Points 9D reverse and Plunger 10 in.
- 03.08.2001 **Belgrave** (A18/01)  
 On Friday, 3.8., between 0800 and 1600 flashing lights were provided at Old Monbulk Road. Diagram 2/2001 was provided.  
 An Approach Section Board and a 5 mph Speed Board were provided at the Down end of the platform on No 1 Road. A 5 mph Speed Board was provided between Nos 2 & 3 Roads.  
 The plunger locked points at the Down end of Nos 1 and 2 Roads were altered so that the plunger will lock the points both ways. These points will now be known as 'Points A'. Mechanical slide detectors were provided in the wire leads to Home 6 and Disc 5 to ensure the points are normal before those signals can clear. Signalmen must ensure that the route is correctly set before signalling trailing moves through these points.  
 Down Permissive signal L1379 was provided immediately on the Up side of the level crossing to prevent unnecessary operation of the flashing lights during shunting. There is space for 2 locomotives or cars between Crossover 1 and L1379. It governs movements along the main line and across the crossover. The normal position of the signal is 'Stop'. When cleared, L1379 displays Warning if the Down Outer Home is at Stop for moves along the main line or for moves to Belgrave East Loop and Proceed for main line moves if the Down Outer Home is at Proceed. The signal will return to stop when passed by a train, but is not automatic (it will not reclear once it has returned to Stop) and it is necessary to operate the signal for each move.  
 'Clear' and 'Stop' push buttons are provided at the ground frame and at the Down end of the platform to control L1379. The signal is controlled by the position of Crossovers 1 and 3 and Points A. Moving any of these after L1379 has cleared will result in the signal being restored to Stop so it is necessary to set the required route before clearing L1379. If a train is on the Down Approach track when L1379 is called the flashing lights will commence operation immediately but there will be a 12 second delay before the signal clears. If a train does not vacate the Down Approach during shunting and needs to reenter the crossing, the 'Clear' button for L1379 must be pressed but this must not be done until the train is ready to move. If a train is standing on the Down Approach when the 'Stop' button is pressed, the flashing lights will operate for 20 seconds before stopping. To prevent unnecessary operation of the flashing lights when bringing a locomotive from the TR point or No 2 Road onto a train in No 1 Road, L1379 must not be called until the locomotive has set back into No 1 Road and is clear of the Down Approach track. The push buttons at the Down end of the platform are specifically provided for this purpose.  
 It is possible to pre-call L1379 when shunting a long train between Nos 1, 2, or 3 Roads and the next movement is another shunt or a departure. Once the Down shunting movement is clear of Crossover 1 (and standing across or beyond Old Monbulk Road) the road can be set for the Up shunting movement and the 'Clear' button for L1379 pressed. The 'L1379 Called' indicator will illuminate. When the train has set back and cleared the Down Approach Track, L1379 will clear. When the train makes its next Down move (e.g. a departure or another shunt), the flashing lights will start automatically when the train enters the Down Approach. If the move is another shunt, the pre-call can be used again once the shunting move is clear of Crossover 1 and the road set for the next move. The pre-call can be cancelled by pressing the 'Stop' button.  
 A semaphore Calling-on signal is provided underneath the Home signal on Post 2 for moves to No 1 Road. Two Subsidiary Light signals were provided on Post 2 underneath the Calling-On signal. The left hand Subsidiary Light Signal applies to No 2 Road, and the right hand signal applies to No 3 Road. A needle repeater labelled 'Lever 7 Discs' is provided at the ground frame for the two Subsidiary Light signals. The repeater indicates when either signal is displaying 'Proceed' or when both are displaying 'Stop'. An indicator labelled 'Signal No 7 Called' is provided adjacent to lever 7.  
 All signals on Post 2 are worked by lever 7 in the ground frame, the signal cleared depends on the setting of the points and track occupancy. The Home signal will clear if the points are set and locked for No 1 Road and the track is clear between Post 2 and the fouling point at the Up end of No 1 Road. The Calling-on arm will clear if the points are set and locked for No 1 Road, but the track ahead of Post 2 is occupied and the Up Approach track is also occupied. The left hand Subsidiary Light Signal will clear if the points are set and locked for No 2 Road. The right hand subsidiary will clear if the points are set and locked for No 3 Road and the plunger on Points A is in (even though this is not in the route). If lever 7 is reversed while a train is occupying the Up Approach track there will be a 12 second delay before the appropriate signal clears. However, there are two special cases for moves towards an occupied No 1 Road (i.e. for the Call-on). If the flashing lights are already operating when lever 7 is reversed and the Up Approach is occupied the Call-on will clear immediately. If the Up Approach is not occupied when lever 7 is reversed the Call-on will remain at Stop until the Up Approach is occupied and then for a further 12 seconds. Operation of



### Menzies Creek 2002

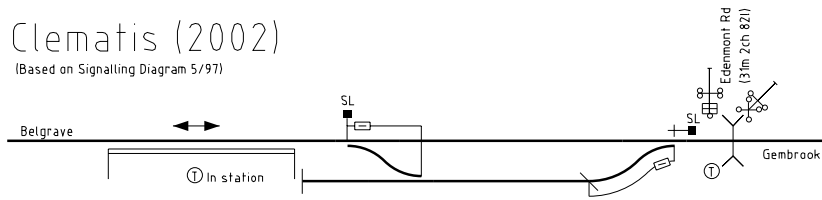
(Based on Signalling Diagram 4/2001)





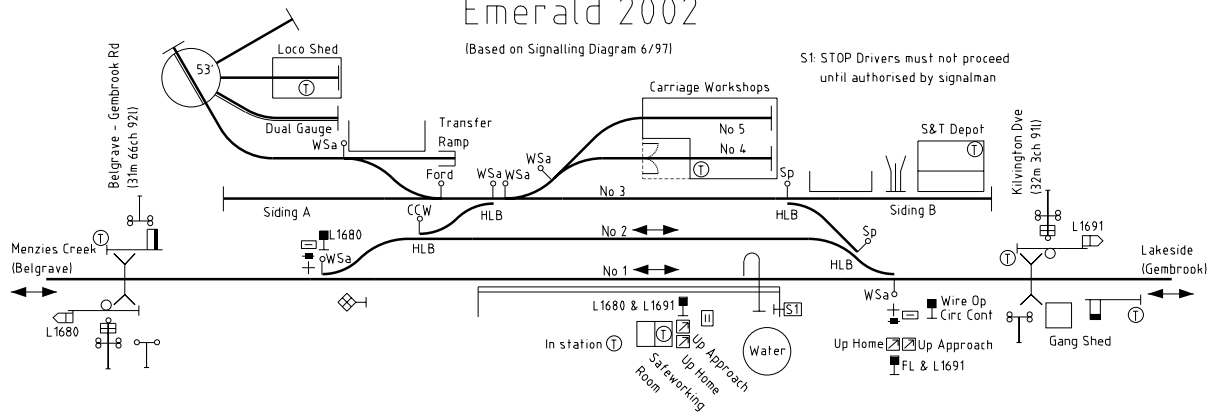
### Clematis (2002)

(Based on Signalling Diagram 5/97)



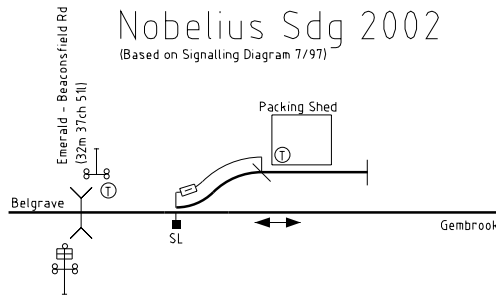
### Emerald 2002

(Based on Signalling Diagram 6/97)



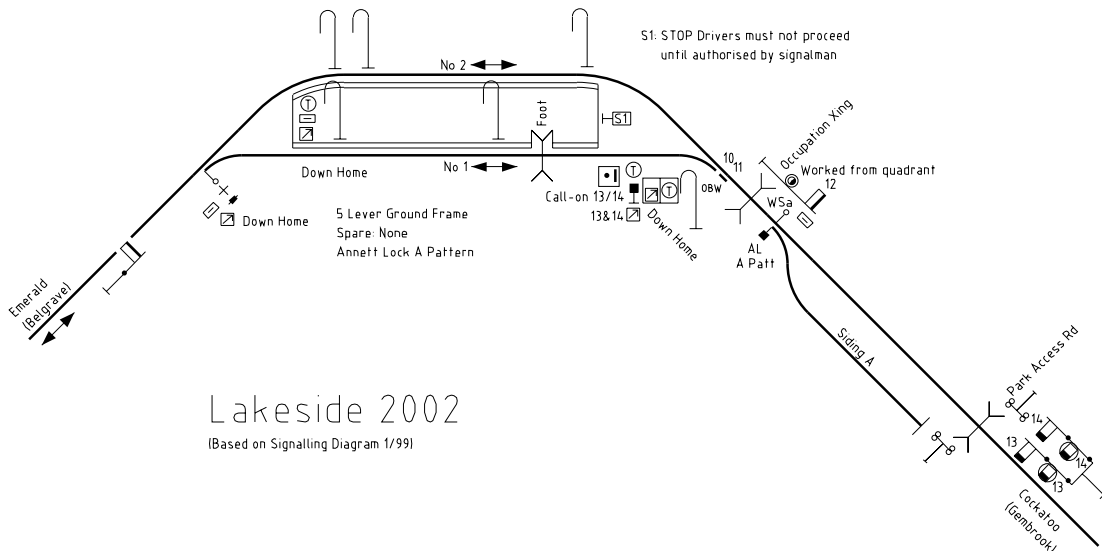
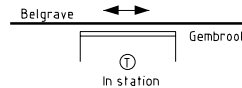
### Nobelius Sdg 2002

(Based on Signalling Diagram 7/97)



### Nobelius 2002

(Based on Signalling Diagram 7/97)

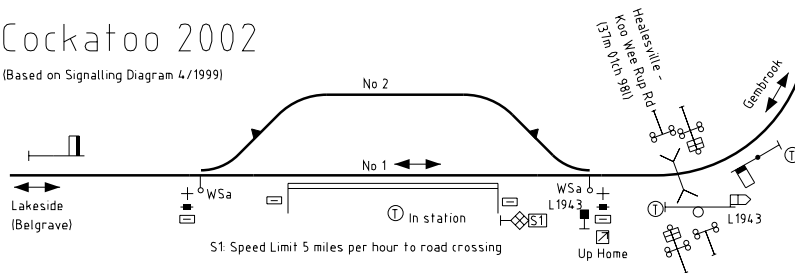


### Lakeside 2002

(Based on Signalling Diagram 1/99)

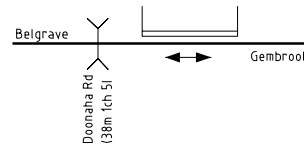
### Cockatoo 2002

(Based on Signalling Diagram 4/1999)



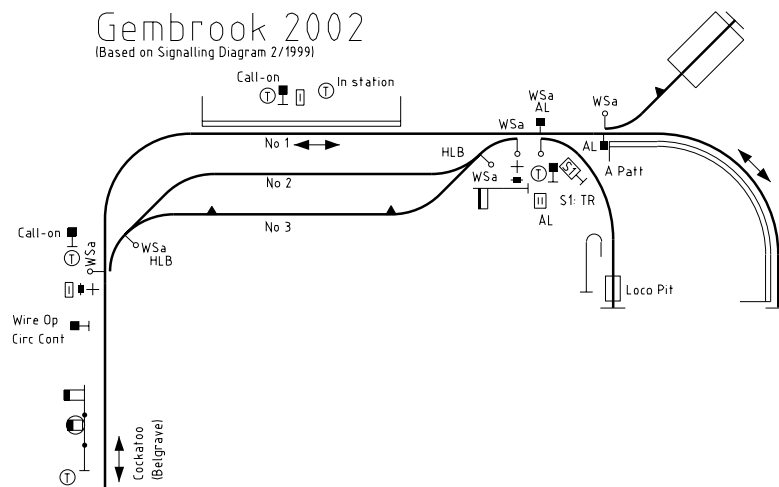
### Fielder 2002

(Based on Signalling Diagram 11/97)



### Gembrook 2002

(Based on Signalling Diagram 2/1999)



lever 7 is required for all moves past Post 2 even during shunting when the Up movement has not completely passed Post 2.

The Home signal on Post 2 will be automatically restored to Stop when a train passes the post (the Calling-on arm will not then operate even if lever 7 is left reverse). The Calling On signal will return to Stop when the Up Approach track becomes unoccupied. The Subsidiary Light Signals are not track cancelled. If lever 7 is restored to normal after a signal on Post 2 clears and a train is occupying the Up approach, there will be a 20 second timeout before the flashing lights cease to operate.

When a train is to depart from No 1 Road under Guard in Charge working, the Home 7 can work semi-automatically. The route is to be set and locked for No 1 Road and lever 7 reversed. The 'Signal No 7 Called' indicator will illuminate. Home 7 will not clear, however, until the rear of the train has passed beyond the Up Approach track. A similar feature is provided for trains departing from No 2 or 3 Roads and the next move is an arrival back into the same road. In this case, reversal of lever 7 will clear the appropriate Subsidiary Light signal, but this will be restored to Stop when the departing train enters the level crossing and will not reclear until the train has cleared the Up approach. If it is necessary to cancel this semi-automatic working, lever 7 can be restored to normal.

A board lettered 'Locomotives and Trains on No 3 Road must not enter the level crossing until the Flashing Lights are operating' is provided on the Up side of the level crossing, and a board lettered 'Locomotives and Trains in Belgrave East Loop must not enter the level crossing until the Flashing Lights are operating' is provided on the Down side. Push buttons to start and stop the flashing lights are provided on the posts of both of these notice boards and at the Ground Frame.

The flashing lights will operate automatically for all Up and Down movements along the main line, for Down moves from No 1 Road to the Belgrave East Loop, and for Down moves from No 3 Road to the main line. The Down approach track commences at the Approach Section Board (in No 1 Road), at the Down end fouling point (in No 2 Road), and on the Down side of the V crossing of the points leading onto the Crossover to the main line (in No 3 Road). The Up approach track commences opposite Post 3. Up moves from Belgrave East Loop to the main line (No 1 Road) will require the flashing lights to be started manually, but they will cease operation automatically when the train has cleared the crossing. Moves between No 3 Road and Belgrave East Loop (in either direction) will require the flashing lights to be started and stopped manually. When the flashing lights have been started manually, it will be necessary to operate the 'Stop' button if the move is not to proceed. Before the Stop button is operated there must be

a clear understanding between the Driver and the Signaller and the train must be stationary or proceeding away from the crossing. Automatic operation of the flashing lights cannot be cancelled in this way.

The Flashing Lights are not fitted with Remote Radio Operation and Trolley Drivers must operate the test switch or any of the manual stop/start buttons before crossing Old Monbulk Road. Trolley Drivers are not to alter the position of L1379, but pass it at Stop (if necessary) in accordance with G.I 2.11.2 (ii). Post 2 is to be operated for Up movements, except for movements into No 1 Road when it is occupied (as Trolleys do not operate track circuits). For this case, the movement must be performed in accordance with G.I. 6.15.

The level crossing is equipped with a healthy state indicator and pedestrian warning bell. Standard 'Test Switch' and 'Override Fortress Key Switch' are provided. Use of the Fortress Key will place L1379 and all signals on Post 2 to Stop and stop the operation of the Flashing Lights. Should a train or locomotive require to enter the crossing the Fortress Key is to be restored to normal when the flashing lights should start. The appropriate signal should be operated (but may not clear if the cause of the failure is a track circuit failure).

11.08.2001 **Emerald - Nobelius - Lakeside** (A19/01)

Nobelius will be a Temporary Staff station in the Emerald - Lakeside section on Saturday 11.8, and Sunday 12.8, between 0900 and the arrival of No 32 Pass at Emerald. This is to facilitate the operation of special trains on the 'Day out with Thomas' events at Emerald on these days.

Once Emerald is opened as a Temporary Staff Station, the Emerald - Lakeside Staff will be locked away. The Temporary Train Staffs Emerald - Nobelius - Lakeside will be released. No Staff Ticket Boxes will be provided, but blank Staff Ticket Books will be provided.

Nobelius will be attended by a signaller. A box will be provided to allow the Staffs and blank Staff Ticket Books to be secured at Nobelius when not in use. The yard limits are defined as the Up and Down ends of the platform.

Trains must not approach Nobelius simultaneously. There are no fixed signals at Nobelius. Prior to the departure of a train from Emerald or Lakeside, the signaller must confirm that the previous train has, in fact, departed and is out of sight of the signaller at Nobelius.

The Temporary Staff will not operate the points at Nobelius Siding.

10.09.2001 **Belgrave** (A24/01)

On Monday, 10.9., between 1300 and 1500 the Subsidiary Light signals on Post 2 will be replaced to improve their visibility. The new signals have a new single lens units with improved lights surrounded with a background.

22.10.2001 **Lakeside** (A27/01)

On Monday, 22.10., the Down Home was electrically lit. A needle indicator was provided in the safe working cabin to repeat the indication of the Down Home.

19.11.2001 **Belgrave - Menzies Ck - Emerald - Lakeside** (A28/01 & A29/01)

On Monday, 19.11., fax machines will be provided in the safeworking rooms at Belgrave, Menzies Creek, Emerald and Lakeside. They are to be used for the transmission of safeworking messages for Track Patrollers and Guards (when operating under Guard in Charge conditions). In particular, they are used to fax notification of the arrival of a train to the station in the rear. (As from 14.12, they will be used to fax a copy of the Staff Ticket to the station in the rear as the ACRE message.)

19.12.2001 **Belgrave** (A30/01)

The operation of the modified Ford Quadrant near the TR point is modified; Up Trains and Light Engines may now trail through the points.

26.12.2001 **Lakeside** (A33/01)

On Wednesday, 26.12., the Calling-on signals on the Up Home were renewed and the controls modified. The existing time delayed push buttons were replaced.

As with the previous arrangement, the Down end points must be set and locked for the movement, the Annett key secured in the duplicate lock in the frame, and the Home signal lever must be normal before operating a Calling-on signal. The appropriate 'Start' button must then be pressed. The Call-on signal will clear for 10 minutes, after which it will automatically revert to Stop. The position of the Calling-on signals is repeated. The Calling-on signal can be restored to Stop at any time by pressing either 'Stop' button. Movement of levers 11, 13, or 14, or removal of the Annett Key, will cause the Calling-on signal to revert to Stop.

# HAWTHORN

(Continued from Somersault Vol 25 No 2)

## Closure of the Kew line

Rail passenger services on the Kew line were finally withdrawn on 18 August 1952. By the WTT of 27 February 1950 all through Kew trains had been withdrawn. The shuttle still ran in the morning peak from the start of suburban traffic until 0915 and in the afternoon peak from 1535 to 1904. There were no longer any through trains and the main line weekday service had increased to 123 trains per day. The Kew goods, was still running on Monday, Wednesday, and Friday nights and continued to do so after the withdrawal of passenger services.

The Kew line was finally closed for goods as from Monday 13 May 1957. The WTT of 27 June 1955, still in use when the Kew line was closed, shows that the goods train ran only two days a week: Monday and Thursday. The Down train shunted at Hawthorn from 2225 to 2245 and from 0006 to 0051 on the Up. After the Kew line closed the goods train was truncated to Hawthorn. In November 1959 the goods still ran on Monday and Thursday arriving at 2240 and departing at 2340. Hawthorn signalbox was only switched in as required for the goods service, although passenger trains could still terminate in the back platform in an emergency.

On 29 November 1959 the Kew line repeating signal Q192 was removed. The Kew line was converted to a siding, Siding B, on 24 December 1960. Homes 2 and 26 were altered to only show low speed indications and Home 30 was also altered so as to not display Medium Speed indications.

## Three tracks to Camberwell

In 1963 a third track was provided between Hawthorn and Camberwell. The former Down line became the bi-directional Centre line. The former Kew line and No 3 Road became the new Down line.

The first recorded alteration for this occurred on 29 August 1963 when No 2 platform and the Down line to Elgin Street were taken out of use. The Down line was slewed to the alignment of the former Kew line and trains were worked via No 3 Road. Crossover 3 and Dwarf 6 were relocated further out and the crossover was converted to motor operation. Home 2 was replaced by a light Dwarf signal. Home 26 was fitted with an illuminated letter A and the locking rearranged to switch out via No 3 Road. Points 21U were spiked to lie for No 3 Platform. Post L.185 replaced L.187 on the original Down line. Post L.179 was fixed at stop and Dwarf U16 taken out of use. Post L.151 was renewed on 1 September 1963.

On 13 October Siding A and the connections at the Up end were taken out of use. The Down main line was taken out of use between Home 30 and Crossover 21 and slewed

to run via the former Siding A and Crossover 17/21D (spiked reverse). Crossovers 21, 23, and 27 were taken out of use. Dwarfs 28 and U30 were abolished. Dwarf 18 and Home 20 were secured at Stop. A scotch block was provided in the neck of No 4 Road and the Goods Siding. Home 30 was relocated 26 yards further out and only displayed a Normal Speed indication. Levers 17, 20, 21, 23, 25, 27, 28 were now spare.

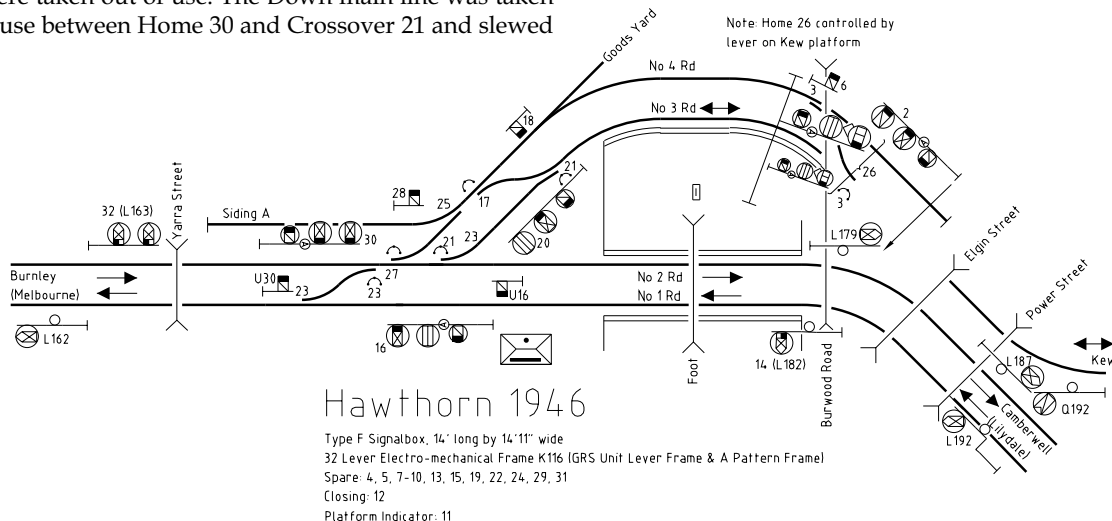
The light units on Controlled Automatic L163 were renewed on 18 October. On 27 October Home 20 was replaced by a 3 position Dwarf U18. Home 16 was replaced by a new Home worked by lever 20 located 51 yards in the Down direction. The control of Controlled Automatic L184 (by lever 14) was abolished. The Down track was resigalled on 10 November when signals L197 and L205 replaced L201 and L211.

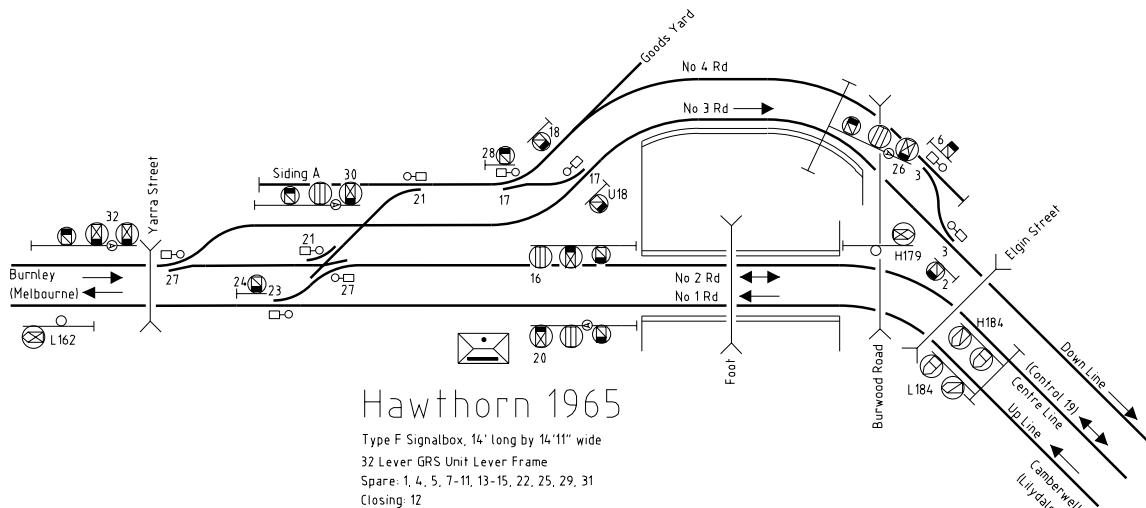
On the 17 November a new Siding A was provided forming an extension of No 4 Road. The Down line was slewed to its final location near the platform. Crossover 17/21D was relocated to provide access from No 3 Road to Siding A and was now worked solely by lever 17.

On 24 November connections were provided from the Up and Down lines to the Goods Yard. Points 21 were spiked reverse to prevent movements towards No 2 platform (the future Centre line). Automatic L163 was redressed to become Home 32 and was equipped with illuminated letter A. Dwarfs 24 and 28 were provided.

The new Centre line between Hawthorn and Camberwell was bought into service on 8 December 1963. The new line was worked by Lever Locking and Track Control with sections Hawthorn - Camberwell. Hawthorn signalbox was now switched in Monday - Friday 0645-0905 and 1600-1845 & as required for local goods. When the box was switched out Down trains ran via the Down line and Up trains via the Up line.

The September 1964 WTT showed that there was only 117 weekday Down trains - less than had run in 1950. The Centre line was used for 14 Up trains in the morning peak, and for two Down trains just after the morning peak, and then for 9 Down trains in the evening peak. Most, but not all, of these trains ran express. The Hawthorn goods train now ran during the day three days a week (MWF) arriving at Hawthorn at 1040. On Monday and Fridays the train departed at 1145 and ran to Darling. On Wednesday the goods continued to Camberwell at 1140. The timetable limited the goods to 18 vehicles for Hawthorn. The Wednesday service had been cancelled by October 1965.





On 18 April 1967 the switch out arrangements were altered. Hawthorn could now switch out with Down trains routed via either the Down or Centre lines. The illuminated letter 'A' was removed from Home 32. When switched out, the phone on Home 32 was switched through to SMs office.

Dwarf 18 moved 20 feet further out on 20 April 1969 due to rearrangement of the goods yard. By 1970 the goods train ran daily and had been altered to run in the early morning arriving 0440 and departing at 0500. On Mondays an additional goods ran, combined with the Darling goods, arriving at 1039 and departing 1148. On 7 July 1970 the Manager, Freight Operations, sent the following memo:

12.45 am Box Hill Goods S1659/70

Commencing forthwith the above train is to leave Melbourne marshalled as follows: locomotive, Hawthorn loading, Burnley loading, Box Hill loading, brakevan.

The Hawthorn loading is to remain on the locomotive during the shunt at Burnley. Upon arrival at Hawthorn the whole train is to set back onto the up main line where the rear portion will be secured and the locomotive will draw the Hawthorn portion into the yard for normal working. The wagons cleared from Hawthorn yard will then be pushed onto the train on the up main line and after the brakes are tested the whole train will depart to Box Hill.

**Three tracks to Burnley and closure of the signalbox**

Being the start of the three track section to Camberwell was the swan song of Hawthorn signalbox as the only reason the third track had not been extended to Burnley was the condition of the Yarra River bridges. The life of the box was fixed by the time it took to erect the new bridges over the Yarra. When these were completed, the third track would be extended to Burnley and Hawthorn signalbox would be

abolished. This occurred in 1972.

Just before closure, the box was opened weekdays from 0700 to 0955 and from 1510 to 1900. It was closed on Saturday and Sunday.

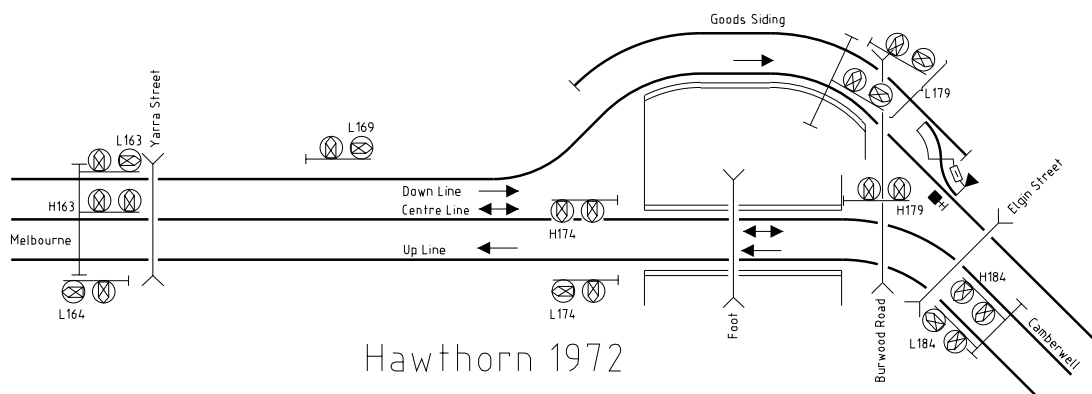
Points 27 were spiked reverse on 20 May 1972. Post 32 was relocated 60 feet in the Up direction on 28 May 1972 due to a slew in the Down line. On 8 June the Up end connections to the goods yard (Crossovers 17, and 21, and half of Points 27D) were spiked normal and Dwarf 18U was secured at Stop. Levers 17, 18, 21 and 28 were sleeved normal. Two days later the goods siding and Siding A were abolished. No 4 Track was slewed to form a new briquette siding and extended by 90 feet at Down end to form a safety over-run.

The new Up line across the new Yarra River bridge was brought into service on 13 July. Automatic L156 was provided.

The third track between Burnley and Hawthorn was brought into service on 13 August 1972. The signalbox was abolished. The remaining connections at the Up end were removed, but Crossover 3 was secured by a switchlock to provide access to the goods siding.

In May 1972 the WTT shows that there was a daily goods service to Hawthorn arriving at 0120. On Mondays the goods returned to Melbourne at 0235, but on the remaining weekdays the goods continued on to Box Hill. With the closure of the box the Monday goods train was extended to Box Hill and retimed slightly to shunt Hawthorn from 0200 to 0240. This service remained until Hawthorn was closed to goods.

The goods siding remained in service until 12 April 1978 when the points and switchlock were abolished. They were removed on 4 May 1978.



## KEW JUNCTION

Kew Junction was opened with the branch line to Kew on 19 December 1887. The signalbox was located on the Down (north) side of the line at the point of divergence of the branch line. The track layout was unusual; the points in the Down line were on the Up side of the box and the branch then ran around the back of the box. The connection to the Up line was on the Down side of the box. The signalbox was consequently surrounded by tracks.

The box itself was constructed by J. Brown, the contract had been gazetted on 25 March 1887 for a price of £205/17/1. It contained a 16 lever No 5 Pattern Rocker frame with 1 spare lever.

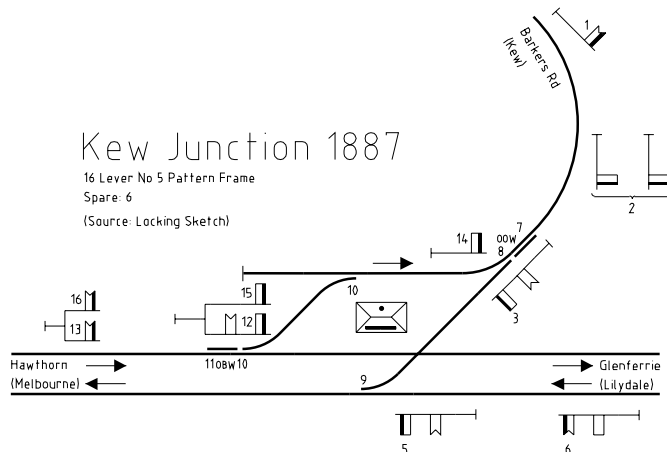
On the main line Kew Junction was a block post dividing the Hawthorn - Glenferrie section. The branch was worked by Train Staff and Ticket with the single section Kew Junction - Kew. Single Line block was superimposed on the Staff, but only between Kew Junction and Barkers Road and then only for the Up direction.

Wal Larsen quotes a snippet from the Weekly Times of 11 November 1887 concerning Kew Junction:

The celebrated Kew railway is approaching completion at last and the term "one man line" will become as famous as the expression "one horse affair". If in the multitude of counsel there is wisdom, it is to be presumed that in the multitude of checks to danger, there is safety.

Arguing on these premises, there will not be a safer bit of railway in the world than the half-mile of line between Hawthorn and Barkers Road. In that half mile there are no less than six semaphores to make assurance double sure that there will be no collision between a Hawthorn "down" and a Kew "up" train. The first semaphore appears to act as an indication of "I think it is alright but wait till I see." Semaphore No 2 means "I have seen, it's alright but wait till I ask a second time." Semaphore No. 3 I translate as "Come along slowly, everything right." No 4, "It's safe as far as the Hawthorn station but go gently around the curve." No. 5 "Steady there, the line is clear but do not be impatient", and No 6, "Hang it all, we will have to risk accidents; on you go!"

In addition to these six semaphores there is what is technically known, I believe, as a dead end into which the Kew train can be run in case of necessity, the collision being averted by a modified slaughter of the Kew passengers in the unpleasantly suggestive title - of dead end! Now that the semaphores are up and the graves dug - I should say the dead end



constructed - I think that the best thing the Commissioners could do would be to establish branch life and insurance offices at each semaphore post. A large business could be done at each place whilst the train was waiting for the signal to "come on." Besides, the whole of the branch line from Barkers Road is in a curved cutting where travellers of necessity are reminded of the narrow grave and man's mortality, just the frame of mind to get persons into when you want them to insure their lives.

The Weekly Times then, as now, was targeted at rural readers and did not approve of the government spending money on suburban railways for Melbourne. Despite the reporter's comments, Kew Junction was not over signalled. Under the block rules in force in 1887 'Line Clear' was given to the box in the rear when the line was clear to the Home signal - there was no quarter mile clearance point as there is today. As the branch train approached the junction down a 1 in 40 grade and around a sharp bend in a cutting before crossing the Down main line to merge with the Up line, the provision of an outer home and short runaway siding was probably a sensible precaution.

By 1 October 1888 the branch line section had been extended to Hawthorn; the Train Staff was overcarried between Hawthorn and Kew Junction. The Signaller consequently happily signalled trains to and from the branch without any thought of the Staff. Perhaps to reduce the inherent risks of this the Single Line Block section had been extended to become Kew Junction - Kew and was worked for both Up and Down trains.

The box was closed on 10 August 1890 when the branch line was extended as a third track into Hawthorn station.

## BARKER

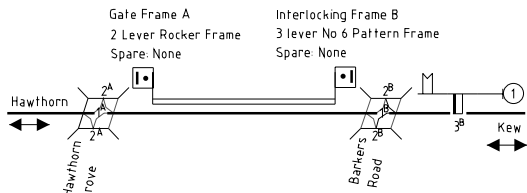
The only intermediate station on the branch was Barkers Road (later shortened to Barker). This was a single platform situated on the Down side of the line between Hawthorn Grove and Barkers Road. The station was opened as 'Barker's-road' with the line on 19 December 1887.

The WTT for opening shows that Barker's Road was a block post but not a Staff station. The Single Line block was only worked between Kew Junction and Barker's Road and only Up trains were signalled. Presumably the main function of the block was to give the Signaller at Kew Junction some warning of Up branch trains so he could regulate the traffic on the main line. There must have been at least one Up Home signal for the block working, but my sources are silent on the subject. By 1 October 1888 Barker's Road had

been closed as a Block post and the block extended to Kew. However, by 9 May 1892 Barker's Road had been opened as a Staff station (sections Hawthorn - Barker's Road - Kew) and the Single line block was once again worked between Hawthorn and Barker's Road, but not between Barker's Road and Kew. The Staff Register records that the Hawthorn Staff was a No 1 Pattern Staff with a blue ticket box (with sliding lid). The Kew Staff was No 2 Pattern with red ticket box. Barker's Road was closed as a Staff station and Block Post on 17 December 1894; this was probably due to the withdrawal of the Stationmaster. It appears that the block instruments were replaced by an electric bell between Hawthorn signalbox and Barker's Road used to announce the departure of trains.

Gates were probably provided at both level crossings from opening. A contract was gazetted on 25 March 1887 for the erection of two gate cottages on the Kew line - undoubtedly for the two level crossings at Barker's Road. The contract was let to T & W.F. Wright for £255/10/6.

By May 1895 the two gates had been converted to interlocked gates. Instead of being worked from a signalbox, however, the gates were worked from two small frames, one at each end of the platform adjacent to the gates. Gavan



Barkers Road 1898

(Source: Interlocking Register)

Duffy states in his Bulletin article that the frames were provided on 1 May 1895. The frames were quite likely provided to reduce the number of staff required to work Barker's Road station.

The instructions in the 1898 General Appendix (which probably dated from May 1895) for working the gates were as follows:

1. The Hawthorn Grove gates are to be kept closed against the public road, and when a call is made for them to be opened the employe is to remain at the wheel and close them again, care to be taken that the gates are not open when a train is approaching.
2. The Barker's Road gates are to be kept closed to the line till required to be opened for the train, and while so closed the Up signal is to be kept at 'Danger'

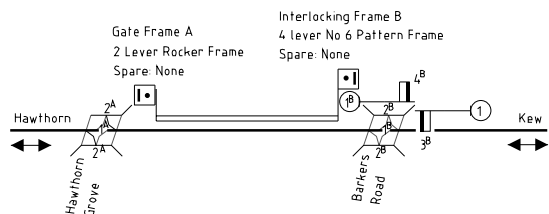
These instructions explain why an Up Home was provided to protect Barker's Road, but no Down Home for Hawthorn Grove. Barker's Road station was included in a list of 'Other Priviledged Gates' at the back of the GA. Priviledged gates are those which could be closed across the line after the train service had ceased for the night. The note reads "Gates at Barker's Road and Hawthorn Grove [...] are closed across line, and locked when station staff are off duty. Guard of Kew Goods is furnished with duplicate keys to unlock and lock gates."

The Hawthorn Grove gates were worked by Cottew pattern gate gear.

Barker's Road station was renamed 'Barker' on 1 August 1905.

A Down Home (Post 1B) was provided on 24 February 1924 to protect the Barker's Road gates. The interlocked frame at that end was consequently extended to be 4 levers long. The Distant for Kew, incidentally, had been removed from Post 1 in 1906.

The gates at Hawthorn Grove were run through by the first Down train on the morning of 8 August 1931. This resulted in the following instruction being issued by the Metropolitan Superintendent:



Barker 1924

(Source: Locking Sketch)

Testing of electric bell between Hawthorn Signal box and Barker station

Commencing forthwith, the booking porter at Barker must, when he reports for duty at 5/18 am daily, immediately test the electric bell communication with the Hawthorn signalbox by exchanging the "Testing of Bell" signal (3-5-3) with the signalman at Hawthorn.

In the event of the signal not being received, the signalman at Hawthorn must endeavour to communicate with Barker and if unable to gain communication, he must assume that the porter has failed to report for duty and under such circumstances he must instruct the porter in charge of the Kew platform at Hawthorn to so inform the driver of the first down train, and that he (the driver) must approach the level crossing at the up end cautiously, being prepared to stop clear of the Crossing should be set for Road traffic.

A record that the electric bell has been tested must be inserted across the figure line of the train register book.

At some date another instruction was issued with respect to the operation of the Hawthorn Grove gates:

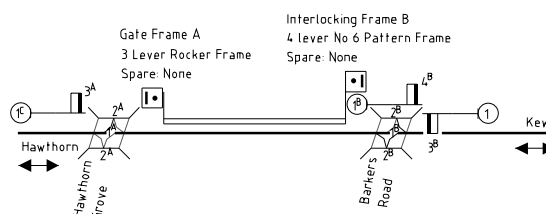
Barker - Operation of Gates at Hawthorn Gve

After the departure of each train in the up direction, these gates must be opened for vehicular traffic.

Should the porter notice any vehicle waiting after a down train has passed through Barker's Rd gates, he must proceed to Hawthorn Gve gates and let the vehicle through, but must not block the up train.

This suggests that the gates at Hawthorn Grove were normally open for road traffic except when a train was at Kew. The operation of the gates was probably something as follows. The porter in charge of the station would close the Hawthorn Grove gates across the road when the departure of a Down train was belled from Hawthorn. The porter would then go to the Barkers Road gates, close them, and clear Post 1B for the train. After the train had departed for Kew the Barkers Road gates would be opened for road traffic. The porter would then collect tickets and return to his office to serve passengers on the Up. The gates at Hawthorn Grove would be left closed to road traffic unless, as the instruction states, a vehicle was waiting to cross. Before the Up train arrived at Barker, the porter would close the gates across Barkers Road and clear the Up Home. After the train departed, the porter would open the Barkers Road gates and, finally, go to Hawthorn Grove to reopen the gates there. It was recorded that the porter at Barker was nicknamed the 'rabbit'.

On 27 February 1942 a Down Home, Post 1C, was provided to protect the Hawthorn Grove gates. The signal was worked from the frame at the crossing and it was extended to three levers to do so. With regards to these gates, C.D. Gavan-Duffy records that-



Barker 1942

(Source: Locking Sketch)

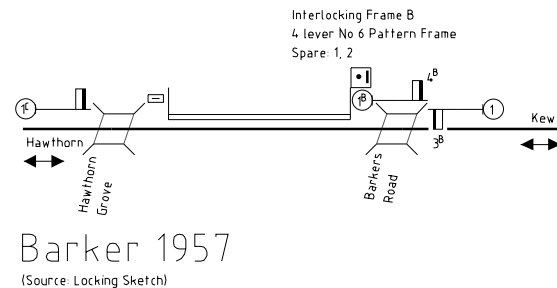


[...] on one occasion the son of a well known Traffic Superintendent, then attending a neighbouring public school [Xavier,], gave his fellow students a deonstration of how to work interlocked gates - a demonstration very rudely interrupted by the arrival of a Down train and what that train did to those gates was nobody's business! Nor was what the Superintendent did to his young hopeful, either.

The rail passenger service was withdrawn on 18 August 1952. The Weekly Notice simply states that Barker was closed to parcels traffic. Presumably the porter was withdrawn and the station was closed at this time.

The interlocked frame at Hawthorn Grove was abolished on 28 January 1955. The gates at Hawthorn Grove were converted to hand operation and a quadrant was provided to work the Down Home.

The good service was withdrawn as from 13 May 1957 and the line closed. The gates at Barkers Road were converted to hand operation on 7 October 1957 and the gatewheel and gate stop lever removed from the frame. The frame, however, continued to 'work' the Up and Down Home signals until 6 March 1959 when it was abolished.



### KEW

The terminus of the Kew branch line was situated at the foot of the Denmark street hill, as close to the High Street shopping centre as it was practical to get. The location was convenient when the alternative was a mixture of horse and cable tram, but the railway was doomed once the through electric trams were introduced.

When the line was opened on the 19 December 1887, Kew was open for passengers and light goods. A traverser was probably provided from opening at the Down end of No 1 and 2 Roads, although this was not mentioned in the Working Timetable until 1892. The contract for the supply and erection of the engine traverser had been gazetted on 29 April 1887 to M. Ferguson for £622/9/10. A Down Home signal would have been provided well beyond the outermost set of points. The main line points would have been secured by Hand Locking Bars and Padlocks. The contract to erect the station building was gazetted on 23 March 1888 when it was let to Meikle and Campbell for £1477/0/0.

Upon opening the line was worked by Train Staff and Ticket with the section Kew Junction - Kew. No block working was in force between Barkers Road and Kew. By 1 October 1888 the Staff section was Hawthorn - Kew, and the block instrument at Barkers Road had been relocated to Kew (the section becoming Kew Junction - Kew). By 9 May 1892 Barkers Road had been opened as a Staff station (section Barkers Road - Kew, No 2 Pattern Staff with Red ticket boxes). The single line block instrument had been restored to Barkers Road leaving the Kew section without block working. Barkers Road was closed as a Staff station on 17 December 1894. The Staff section then became Hawthorn - Kew. The Ticket Boxes were withdrawn and all trains had to carry the Staff.

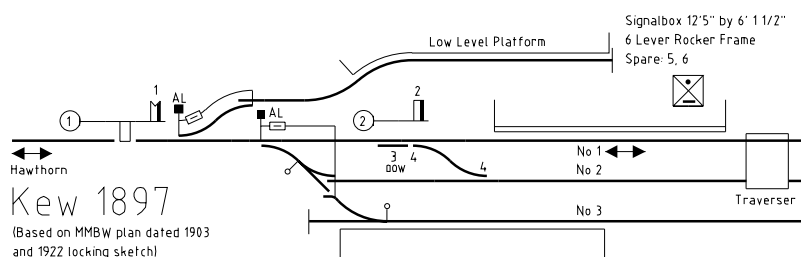
Between opening in 1887 and 1895 Kew was served by around 40 trains each weekday, between 40 and 46 trains on Saturday, and 21 on Sunday. All trains ran through from Melbourne. At peak times the trains ran close to the maximum capacity of the line; generally a Down train would arrive at Hawthorn around 4 minutes after the Up train had left. Despite being open for light goods from opening, the

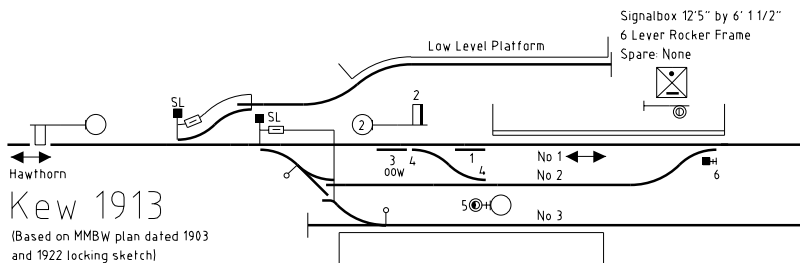
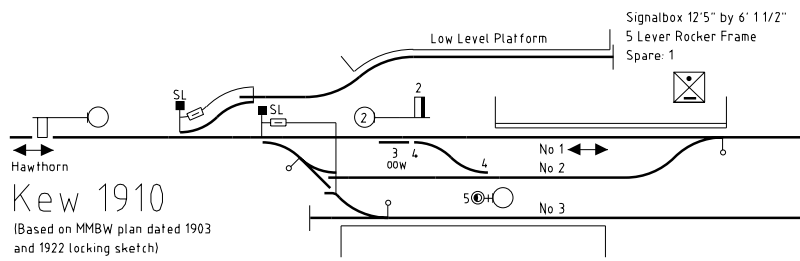
initial timetable did not show a goods service. By October 1888, and until at least August 1890, a goods train ran Monday to Saturday and shunted Kew between 1101 and 1130. By May 1892, the regular goods train ran slightly later, shunting Kew between 1145 and 1213, but a conditional goods ran on the original path. Both of these timetables are notable because they required two trains at Kew at one time; a passenger train arrived and departed Kew while the goods was shunting. By August 1894 the Goods had been rescheduled to run after the passenger service had ceased for the day and now shunted Kew between 0130 and 0200 Tuesday to Sunday.

The Kew horse tram was opened on 28 December 1887. This ran along High Street, through Kew Junction, and along Barkers Road to the Yarra River where it connected with the Victoria Street cable tram. Compared with the direct train service provided by the railway the slow tram journey would not have been competitive.

A three lever ground frame was provided on 7 February 1895. As all levers were working, it can be assumed that the frame worked the crossover at the Up end of the platform, the associated lockbar, and the Down Home signal. The frame was probably provided, in conjunction with the similar sized frames at Barkers Road, to reduce the number of staff required when running around. On the 20 August 1897 the remaining main line points at Kew were interlocked. A new Down Home was provided just outside the interlocked crossover and the existing Down Home was converted to a Distant signal. The points to the Low Platform Siding and to Nos 2 and 3 Roads were secured by Annett locks and rodded to catch points. As these points were outside the Home signal they were in the Hawthorn - Kew Staff section and the Annett key was attached to the Train Staff. The ground frame was replaced by one of 6 levers (2 spare). By 1 July 1899 the ground frame worked two signals (the Down Home and Distant), a set of points (the Up end crossover) and a lockbar.

On 9 December 1895 the timetable was recast. The number of services was increased to 51 (weekdays) and 53 (Saturday). However, through services were only provided at peak periods. On weekdays the first through train departed Kew at 0726 and the last in the morning peak arrived at 1021. This arrival became the shuttle which formed all services until the 1526 Up departure which ran through. Through services were then resumed until the 1956 arrival at Kew which formed the shuttle for





the evening. Saturday morning was similar, if not identical, to the weekday mornings. However, through services resumed from the 1231 Up departure and ran for the early part of the afternoon, ceasing from the 1546 Down arrival. There were a further two through trains in the evening. The solitary Sunday morning service (arrive 1011 and depart 1022) ran through, but the remaining Sunday services, which commenced at 1306, were locals. The goods continued to run after the passenger service ceased Tuesday to Sunday, shunting at Kew from 0145 to 0215. This service survived, largely unchanged, until electrification in 1922. There were minor changes over the years as the number of through services waxed and waned. In December 1913, for example, there were through trains in the evenings. By December 1909 all the Sunday trains ran through.

The old style Train Staff was replaced by a Lock staff (No 1 Pattern) on 28 May 1901. The two Annett locks at Kew were consequently replaced by Staff locks on that day. By the issue of the 1908 General Appendix trains were permitted to travel on Ticket with the necessary messages being exchanged by telephone.

The MMBW surveyed the area around Kew station in March 1903. It appears that the traverser was out of use by this time. No 2 Road had been slewed to join No 1 Road outside the station building at the Down end of the platform. No 1 Road still crossed the traverser pit as part of the head shunt. The traverser was still listed in the 1901 WTT, but not in the 1909 WTT.

The Distant signal was abolished in late October 1906 and there were now three spare levers in the ground frame. On 23 February 1910 a ground disc was provided to control run around movements from No 2 Road across the interlocked crossover. The ground frame was concurrently shortened to five levers (or replaced by a new frame) with one spare lever. This spare lever was brought into service on 16

March 1911 when the Down end runaround points were connected to the frame. A point indicator was provided to indicate the lay of the points. Finally, a clearance bar was provided in No 1 Road at the Up end clearance point of No 2 Road. The frame was extended to six levers once again (or replaced).

By the issue of the 1913 General Appendix a fixed disc had provided to mark the stopping place of the leading end of the first vehicle of the train; clearly there was a temptation to draw up just that bit too far leading to problems in running around.

In the middle of December 1914 the Up end crossover was relocated 27 yards further out and the Down Home was similarly relocated 16 yards further out.

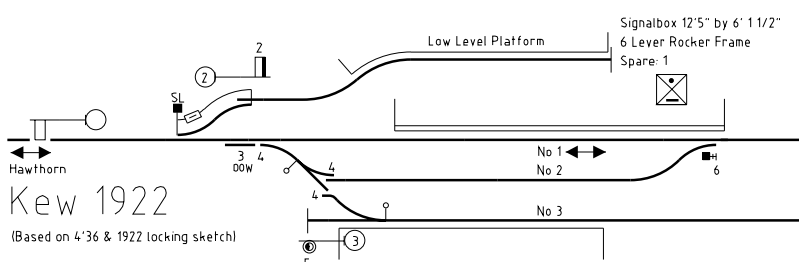
On 30 May 1913 the Prahan and Malvern Tramway Trust opened their electric tram line from Malvern Town Hall along Glenferrie Road and Cotham Road to Kew

Junction (a branch along Cotham Road to Burke Road was also opened on the same day). This passed Glenferrie station and was nowhere more than 800 metres from the Kew line. It probably diverted many rail patrons who lived west and north of Kew station. The Kew horse tram was acquired by the Kew council on 1 November 1914 and closed for reconstruction as an electric tram line. The section from Kew Junction down High Street and then along Barkers Road to the Yarra was opened on 24 February 1915. This must have been a far more formidable competitor. The new line was within 250 metres of the two rail stations, and would have been more convenient for passengers east of the railway line. Still, the need to change trams at the Victoria Street bridge would have restricted use (the electric tram was extended over the Victoria Street bridge to the cable terminus on 14 July).

Electrification came to Kew railway line in 1922. In preparation the platform was extended to 169 yards in length. The extension was at the Up end and on 29 August 1922 Crossover 4 was removed. The former Staff locked points to Nos 2 and 3 Roads were connected to the interlocking frame to replace the abolished crossover. Post 2 was relocated further out and the Ground Disc was replaced by a new post. The electric service was introduced on 17 December 1922. At this stage on No 1 Road was wired as the remaining roads were only used by the goods service was still steam hauled. Around the same time the fixed disc was removed from the platform. The instructions for working the station in the 1928 GA were as follows:

1. Drivers of Electric trains arriving at Kew must bring their trains to rest with leading vehicles at platform opposite the Down end of Station verandah. A lever sleeve must be placed on No 6 lever [Down end points], when the cross-over is not in use.
2. As soon as a Down train has passed the Points at the Up end of Station, all levers must be placed to normal position in the frame, and remain so until the Up train has departed.

3. In the event of a stram train arriving in No. 1 Road, and the engine requiring to run around, the Driver of the engine, and the employe working the Interlocked frame, will be responsible for seeing that the front vehicle is clear of the fouling Point of the cross-over, from



No. 1 to No. 2 Road, before the engine is detached.

The same GA noted that Staff Tickets were not ordinarily in use between Hawthorn and Kew.

The electrification saw a return of the through service to Melbourne to meet the looming threat of electrification of the direct tram lines to the city. By the December 1924 WTT there were 72 services each day between Flinders Street and Kew (including Saturday); an increase of nearly 50 per cent. The Sunday service was nearly doubled - to 29 trains per day - but almost all of these trains ran on Sunday afternoon and there was still only one service on Sunday morning. The goods service, still steam hauled, ran 'daily' after the passenger trains ceased. This timetable lasted for roughly a decade.

The electrification was just in time to counter improved competition from the electric tramways. On 7 July 1923 a new line was opened along Church Street giving a service to Hawthorn bridge and a second connection to the cable tram. The first through electric tram service was provided on 4 December 1927 when the Kew and East Kew (High Street) services were extended along Bridge Road and Wellington Pde to Flinders Street and Spencer Street (replacing the cable tram). The Cotham Road services were also diverted to this route on 30 June 1929 pending the conversion of the Victoria Street cable tram. This partially occurred when the electric service was extended along Victoria Street to Brunswick Street on 15 September 1929, but the city section along Collins Street was not opened until 8 December 1929.

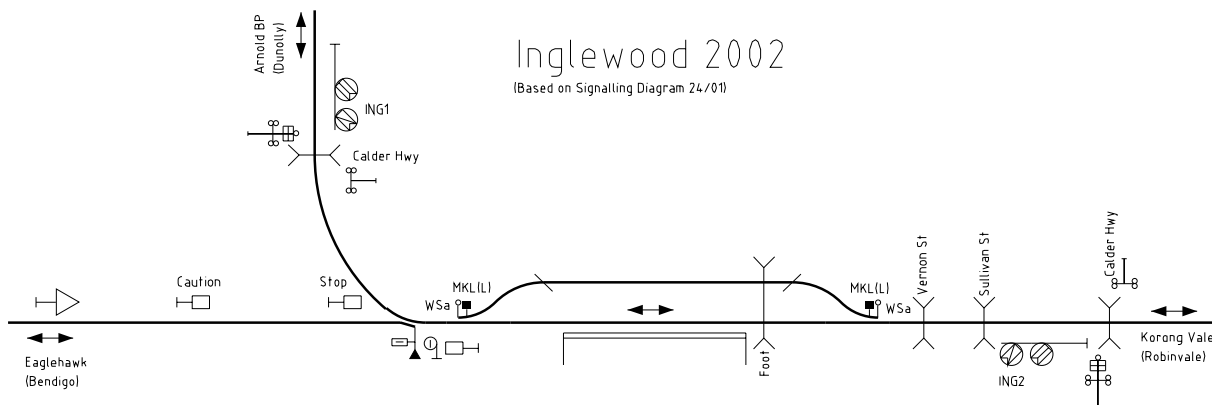
As from 14 August 1929 no signalman was in charge at Kew. Of course, there would have never been a classified signalman at Kew; the signalling duties would have been carried out by the station staff as part of their other duties. The change in status basically meant that the station staff no longer had to work the frame for each train. The Down Home was left at clear unless it was required to shunt the sidings. The Driver retained possession of the Train Staff while changing ends, but was required to show it to the Guard while doing so.

Weekly Notice 5/29, issued late January, announced that all local roads and sidings at Kew were equipped with overhead wiring and were available for the operation of electric trains. This was in preparation for the operation of the local goods service by electric locomotive. The primary benefit of the butterboxes was probably that they were quieter when running nighttime suburban goods than steam locos. In power they fell between the D classes, and the A1. The 1926 loads book gives loads for all classes except the C class. The K and N classes, the most powerful allowed, could haul 297 tons to Kew. The A1 could haul 267 tons, a Y 232 tons, and a DD or DDE 205 tons (superheated locos could haul slightly higher tonnages). The 1935 WTT shows similar loads, but the electric locomotive was rated to haul 245 tons. Goods trains were subject to a vehicle limitation of 40 and double heading was not permitted.

(To be continued)

### SIGNALLING ALTERATIONS

(Continued from Page40)



issued for a Down train on the primary corridor as far as Arnold Block Point.

A new instruction (96) has been issued for the Book of Rules.

28.03.2002 **Victoria Park** (TS 9/02, WN 12/02)

On Thursday, 28.3., the Stabling Siding was shortened by 25 metres.

(02.04.2002) **Book of Rules, Rule 16, Section 22 (Electric Staff)** (SWP 1/02, WN 12/02)

Rule 16 (Obstruction of the Line) is amended commencing forthwith. The amendments are those shown in Somersault Vol 25 No 1 page 6.

(02.04.2002) **Book of Rules, Rule 19, Section 21 (Train Staff and Ticket)** (SWP 1/02, WN 12/02)

Rule 19 (Obstruction of the Line) is amended commencing forthwith. The amendments are those shown in Somersault Vol 25 No 1 page 6.

(02.04.2002) **Maryborough** (SW 1037/02, WN 12/02)

Freight trains may be stabled in No 1 (Platform) Track provided the train is stabled no longer than 3 hours, the locomotive is shut down, sufficient hand brakes must be applied to hold the train and a Signaller must be continuously in attendance.

08.04.2002 **Seaford** (SW 30/02, WN 12/02)

From 0400 hours Monday, 8.4., Crossover 12 was abolished. The signalbox was abolished and the panel will be removed at a later date. Down Home 4 and Up Home 18 will be converted to Automatic signals and renumbered F1235 and F1264 respectively. Both will be of Westinghouse LED head. Dwarfs 8 and 12 had been previously abolished. Diagram 7/02 replaced 11/01.