SOMERSAULT

March 2012
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Signalling Record Society of Victoria Inc

Post 7 at Menzies Creek on Puffing Billy governs Up movements into the station. The post itself is the only remaining example of a wooden bracket post in Victoria. It was originally located at Clifton Hill where it controlled Up movements from the Hurstbridge line, though I believe that most of the wooden components had to be replaced before it was erected at Menzies Creek. All four signal arms are operated by GRS 25 Hz signal motors which are mounted at the foot of the post to allow for semi-automatic operation of main line movements at Menzies Creek. Essentially, the Guard of a departing move sets up the route for the next arriving movement. The arrival signals then clear automatically when the track circuits clear behind the departing train. Photo: Andrew Waugh

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Minutes of 2011 Annual General Meeting held Friday 18 March, 2011, at the Surrey Hills Neighbourhood Centre, 1 Bedford Avenue, Surrey Hills

Present: - Wilfrid Brook, Glenn Cumming, John Dennis, Graeme Dunn, Vance Findlay, Michael Formaini, Ray Gomerski, Chris Gordon, Judy Gordon, Bill Johnston, Chris King, Keith Lambert, Steve Malpass, Tom Murray, Laurie Savage, Brian Sherry, David Stosser, Stuart Turnbull, Andrew Waugh and Andrew Wheatland.

Apologies: - Jon Churchward, David Langley, Greg O'Flynn, Peter Silva, Rod Smith & Bob Whitehead.

In the absence of the President, the Vice - President, Mr. Bill Johnston, took the chair & opened the meeting @ 20:06 hours.

Minutes of the 2010 Annual General Meeting: - Accepted as read by the Secretary. Graeme Dunn / Vance Findlay. Carried.

Business Arising: - Nil.

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

I think that we have a had a good year. Those were the words of the past Presidents for a number of years and I find that they are the best I can do at this time. I am recovering from some major surgery and concentration is something I don't have a lot of at the moment.

We have had the usual six meetings for the year with the February meeting being in the form of an after work visit, this time to Puffing Billy where the far end of the line was explored. Other meetings have had a variety of entertainment following the "serious" stuff and the social discussion around the tea or coffee pot has been informative.

The visit in September to various suburban locations went off without any trouble which highlights the excellent work put in by our tours organiser.

"Somersault" is still in need of help from members with any contributions to ease the work load of the Editor being urgently required. I challenge all of you to see if you can't contribute something in the coning year even if it is just a photo or two with captions to accompany it. Its not a difficult task and I am sure that all of you have some images of interest which you are itching to see in print.

So with those few words it just behoves me to thank the various members of the executive - Secretary Glenn for keeping the meetings minuted and the correspondence in check, not to mention organising the annual tour to run like clockwork, Vice President Bill for handling the syllabus items as well as standing in for me as required, tonight being no exception, Treasurer Peter for keeping an eye on the finances of the society and maintaining records of same, and committee-men Wilfrid and Steve for their opinions at our on line committee meetings, all very valuable contributions.

With regards to the tours I wish to thank Keith Lambert and his fellow comrades in the Safeworking Office for their assistance in our tours. Without co-operation from their end our tours would be non-existent, please pass on my thanks to the others Keith.

Finally I wish to thank the members for their continued support both at meetings and on tours and I hope you have all got something out of being a member of the SRSV in 2010.

I move the report. David Langley, President. Andrew Waugh / Andrew Wheatland. Carried.

Treasurer's Report: - In the absence of the Treasurer Peter Silva, the presentation of the Treasurer's Report for the year ended 31 December 2010 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 2010.

The tour for the year was the annual Showday Tour / Cupday Tour etc, this year held on Saturday 18th September 2010. The locations visited this year were Diamond Creek, Eltham, Greensborough, Kooyong, Gardiner, Darling and Glen Waverley. As was to be expected, this tour was well attended and this justified the extra effort required to arrange this tour.

Organisation of SRSV tours is not a one man job and thanks must go to the following people for their assistance in organising this year's tour: - to David Langley and Andrew Waugh for their advice & comments and especially for reminding me of all the tasks I had forgotten to do.

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. Glenn Cumming / Stuart Turnbull. Carried.

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

Type	2010	2009	Movement
V	74	71	+3
K	30	29	+1
N	1	1	-
KL	3	3	-
VH	3	3	-
Total	111	107	+4

Analysis of Movement

Additions: - Dave Clark (K), Steven Dunne (K), Michael Menzies (V), Donald Sharp (V), Damien Thomas (V)

Non - Renewals: - John McPhee (V)

Transfers: - David Donald (K - V)

Glenn Cumming Membership Officer. Glenn Cumming / Michael Formaini. Carried.

Editorial Report: - The Editor, Andrew Waugh, presented the Editor's Report to the meeting.

Six issues of "Somersault" were published this year. A technical hitch with the print shop has been identified and is in the process of being rectified. New printing arrangements for "Somersault" will be implemented shortly.

I have very little time to devote to "Somersault" and I would appreciate assistance in the form of additional contributions. Even one article per issue from other sources would be a great help.

Anything of interest should be submitted including pictures. A special request is made for articles relating the experiences of people in the operating grades. Members are encouraged to contribute to Somersault.

Andrew Waugh Editor. Andrew Waugh / Andrew Wheatland. Carried.

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

Moved Chris King that a vote of thanks be given to Andrew Waugh. Carried with acclamation.

Archives Report: - No report was received.

Market Street Report: - In the absence of Peter Silva, Bill Johnston presented the Market Street Project Report.

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 are being prepared for painting and a number of carriers have now been 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.

Bill Johnston Market Street Sub - Committee Bill Johnston / Andrew Waugh. Carried.

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

No written nominations were received.

The following verbal nominations were received at the meeting: -

President: - David Langley, nominated by Laurie Savage and seconded by Graeme Dunn.

Vice President: - Bill Johnston, nominated by Steve Malpass and seconded by Andrew Waugh.

Secretary: - Glenn Cumming, nominated by Chris King and seconded by Ray Gomerski.

Treasurer: - Peter Silva, nominated by Chris King and seconded by Brian Sherry.

Committeeman: - Wilfrid Brook nominated by Chris King and seconded by Stuart Turnbull.

Committeeman: - Steve Malpass nominated by Tom Murray and seconded by Andrew Wheatland.

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 @ 20:36hrs.

The March 2011 Annual General Meeting was followed by the March 2011 Ordinary Meeting.

Minutes of the Resumed 2011 AGM held Friday 20 May, 2011, at the Surrey Hills Neighbourhood Centre, 1 Bedford Avenue, Surrey Hills

Present: - Wilfrid Brook, Brett Cleak, Graeme Cleak, Glenn Cumming, John Dennis, Mike Drew, Graeme Dunn, Vance Findlay, Michael Formaini, Ray Gomerski, Andrew Gostling, Bill Johnston, Chris King, Keith Lambert, David Langley, Steve Malpass, Andrew McLean, Tom Murray, Peter Silva, David Stosser, Damian Thomas, Andrew Waugh, Andrew Wheatland and Bob Whitehead.

Apologies: - Jon Churchward, Chris Gordon, Judy Gordon, Greg O'Flynn, Trevor Penn, Laurie Savage and Stuart Turnbull.

Visitor: - Tony Howker.

The President, Mr. David Langley, took the chair & opened the meeting @ 20:04 hours.

Treasurer's Report: - The Treasurer, Peter Silva, presented the Profit and Loss Statement and the Balance Sheet for the year ended 31 December 2010.

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

Motion: That the Treasurer's report is received and adopted. Peter Silva / Chris King. 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.

Bill Johnston / Wilfrid Brook. Carried.

There were no questions and no further discussion.

General Business: - Election of Auditor. Moved Bill Johnston, seconded Wilfrid brook, that Jon Churchward be appointed as Auditor of the SRSV for 2011. Carried.

Meeting closed @ 20:12 hrs.

The May 2011 Annual General Meeting was followed by the May 2011 Ordinary Meeting.

Signalling Alterations

The following alterations were published in WN 1/12 to WN 6/12 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.

16.12.2011 **North Bendigo Junction** (TON 365/11, WN 1)

On Friday, 16.12., the North Bendigo Workshops sidings were booked out of use due to conditions within the siding. The main line points at 164.232 km and 164.857 km were spiked out of use.

27.12.2011 **Seymour** (SW 152/11, WN 1)

On Tuesday, 27.12., Diagram 156/11 (Seymour) replaced 50/11. The changes relate to the provision of banner indicators on the standard gauge and relocation of the standard gauge 'Limit of Shunt' board. It appears that Banner Indicator SEY104BI was provided on the standard gauge between the Down end of the platform and the broad gauge crossing to the Loco Sidings, and the 'Limit of Shunt' board was moved in the Up direction.

08.01.2012 **North Geelong C** (SW 3/12, WN 2)

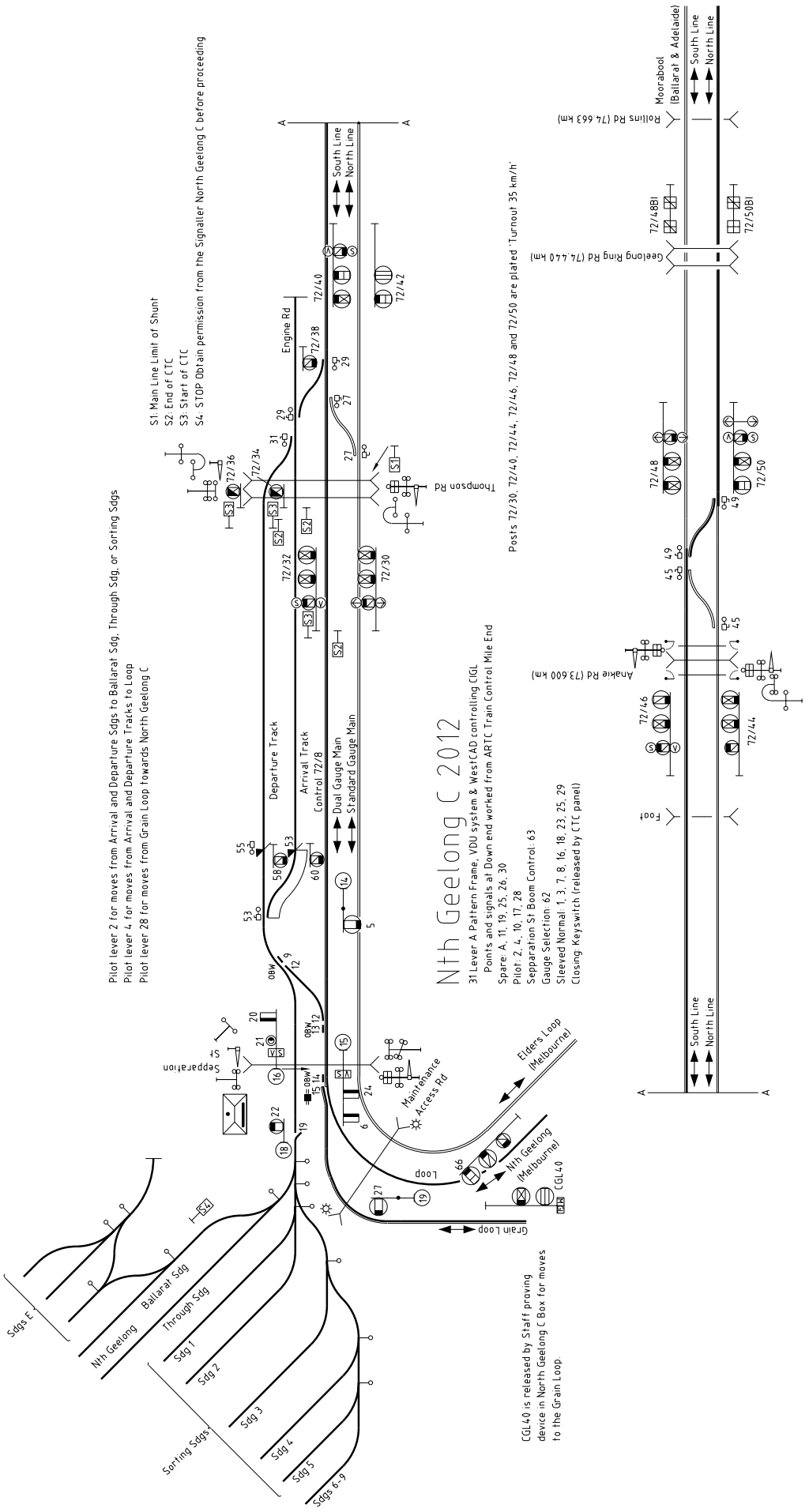
On Sunday, 8.1., the Sims Metal siding was abolished. The electric crosslock was removed and the A pattern Annett key withdrawn (the ground frame and points had previously been removed). Crosslock lever 25 became a spare lever and was secured in the normal position.

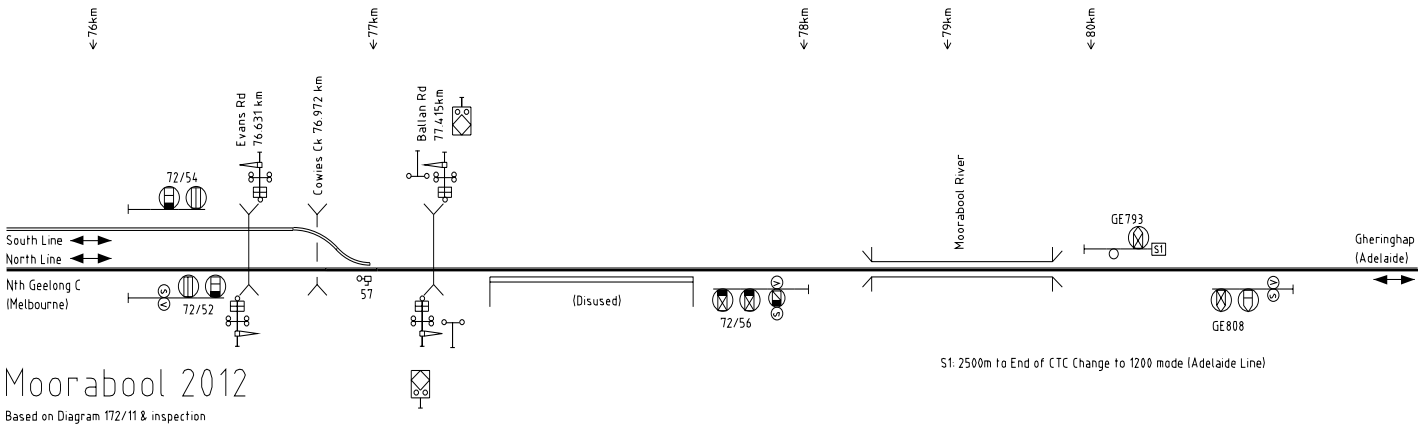
15.01.2012 **North Geelong C - Moorabool - Gheringhap** (SW 156/11, WN 1)

Between Thursday, 5.1., and Sunday, 15.1., the line between North Geelong C and Moorabool was duplicated. The existing line was renamed the 'North Line' and a new 'South Line' was provided to nearly the Up side of Ballan Rd at Moorabool. Facing and trailing crossovers are provided at Annakie Rd. Dual gauge is provided on the South Line between North Geelong C and the crossovers at Annakie Rd, and thence on the North Line to Moorabool. The standard gauge/broad gauge junction at Gheringhap was realigned and the fixed splitter replaced by a motorised splitter.

The crossovers at Annakie Rd, the turnout at Moorabool, and the motorised gauge splitter at Gheringhap are signed as '35 km/h' for moves through the turnout.

The panel at North Geelong C was replaced by a workstation. Operation of Points 53 & 55, Dwarfs 58 & 60, and Control levers 42, 44, & 46 were transferred to the workstation. Lever 63 (manual operation of the Separation St level crossing), and the push button release for pilot lever 28 were transferred to a stand alone housing on the block shelf.


Nth Geelong C 2012
31 Lever A Pattern Frame, VDU system & WestCAD controlling CIGL
Points and signals all Down end worked from ARTC Train Control Mile End
Spare: A, 11, 19, 25, 26, 30
Pilot: 2, 4, 10, 17, 28
Separation St Boom Control: 63
Gauge Selection: 62
Sleeved Normal 1, 3, 7, 8, 16, 18, 23, 25, 29
Closing Keyswitch (released by CTC panel)
Pilot lever 2 for moves from Arrival and Departure Sdgs to Ballarat Sdg, Through Sdg, or Sorting Sdgs
Pilot lever 4 for moves from Arrival and Departure Tracks to Loop
Pilot lever 28 for moves from Grain Loop towards North Geelong C
S1: Main Line Limit of Shunt
S2: End of CTC
S3: Start of CTC
S4: STOP Obtain permission from the Signaller North Geelong C before proceeding
Posts 72/30, 72/40, 72/44, 72/46, 72/48 and 72/50 are plated 'Turnout 35 km/h'
CGL40 is released by Staff proving device in North Geelong C Box for moves to the Grain Loop.
Departure Track
Arrival Track
Control 72/8
Dual Gauge Main
Standard Gauge Main
South Line
North Line
Engine Rd
Thompson Rd
Separation St
Maintenance Access Rd
Elders Loop (Melbourne)
Nth Geelong (Melbourne)
Grain Loop
Loop
Nth Geelong
Ballarat Sdg
Through Sdg
Sdg 1
Sdg 2
Sdg 3
Sdg 4
Sdg 5
Sdgs 6-9
Sorting Sdgs
Sdgs E
Rollins Rd (74.663 km)
Moorabool (Ballarat & Adelaide)
Geelong Ring Rd (74.440 km)
Ankle Rd (73.600 km)
Foot



Moorabool 2012

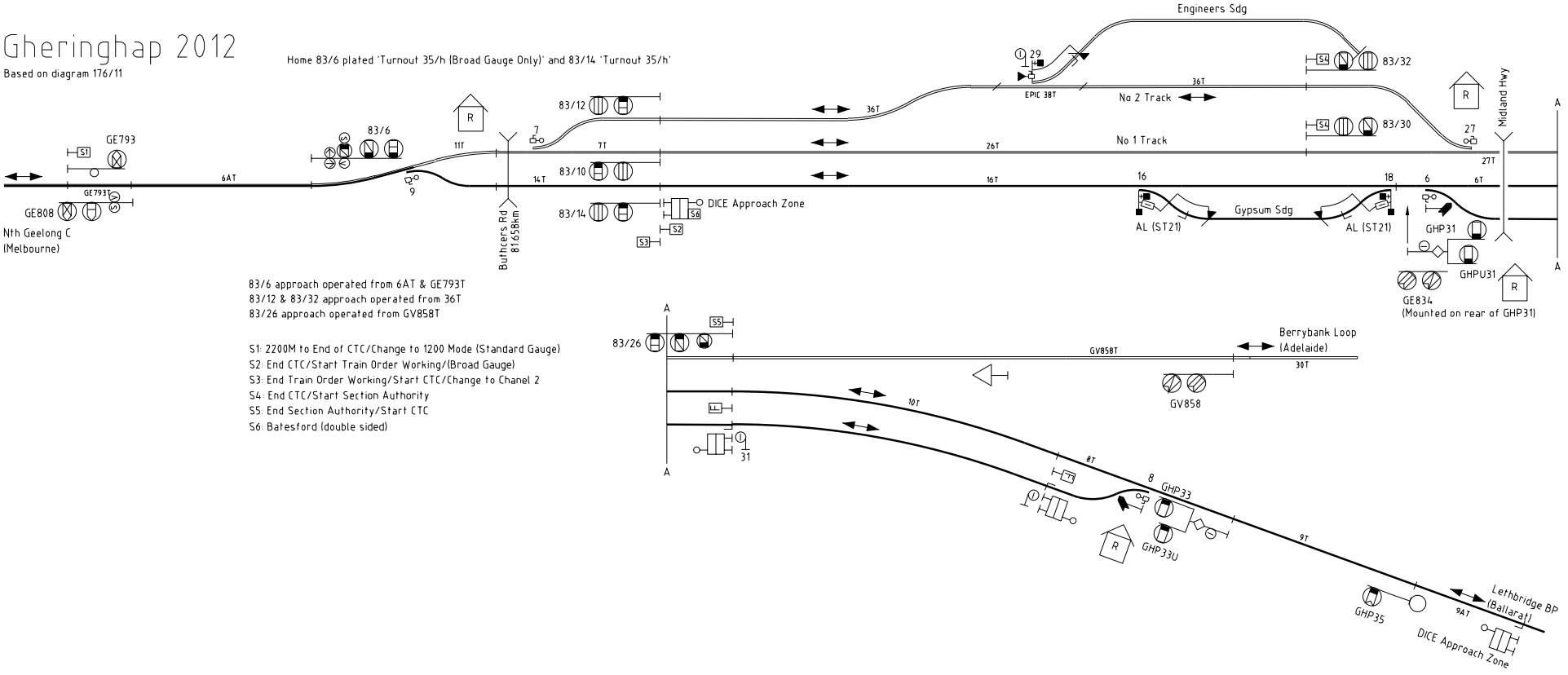
Based on Diagram 172/11 & inspection

S1: 2500m to End of CTC Change to 1200 mode (Adelaide Line)

Gheringhap 2012

Based on diagram 176/11

Home 83/6 plated 'Turnout 35/h (Broad Gauge Only)' and 83/14 'Turnout 35/h'



83/6 approach operated from 6AT & GE793T
83/12 & 83/32 approach operated from 36T
83/26 approach operated from GV858T

S1: 2200M to End of CTC/Change to 1200 Mode (Standard Gauge)
S2: End CTC/Start Train Order Working/(Broad Gauge)
S3: End Train Order Working/Start CTC/Change to Chanel 2
S4: End CTC/Start Section Authority
S5: End Section Authority/Start CTC
S6: Batesford (double sided)

Diagrams 174/11 (North Geelong), 172/11 (North Geelong - Moorabool) and 176/11 (Gheringhap) replaced 16/11, 8/11, and 160/11.

19.01.2012 **North Bendigo Junction** (TON 22/12, WN 3)

On Thursday, 19.1., the North Bendigo Workshops sidings were booked back into service. TON 365/11 was cancelled.

21.01.2012 **North Melbourne** (SW 13/12, WN 3)

On Saturday, 21.1., the point machine on Points 688 was replaced by a Siemens S700VA and a Sherlock for type approval.

22.01.2012 **Epping** (SW 10/12, WN 2)

On Sunday, 22.1., four new stabling sidings were commissioned on the site of the former platforms. The sidings are numbered 3A, 3B, 3C, and 3D. They are each 154 metres in the clear and are fitted with anti-friction buffers. Electro-hydraulic Points 077, 079, and 081 were provided. Dwarfs 177, 179, 181, and 183 were provided. Diagram 75/11 (Ruthven - Epping) replaced 9/11.

(24.01.2012) **Ballarat - Maryborough** (SW 54/12, WN 3)

Signalling Diagrams 120/11 (North Ballarat Junction), 178/11 (Sulky), 124/11 (Creswick), 180/11 (Tourello), 122/11 (Clunes), 182/11 (Talbot), and 118/11 (Maryborough) replaced 80/11 (North Ballarat Junction), 32/10 (Sulky - Talbot), and 38/10 (Maryborough) as in service.

30.01.2012 **Westall - Springvale** (SW 25/12, SWP 1/12, WN 3 & 4)

Between 1000 hours Friday, 27.1., and 0400 hours Monday, 30.1., the existing relay interlocking at Springvale (which also controlled Westall) was replaced by a SmartLock/Sigview interlocking controlled from Dandenong. Springvale signalbox was closed.

The signalling associated with the third platform at Westall and the by-pass line was commissioned. All points and signals were renumbered. All remaining illuminated letter 'A's were abolished. At Westall the driver operated control panels in the stabling sidings were abolished. An additional Stabling Siding was provided and the existing Stabling Sidings 8 & 9 were renumbered 9 & 10 respectively. The Shunting Track was renamed Siding B, and a portion of the Through Goods Track was renamed Siding A. No 2 Cripple Siding (Cripple Road) will be secured out of use until further notice.

At Clayton the 5P keyswitches in the Up side station building were abolished.

Homes WTL724, WTL725, WTL729, WTL731 (fixed at Stop), WTL732, WTL733, WTL735, WTL737, WTL739, WTL740, and WTL 742 were provided. Dwarfs WTL747, WTL749, WTL750, WTL754, WTL756, WTL758, WTL760, WTL762, WTL764, WTL766, and WTL768 were provided. Automatics WL730, and D740 were provided. Co-acting signals WTL740P, and WTL794P were provided. Homes D663, D679, 4, 44, 46, 54, 24, 60, 70, 72, 74, and 48 were renumbered WTL726, WTL728, WTL734, WTL744, WTL794, WTL796, WTL741, WTL775, WTL746, WTL748, WTL751, and WTL798 respectively. Dwarfs 10, 28, and 50 were renumbered WTL736, WTL752, and WTL769 respectively. Automatics 38, D620, D709, SPG026, and D780 were renumbered WTL771 (sic!), WTL771, WTL738, WTL745, and WTL770 respectively. Automatics 22 and D645 were abolished. Dwarfs 6, 8, 30, 32, 34, and 36 were abolished.

All main line points are operated by a dual control point machine.

Signalling Diagrams 3/12 (Caulfield), 5/12 (Carnegie - Huntingdale), 7/12 (Clayton - Springvale), 9/12 (Sandown Park - Yarraman), and 11/12 (Dandenong - Hallam) replaced 1/06, 55/10, 77/11 (Clayton - Yarraman), and 131/10.

Operating Procedure 13 (Springvale - Westall Failure of Signals) was re-issued.

08.02.2012 **Woorinen** (TON 32/12, WN 6)

On Wednesday, 8.2., the siding was booked out due to sleeper condition. The points are secured normal.

13.02.2012 **Newport** (SW 42/12, WN 5)

On Monday, 13.2., co-acting signal NPT721P was brought into service.

13.02.2012 **Newport South - Altona Junction** (SW 40/12, 41/12, & 52/12, WN 5 & 6)

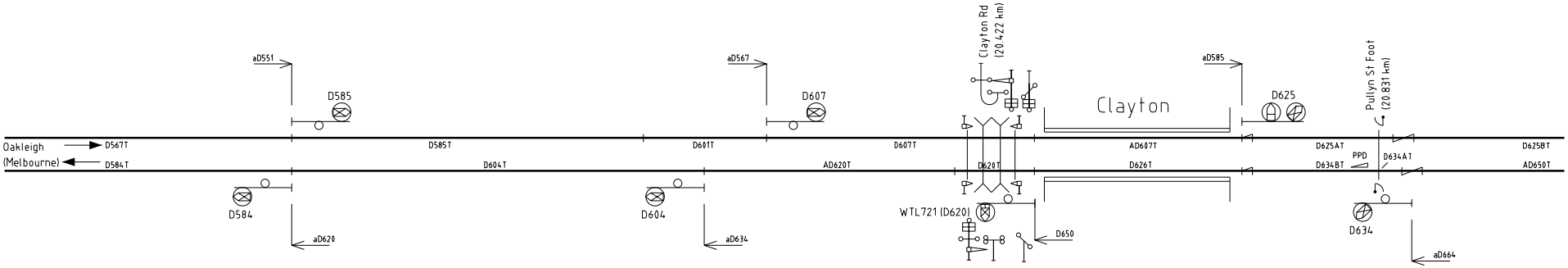
Between 2115 hours Friday, 10.2., and 0400 hours Monday, 13.2., track and signal alterations took place at Newport South in conjunction with the Newport Workshops Stabling project. Points 165 were replace by a new tangential turnout with M23A point machine located 72 metres in the Up direction. Down Homes 164 and 166 were replaced by new LED masts located 72 metres in the Up direction. Signals 162 and 170 were replaced by LED signals. Points 165 remain secured out of service. Automatics G457 and GG457 were renewed with LED lights. Amend Diagram 47/11 (Newport - Laverton). Diagram 13/12 (Newport - Altona Junction) subsequently replaced 47/11.

(14.02.2012) **Bendigo** (SW 9/12, WN 6)

The Wagon and Storage Roads leading from the Independent Siding past Stop Boards 4 & 5 have been removed to allow for construction of Stabling Sidings. The crane, lifting pad, derail block and associated signs have been removed. The points in the Independent Siding have been secured normal. Amend Diagram 72/11 (Bendigo).

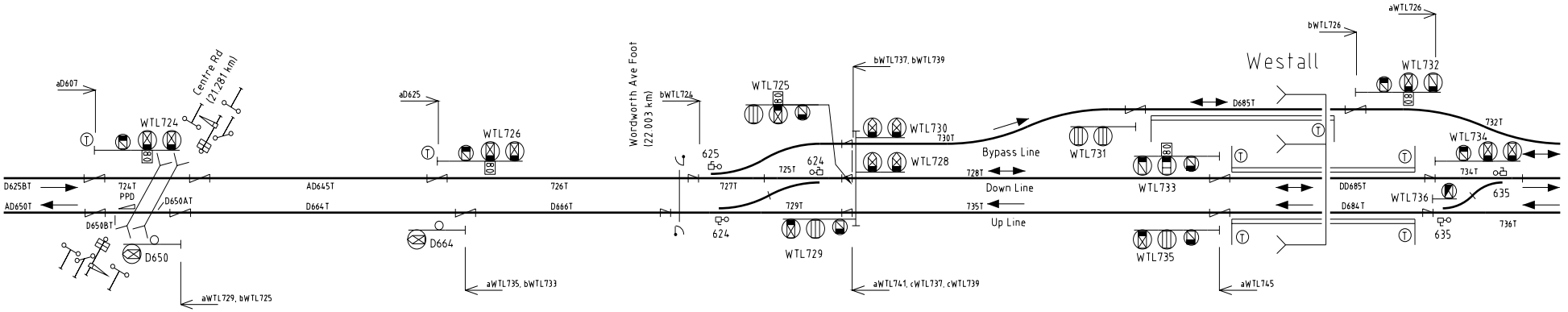
19.02.2012 **Laverton Loop** (SW 48/12, WN 6)

Between Saturday, 11.2., and Wednesday, 19.2., ARTC commissioned track and signal alterations at Laverton Loop. Diagram 25/12 (Altona Junction - Laverton) replaced 45/10.



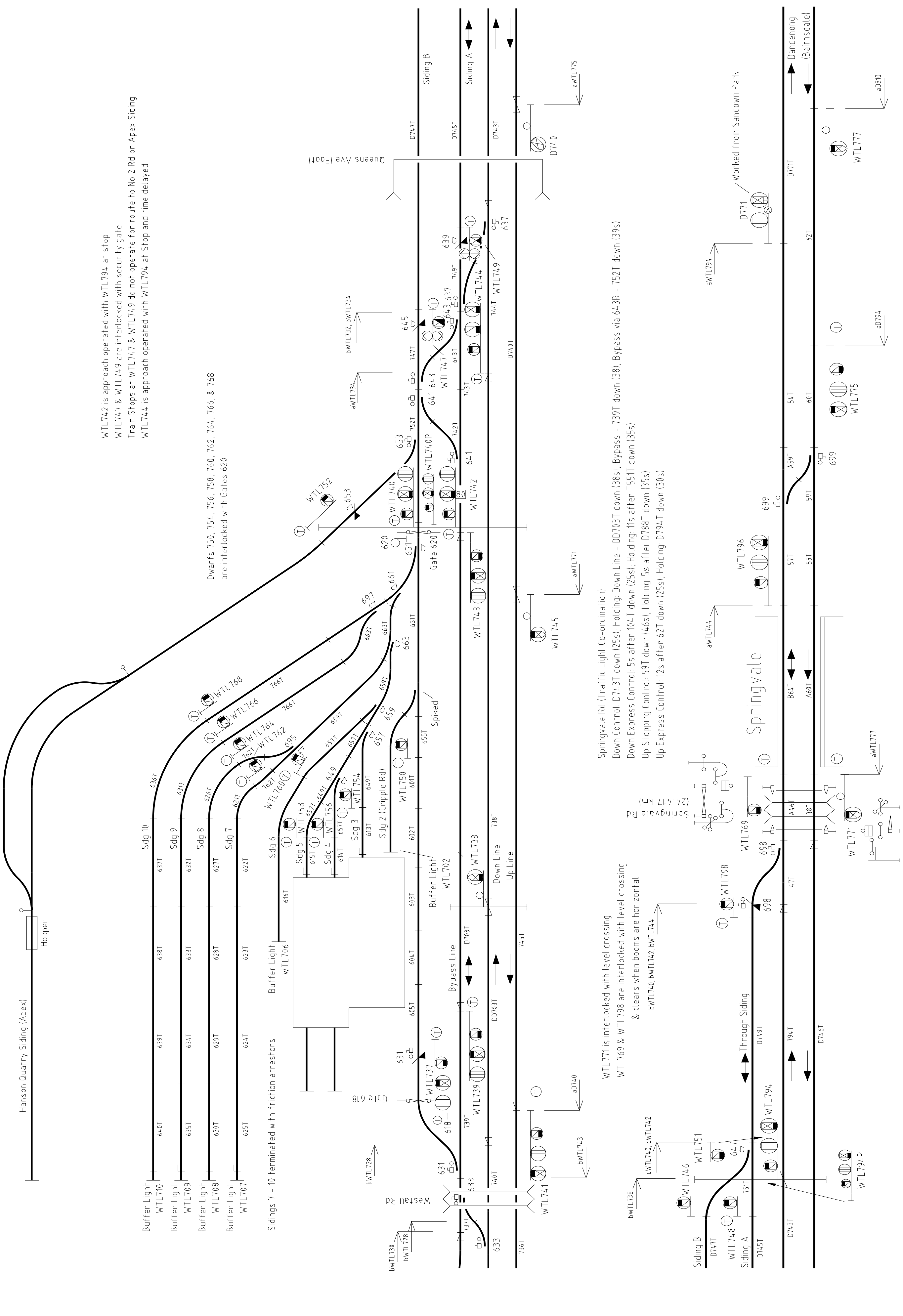
Clayton Rd (Traffic light co-ordination)
Down Control: 5s after D607T down (25s); Holding: D567T down (35s)
Up Stopping Control: D626T down (42s); Holding: 5s after D650AT down (32s)
Up Express Control: AD650T down (25s); Holding: D664T down (35s)

Pullyn St (Foot)
Down Control: D607T down (25s)
Up Control: D664T down (25s)



Centre Rd (Traffic light co-ordination)
Down Stopping Control: D625AT down (31s); Holding: 10s after AD607T down (37s)
Down Express Control: D625AT down (26s); Holding: D607T down (32s)
Up Stopping Control: D666T down (31s); Holding: Up Line - 735T down (36s), Down Line - 728T down (36s)
Up Express Control: D666T down (31s); Holding: Up Line - D684T down (33s), Down Line - DD685T down (39s)

Wordsworth Ave (Foot)
Down Stopping Control: AD645T down (28s); Holding: B625BT down (21s)
Up Stopping Control: Up Line - 8s after 735T down (25s), Down Line - 8s after 728T down (25s); Holding: Up Line - 31s after D684T down (20s), Up Line (when 635R) - 50s after D684T down (22s), Down Line - 29s after DD685T down (20s)
Up Express Control: Up Line - D684T down (30s), Down Line - 11s after DD685T down (25s); Holding: Up Line - 736T down (10s), Up Line (when 635R) - 734T down (14s), Down Line - DD685T down (11s)?


WTL742 is approach operated with WTL794 at stop
WTL747 & WTL749 are interlocked with security gate
Train Stops at WTL747 & WTL749 do not operate for route to No 2 Rd or Apex Siding
WTL744 is approach operated with WTL794 at Stop and time delayed
Dwarfs 750, 754, 756, 758, 760, 762, 764, 766, & 768
are interlocked with Gates 620
Springvale Rd (Traffic Light Co-ordination)
Down Control: D743T down (25s), Holding: Down Line - DD703T down (38s), Bypass - 739T down (38), Bypass via 643R - 752T down (39s)
Down Express Control: 5s after 104T down (25s), Holding: 1s after T551T down (35s)
Up Stopping Control: 59T down (46s), Holding: 5s after D788T down (35s)
Up Express Control: 12s after 62T down (25s), Holding: D794T down (30s)
WTL771 is interlocked with level crossing
WTL769 & WTL798 are interlocked with level crossing
& clears when booms are horizontal
Sidings 7 - 10 terminated with friction arrestors
Hanson Quarry Siding (Apex)
Hopper
Queens Ave (Foot)
Westall Rd
Springvale
Springvale Rd
(24.417 km)
Worked from Sandown Park
Dandenong
(Bairnsdale)
Siding A
Siding B
Down Line
Up Line
Bypass Line
Through Siding
Sdg 2 (Cripple Rd)
Gate 618
Gate 620
Spiked

Collision on the Zig Zag Railway

The NSW Office of Transport Safety Investigation (OTSI) has completed its investigation into the collision of a railmotor and a hi-rail vehicle on the Zig Zag Railway on 1 April 2011. The accident was found to be caused by a safeworking irregularity.

The Zig Zag Railway is located in the Blue Mountains near Lithgow. It is a 3'6" gauge line operating over the former standard gauge 'Great Lithgow' zig zag. The operational headquarters of the line is at Bottom Points, near Lithgow, and adjacent to the current Main West standard gauge line. From Bottom Points the line climbs at around 1 in 40 across the face of the Blue Mountains escarpment to Top Points. Here is the reversal of the zig zag, and the line reverses direction. It continues to climb the escarpment at around 1 in 40. Just after the summit tunnel is the current terminus at Clarence. The line is single and is operated under the Train Staff and Ticket system with two sections: Bottom Points - Top Points, and Top Points - Clarence. The terrain through which the line operates is extremely rugged, and road access is extremely limited to much of the line.

On the day of the accident train services were being operated by a single train, a former QR 2000 class railmotor composed of two cars 2006 and 2016. The railcar was scheduled to shuttle between Clarence and Bottom Points, with departures from Clarence scheduled for 1100, 1300, and 1500. The crew of the railmotor were the only operational staff on duty. The driver was a very experienced volunteer, and he was also the Zig Zag Railway's operations manager (who, among other duties, authorised any deviations from the rules). As was usual when only one train was operating, the railmotor driver was also acting as train controller (authorising rail movements). The guard, on the other hand, was very inexperienced. Although he had previously qualified as a driver and condutor at the Loftus Tramway Museum, he had only just qualified as a trainee guard at the Zig Zag Railway and had only just started to work unsupervised.

The railmotor departed empty cars from Bottom Points at 1033 to Clarence where it was to form the first passenger service. As the railmotor was the only train on the line it took both staffs (Bottom Points - Top Points and Top Points - Clarence). This was the usual practice when only one train operating on the line as the driver was also the train controller and, having possession of both staffs, could authorise the issue of Safeworking Advice Forms (SAFs). In fact the rail motor had been fitted with two staff holders in the Lithgow end driving cab to hold the staffs. This, however, was contrary to the Rulebook which required the staffs to be held in a Staff & Ticket Box when not in use.

The return journey to Bottom Points, carrying passengers, departed on time at 1100 and arrival at Bottom Points was at 1120. Before the departure of the next trip to Clarence, the driver was busy organising maintenance staff to replace a blowing 'dead man' valve, and the guard was giving the passengers a tour of the workshops.

A hi-rail was waiting to depart from Bottom Points carrying two maintenance staff. The staff were to provide worksite protection for a Roads and Traffic Authority (RTA) worksite 2.2 km west of Clarence. The plan was that the hi-rail would precede the railmotor to Clarence, and then follow it back to the worksite. Accordingly the hi-rail driver took both staffs from the railmotor. Going to the signalbox, he made out a staff ticket for the Bottom Points - Top Points section and left that staff in the signalbox. He retained the Top Points - Clarence staff. The hi-rail then departed for Top Points, however the driver did not obtain the train controller's permission to depart. Once at Top Points, the hi-rail driver radioed the train controller to inform him that they had arrived complete. The hi-rail driver then filled out a staff ticket for the Top Points - Clarence section and left that staff in the signalbox. He also filled out a Safeworking Advice Form (SAF) for the RTA worksite. The hi-rail then left for Clarence.

The guard of the railmotor retrieved the Bottom Points - Top Points staff from the signalbox and placed it in one of the holders at the Lithgow end of the railmotor (where the driver would sit for the trip to Top Points). The railmotor then ran from Bottom Points to Top Points on staff on its scheduled service. At Top Points the driver changed ends, and the guard operated the signalbox to allow the railmotor to proceed to Clarence. When rejoining the train, however, the guard neglected to collect the Top Points - Clarence staff. This was not noticed by the driver as he did not view the staff before departure "as it normally travels in the Lithgow end". The ZZR operations manual required the driver (and guard) to confirm the correctness of the staff before departure. The railmotor consequently travelled through the Top Points - Clarence section without the staff.

That the staff for the section had been left at Top Points was discovered when the railmotor arrived at Clarence and the hi-rail driver requested the staff (the hi-rail would follow the railmotor to the worksite). To retrieve the staff from Top Points by road would have required a round trip of around 40 minutes involving both highway travel and a 4-wheel drive only dirt track, followed by a steep foot descent. (The report does not state whether travel by road vehicle was, in fact, an option. Although the hi-rail was at Clarence, the hi-rail driver did not hold a license to drive on public roads and it is not stated whether any of the other staff or volunteers there were qualified to drive the hi-rail.) While the Rulebook provided for the issuing of Safeworking Advice Forms in this case, these rules required that the staff be in the possession of a qualified person.

Instead, the railmotor driver, acting as the operations manager, authorised the operation of the railmotor and the hi-rail back to Top Points without any formal authority. The railmotor driver stated "There was no paperwork done for this as there was nobody at Top Points to secure the Staff and issue a Safeworking Advice Form."

The railmotor departed Clarence at 1302 with four passengers on board. After passing through the tunnel on the way to Top Points the railmotor driver radioed the hi-rail and informed the driver that they were clear of that point. The hi-rail departed Clarence on that assurance. When the railmotor passed the point at which the RTA worksite was to be established, the driver again radioed the hi-rail to inform the driver that the line was clear to that point and it was safe to proceed to the worksite. The hi-rail duly travelled to the worksite and the protection was set up.

On arrival at Top Points at 1324 it would appear that the railmotor was driven right to the dead end. The guard then took the passengers on a short tour of the location while the driver drove the short distance back to the signalbox. Top Points curves tightly, in deep cuttings, around the end of a ridge, consequently the railmotor was now out of sight of the guard. Once at the signalbox the driver retrieved the Top Points - Clarence staff from

the table. He then decided to return to the RTA worksite by railmotor to give the staff to the driver of the hi-rail. The purpose of this was to give protection to the hi-rail, however the OTSI noted that with the staff in the driver's possession he could have issued a Safeworking Authority Form (SAF) to the hi-rail. The driver departed from Top Points in the railmotor without informing the guard or the crew of the hi-rail of this decision. The driver did not have access to a radio in the leading cab of the railmotor. The railmotor was supposed to be equipped with two portable radio in addition to a fixed radio. However, when the guard prepared the railmotor for service at Bottom Points that morning, he had discovered that one of the two portable radios available was defective. Only one portable radio was therefore taken, and this was with the guard. The railmotor did have a fixed radio, but this was located in the driver's cab at the Lithgow end of the train, not in the leading cab at the Clarence end.

In the meantime, the hi-rail crew had completed setting up the worksite protection and attempted to contact the railmotor driver (acting as train controller/operations manager) for permission to return to Top Points. They made several attempts to call the driver. Eventually, the guard responded to the call. The guard gave permission for the hi-rail to return to the Outer Home signal at Top Points. He did this believing that the railcar was still at Top Points. The guard, however, had no authority to give permission to return; the rail motor driver (acting as train controller and operations manager) was the only person who could give the necessary permission.

The railmotor driver was slowing down for a 10 km/h perway slack over No 1 Viaduct when he saw the hi-rail coming the other way, about 50 metres away. He immediately applied the brakes and cut back the throttle, but did not sound the horn as he had his hand on the brake and did not want to remove it.

The hi-rail was freewheeling in reverse down the 1 in 42 grade with the engine out of gear. It was travelling at 20 km/h over the viaduct, even though the speed limit was 10 km/h. The crew were not keeping a continuous lookout in the rear view mirrors, and, in fact, were completely unaware of the railmotor until the collision occurred. The railmotor and hi-rail collided on No 1 Viaduct and the impact lifted the front of the hi-rail into the air. All the passenger in the hi-rail could see was the sky and he was worried that the hi-rail would go over the edge of the viaduct. Curiously, the report does not consider why the hi-rail was operating in revese. Clearly, the layout of the Zig Zag Railway would either require a hi-rail to turn around at Top Points or operate in reverse over a portion of the line. It is equally clear that it would be quite slow *driving* the hi-rail in reverse gear any distance. It would be natural, therefore, for the hi-rail to roll down hill in reverse. But this meant an extremely limited view by the crew and that engine braking could not be used.

In the collision, the driver of the hi-rail was briefly knocked out and suffered a sore lower back, shoulders and legs. The passenger suffered a bruised spine and legs. The railmotor driver loaded them into the railmotor and the driver reversed hauling the hi-rail (the tow bar on the hi-rail had penetrated the skirt of the railmotor). After 500 metres the hi-rail detached from the railmotor and derailed. The railmotor driver determined that it would not move or run away and decided to leave it. No protection was put down, even though the hi-rail was foul of the track. The railmotor was then driven back to Top Points where it arrived at 1330. The passengers and guard were collected and the railmotor returned to Bottom Points. The driver of the railmotor did not report the collision by radio. Once at Bottom Points the driver and the passenger of the hi-rail were taken to hospital.

The railmotor driver then made up a works train and loaded a crane on board with the intention of returning to the accident site to clear the track. In the meantime one of the volunteer workers notified the Acting General Manager of the railway who contacted the driver at Top Points and instructed him to cease operations and preserve the accident site for the investigators. The General Manager then notified the OTSI.

The immediate cause of the accident was that the inexperienced guard, without any authority, gave permission for the hi-rail to return to Top Points, and the driver of the hi-rail accepted and acted on this authority. The accident would also not have occurred had the guard not left the staff behind at Top Points, and this would have been detected if the driver and guard had checked that the railmotor had the correct staff before departure.

However, the OTSI was extremely critical of the underlying safety management systems on the Zig Zag Railway. They noted that trains regularly departed Top Points for Clarence without the staff, this was due to the long standing practice of carrying both staffs in the Lithgow end of the railmotor, thus preventing them being easily sighted by the driver upon depature. It was also reported that, on occasion, workers acted independently or in concert to arrange rail traffic without the express permission of the train vontroller, and this may have led the guard to believe he had the authority to authorise the hi-rail's movement. Both of these latent conditions were known to the railway's management, and specifically to the operations manager, but they were tacitly permitted to be practiced.

That the driver was also acting as train controller and operations manager meant that there were no checks on poor or hasty decisions. It also removed the need for the driver to communicate his decisions.

The Zig Zag Railway has made a number of operational changes since the accident:

* The Staff or Ticket is to be in the driving compartment.
* All train movements need the approval of the Train Controller who will record the details of each movement.
* Every driver, guard, signalman, ganger, worksite supervisor, hi-rail operator, section car operator, and track machine operator must have a working UHF radio.
* Train movements must cease if effective communications cannot be established or maintained with the Train Controller.
* Railmotors must be worked by a crew of two (driver and guard).
* Hi-rails are to be driven in the forward direction where possible.
* Train register books are now located at Bottom Points, Top Points, and Clarence.

North Geelong - Gheringhap

Photos by David Langley

The ARTC has just commissioned the duplication (re-duplication) of the line between North Geelong and Moorabool, and altered the standard/broad gauge junction at Gheringhap. This double page shows a selection of photos of signals on the new duplication and at Gheringhap. (Left) Down Home 83/6 governs arriving movements off the dual guage line into Gheringhap. As part of the new work, the lead to the standard gauge side of Gheringhap was realigned to permit higher speed running and the fixed gauge splitter replaced by a motorised one. The four smaller lights on Home 83/6 are route indicators. The top two are 'S' and 'V' indicators to indicate whether the route is set for broad or standard gauge moves. The lower two are arrow indicators showing whether a standard gauge route is set to the main line (Up arrow) or Loop (left arrow). This indicator is not illuminated for broad gauge moves. The low speed light is a very small box between the arrow indicators. All the new turnouts between North Geelong and Gheringhap (including the gauge splitter) are limited to 35 km/h for diverging movements, which is indicated by the sign on the post. From a rules perspective, this presumably modifies the meaning of the medium speed aspect which would otherwise be available for 40 km/h. (Bottom Left) Up Home 83/14 from the broad gauge line at Gheringhap shows Clear Medium Speed and Stop. On the signpost at the left is the word 'Batesford' which is the name of the location at the end of the very short broad gauge train order section (Gheringhap Loop - Batesford). Without this location, there might be confusion about rights to occupy the short section of broad gauge track from the broad gauge Gheringhap loop and the beginning of the CTC at Home 83/14. (Right) Three aspect three position Dwarf 72/34 governs broad gauge movements from the Departure Track at North Geelong C towards the dual guage South Track to Gheringhap or the Engine Road. As can be seen, this Dwarf can show Clear Low Speed for movements towards Gheringhap. (Below) The Up Homes (72/48 and 72/50) at North Geelong governing movements over the crossovers at Anakie Road. Both can show arrow type route indicators to indicate whether trains are routed over the North or South Lines, while the lefthand Home 72/50 can also show 'S' or 'V' as it is located on a section of dual gauge track.

The crossovers at Anakie Road, North Geelong, are interesting examples of dual guage point work. At these crossovers the dual gauge from North Geelong swaps from the South Line to the North Line onwards to Moorabool. On this page can be seen two views of the Down end of Crossover 49 in which broad gauge moves can only be made through the diverge. Note how the broad gauge point blade (leftmost in the above view) also forms the standard gauge rail when the crossover is normal. The common point blade (on the right side above) has a guard rail mounted against it to ensure that broad gauge wheelsets are well over to the common rail side so they do not take the wrong path when they cross the standard gauge rail

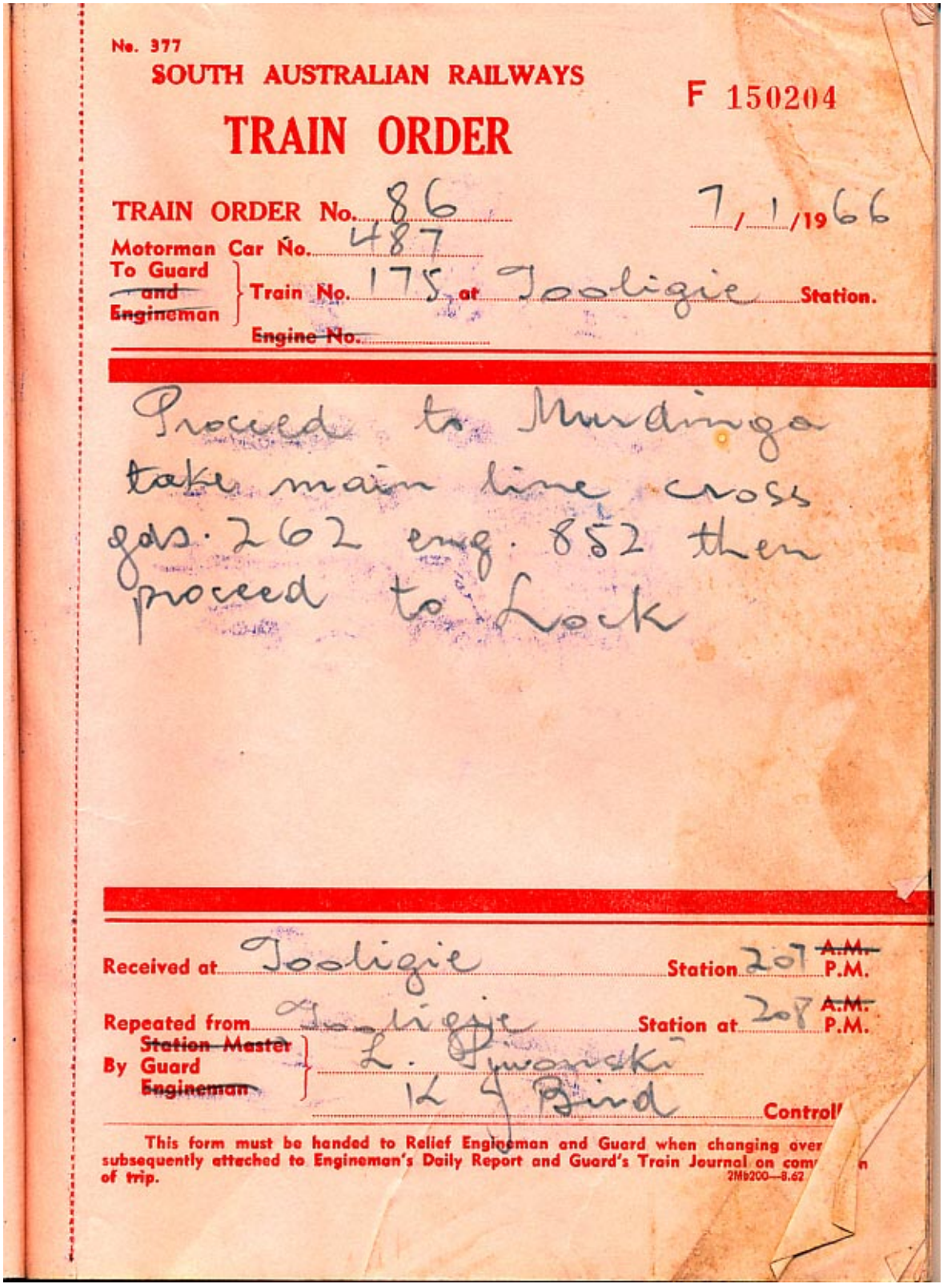
Above is the other (Up) end of Crossover 49. This set of points is essentially a standard gauge turrnout with the broad gauge rail on the north side of the standard gauge. Below is the Down end of Crossover 45. This crossover is standard gauge only, with broad gauge moves only possible along the straight. The points themselves, consequently, are simple standard gauge points, but as the broad gauge rail is on the turnout side, complicated rail arrangement is required to get the standard gauge rail across the broad gauge rail.

Three Train Orders from South Australia

These three train orders are from the book kept at Tooligie (on the York Peninsula) between January and April 1966. Tooligie was 113.4 km (70 miles 27 chains) from Port Lincoln on the Thevenard line. The three Train Orders were issued on the same day, Friday 7 January 1966.

The first Train Order was issued to Railcar 487 heading north on Train 175. This was the Friday railcar that departed Port Lincoln at 1045 and terminated at Minnipa (253.4 km) at 1710. Issued at 1407, the order instructed the motorman (not driver) and guard to proceed to Murdinga (15 km north of Tooligie) and, holding the main line, cross southbound Goods Train 262 hauled by engine 852. The railcar was then authorised to proceed to Lock, 20 km further on, where a fresh Train Order would be issued for onwards movement.

The second Train Order was issued to southbound Train 262 at 1515, after it had crossed Railcar 487 at Murdinga. The order was to proceed to Cummins (46 km



No. 377

SOUTH AUSTRALIAN RAILWAYS

F 150204

TRAIN ORDER

TRAIN ORDER No. 86 7/1/1966

Motorman Car No. 487

To Guard ~~and Engineman~~ Train No. 175 at Tooligie Station.

~~Engine No.~~

Proceed to Murdinga take main line cross gds. 262 eng. 852 then proceed to Lock

Received at Tooligie Station 207 ~~A.M.~~ P.M.

Repeated from Tooligie Station at 207 ~~A.M.~~ P.M.

~~Station Master~~ By Guard ~~Engineman~~ L. Piwonski

K J Bird

Control

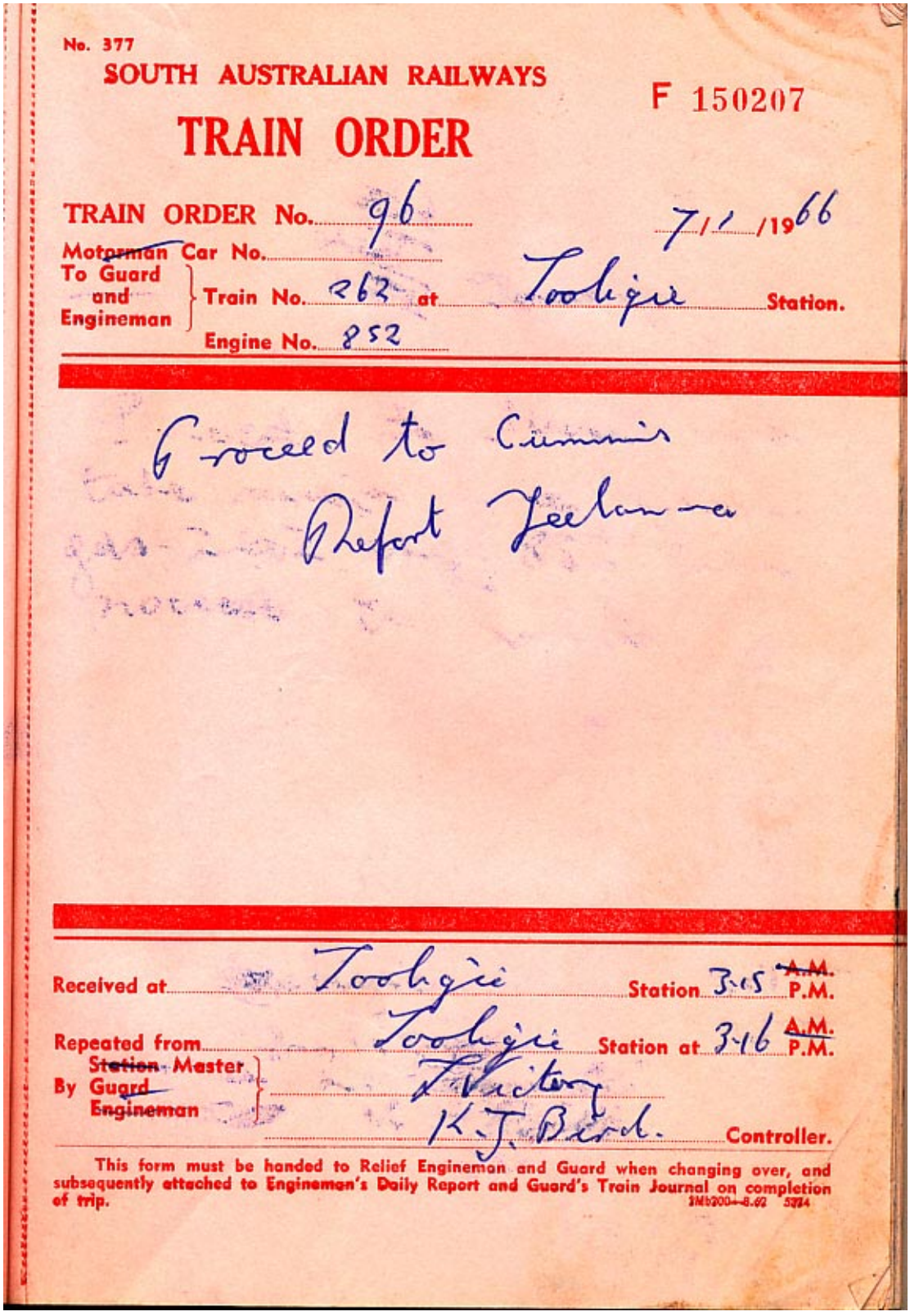
This form must be handed to Relief Engineman and Guard when changing over subsequently attached to Engineman's Daily Report and Guard's Train Journal on com n of trip.

2Mb200—8.62

south of Tooligie), reporting at Yeelanna (32 km south of Tooligie). Cummins was a significant location on the Peninsula lines as it was the junction of the branch line to Buckleboo. The goods was hauled by 852, an 830 class Goodwin-Alco that had commissioned new at Port Lincoln in September 1963.

The third Train Order was issued to southbound Goods 166 at 1737 to proceed to Yeelanna. This was, of course, the reason that Train 262 had been required to report at Yeelanna. In the two and a quarter hours since southbound Tain 262 had departed Tooligie, it had passed Yeelanna (32 km away), but not yet reached Cummins (46 km away). Interestingly, this second goods was hauled by sister Goodwin-Alco 853.

Information in these notes has been taken from that excellent book 'Peninsula Pioneer' by Peter Knife, 2006.



No. 377

SOUTH AUSTRALIAN RAILWAYS

F 150207

TRAIN ORDER

TRAIN ORDER No. 96 7/ /1966

Motorman Car No.

To Guard and Engineman } Train No. 262 at Tooligie Station.

Engine No. 852

Proceed to Cummins

Report Yeelanna

Received at Tooligie Station 3.05 ~~A.M.~~ P.M.

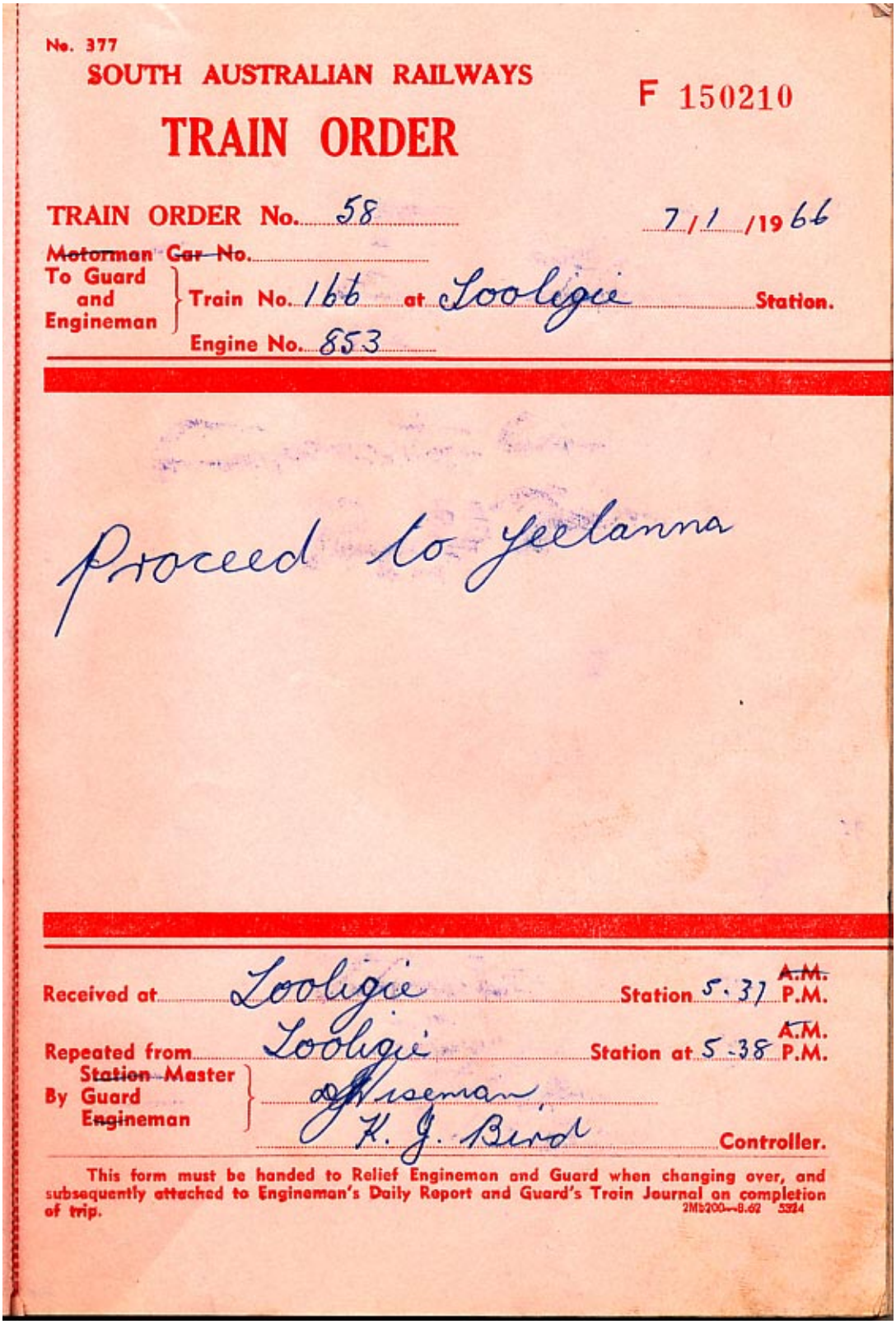
Repeated from Tooligie Station at 3.16 ~~A.M.~~ P.M.

~~Station Master~~ By ~~Guard~~ Engineman } Victory

K. J. Bird. Controller.

This form must be handed to Relief Engineman and Guard when changing over, and subsequently attached to Engineman's Daily Report and Guard's Train Journal on completion of trip.

2Mb200—8.62 5284



No. 377

SOUTH AUSTRALIAN RAILWAYS

F 150210

TRAIN ORDER

TRAIN ORDER No. 58 7/1/1966

~~Motorman~~ ~~Car No.~~

To Guard and Engineman } Train No. 166 at Looligie Station.

Engine No. 853

Proceed to Yeelanna

Received at Looligie Station 5.37 ~~A.M.~~ P.M.

Repeated from Looligie Station at 5.38 ~~A.M.~~ P.M.

~~Station Master~~ By Guard ~~Engineman~~ } Fireman

K. J. Bird Controller.

This form must be handed to Relief Engineman and Guard when changing over, and subsequently attached to Engineman's Daily Report and Guard's Train Journal on completion of trip.

2M5200—8.62 5324