SOMERSAULT

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Signalling Record Society of Victoria Inc

Gunning is a small town in NSW on the Main South line between Sydney and Albury. Until 1996 Gunning had a full complement of facilities: Up and Down Refuge Sidings and a set of goods sidings. The station was fully interlocked from a signalbox situated on the Down platform and a small ground frame at the extreme Down end of the yard. This photo is taken from the Down Refuge looking back into the station in 1994. The Main South is double track from Sydney to Junee, and at Gunning is controlled by three position upper quadrant semaphores. These use the unique NSW double light system where the night aspects of the three position signal are displayed using a combination of green and red lights. As was common in NSW, the shunting signals were all lower quadrant mechanical signals even though the main running signals were upper quadrant signals. A signalling history of Gunning can be found starting on page 31 of this issue. (Photo Andrew Waugh)

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Minutes of Meeting held Friday 16 February, 2013, at the Diamond Valley Railway, Eltham Lower Park, Eltham

Present: – Noel Bamford, Wilfrid Brook, Michael Formaini, Gary Fyfe, Ray Gomerski, Judy Gordon, Bill Johnston, Chris King, Tony Kociuba, Keith Lambert, David Langley, Steve Malpass, Bruce McCurry, Andrew McLean, Tom Murray, Alex Ratcliffe, David Stosser and Andrew Waugh.

Apologies: – Glenn Cumming, Reg Lloyd, Greg O'Flynn, Laurie Savage and Peter Silva.

Visitors: – Jim Gordon, D. Isherwood, D. Rendell and Patrick Kethers.

The President, Mr. David Langley, took the chair & opened the meeting @ 13:00 hours, and welcomed everybody to the Diamond Valley Railway.

General Business: – The February 2013 meeting consisted entirely of a visit to the Diamond Valley Railway at Eltham Lower Park in Eltham.

Members enjoyed a tour of inspection of the signalling facilities at the Diamond Valley Railway including the Meadmore Junction "A" Signal Box, the Diamond Valley "B" Signal Box, the workshops and the member's club rooms.

The opportunity was taken to travel by train around the layout to view the signals in action and to view the expansion of the railway since our previous visit in 2006.

A good time was had by all.

No other business was transacted during the meeting.

At the conclusion of the visit, the President thanked the Diamond Valley Railway for their hospitality, especially DVR & SRSV members Wilfrid Brook, Chris King, Tony Kociuba and Bruce McCurry for their assistance during the evening.

Meeting closed at approximately 17:00 hours.

The next meeting will be on Friday 15 March, 2013 at the Surrey Hills Neighbourhood Centre, Bedford Avenue, Surrey Hill, commencing at 20:00 hours (8.00pm).

Minutes of 2012 Annual General Meeting held Friday 16 March, 2012, at the Surrey Hills Neighbourhood Centre, 1 Bedford Avenue, Surrey Hills

Present: – Wilfrid Brook, Brett Cleak, Graeme Cleak, Glenn Cumming, John Dennis, Graeme Dunn, Vance Findlay, Michael Formaini, Ray Gomerski, Chris Gordon, Judy Gordon, Andrew Gostling, David Jones, Keith Lambert, David Langley, Steve Malpass, Andrew McLean, Tom Murray, Laurie Savage, Peter Silva, David Stosser, Andrew Wheatland and Bob Whitehead.

Apologies: – Jon Churchward, Steven Dunne, Bill Johnston, Chris King, Bruce McCurry, Greg O'Flynn, Brian Sherry, Rod Smith, Stuart Turnbull and Andrew Waugh.

The President, Mr. David Langley, took the chair & opened the meeting @ 20:07 hours.

Minutes of the 2011 Annual General Meeting: - Accepted as published. Laurie Savage / Graeme Dunn. Carried.

Business Arising: – Nil.

President's Report: – The President's Report was tabled by the Secretary.

I have pleasure in presenting the President's report for 2011.

The society held the usual six meetings during the year and in common with recent trends, the first was a visit after work to a location of signalling interest this year being the Melbourne Model Railway Societies clubrooms and layout underneath Auburn railway station. This layout features full signalling and members present were duly impressed by the set up. Members of the MMRS operated a timetable session for us and the signalling was very capably demonstrated as a result.

The remaining five meetings were held at Surrey Hills Neighbourhood Centre – our usual venue – and all consisted of a bit of society business, lively discussion on current happenings and all bar the AGM meeting night, concluding with a syllabus item.

In May we were entertained by Tony Howker who gave a presentation on "Signalling Principles in Plain English" and followed it with some images of the Great Cockcrow Railway's signalling arrangements.

July was a screening of images from Poland and the UK by Andrew Wheatland including some around Wolstyn where people can pay to drive steam locos still in use on regular trains.

In September our Secretary entertained us with a presentation on the workings of Staff & Ticket around Australia, this being another tryout before taking it to the ARHS and ARE meetings later on. We were all suitably impressed with his thoroughness in assembling the presentation and members had the opportunity for some hands-on experience after the presentation..

November saw the annual screening of Stephen McLean's slides by Roderick Smith and it is sobering to think that over 22 years have elapsed since Stephen was taken from us.

Six issues of "Somersault" have again been published and it is a continuing delight to see this journal that began life in a modest way back in 1974 continue the tradition of placing on record Society news along with signalling alterations and articles that pertain to our interest in signalling and safeworking. Thank you to Andrew Waugh for his continued hard work with "Somersault" and it is nice to see the odd article published not under Andrew's hand. Keep those articles coming please and also a challenge to members to get a photo or two published in "Somersault" in the coming year.

I wish now to record grateful thanks to Keith Lambert for his regular supply of information and also to the others within the industry who have also provided the "inside knowledge" from time to time. Thanks also to the various groups who are kind enough to permit SRSV members to visit their locations particularly Puffing Billy Railway and Diamond Valley Railway, two venues that we have been to more than once and hope that further return visits can be achieved. There is a new signal box at Diamond Valley that we need to see when it is fully operational.

It now remains for me to acknowledge the office bearers of the committee for their tireless work in ensuring the society keeps on moving forward – to use a popular political term. I wish to thank in no particular order, Vice President Bill Johnson for sitting on the President's chair on occasions and for organising the entertainment at the meetings, Treasurer Peter Silva for again keeping the finances under control, Wilfrid Brook and Steve Malpass for their thoughts and opinions, and votes when the committee have some discussions on the internet list and last but most definitely not least to Glenn Cumming for the diligent and professional manner in which he has performed the task of Secretary and Membership Officer of the society. A truly monumental task. But having said all that, possibly the most important task performed by him on meeting night is the provision of the biscuits, tea and coffee for supper.

And it finally remains for me to thank the members of the society for their continued support of the society and its activities, and trust that something has been gained by being a member of the Signalling Record Society Victoria Inc.

I move the report.

David Langley, President. David Langley / David Stosser. Carried.

Treasurer's Report: – Treasurer Peter Silva advised that the audit had not been completed. The Treasurer made a short statement with a brief explanation of the results. The presentation of the Treasurer's Report for the year ended 31 December 2011 was deferred.

Auditor's Report: – In the absence of The Auditor, Jon Churchward, the presentation of the Auditor's Report was deferred.

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

I am pleased to report that one signal box tour was conducted during 2011.

The tour for the year was the annual Showday Tour / Cupday Tour etc, this year held on Saturday 17th September 2011.

The locations visited this year were Frankston, Carrum, Chelsea, Mordialloc, Cheltenham, Sandringham and Brighton Beach.

As was to be expected, this tour was well attended and this justified the effort required to arrange this tour, even though I was unable to attend.

Thanks must go to the people who contributed advice and assisted with the organising of the tour this year.

My thanks to all members & friends who participated & helped to ensure the success of the tour.

Special thanks must go to the officers of the various railway operating & engineering companies who allow the SRSV to visit areas not normally open to the general public. Their assistance is very much appreciated. Without their co – operation, SRSV tours would not occur. This year, the SRSV appreciated the co – operation and assistance of Bill Uren and Keith Lambert at Metro Trains Melbourne. My thanks to these gentlemen for their assistance.

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

Glenn Cumming, Tours Officer. Michael Formaini / Graeme Cleak. Carried.

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

Type	2011	2010	Movement
V	71	74	-3
K	32	30	+2
N	1	1	–
KL	2	3	-1
VH	3	3	–
Total	109	111	-2

Analysis of Movement

Additions: – Francis Noonan (K)

Non – Renewals: – Dave Clark (K), James Wells (V)

Final Departures: – Jack McLean (KL)

Transfers: – Noel Bamford (V – K), Ray Layton (V – K)

Glenn Cumming, Membership Officer. Glenn Cumming / Andrew Wheatland. Carried.

Editorial Report: – In the absence of the Editor, Andrew Waugh, the Secretary tabled the Editor's Report for 2011.

Six issues of "Somersault" were produced during the year, albeit with one issue running late.

The printing arrangements have been changed. "Somersault" is now being printed using the President's commercial quality printer. This is cheaper than using a commercial printer, and the quality of the printing is substantially better. In particular, the printer carefully checks that everything is as expected.

I would like to make the usual plea for articles, photographs, diagrams, etc.

Members are encouraged to contribute to Somersault.

Andrew Waugh, Editor. Glenn Cumming / Michael Formaini. Carried.

Contributions to "Somersault" were discussed with a request to assist the Editor wherever possible.

Archives Report: – No report was received.

A lengthy discussion ensued about propoed works for the rooms in Seymour and the future of the archives.

Market Street Report: – Peter Silva, Bill Johnston presented the Market Street Project Report for 2011.

The Market Street Project continues to make slow progress.

Work is now based at the Puffing Billy Railway S & T Workshops at Emerald VIC. Signal arm carriers continue to be restored and an increasing number of arm carriers have now been stripped and painted.

Access to East Block at Newport is now restricted with the result that no work has been carried out on the main truss and formal assessment of this asset is yet to be done.

Additional assistance for this project is required.

Peter Silva, Market Street Sub – Committee Peter Silva / Andrew Wheatland. Carried.

Elections: – The Treasuer, Peter Silva , chaired the meeting for the election of the new Committee.

No written nominations were received.

The following verbal nominations were received at the meeting: –

President: – David Langley, nominated by Tom Murray and seconded by Bob Whitehead.

Vice President: – Bill Johnston, nominated by Tom Murray and seconded by Graeme Dunn.

Secretary: – Glenn Cumming, nominated by Laurie Savage and seconded by David Stosser.

Treasurer: - Peter Silva, nominated by David Stosser and seconded by Michael Formaini.

Committeeman: – Wilfrid Brook nominated by Peter Silva and seconded by David Stosser.

Committeeman: – Steve Malpass nominated by Peter Silva and seconded by David Stosser.

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

General Business: – Election of Auditor. This election was deferred.

Meeting adjourned @ 21:17hrs.

The March 2012 Annual General Meeting was followed by the March 2012 Ordinary Meeting.

Minutes of Resumed 2012 Annual General Meeting held Friday 18 May, 2012, at the Surrey Hills Neighbourhood Centre, 1 Bedford Avenue, Surrey Hills

Present: – Phil Barker, Wilfrid Brook, Brett Cleak, Graeme Cleak, Glenn Cumming, John Dennis, Mike Drew, Graeme Dunn, Steven Dunne, Vance Findlay, Michael Formaini, Ray Gomerski, Chris Gordon, Judy Gordon, Andrew Gostling, Bill Johnston, David Jones, Chris King, Keith Lambert, David Langley, Bruce McCurry, Andrew McLean, Tom Murray, Colin Rutledge, Brian Sherry, Peter Silva, Rod Smith, David Stosser, Andrew Waugh, Rob Weiss, Andrew Wheatland and Ray Williams.

Apologies: – Jon Churchward, Steve Malpass, Greg O'Flynn, Laurie Savage, Stuart Turnbull and Bob Whitehead.

Visitors: – Jim Gordon.

The President, Mr. David Langley, took the chair & opened the meeting @ 20:06 hours.

Treasurer's Report: – The Treasurer, Peter Silva, presented the Profit and Loss Statement and the Balance Sheet for the year ended 31 December 2011.

The SRSV recorded a loss for the year.

Peter spoke to the statements and explained the details of the statements and noted variations when compared with the previous year.

Further explanation was provided regarding the purchase of the digital projecter which was fully depreciated in the year of purchase.

A question was asked regarding the operation of the Secretary's Cash Float and this was answered by the Treasurer and the Secretary.

Motion: That the Treasurer's report is received and adopted.

Peter Silva / Michael Formaini. Carried.

There were no questions and no further discussion.

Auditor's Report: – In the absence of The Auditor, Jon Churchward, the Secretary tabled the Auditor's Report.

Motion: That the Auditor's Report be accepted.

Peter Silva / David Stosser. Carried.

There were no questions and no further discussion.

General Business: – Election of Auditor. It was agreed that this matter would be referred to the Committee to be dealt with.

A brief discussion took place regarding the amendments to the Incorporated Associations Act that are currently being debated in parliament. A notable amendment will be to remove the requirement for a financial audit for groups the size of the SRSV.

Meeting closed @ 20:24 hrs.

The May 2012 Annual General Meeting was followed by the May 2012 Ordinary Meeting.

SIGNALLING ALTERATIONS

The following alterations were published in WN 1/13 to WN 6/13 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 alteration.

04.01.2013 **Eltham** (SW 1/13, WN 1)

On Friday, 4.1., Sidings 2, 4, and 5 were removed. Points/Derails 11D, 12, 13U, 13D, 14, 27D, 27U, and 28U were abolished. Dwarfs 5, 6, 7, 10, and 10B were abolished. Points 11U and 28D were secured normal. Levers 6, 11-14, 17-19, 22, 23, 27, 28, and 31 were sleeved normal.

Amend Diagram 71/12 (Watsonia - Eltham).

(08.01.2013) **Donald Loop - Morton Plains** (SW 213/12, WN 1)

Diagram 70/12 (Donald Loop - Morton Plains) replaced 98/08 as in service.

09.01.2013 **Ballarat** (SW 216/12, WN 1)

Operating Procedure 70 (Ballarat Freight Terminal) was withdrawn account the closure of the freight terminal. SW 215/12 is cancelled.

09.01.2013 **North Ballarat** (SW 215/12, 216/12, & 2/13, WN 1 & 2)

On Wednesday, 9.1., a low speed light was provided on Down Home 6. The low speed aspect will only apply for moves into North Ballarat Workshops. Reverse detection was provided on the electrically released points into the workshops. Up Repeating AM1220 was secured at the Warning position (but SW 2/13 states that this signal was restored to normal operation in conjunction with these works).

The Workshops points are secured by a plunger lock which, in turn, is secured by a Fortress lock. The key of the Fortress lock is secured in an electric crosslock released by the Signaller Ballarat.

When a train is to be signalled into the Workshops siding, the Signaller is to reverse Points 3 prior to signalling the train towards Home 6. Home 6 must be kept at Stop until the Workshops points are reversed. A competent employee is to check that no conflicting movements are being made in the Workshops sidings, open the security gate, and then request the release from the Signaller. The release cannot be given until the approaching train has been at a stand at Home 6 for 70 seconds. The competent employee can then remove the key, unlock & withdraw the plunger, and reverse the points. When the points have been detected reverse the Signaller can clear Home 6 for the movement. The Low Speed aspect will clear for the movement when the boom barriers have lowered.

For movements from the Workshops siding, the competent employee is to open the security gate and advise the Signaller. The Signaller will reverse Points 3 and give the release. After removing the key and reversing the points, the competent employee will then notify the driver that the movement can take place. The train must not exceed 15 km/h until it reaches McArthur St to ensure the correct operation of the boom barriers.

Operating Procedure 71 (North Ballarat Workshops Sidings) was reissued (SW 215/12 is cancelled). Amend Diagram 120/11 (North Ballarat Junction).

10.01.2013 **Bendigo** (TON 6/13, WN 2)

On Thursday, 10.1., Nos 7, 8, & 9 Train Stabling Sidings were booked out due to high voltage power line works.

13.01.2013 **Southern Cross** (SW 211/12, WN 1)

Between Saturday, 5.1., and Sunday, 13.1., the following alterations were made to the Carriage Sidings to allow for the future RRL Country By-Pass tracks. Sidings 7 & 9 were removed and the compound points leading to these sidings were straight railed. Sidings 8 & 10 were slewed to a new alignment, and Siding 10 was reduced in length from 154m to 128m. A new turnout for Siding 8 was provided in advance of Home 505 but not commissioned. Diagram 160/12 (Southern Cross - V/Line passenger lines) replaced 85/11.

14.01.2013 **Sunshine** (SW 420/12, 421/12, 422/12, 208/12, 209/12, WN 50 & 1)

Between Friday, 4.1., and Monday, 14.1., the following alterations took place.

On the Main Suburban Line, Down Automatic M395 and Up Automatic SUN628 were converted to uncontrolled Home signals. Each was provided with an illuminated letter 'A' and a post telephone. Points 455 were installed in the Down Main Suburban Line at 11.370 km, and Points 434D were installed in the Up Main Suburban Line at 11.383 km. Neither set of points was commissioned.

The last 890 metres of the Down Independent Through Track was removed, and the Up Independent Through Track between Sunshine and end of the double track became a bi-directionally signalled track. The end of the double track is at a new set of Points 405 installed at 11.291 km. These points will be manually operated. Down Home SUN515 was provided at 11.050 km to control movements from the Down Independent Through Track. This signal will be secured at Stop and authority to pass the signal will be by Signaller's Caution Order. Up Home SUN504 was provided at 11.295 km to control movements from the bi-directional track to the Up Independent Track. This signal will only display Stop and Low Speed Caution (when Points 405 are detected normal).

Points 415 were provided in the Down Independent Track at 11.210 km, and Points 434U were provided in the bi-directional track at 11.304 km. Neither set of points were commissioned.

Crossover 617 was secured normal and Home SUN717 was secured at Stop. Dwarf SUN707 was replaced by a Home signal that can only display Stop and Low Speed aspects.

Diagram 143/12 (Sunshine) replaced 132/12.

(15.01.2013) **Operation of Road Rail Vehicles** (SW 3/13, WN 2)

Commencing forthwith, road rail vehicles used for track inspections may only operate on V/Line sections with two parallel lines under cover of an Absolute Occupation or a Track Warrant (see SW 7/11) which must be held for both lines. The affected portions of track are: Werribee - Marshall, Sunshine - Deer Park West Junction, Bungaree West - North Ballarat Junction, Sunbury - North Bendigo Junction, Craigieburn - Seymour, and Pakenham - Traralgon. On other lines track inspections may run under Track Permission (Book of Rules s30) provided the road rail vehicle is accompanied by a qualified Level 4 employee.

Road rail vehicles with lighting certified to AS7531.4 may operate during darkness for track inspections.

(15.01.2013) **North Ballarat** (SW 4/13, WN 2)

Operating Procedure 71 (North Ballarat Workshops Sidings) was reissued and SW 216/12 is cancelled. The changes were to add a requirements that the Train Operator of an arriving train has to confirm with the Workshops Operator that the train can be accepted, and to so inform the Signaller, and that the competent operator to inspect the points before allowing the Signaller to signal the train into the workshops.

(22.01.2013) **Axle Counter Level Crossing Reset Procedure** (SW 11/13, WN 3)

A new Operating Procedure 133 (Axle Counter Level Crossings Reset Procedure) was issued. This incorporates the contents of SW 6/13 which is cancelled.

Where the level crossing protection equipment is operated by axle counters, an indication panel to reset the axle counters is provided in the test cabinet (together with the test switch and boom barrier cut out switch). The reset panel has four LEDs and a V5PSW keyswitch. Three of the LED lights show the status of the crossing track and the two approach sections. The fourth LED shows when the reset function is available. The keyswitch resets the axle counters. The key can only be removed when the keyswitch is in the normal position.

Road/Rail Vehicles

These level crossings have been set up to detect road/rail vehicles and track machines in addition to trains. It will consequently not be necessary for the test switch to be operated for the passage of a road/rail vehicle through the level crossing, either to start the flashing lights or stop them. The driver of a road/rail vehicle is to approach the crossing prepared to stop if necessary, and proceed through the crossing when safe to do so.

When it is necessary to on-track at a level crossing worked by axle counters, the following procedure must be followed. The road/rail vehicle is to be positioned on the level crossing and the test switch operated to start the protection equipment. The road/rail vehicle is then to be on-tracked and driven at least 25 metres from the level crossing (to ensure it has cleared the crossing track). The operator is to secure the road/rail vehicle and return to the test box. The reset panel should show the crossing

track and one approach track occupied (red lights) with the reset available (yellow light) lit. The V5PSW keyswitch is to be turned to the 'reset' position and held there for three seconds. The crossing track and reset available lights should be extinguished. The approach track LED should still be lit (due to the presence of the road/rail vehicle). The test switch should be restored and the level crossing protection equipment should stop.

To off-track at a level crossing worked by axle counters, the following procedure must be followed. The level crossing protection equipment will operate when the vehicle enters the approach. The road/rail vehicle is to be off-tracked at the level crossing. The test switch must then be operated. On the reset panel, the crossing track (red light) and reset available (yellow light) should be lit. The V5PSW keyswitch is to be turned to the 'reset' position and held there for three seconds. The crossing track light and the reset available light will be extinguished. The test switch should then be restored to stop the level crossing protection equipment and the road/rail vehicle removed from the crossing.

(22.01.2013) **North Ballarat Junction** (SW 5/13, WN 4)

Diagram 150/12 (North Ballarat Junction) replaced 120/11 as in service.

24.01.2013 **Elmore** (SW 7/13 & 14/13, WN 3 & 5)

On Thursday, 24.1., boom barriers were provided at the passive crossing at Avonmore - May Reef Rd (200.732 km) on the Up side of Elmore. The booms are operated by a axle counters. Healthy State Indicators, remote monitoring equipment and yellow RFR predictor indicator boards were provided. Diagram 32/12 (Goornong - Elmore) replaced 90/11.

This road was subsequently renamed 'Avonmore Cross Road'. Amend Diagram 32/12.

24.01.2013 **Rochester** (SW 8/13, WN 3)

On Thursday, 24.1., boom barriers were provided at the passive crossing at Siphon Rd (226.532 km) on the Down side of Rochester. The booms are operated by a axle counters. Healthy State Indicators, remote monitoring equipment and yellow RFR predictor indicator boards were provided. Amend Diagram 30/12 (Rochester - Echuca).

25.01.2013 **Newport - Williamstown & Laverton** (SWP 5/12, WN 4)

On Friday, 25.1., Northern Group Operating Procedure 1 (Newport - Williamstown & Laverton, Failure of Signals) was reissued. SWP 2/10 was cancelled.

(29.01.2013) **St Albans** (SW 32/13, WN 4)

Commencing forthwith the signalbox hours will be:

M-F ..... 0540-0940 hours & 1430-2000 hours
Sa, Su ..... Switched out

(29.01.2013) **Mordialloc** (SW 31/13, WN 4)

Commencing forthwith the signalbox hours will be:

M ..... 0040-0050 hours, 0500-0935 hours & 1500-1945 hours
Tu-F ..... 0500-0935 hours & 1500-1945 hours
Sa ..... 0945-1100 hours & 1910-2035 hours
Su ..... 0130-0145 hours, 0930-1120 hours, & 1920-2040 hours

29.01.2013 **Southern Cross - North Melbourne** (SW 9/13, 10/13, 12/13, 16/13, 29/13, & 30/13, WN 3 & 4)

Between Friday, 25.1., and Tuesday, 29.1., the junctions between the Goods Lines and the new RRL tracks were commissioned. This included the signalling on the RRL tracks to North Melbourne. The East and West Bypass Tracks became fully bi-directional. Baulks are provided on the RRL tracks on the Down side of Home MW017 to protect the Work Package B construction area, and on the Down RRL line at Home SSS921.

Homes SSS513 (S), SSS526 (T, S), SSS728 (T), SSS908 (T), SSS910 (S), SSS911 (T), SSS920 (T), SSS921 (T), SSS924 (T), MYD925 (T), MYD529 (S), MYD538 (S), MYD932 (T), MYD937 (T), and MW017 were provided. Automatics MW016 (T) and MW018 (T) were provided. Signals marked (T) are equipped with TPWS and those with (S) are equipped with train stops. Home SSS728 is fixed at Stop. Home SSS911 is equipped with a '65' indicator. Home MYD937 is provided with a route indicator that shows 'G' when set for the East Bypass Track and 'R' when set for the RRL line. A co-acting signal MWP017P is provided for Home MWP017.

Crossovers 213, 811, 820, and 825 were provided.

Home MYD528 was altered to no longer display normal speed aspects. Homes MYD534, MYD536, MYD540, and MYD544 can now display normal, medium and low speed aspects. Home MYD544 will remain approach operated at the moment.

Automatics 724 and 822 were abolished.

Diagrams 139/12 (Southern Cross - MTM Passenger Lines) and 135/12 (West Tower) replaced 137/12 and 60/12 respectively.

01.02.2013 **Seymour** (SW 13/13, WN 4)

On Friday, 1.2., a notice board lettered 'Prior to entering the siding obtain permission from the Signaller Seymour signalbox' was provided to control standard gauge movements entering the Locomotive Depot. The hand points leading from the standard gauge run-around siding towards the turntable were fitted with a point clip and padlock to secure them away from the turntable. A notice board

lettered 'Prior to leaving the siding obtain permission from the Signaller Seymour signalbox' was provided to control standard gauge movements from the turntable.

New Operating Procedures 104 (Seymour Locomotive Depot Sidings - Standard Gauge Operations) and 105 (Seymour Locomotive Depot Sidings - Broad Gauge Operations) have replaced 103A (SW 74/08)

Amend Diagram 156/11 (Seymour).

(04.02.2013) **Greensborough - Eltham - Diamond Creek** (SW 20/13, SWP 1/12, 2/12, & 3/12, WN 3 & 4)

Between Thursday, 31.1., and Monday, 4.2., the Electric Staff system Greensborough - Eltham, and the Train Staff and Ticket sections Eltham - Hurstbridge (long section) and Eltham - Diamond Creek (short section) were replaced by Automatic and Track Control system Greensborough - Eltham - Diamond Creek. The section Diamond Creek - Hurstbridge remains worked by Train Staff and Ticket.

All two position signalling between Greensborough and Diamond Creek was replaced by three position signalling. All mechanical signalling was abolished at Eltham, and the mechanical frame was replaced by a Westrace CBI. Local control of Greensborough and Eltham was abolished and control was transferred to the Epping signal box. Diamond Creek will be permanently open as a Train Staff & Ticket station.

Greensborough. The WestCAD control screens were abolished. Homes GRN104, GRN104P, & GRN114 were converted to three position signals. Up Repeating S754 was converted to an Automatic.

Eltham. The platform tracks at Eltham were renumbered. The Back Platform was renumbered No 1 Track, and No 1 Track was renumbered No 2 Track. A dead end Siding A (182m) was provided at the Down end. Points 002, 004, 005, & 015 were provided. Points 015 were secured normal. Derail and Crowder 004 was provided in Siding A.

Diamond Creek. Homes DCK101 and DCK101P were converted to three position signals. Down Repeating S983 was converted to an Automatic.

All signals are LEDs.

Diagrams 75/12 (Watsonia - Eltham) and 73/12 (Diamond Creek - Hurstbridge) replaced 71/12 and 81/07 respectively.

Clifton Hill Group Operating Procedures 5 (Operation of Track Machines & Road/Rail Vehicles), 6 (Eltham - Shunting Operations), and 9 (Diamond Creek - Instructions for crossing a Down Train with the first Up train) are cancelled. SW 4/06 (Opening and Closing Diamond Creek as a Temporary Staff Station by means of Train Staff Closing Box) is cancelled. Clifton Hill Group Operating Procedure 7 (Diamond Creek - Failure of Signals) was reissued. Clause (a) was altered re failure of DCK101. Clause (d) re train staff working was deleted. Clifton Hill Group Operating Procedure 8 (Hurstbridge - Driver in charge of safeworking) was reissued. A new Clifton Hill Group Operating Procedure 4 (Greensborough - Eltham - Diamond Creek, Failure of Signals) was issued.

(05.02.2013) **Box Hill** (SW 36/13, WN 5)

Commencing forthwith the signalbox hours will be:

M-F ..... 0600-1250 hours & 1400-1900 hours
Sa & Su ..... Switched out

(05.02.2013) **Blackburn** (SW 37/13, WN 5)

Commencing forthwith the signalbox hours will be:

M-F ..... 0630-1230 hours & 1515-1830 hours
Sa & Su ..... Switched out

(05.02.2013) **Mitcham** (SW 38/13, WN 5)

Commencing forthwith the signalbox hours will switched out.

(05.02.2013) **Glen Waverley** (SW 35/13, WN 5)

Commencing forthwith the signalbox hours will be:

M-F 0001-0100 hours, 0340-1000 hours, 1430-1450 hours, 1550-1930 hours & 2330-2400 hours
Sa ..... 0001-0200 hours, 0340-0540 hours, 0700-0930 hours, & 2330-2400 hours
Su ..... 0001-0200 hours, 0600-0830 hours, 1030-1930 hours, & 2330-2400 hours

(05.02.2013) **Cheltenham** (SW 39/13, WN 5)

Commencing forthwith the signalbox hours will be:

M-F ..... 1615-1650 hours
Sa & Su ..... Switched out

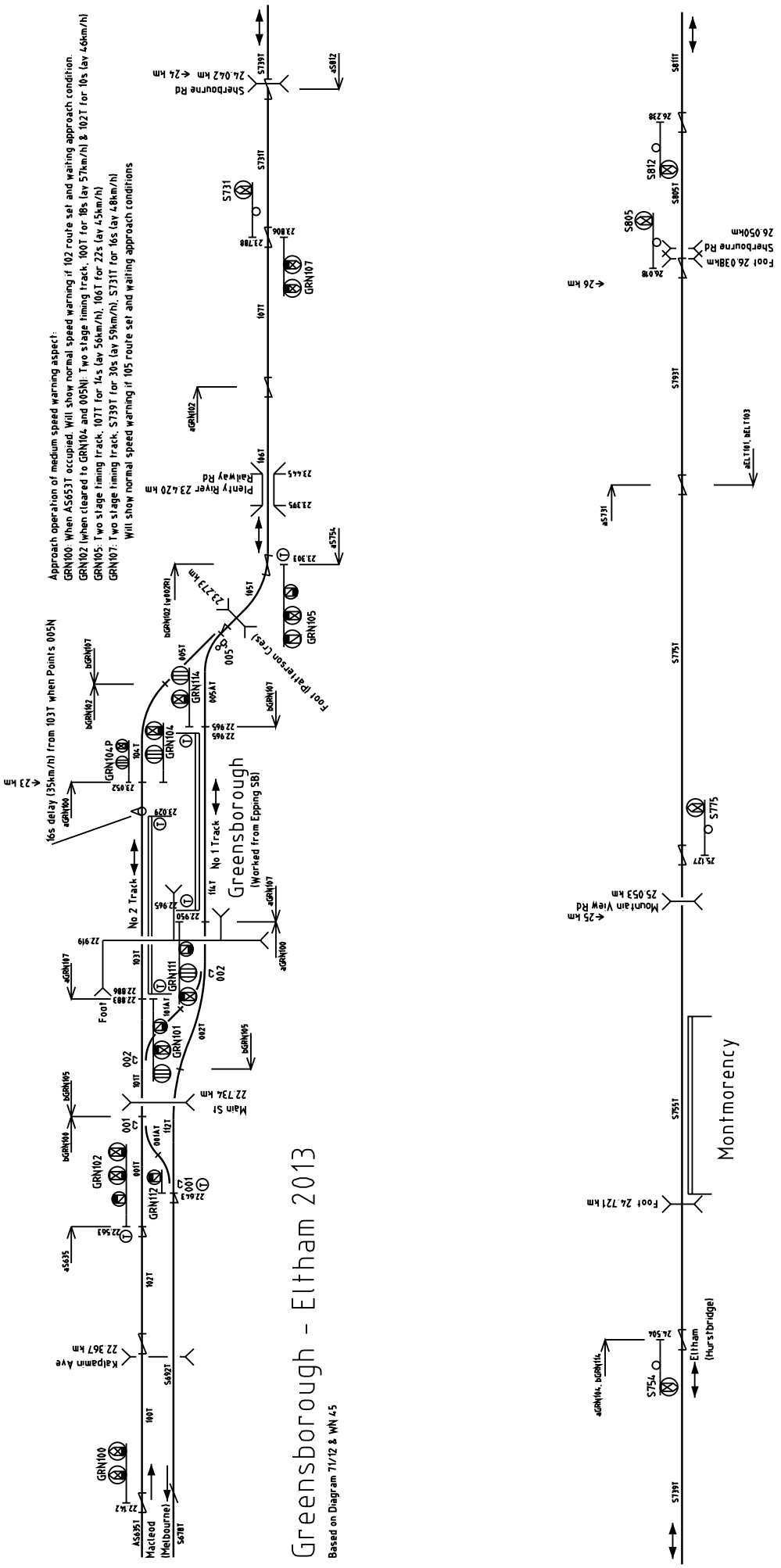
(05.02.2013) **Carrum** (SW 44/13, WN 5)

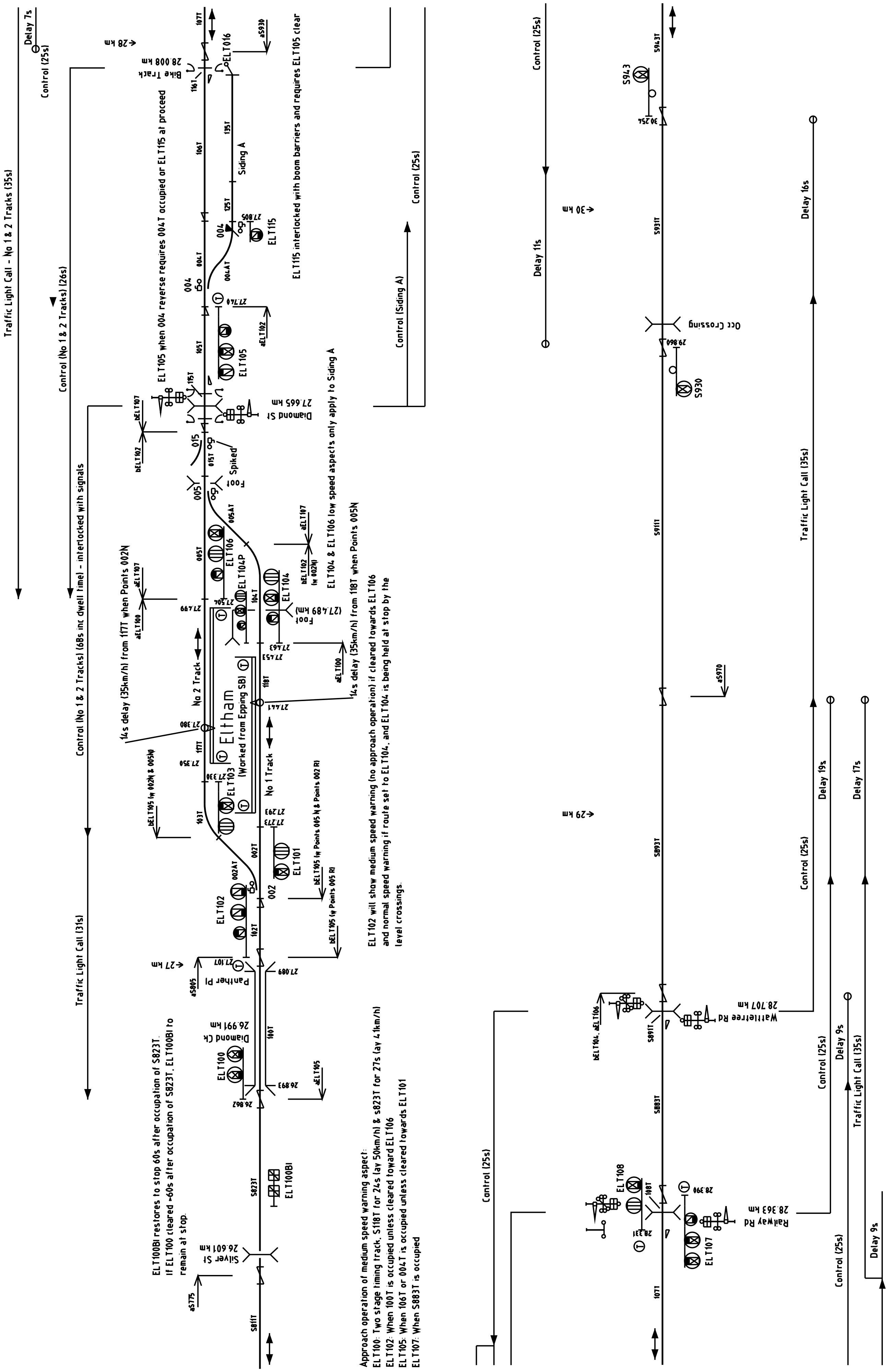
Commencing forthwith the signalbox hours will be:

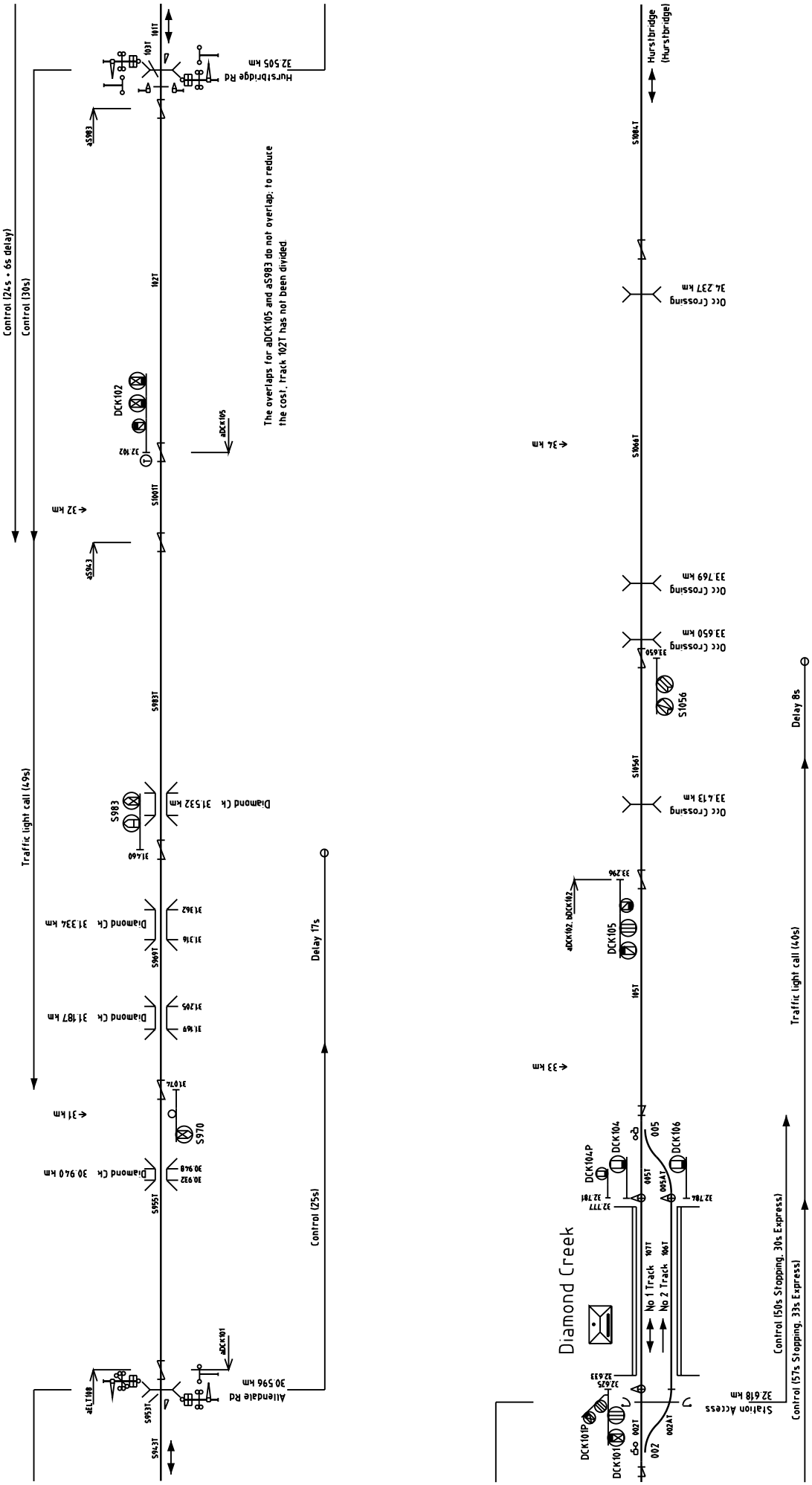
M-F ..... 0450-0740 hours & 1740-2005 hours
Sa ..... 0445-0930 hours, & 1800-2005 hours
Su ..... 0715-1030 hours, & 1805-2005 hours

(05.02.2013) **Brighton Beach** (SW 41/13, WN 5)

Commencing forthwith the signalbox hours will be:


Approach operation of medium speed warning aspect:
GRN100: When AS653T occupied. Will show normal speed warning if 102 route set and waiting approach condition.
GRN102 (when cleared to GRN104 and 005N): Two stage timing track. 100T for 18s lay 57km/h) & 102T for 10s (av 46km/h)
GRN105: Two stage timing track. 107T for 14s (av 56km/h), 106T for 22s (av 45km/h)
GRN107: Two stage timing track. S739T for 30s (av 59km/h), S731T for 16s (av 48km/h)
Will show normal speed warning if 105 route set and waiting approach conditions
Greensborough - Eltham 2013
Based on Diagram 71/12 & WN 45
Greensborough
(Worked from Epping SB)
No 1 Track
No 2 Track
Montmorency
Macleod (Melbourne)
Kalpamin Ave 22.367 km
Main St 22.734 km
Foot (Patterson Cres)
Railway Rd Plenty River 23.420 km
Sherbourne Rd 24.042 km → 24 km
Foot 24.721 km
Mountain View Rd 25.053 km
Foot 26.038km Sherbourne Rd 26.050km
Eltham (Hurstbridge)
16s delay (35km/h) from 103T when Points 005N
23 km →
26 km →
25 km →


Traffic Light Call - No 1 & 2 Tracks (35s)
Delay 7s
Control (25s)
Control (No 1 & 2 Tracks) (26s)
Traffic Light Call (31s)
Control (No 1 & 2 Tracks) (68s inc dwell time) - interlocked with signals
14s delay (35km/h) from 117T when Points 002N
ELT100Bl restores to stop 60s after occupation of S823T.
If ELT100 cleared ~60s after occupation of S823T, ELT100Bl to remain at stop.
ELT105 when 004 reverse requires 004T occupied or ELT115 at proceed
Eltham
(Worked from Epping SB)
No 2 Track
No 1 Track
Silver St 26.601 km
Diamond Ck 26.991 km
Panther Pl
Diamond St 27.665 km
Foot (27.489 km)
Bike Track 28.008 km
Siding A
ELT115 interlocked with boom barriers and requires ELT105 clear
ELT104 & ELT106 low speed aspects only apply to Siding A
14s delay (35km/h) from 118T when Points 005N
Approach operation of medium speed warning aspect:
ELT100: Two stage timing track, S118T for 24s (av 50km/h) & s823T for 27s (av 41km/h)
ELT102: When 100T is occupied unless cleared toward ELT106
ELT105: When 106T or 004T is occupied unless cleared towards ELT101
ELT107: When S883T is occupied
ELT102 will show medium speed warning (no approach operation) if cleared towards ELT106 and normal speed warning if route set to ELT104, and ELT104 is being held at stop by the level crossings.
Control (Siding A)
Control (25s)
Delay 11s
Railway Rd 28.363 km
Wattletree Rd 28.707 km
Occ Crossing
Traffic Light Call (35s)
Delay 16s
Delay 19s
Delay 9s
Delay 17s


Hurstbridge
(Hurstbridge)
Dcc Crossing
34.237 km
Dcc Crossing
33.769 km
Dcc Crossing
33.650 km
Dcc Crossing
33.413 km
S1056
DCK105
DCK102, aDCK102
DCK104P
DCK104
DCK106
DCK101P
DCK101
Diamond Creek
No 1 Track
No 2 Track
Station Access
32.618 km
Control (50s Stopping, 30s Express)
Control (57s Stopping, 33s Express)
Traffic light call (40s)
Delay 8s
Hurstbridge Rd
32.505 km
aDCK105
The overlaps for aDCK105 and aS983 do not overlap; to reduce the cost, track 102T has not been divided
DCK102
Control (24s + 6s delay)
Control (30s)
Traffic light call (49s)
Diamond Ck 31.532 km
S983
Diamond Ck 31.334 km
Diamond Ck 31.187 km
S970
Diamond Ck 30.940 km
Delay 17s
Control (25s)
Allendale Rd
30.596 km
aDCK101

M-F ..... 1615-0700 hours, 0900-0915 hours, 1455-1510 hours, & 1825-1915 hours
Sa & Su ..... Switched out

(05.02.2013) **Sandringham** (SW 42/13, WN 5)

Commencing forthwith the signalbox hours will be:

M-F 0001-0030 hours, 0510-0540 hours, 0845-0935 hours, 1610-1655 hours & 2335-2400 hours
Sa ..... 0001-0125 hours, 0510-0555 hours, 0650-0710 hours, & 2335-2400 hours
Su ..... 0001-0125 hours, 0750-0815 hours, 0940-1030 hours, & 2330-2400 hours

11.02.2013 **Southern Cross** (SW 43/13, WN 5)

Between Saturday, 9.2., and Monday, 11.2., the following alterations took place. Down Home 723 was relocated 37 metres in the Down direction and provided with a theatre route indicator. The route indicator will display 'M' for moves towards No 14 Track, and 'G' for moves towards the Main Goods Line. New Points 607D were installed in the Up Through Suburban Viaduct line. New Crossover 625 was installed in the Up and Down Through Suburban Lines. Neither Points 607D or Crossover 625 were commissioned.

Diagram 1/13 (Southern Cross - MTM Passenger Lines) replaced 139/12.

18.02.1913 **Williams Landing** (SW 60/13, WN 6)

Between Friday, 15.2., and Monday, 18.2., the following signalling alterations took place at the new Williams Landing station.

New Up Automatics G816 (with co-acting signal G816P) and GG816 were provided at 23.421km. Up Automatics G824 and GG824 were abolished. Down Automatic GG825 was relocated from the signal bridge to a ground mast adjacent to the bridge at 23.618 km. New Up Automatics G868 and GG868 were provided on a signal gantry at 25.024 km. Home LAV730 was replaced by a new signal on a tilt mast. Home LAV720, and Automatics G825, G902, and GG902 were converted to LED heads. All the new signals are LED signals.

The Laverton interlocking was extended to include signalling to G868/GG868 via a Westrace CBI at Williams Landing Signal Equipment Hut.

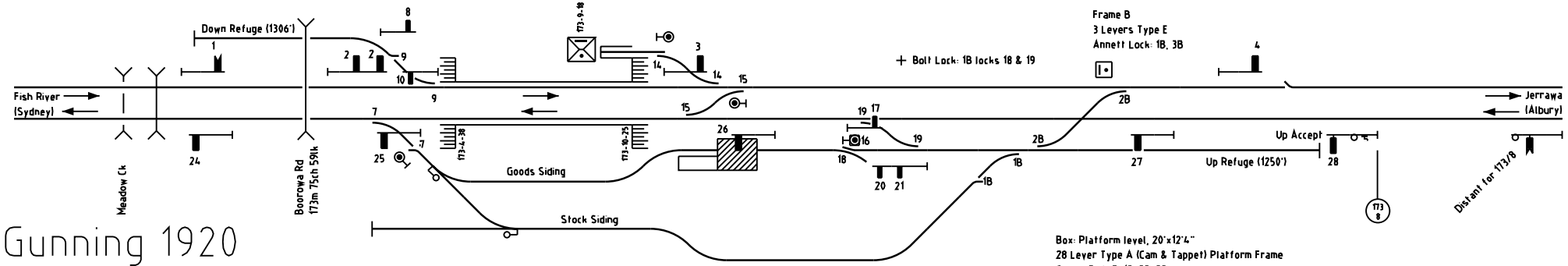
Diagram 23/12 (Aircraft - Werribee) replaced 15/11.

The Shunt ahead signal on the Down Starting signal at Gunning (left). The mechanical design of the signal is worthy of note. The bearings for the arm spindle are mounted on the side of the post, rather than the spindle running through the post. Most of the counterweight to ensure the arm returns to danger is provided by the casting into which the arm is secured. A very small red light is displayed when on, and the caution (off) position shows a green light in an elongated slot to allow the arm to come off at a range of angles. The spectacle is also bolted into this casting. Notice that a back blinder is fitted even though the signal faces the signalbox

GUNNING

Bob Taaffe

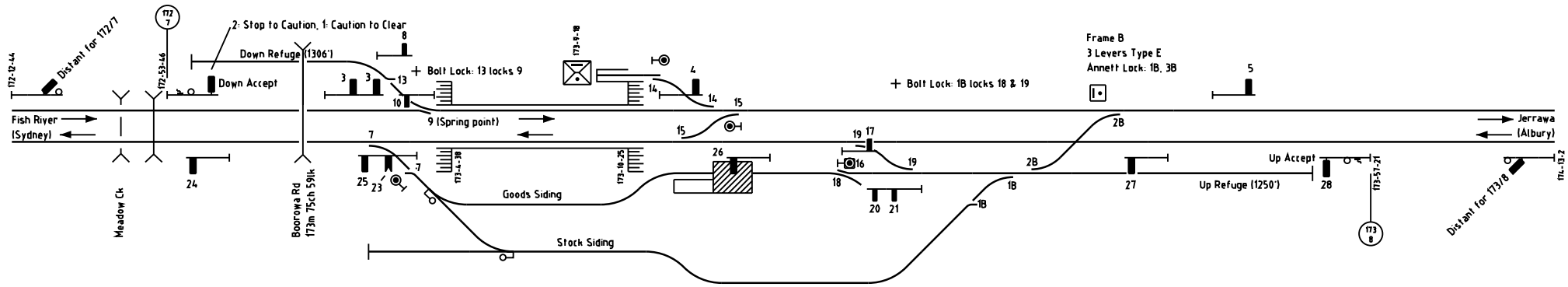
1875 Nov 9	Line opened from Goulburn. Terminus. Timetable and Telegraph working
1876 July 3	Line extended to Bowning. Timetable and Telegraph working
1878	Staff and Ticket working introduced with Blue staff from Breadalbane and Red staff to Jerrawa (WTTs)
1890	Between May and June ETT extended from Breadalbane to Gunning
1890 June 30	OTS&T replaced by ETT on section to Oolong and Oolong – Jerrawa - possibly No2 pattern instruments(WN1890-25)
1890 Oct 7	New Up and Down Home signals into use, probably replacing a Station Semaphore (WN1890-40)
1890 Oct 14	New Down Distant signal into use (WN1890-41)
1891	Razorback opened as ETT station to divide Breadalane – Gunning section (WTT1891 Jan 1)
1891 Jan 9	New Up Distant signal into use (WN1891-3)
1891 Jan 28	Interlocking into use, McK&H type 6A pattern at least 20 levers (WN1891-5)
1891	Distant signals altered to show red and green lights only per new Rule Book (WN1891-47)
1892 May 27	Oolong closed as ETT station, section now to Jerrawa (WN1892-23)
1892 July 27	Oolong reopened as ETT station (WN1892-32)
1892 Nov 26	Oolong closed as ETT station, section now to Jerrawa (WN1892-49)
1893	Interlocking altered to allow train to stand partly in Dead End siding and Loop while Main Line signals cleared. Points Loop to Dead End siding by Lever D. This idea of dead end siding off the Loop to assist crossing longer trains seems to have been common on the Main South, an alternative to lengthening the crossing loop. Four levers (B to E) operate various points off Main and Loop released by keys from Frame A (WN1893-40)
1894	Local Appendix – ETT sections Razorback to Gunning and Gunning to Jerrawa with Oolong able to divide the latter section when authorised
1894 July 16	ETT Exchangers extended from Moss Vale to Junee Junction (WN1894-29)
1895 Oct 21	Oolong temporarily reopened as ETT Station (WN1895-44)
1896 Feb 25	Oolong closed as ETT station (WN1896-10)
1896 April 15	No 2 ETT instruments replaced by No 3 instruments (WN1896-18)
1896 Aug	Oolong closed as ETT Station (WN1896-36)
1896 Dec 30	Oolong opened as ETT station (WN1897-1)
1899 May 22	Metal tablets 1 to 30 replaced by celluvert tablets on section to Jerrawa (WN1899-21)
1899 July 12	Metal tablets 1 to 30 replaced by celluvert tablets on section to Razorback (WN1899-28)
1899 Sept 11	Celluvert tablets 1 and 30 replaced by metal tablets on sections to Razorback and Jerrawa (WN1899-37)
1901 Aug 21	Two arm Down Home signal (for Main Line above Main to Loop) replaced by 4 arms on post for co-acting (WN1901-34)
1903 Jan	Metal tablets 2 to 29 replaced by celluvert for section to Oolong (WN1903-2)
1907	Down Tablet Exchanger relocated 80 ft nearer Sydney (WN1907-33)
1908 May 18	Oolong opened permanently as ETT and Crossing Station – previously opened seasonally (WN1908-27)
1911	Throwover points at south end of Extended Loop replaced by ball lever points (WN1911-6)
1911	Local Appendix – Section Fish River – Gunning used ETT No 3 instruments. Gunning – Oolong and Oolong – Jerrawa used ETT No 3 and 2 instruments. It is likely No 3 instruments were used for long section Gunning – Jerrawa. Tablets Nos 1 and 3 were metal and 2 to 29 were celluvert. The tablet exchangers were used by Up and Down Melbourne Expresses and Up and Down Through South Mails, and other trains as authorised by DS. Grades – down approach rising 1 in 40 and up approach rising 1 in 70
1914 June 1	Temporary Per Way Siding provided on down side of Main Line with points facing down trains. Points and FPL in Main Line and catchpoints in siding by Ground Frame xx unlocked by key from 10A (WN1914-22)
1914 June 22	Auxiliary Up Home Main Line moved further out and clear of duplication line (WN1914-25)
1914 Oct 12	Open Double Line Oolong – Jerrawa Jct
1914	Portion of Per Way Siding at Albury end of station in use for refuging Goods trains. Ballast trains may proceed beyond Stop Board for ballasting duplication line (WN1914-32)
1914 Oct 27	Up Home signals on same post relocated 24 ft nearer station (WN1914-43)
1914 Oct 27	Crossover between Loop and Main Line at Albury end reversed and reconnected to Frame A. Connection between old Dead End and old Main Line worked from Lever E used as a connection between New and Old lines for ballasting purposes. Lever E. Old Main Line broken near old Loop Line facing points. Up Home bracket signal had LH dolly removed and new RH bracket provided and known as Up Inner Home. Goods Siding extended at Albury end and extension used as Refuge Siding. Connection between Goods Siding and new Main Line reversed and relocated nearer station. Points in Main Line to Goods Siding worked from Ground Frame D by key from 10A. (WN1914-44)
1914 Nov 6	Double Line opened to Oolong (WN1914-44)
1914 Nov 6	Per Way Siding laid in on down side and connected to Down Main Line between Down Starting and Down Advanced Starting signals. Facing points in Down Main Line by key from 11A (WN1914-45)
1914 Dec 22	Connections at Sydney end of station remodelled per Circ 335(1914) (WN1914-51)



Gunning 1920

Based on Circular 127

Box: Platform level, 20'x12'4"
28 Lever Type A (Cam & Tappet) Platform Frame
Spare: 5, 6, 9, 13, 22, 23
Key for 3B: 11, for 1B: 12



Gunning 1928

Based on Circular 173-13 and Drawing 70S

Box: Platform level, 20'x12'4"
28 Lever Type A (Cam & Tappet) Platform Frame
Spare: 6, 22
Key for 3B: 11, for 1B: 12

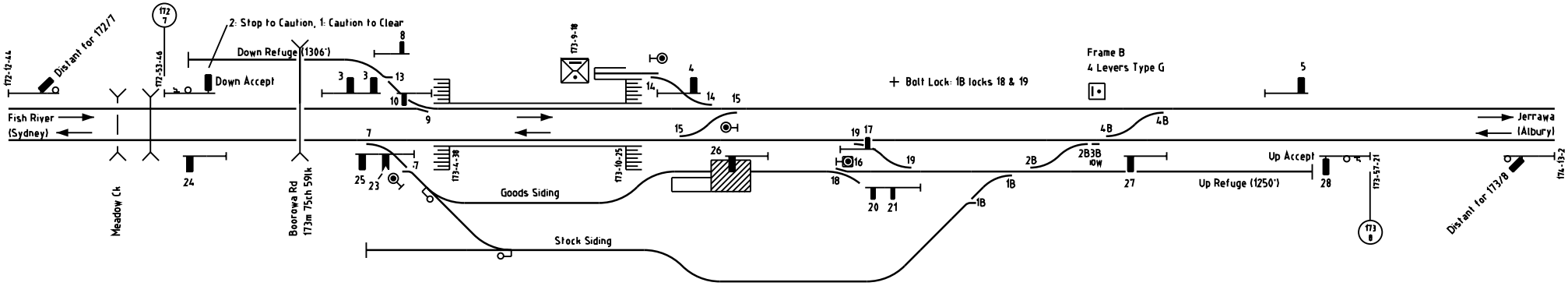
Frame A
Table of Locking

1 (2)-(3)-(4)-(5)
2 (9)- 11 - 13 - 14 - 15
3 (9)- 11 - 13 - 14 - 15
4 10 - 11 - 13BW - 14 - 15
5 14BW - 15BW
6 Spare
7 15 - 21 - 25 - 26 - 27 - 28
8 10 - 11 - (13)
9 13
10 4 - 8 - (13)
11 2 - 3 - 4 - 8 - 14 - 15 - 19 - 26 - 27 - 28 (Releases Key 1B)
12 16 - 17 - 20 - 21 (Releases Key 3B)
13 2 - 3 - 9 - 14 - 15
14 2 - 3 - 4 - 11 - 13 - 15
15 2 - 3 - 4 - 7 - 11 - 13 - 14 - 19 - 26 - 27 - 28
16 12 - (18)- 20
17 12 - (19)- 21 - 26
18 19
19 11 - 15 - 18 - 27 - 28
20 12 - 16 - (18)
21 7 - 12 - 17 - (19)
22 Spare
23 (24)-(25)
24 7BW
25 7 - 15BW - 19BW
26 7 - 11 - 15 - 17 - 19BW
27 7 - 11 - 15 - 19
28 7 - 11 - 15 - 19 (23)-(26)-(29) C to Rl

Frame B
Table of Locking

1 Key from 12A
2 3
3 2 - Releases key from 11A

1914	Work per Circ 335(1914) cancelled (WN1914-52)
1915 April 8	Up Starting signal replaced by new signal 10 ft nearer Sydney (WN1915-14)
1915 May 3	Down Distant signal moved to new position on down side of deviated line (WN1915-19)
1915 June 3	Down Home signal moved 40 ft further from station (WN1915-22)
1915 Aug 15	Oolong – Jerrawa – Tyers 1 wire Block converted to 2 wire Block
1915 Sept 30	New up platform into use. New arrangements per Circ 224(1915) (WN1915-39)
1915	Temporary Per Way Siding on down side at Albury end of yard, not on diagram per Circ 252(1915), will remain in use. Points in Main Line by Ground Frame with key from 11A (1915-43)
1915 Oct 24	Double Line opened from Cullerin, mostly on major deviation to reduce long 1 in 40 grades to max 1 in 75 for up trains at price of more curves. Double Line auto in use from Breadalbane to Fish River and Block Telegraph from Fish River to Gunning. New station at Fish River and old stations at Razorback and Lerida closed. New Signal Box and interlocking machine provided – Type A, Cam and Tappet Platform Level 28 levers (WN1915-43)
1915 Nov 20	Oolong – Jerrawa – 2 wire Block replaced replaced by 2 wire Block Improved instruments
1916 Aug 22	Siding in on down side at Albury end of yard dispensed with (WN1916-35)
1916	Throwover lever in lieu of ball lever provided at points at Sydney end of new Stock Siding (WN1916-41)
1916 Nov 20	Two wire (NSW Standard) Block instruments replaced by Improved 2 wire instruments on sections Fish River to Gunning and Gunning to Oolong (WN1916-48)
1917 June 24	New pattern buffer stop lamps provided on buffer stops of Down and Up Refuge Sidings (WN1917-24)
1920	Until 1920 there was a turntable provided for bank engines assisting trains towards Cullerin (on up)
1920 Mar 8	Additional Up Auto signals between Breadalbane and Fish River into use and existing Auto signals renumbered to suit new Rota Mileages. New diagram per Circ 52(1920) (WN1920-10)
1920 Mar 15	Existing Up Distant signal at Fish River removed. A Distant arm provided below Up Outer Home at Fish River. An Intermediate Up Auto signal 168/8 and Distant provided between Gunning and Fish River (WN1920-11)
1920 Mar 28	Manual Block to Double Line Auto on sections Gunning – Jerrawa – Yass Junction (WN1920-26)
1920 Sept 9	Manual Block replaced by Auto signalling on between Fish River and Gunning on Down Main (WN1920-36)
1920 Sept 9	Points in Down Main to Down Refuge Siding altered to lie normally for Down Refuge Siding and provided with slotted connection worked from separate lever. Down Distant signal replaced by new motor worked Down Outer Distant signal 2000 ft nearer Goulburn. New Down Outer Home Inner Distant signals on same post 1713 ft from Down Home signal. A Distant arm fitted below Up Third Home signal and when Distant arm lowered indicates Up Third Home and Up Starting signals have been lowered. Shunting Back on Down Main in direction of Fish River when points Down Main to Down Refuge Siding are set for Down Main is prohibited (WN1920-36)
1921 Sept 20	Distants for Auto Signals 177/9, 177/0, 180/2 and 184/7 had fish tail arms replaced by square ended arms and in future worked from 45 deg to vertical (WN1921-38)
1921 Dec 19	Down Outer Distant signal had fish tail arm replaced by square ended arms and in future worked from 45 deg to vertical (WN1921-52)
1922 Mar 14	Down Outer Home with lower Inner Distant signal replaced by 3 position Upper Quadrant Auto signal at same site and lettered 172/7. Working of Distant signal in rear of Auto signal 173/8 altered and Clearing of this signal indicates that Auto signal is either at Caution or Clear and Up Home is Clear. (WN1922-11)
1928 Feb 27	Bolt Lock provided between No 13 Catchpoints in Down Refuge Siding and No 9 Spring worked Trap Point in Down Main Line (WN1928-12)
1935 Sept 10	Up Home signal relocated 115 ft nearer Albury (WN1935-37)
1935 Sept 12	Down Starting signal relocated 150 ft nearer Albury (WN1935-37)
1936 Feb 5	Points in Up Main to Goods Siding (No7A) moved 7 ft nearer to Sydney (WN1936-7)
1936 Feb 12	Points in Up Main Line, Main Crossing No 15 moved 15 ft nearer to Sydney (WN1936-7)
1936 Feb 11	No 17A signal Up Main to Up Refuge Siding relocated 9 ft nearer Sydney (WN1936-8)
1936 Feb 13	No 10A signal Down Main to Down Refuge Siding relocated 15 ft nearer Albury (WN1936-8)
1936 Feb 18	Points in Down Main Line, No 9A Trap Points, moved 15 ft nearer Albury (WN1936-8)
1936 Feb 20	Points in Up Main, No 19A Up Main to Up Refuge Siding, moved 9 ft nearer Sydney (WN1936-8)
1936 Feb 26	Points in Up Main Line No 15A, Main Crossing, moved 15 ft nearer to Sydney and cancels WN7(1936) (WN1936-9)
1936 Mar 17	Connections Down Main to Up Refuge Siding (No 2B) dispensed with and new connections provided Up Main to Up Refuge Siding (No 2B) and Main Line Crossing (No 4B) into use. Existing 3 lever Frame B replaced by new 4 lever Frame B 210 ft nearer Junee (WN1936-13)
1940	Ball lever controlling points leading to Goods Siding replaced by throwover lever (WN1940-34)
1942 Mar 16	Post carrying Up Third Home signal (No 25) with Distant under (No 23) renewed (WN1942-11)
1944 Mar 7	Point Indicator working with No 15A Main Crossing removed (WN1944-10)
1952 Aug 13	Down Second Home signal post renewed (WN1952-32)
1957 Aug 1	Post and fittings of Up Starting signal renewed (WN1957-30)
1958 Oct 28	Closing facilities provided for Up and Down Main Lines. Each Main Line can be switched out separately. Down and Up Second Home signals dispensed with. Down and Up Home and Starting signals provided with lower light and to operate in Upper Quadrant. Shunt Ahead signal below Down Starting signal removed (provided?). (WN1958-42)
1962 Nov 27	Fish River closed as Block station and Auto section now Breadalbane to Gunning (WN1962-47)



Gunning 1936

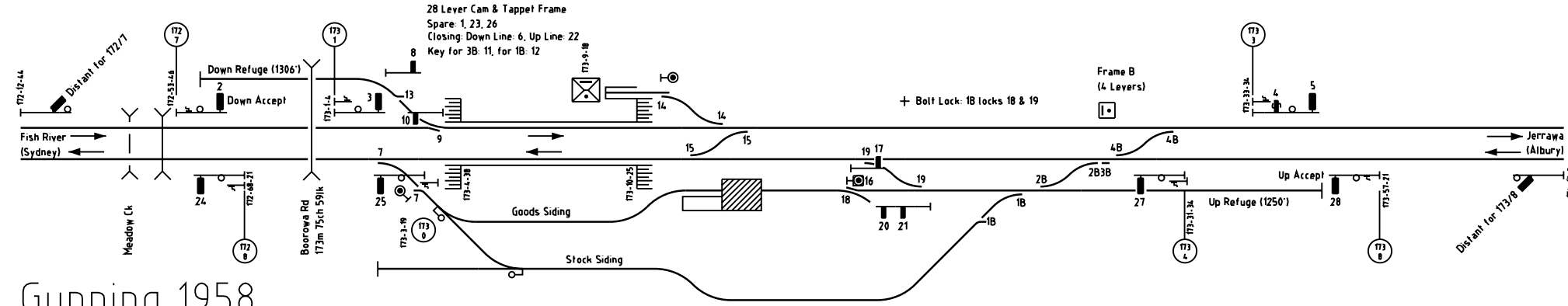
Based on Circular 173-13 and Drawing 70S
Box: Platform level, 20'x12'4"
28 Lever Type A (Cam & Tappet) Platform Frame
Spare: 6, 22
Key for 3B: 11, for 1B: 12

Frame A
Table of Locking

1 (2)(3)(4)(5)
2 (9) - 11 - 14 - 15
3 (9) - 11 - 14 - 15
4 10 - 11 - 13BW - 14 - 15
5 14BW - 15BW
6 Spare
7 15 - 21 - 25 - 26 - 27 - 28
8 10 - 11 - (13)
9 13
10 4 - 8 - (13)
11 2 - 3 - 4 - 8 - 14 - 15 - 19 - 26 - 27 - 28 (Releases Key 1B)
12 16 - 17 - 20 - 21 (Releases Key 3B)
13 9 - 14 - 15
14 2 - 3 - 4 - 11 - 13 - 15
15 2 - 3 - 4 - 7 - 11 - 13 - 14 - 19 - 26 - 27 - 28
16 12 - (18) - 20
17 12 - (19) - 21 - 26
18 19
19 11 - 15 - 18 - 27 - 28
20 12 - 16 - (18)
21 7 - 12 - 17 - (19)
22 Spare
23 (24) - (25)
24 7BW
25 7 - 15BW - 19BW
26 7 - 11 - 15 - 17 - 19BW
27 7 - 11 - 15 - 19
28 7 - 11 - 15 - 19 ((23) - (26) - (27) C to R)

Frame B
Table of Locking

1 Key from 12A
2 (4)
3 Key from 11A
4 (3)



Gunning 1958

Based on Circular 305-7

1967 Oct 16	Oolong abolished as Signal Box and Block Station
1972 Feb 8	No 17 signal Up Main to Up Refuge Siding relocated 5 ft nearer to Sydney (WN1972-5)
1972 Feb 21	Points in Main Line at Sydney end of No 19 crossover (Up Main to Up Refuge Siding) relocated 6 ft towards Sydney (WN1972-7)
1972 Feb 28	Points in Up Main at Sydney end of No 4B crossover (Down Main to Up Main) relocated 5 ft nearer Sydney (WN1972-8)
1976 Nov 14	Dock Siding abolished. No 14 Points in Down Main and associated catchpoint removed (WN1976-46)
1982 Aug 9	No 9 Independent disc Goods Siding to Up Refuge Siding replaced by mechanical dwarf shunt signal (WN1982-35)
1987 Sept 27	Up Distant signal for Up Accept (173/8(relocated 1120m nearer to Sydney. Advisory Speed Board at 281.408km removed (WN1987-38)
1996 Feb 9	Signal Box abolished. All points and crossovers together with Frame B removed. All semaphore signals, except No 25 (173.0) and No 5 (173.3) signals and Down and Up signals removed. (WN1996-5)

First interlocking machine, No 6A pattern Rocker type. Possibly made by McK&H. At least 20 levers. Located on platform and it is unlikely that it was covered.

Second interlocking machine, in use at the beginning of 1915, NSWR Type A cam and tappet, Platform level , 28 levers. A Closing lever was removed in 1917 and 2 Closing levers provided in 1957.

Signal Box brought into use at the beginning of 1915 (drawing dated 5 Aug 1914 based on standard drawing), 20 feet long by 12 wide. It was a standard platform level type made of weatherboards with a skillion roof. It was slightly unusual in that two sliding sashes were provided in the front walls in lieu of a single one. The corrugated iron (steel) roof was replaced by a corrugated fibro roof sheets in late 1963 or early 1964.

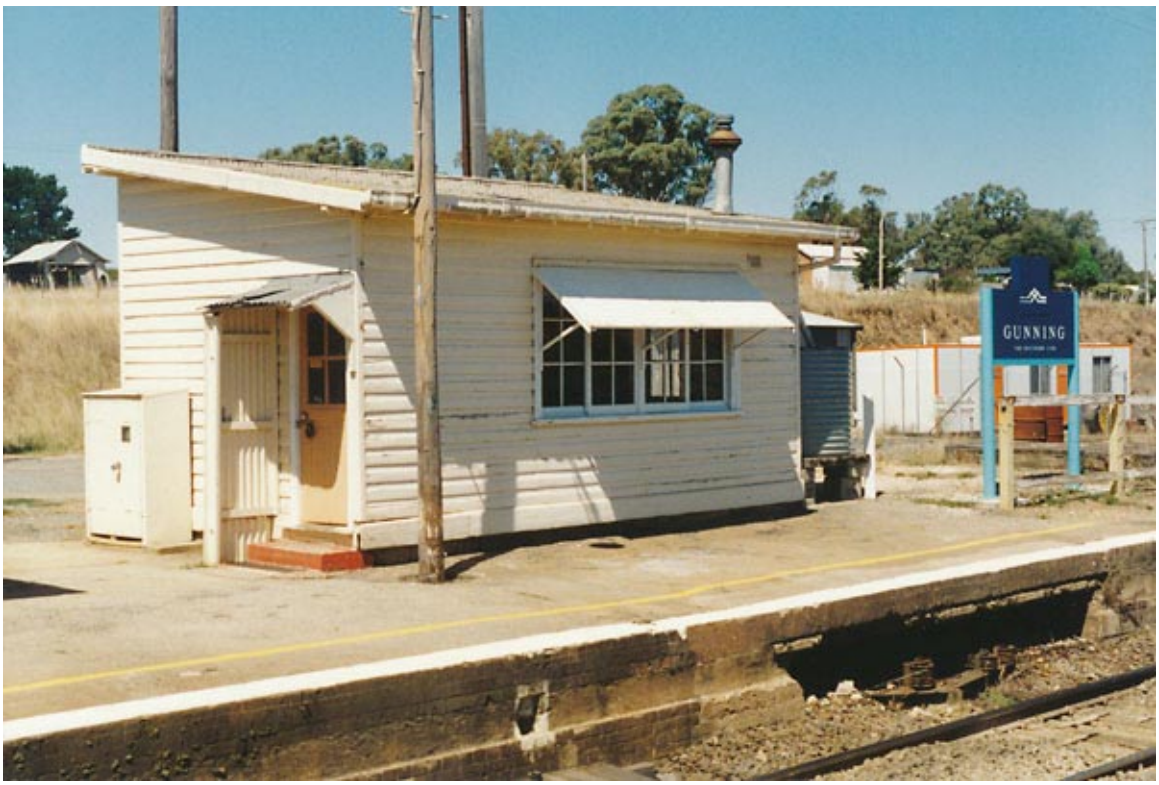
Ground Frame B – 3 lever Type E tappet replaced by a 4 lever Type G in 1935

A Light in type Track Circuit Diagram dated 1956 was provided in the signal box and possibly replaced an eyeball type. The Box Diagram was dated 1961.

This photograph shows the semaphore and spectacle plates on Down Home 5. The basis of the signal is a conventional US based upper quadrant semaphore using a GRS Model 2A signal motor, a standard RSA spectacle plate, and a semaphore arm based on a standard RSA semaphore arm.

Two spectacle plates are used to give the two lights for the aspects. The upper spectacle plate gives the 'home' aspects, and has green lenses for the caution and clear positions. The lower spectacle plate is for the 'distant' aspects. To avoid the need to provide two signal motors, the lower plate is ingeniously driven from the upper spectacle by a rod. Essentially, the upper fixing point of the rod is located such that when the arm moves from Stop to Caution, the fixing point does not move vertically. This means that the lower spectacle plate does not move. When the upper arm moves from Caution to Clear, the upper fixing point is lifted, which lifts the lower spectacle plate to display green.

The use of two spectacle plates driven by one motor was used in country areas to conserve battery power. A further power saving approach was the use of oil lamps to light the signals. In the suburban area, where electric power was available, a small two aspect light signal replaced the lower spectacle plate. From about the '70s, the country upper quadrant semaphores either had the lower spectacle plates replaced by small light signals, or the lamps were converted to electric lights.



Gunning signalbox (above) was situated on the Down platform adjacent to the station building. The signalbox was a typical NSW platform level box, and could be found at through stations on both single and double lines. The box was constructed of timber with an asbestos tile lean-to roof (it would have originally had a galvanised iron roof). The frame was at the rear of the box and only a couple of windows are provided in the front wall. Although these photos were taken on a crisp, clear, morning, a couple of features show that the weather at Gunning is not always so clemmant. A weather shield had been constructed next to the door to stop the rain beating in during winter, and a deep awning had been added over the front windows to reduce the heat in the summer afternoon. A chimney in the far front corner indicates the presence of a stove in the box for the cold winter's days. Just beyond the box can be seen a large galvanised water tank to collect run-off from the signalbox roof, although the station probably has a reticulated water supply from the town. Inside the box (right) was a 28 lever NSW standard cam and tappet frame. The frame is shown switched out with the main line signals and the blue closing levers (6 and 22) reversed - a separate closing lever is provided for each main line. Separate closing levers allowed the signalbox to be switched in on one line only to allow a train to be refuged without affecting the other line. Each closing lever is equipped with an Annett lock to hold the lever reverse. When the closing keys are removed, they were secured in the green painted box that can be seen on the wall of the box behind the levers. The SM had keys to the box, and so the station staff could unlock the box and switch the station in. The box had a glass front, so anyone, in an emergency, could break the glass and obtain the keys to switch in the box.