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SIGNALLING RECORD SOCIETY OF VICTORIA INC



The 25 lever A pattern interlocking frame was provided at Rockbank on 2 November 1914, however it appears that it was not brought into use until 29 January 1915 when Rockbank was opened as an electric staff station. Rockbank was only open as a staff station when the wheat was running and switchout instruments were provided in December 1916. Rockbank was permanently opened as a staff station in May 1920 and the switchout instruments were removed in July 1923. In September 1960 the crossing loop was extended at the Down end to be 2400 feet long. On 3 October 1976 the section from Deer Park was converted to CTC, worked from Sunshine. The main line signals at the Up end had been converted to two position light signals about two months previously. The section to Melton, however, remained worked by miniature electric staff instruments for another fourteen years. On 21 January 1990 the section to Melton was converted to ATC worked from Bacchus Marsh. The mechanical frame and all mechanical signals were consequently replaced by three position light signals. The station buildings were demolished shortly afterwards and the two platforms at Rockbank is now graced with bus shelters.

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MINUTES OF MEETING HELD FRIDAY MARCH 21, 2003,

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

Present: - N.Bamford, J.Black, W.Brook, B.Cleak, G.Cleak, G.Cumming, C.Gordon, W.Johnston, K.Lambert, S.Malpass, B.McCurry, J.McLean, L.Savage, B.Sherry & P.Silva.

Apologies: - K.Ashman, J.Briggs, I.Chan, J.Churchward, A.Hinde, D.Langley, T.Murray, G.O'Flynn, S.Turnbull, A.Waugh, & R.Whitehead.

In the absence of the President, the Vice - President, Mr. Bill Johnston, took the chair & opened the meeting @ 20:47 hours, following the 2003 Annual General Meeting.

Minutes of the February 2003 Meeting: - Accepted as published. S.Malpass / L.Savage. Carried.

Business Arising: - Nil.

Correspondence: - A letter was received from the Victorian Division of the ARHS seeking the assistance of the SRSV in restoring the Market Street Signal Bridge as an exhibit at the Railway Museum. G.Cumming / B.McCurry. The meeting was advised that the Committee was in favour of assisting with the proposal from the ARHS. A course of action was discussed.

Moved Bruce McCurry, seconded Steve Malpass, that the SRSV supports the suggestion of the ARHS and will investigate & explore the feasibility of the proposal. Carried.

It was agreed that the Committee would report back to the members on progress and any offers of assistance were to be directed to the Secretary.

Reports: - Nil.

General Business: - Laurie Savage reported that the Hamilton Highway level crossing at Inverleigh had recently been renewed.

Glenn Cumming described progress on replacing lamps in marker lights on the NorthEast CTC with LED's.

It was noted that the commissioning of the re - signalling at Gheringhap would commence on Monday 31 March 2003. Elders Siding at Corio was re - commissioned last Saturday 15 March 2003, but had not been used yet.

The SG & BG derailments at Chiltern were discussed.

Laurie Savage asked about progress & the status of preservation of historical infrastructure at Ballarat. The current situation at Ballarat was discussed.

Keith Lambert outlined some aspects of the works at Spencer Street Station. Parcels Siding No.1 will be abolished to make way for a new platform & Parcels Siding No.2 will become a running line. The Goods Lines will be relocated to allow room for additional platforms. Platform No.1 will be removed and Platform No.2 will become an island platform.

Keith Lambert noted that the locking room windows at Flinders Street "A" Box had recently been boarded up.

Brett Cleak advised that the ATSB report on the Salisbury (SA) level crossing accident had been released and was available on the ATSB web site.

Chris Gordon reported that the EM100 track recording car is scheduled to travel over the Ballarat - Ararat Line next Thursday.

Meeting closed @ 21:42 hours.

The next meeting will be on Friday 16 May 2003 at the Surrey Hills Neighbourhood Centre, 1 Bedford Street, Surrey Hills, commencing at 20:00 hours (8.00pm).

SIGNALLING ALTERATIONS

The following alterations were published in WN 9/03 to WN 14/03 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.

14.01.2003 **Belgrave - Lakeside, Radio Controlled Intermediate Block Posts** (A 2/03 & A3/03)

Radio Controlled Intermediate Block Posts may be established by the Train Operations Manager, Train Operations Supervisor, Train Operations Administrator, or certain nominated individuals at the following locations:

- * Selby - Marshall Straight, Pole 37 in Down direction or Pole 34 in Up direction
- * Selby - Aura Road
- * Landslide, Pole 65
- * Clematis station
- * Emerald station (when not open as a Temporary Staff Station)
- * Nobelius Siding
- * Nobelius station
- * Wright station
- * Cockatoo station (when not open as a Temporary Staff Station)
- * Fielder station

The Block Posts may be used for trains in either direction in accordance with GI Appendix 1 Sections 11 and 13.

If the Block Post is not listed in the days operational instructions, the Train Controller (or any of the staff listed earlier) must advise the Driver and Guard using Form SW9 (TR 1.03). This must be sent to the Signaller at the originating station, or Guard of the first train if a Guard in Charge station.

The Guard of the first train (or Driver of a Fire Patrol Trolley) must advise Train Control by radio when the train has passed complete the Block Post. The following radio protocol must be used in advising Train Control. Guard: 'Train Control, [Mxxx] calling. Over.' Train Control: 'Train Control receiving [Mxxx], Over.' Guard: '[Mxxx] has cleared [yyy] Block Post, Over.' Train Control: 'Train Control to Guard [Mxxx]. I understand you have cleared [yyy] Block Post, Over.' Guard: '[Mxxx], that is correct. Out.' The Train Controller can then give permission to the Signaller or Guard for the following train to proceed as far as the Intermediate Block Post.

When the first train arrives at the Staff station in advance of the Intermediate Block Post, the safeworking message will be passed to the Train Controller, preferably by landline. The Train Controller can then contact the Guard of the second train and give permission for the train to proceed to the Staff station in advance. The following protocol must be used in granting permission. Train Control: 'No [xx] Pass, Train Control calling, Over.' Guard: 'No [xx] Pass, receiving Train Control, Over.' Train Control: 'No [xx] Pass, you are cleared to proceed to [yyy], Over.' Guard: 'Train Control - No [xx] Pass. I understand we are cleared to [yyy], Over.' Train Control: 'No [xx] Pass, That is correct, Out.'

On approaching the Intermediate Block Post, the Guard of the following train will display a green hand signal if clearance has been received to proceed to the next Staff station. The Driver is to acknowledge the signal by using the All Clear hand signal. If clearance has not been received the Guard will display a red hand signal and when authorisation to proceed is received the Guard will display a green hand signal to the Driver. If the Driver does not see any signal he must bring the train to a stand and wait for the All Clear from the Guard. If the Guard has not received clearance and it is apparent that the Driver is going to proceed, the Guard must open the brake pipe cock. The cock is to be left in the fully open position, and the Guard must apply the handbrake and display a red flag to the Driver. When the Driver acknowledges the signal, the brake pipe cock is to be closed so the Driver can regain control of the train.

Acceptable communication equipment are: fixed base radios (as installed in Guards Vans and on Fire Patrol Trolleys); ETRB telephone; PSTN telephone, and cellular communications. Hand held portable radios are considered suspect and may not be used for operation of a Radio Controlled Intermediate Block Post.

(15.01.2003) **Menzies Creek** (A 4/03)

No 3 Road has been baulked at the Down end and this road is no longer available as a passing loop. This is to secure the ballast wagons while 216 NQR is away for its annual lift.

26.02.2003 **Wodonga** (TS 1051/03, WN 9/03)

Commencing 1600 hours on Wednesday, 26.2., the turntable is booked out of service due to track condition on the turntable.

28.02.2003 **Wunghnu** (TS 1057/03, WN 9/03)

Commencing Friday, 28.02., the siding is booked out of service due to the condition of the Up and Down points levers.

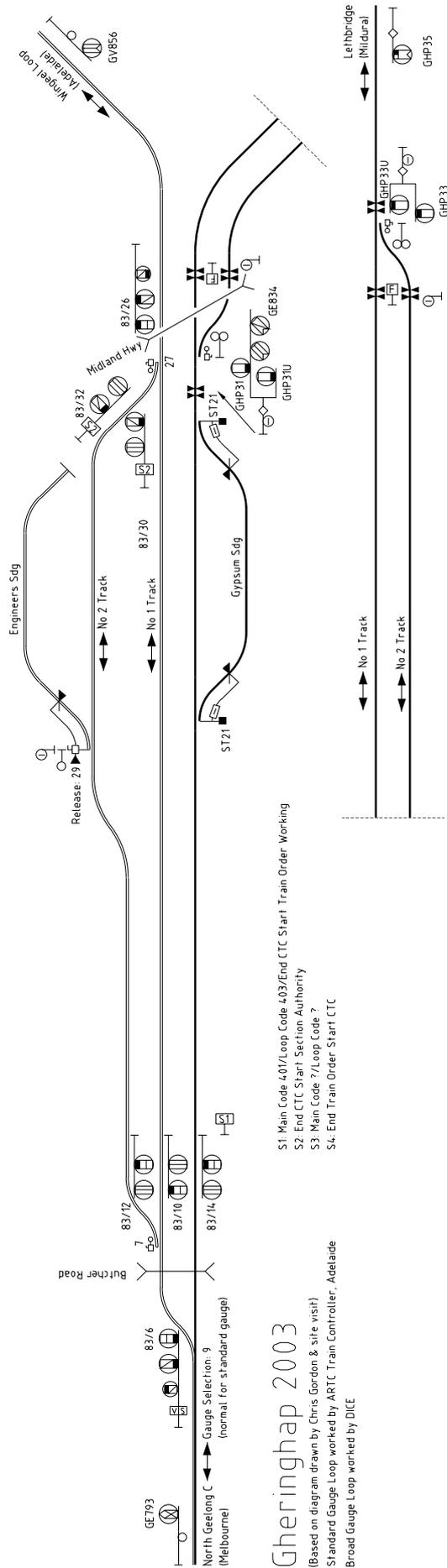
03.03.2003 **Spencer Street** (SW 39/03 & 43/03, WN 9/03)

SW 13/03 was cancelled. From Sunday, 2.3., No 2 Track was reduced in length by 54 metres at the south (dead) end as Stage 2 of the Spencer Street redevelopment. From Monday, 3.3., Points 231 (leading from No 2 South Road to No 2A Road) were relocated 40 metres in the Down direction. Crossover 241 (leading from No 2 South Road to No 2B Road) was taken out of service. Points 241U were removed and Points 241D were secured normal. Down Home 230 (from No 2 South) and Up Home 236 (No 2 to No 2 South)

were relocated to suit. Track circuits 272T, 231T, and 236T were altered or replaced.

The available distances are as follows. From insulated rail joint on Up side of Home 62 to Up Home 272 (protecting intermediate crossover in No 2 Road) is 119 metres. From Up Home 272 to Up Home 236 is 167 metres. From Up Home to the baulk at the end of No 2 Track is 82 metres. The run around is 29 metres.

- 08.03.2003 **Lakeside** (A 8/03)
A point indicator was provided at the Up end main line points. The indicator is provided with reflectorised faces and is not illuminated.
- (11.03.2003) **Oakleigh** (SW 49/03, WN 10/03)
Points 27 and 31 leading to Sidings B and C are booked out due to rust on the railhead.
- (13.03.2003) **Menzies Creek** (A 11/03)
No 3 Road has been restored as an operational road.
- 14.03.2003 **Elmore** (TS 1041/03, WN 11/03)
Commencing 14.3., No 2 and 3 Roads are booked out of use due to sleeper condition. The main line points have been spiked normal.
- 17.03.2003 **Spencer Street** (SW 52/03, WN 10/03)
From Monday, 17.03., the connections at the middle of No 2B and 3 Tracks were relocated 25 metres in the Down connection as Stage 3 of the Spencer Street redevelopment. Crossover 245 (No 3 Track to No 2B Track) and Catch 247 (in No 2B track) were relocated. Down Dwarf 246 (along No 2B Road) and Down Home 244 (No 3 Track) were relocated. Up Homes 248 (No 2B Track) and 250 (No 3 Track) were removed from the signal bridge and were replaced by ground mounted LED signals. Up Home 270 (No 2A Track) was replaced by a LED signal. Track circuits 37T, 38T, 232T, 234T, 245T, and 247T were relocated.
- 24.03.2003 **Spencer Street** (SW 53/03, WN 11/03)
From Monday, 24.3., No 3 Track was reduced in length by 35 metres at the south (dead) end as Stage 4 of the Spencer Street redevelopment. No 2B Track was reduced in length by 23 metres. Crossover 233 (No 3 Track to No 2B Track) was relocated 10 metres in the Down direction and Points 241D (abolished 3.3) were removed. Down Dwarf 234 (No 2B Track), Up Dwarf 240 (No 2B Track), Down Home 232 (No 3 Track) and Up Home 238 (No 3 Track) were relocated to suit. Track circuits 232T, 233T, 234T, 238T, and 241T were relocated.
- (25.03.2003) **Spencer Street** (SW 57/03, WN 12/03)
Commencing forthwith, a simultaneous movements over Crossovers 245 (No 2B and 3 Track) and 249 (No 2 and 2A Tracks) must not be performed.
- 26.03.2003 **Wallan** (SW 1018/03, WN 12/03)
On Wednesday, 26.3., the Up Distant (Post 19) will be converted from a motor operated semaphore to a LED signal. Amend Diagram 28/91.
- 27.03.2003 **Belgrave** (A12/03)
Access to Workshops Road No 1 was removed due to rearrangement of yard.
- 28.03.2003 **Maryvale** (SW 1023/03, WN 13/03)
Commencing Friday, 28.3., the Up end points at the Maryvale Intermediate Siding were booked out of service due the condition of the point rodding. The main line points have been secured normal and if it is necessary to shunt the Up end of the siding it will be necessary for a Signal Maintenance Technician to attend.
- 01.04.2003 **Somerton** (SW 1024/03, WN 13/03)
On Tuesday, 1.4., a hand locking bar was provided on the points leading to No 5 & 6 Tracks in the Austrak Sidings. The bar secures the points to lie for No 5 Track. The bar must be locked on by the Loading Supervisor to protect loading operations.
- 03.04.2003 **Gheringhap** (WN 12)
Between Monday, 31.3., and Thursday, 3.4., the Standard Gauge loop will be converted from DICE operation to a fully signalled loop controlled from ARTC Train Control. The Broad Gauge loop remains worked by DICE, and the section between Manor Loop and Gheringhap by Section Authority Working. New signals were provided as follows: Down Automatic GE 793; Down Home 83/6; Up Homes 83/10, 83/12, and 83/14, Down Homes 83/30 and 83/32, Up Home 83/26, and Up Repeating GV 858 and GE 834. The main line points in the Standard Gauge loop have been fitted with dual control point machines. The points leading to the Gheringhap Engineers Siding are electrically released by the Train Controller. The post with the Down Broad Gauge Arrival Homes (GHP/31 and GHP/U31) has been relocated 1600 metres in the Down direction and the Up Broad Gauge Repeating signal GE 834 placed upon it. The Up Broad Gauge Arrival Homes (13 and U13) have been renumbered GHP/33 and GHP/U33) and the Up Distant renumbered GHP/35.
The Standard Gauge Arrival Homes (83/6 and 83/26) show Clear Normal Speed (for main line moves), Medium Speed Warning (approach cleared for main line, loop, or Ballarat line (for 83/6)), Low Speed Warning (approach cleared for the main line or loop), and Stop. For departure into the single line sections, the Down Departure Homes (83/30 & 83/32) show Warning aspects, the Up Departure Homes (83/10, 83/12, & 83/14) shows Normal aspects. Note that the straight movement over the Gauge Splitter remains for Broad Gauge movements; Standard Gauge movements are the diverging movement.



Modify Section 34 of Train Advice 20 and the 1994 Book of Rules as follows.

83 Gheringhap

Train Control Liason

The Freight Australia Train Controller will confer with the ARTC Train Controller over the passage of Broad Gauge movements between North Geelong C and Gheringhap. A Broad Gauge movement must not proceed unless it will clear the ARTC main line without causing delay to Standard Gauge movements.

Gauge Selection

The CTC system has a gauge selection control to ensure that the correct gauge of movements are requested and accepted at Gheringhap. The selection has 'Broad' and 'Standard' settings.

Operation of Broad Gauge Movements between North Geelong C and Gheringhap

The Broad Gauge Crossing Loop is operated by DICE and a DICE Approach Zone Board is located at Home 83/14 for movements for Down movements.

For Down Broad Gauge movements the ARTC Train Controller will first issue a Section Authority for the movement. The Signaller at North Geelong will then be advised. The ARTC Train Controller will then set the Gauge Selector to 'Broad' and clear Home 83/6 for the movement to proceed to the Broad Gauge Loop. Once the locomotive passes the DICE Approach Zone Board (at Home 83/14) the Driver will enter the DICE code for the required track at Gheringhap Loop (note that if the movement is to enter the Loop the DICE command will not be accepted until the movement has occupied the approach train circuit, which commences at Buchters Road, for three minutes). Once the movement has arrived complete at Gheringhap Broad Gauge Loop the Driver can relinquish the Section Authority. Under no circumstances are the signals leading into the Section Authority section to be cleared before a Section Authority is issued to the movement.

Before the Freight Australia Train Controller can issue a Train Order to an Up Broad Gauge movement to proceed from Lethbridge Block Point, a Track Blocking command must be applied to the track at Gheringhap Broad Gauge Loop upon which the movement will arrive. The Freight Australia Train Controller must instruct the ARTC Train Controller for the Track Block command to be applied and must not issue a Train Order until the ARTC Train Controller has confirmed that the Track Block command has been applied. On approaching Gheringhap the Driver of the movement must contact the ARTC Train Controller to request a Text Test and a Section Authority to proceed to North Geelong C. Provided the movement can be accepted at North Geelong C, the ARTC Train Controller will set the Gauge Selector to 'Broad' and clear Home 83/14. The Section Authority will then be issued to the train. Under no circumstances are the signals leading into the Section Authority section to be cleared before a Section Authority is issued to the movement.

e) Standard Gauge Movements

When an Standard Gauge movements is to proceed between Elders Block Point or North Geelong C and Gheringhap (or vice versa) the Gauge Selection switch must be set to 'Standard' before the signals are operated for the movement. Under no circumstances are the signals leading into the Section Authority section to be cleared before a Section Authority is issued to the movement.

f) Medium Speed Aspects on Homes 83/12, 83/14, and 83/32

A movement passing one of this signals may resume line speed once it has passed the points protected by the signal.

g) Medium Speed Aspect on Home 83/6 for Broad Gauge Movement.

A Broad Gauge Movement passing this signal may resume line speed once it has passed the gauge splitter protected by this signal.

h) Clear Normal Speed Aspects on Automatic GE 793 and Homes 83/6, 83/10, and 83/26

When Clear Normal Speed is displayed on these signals (which will only be for Standard Gauge movements) the movement must still respect the speed restriction applicable to the gauge splitter at Buchters Road.

i) Signal or Point Failure

Homes 83/10, 83/12, 83/30, and 83/32. Should any of these Home Departure signals fail to display a 'Proceed' aspect, the Train Controller will issue a Signallers Caution Order after confirming that that a Section Authority has been issued to enter the section. The Driver will not be required to record the Caution Order, but the Driver and Train Controller must exchange names. Should the points fail or detection be lost, the Train Controller will instruct the Driver to place the points in the Hand Operating mode and set the points for the movement prior to issuing the Caution Order.

Home 83/6 (Broad Gauge Movement). Should this Home signal fail to display a 'Proceed' aspect for a Broad Gauge movement, the Train Controller will issue a Signallers Caution Order. The Driver must be instructed to stop and inspect the points leading to the Gypsum Siding before the train passes over them. The Driver will not be required to record the Caution Order, but the Driver and Train Controller must exchange names.

DICE Signalling (Broad Gauge Loop). If the DICE equipment fails the Train Crew must contact the Freight Australia Train Controller who will instruct the crew in the manual operation of the loop using the key switch. Should this fail, the Freight Australia Train Controller will instruct the Driver to place the points in the Hand Operating mode and set the points for the movement. Verbal permission will then be given to pass the Home signal at Stop.

13.04.2003

Manor Loop - North Geelong C - Gheringhap

(WN 12/03)

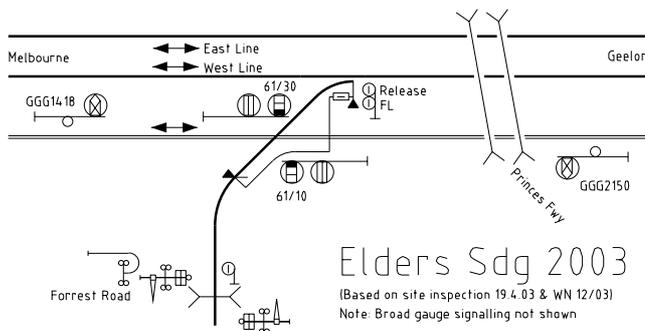
On Sunday, 13.4., at 1800 hours the Section Authority System between Manor Loop and Gheringhap will be abolished and CTC signalling will be brought into use. The CTC single line section will be Manor Loop - Gheringhap, but trains may enter the section at North Geelong C. The CTC will be operated by the ARTC Section Authority Train Controller who also operates the CTC between Tottenham Loop and Manor Loop and Maroona and Pyrenees Loop.

Manor Loop

Down Homes 38/30 and 38/32 will become the Home Departure signals controlling entrance to the single line section. These signals were altered to display 'Clear Normal Speed' (Home 38/30) or 'Clear Medium Speed' (Home 38/32) instead of Warning aspects. Up Repeating signal GGG 1418 was altered to an Automatic signal and will now display Stop, Normal Speed Warning, or Clear Normal Speed. The Up Location Board was abolished. The 'Commence' and 'End' Section Authority Boards were abolished.

Elders Grade Crossing

The Block Point and associated signage and location boards were abolished. Up and Down Home signals (61/10 and 61/30) were provided on the Standard Gauge line to protect the crossing. Both Homes can display Stop and Clear Normal Speed. An Automatic signal was provided in the rear of each Home. The Down Automatic is numbered GGG 1961 and the Up GGG 2150. Each Automatic may display Stop, Normal Speed Warning, and Clear Normal Speed. The points in the Broad Gauge West Line leading to the Elders Siding are now released by the ARTC Train Controller.



North Geelong C

A new Down Home 66 was provided on the Up side of North Geelong C near the Melbourne Road overpass. This signal will display Stop, Low Speed Warning, Medium Speed Warning (approach cleared), and Clear Normal Speed. A new Down Automatic numbered GGG 2225 was provided on the approach side of Home 66. It will display Stop, Normal Speed Warning, and Clear Normal Speed. Repeating signal GE 2524 was replaced with a new Automatic signal (with the same number) which will display Stop, Normal Speed Warning, and Clear Normal Speed. Homes 44, 52, and 54 are Home Departure signals for the single line section, as are Dwarfs 52 and 54 when the route is set towards Gheringhap. North Geelong C is a switch in/out location. The Standard Gauge signals will be worked by North Geelong C when it is switched in but will work automatically when North Geelong C is switched out.

Gheringhap

The Commence/End Train Order Working and Commence/End Section Authority Working boards on the Broad Gauge Loop will be abolished. Notice boards lettered 'End CTC Start Section Authority' are provided on Homes 83/30 and 83/32. A notice board lettered 'End Section Authority Start CTC' was provided on Home 83/26. Notice boards lettered 'End CTC Start Train Order Working (Broad Gauge) Change to Channel 3 (Broad Gauge)' and 'End Train Order Working Start CTC Change to Channel 2'

were erected at Home 83/14.

Down movements from Tottenham Loop (or locations between Tottenham and North Geelong C) will switch to 1200 mode upon departing from originating location. The ARTC Train Controller must be advised when this is done. Movements not proceeding beyond Gheringhap will remain in 600 mode. Up movements from Gheringhap will immediately switch to 600 mode after receiving the 'final authority' message. All Up movements originating between Gheringhap and Tottenham Loop will remain in 600 mode.

Amend Section 34 of TA 20 and the 1994 Book of Rules.

56. Elders Grade Crossing

a) General

The broad gauge Elders Siding crosses the standard gauge line in the Manor Loop to North Geelong section. The points to Elders Siding are situated in the broad gauge West Line and are released by the ARTC Train Controller and the track circuits in the West Line. It is not possible to release the points if a standard gauge movement is approaching the siding from either Manor Loop or North Geelong until the movement has cleared the crossing. For movements entering the siding, the movement must be standing on the 18 metres track circuit immediately in advance of the points. For movements departing the siding, the West Line Home Departure signals at Lara and Corio must be at Stop and no broad gauge movements be approaching Elders Siding on the West Line.

b) Main Line Point Locking

A standard CTC release is provided at Elders Siding to release the points. A V5PSW key switch is provided with three key positions (Cancel, Centre, and Accept) and three indications (Points Locked, Release Available, and Points Free). The 18 metre approach track circuit must be occupied in order to accept a release from the ARTC Train Controller.

c) Movements to Elders Siding

To prevent blocking broad gauge movements, the Signaller at North Geelong A must confirm with the ARTC Train Controller that the movement can be accepted before the movement departs from North Geelong Yard.

The Driver of the movement must bring it to a stand with the locomotive occupying the 18 metre approach track and obtain permission from the Freight Australia Train Controller to operate the points. The ARTC Train Controller must then be contacted to request a release. Immediately the train is clear of the derail within the siding the points are to be restored to normal and the release cancelled. Failure to cancel the release will prevent any movements on the West Line and the standard gauge line. Both the ARTC and Freight Australia Train Controllers are to be notified that the train has cleared the main lines.

d) Operation of Forrest Road level crossing equipment on the siding

Key switches to operate the level crossing equipment on the siding are provided at the points and at the crossing itself. If the movement is too long to fit between the derail and the level crossing, the level crossing equipment must be operated from the key switch at the points to allow the movement to clear the grade crossing without delay. If the movement is sufficiently short (e.g. light engine) the level crossing equipment can be operated from the crossing. In all cases the train crew must ensure that the level crossing equipment is operating before entering the crossing.

e) Movements from Elders Siding

The Driver must obtain permission from the Freight Australia Train Controller to enter the West Line, and then contact the ARTC Train Controller to request a release. Immediately the train has cleared the points, they are to be restored to normal and the release cancelled. Failure to cancel the release will prevent any movements on the West Line and the standard gauge line. Both the ARTC and Freight Australia Train Controllers are to be notified that the train has cleared the standard gauge line.

f) Failure of release lock

It will be necessary for a signal maintenance technician to attend if the release lock fails.

58. North Geelong C

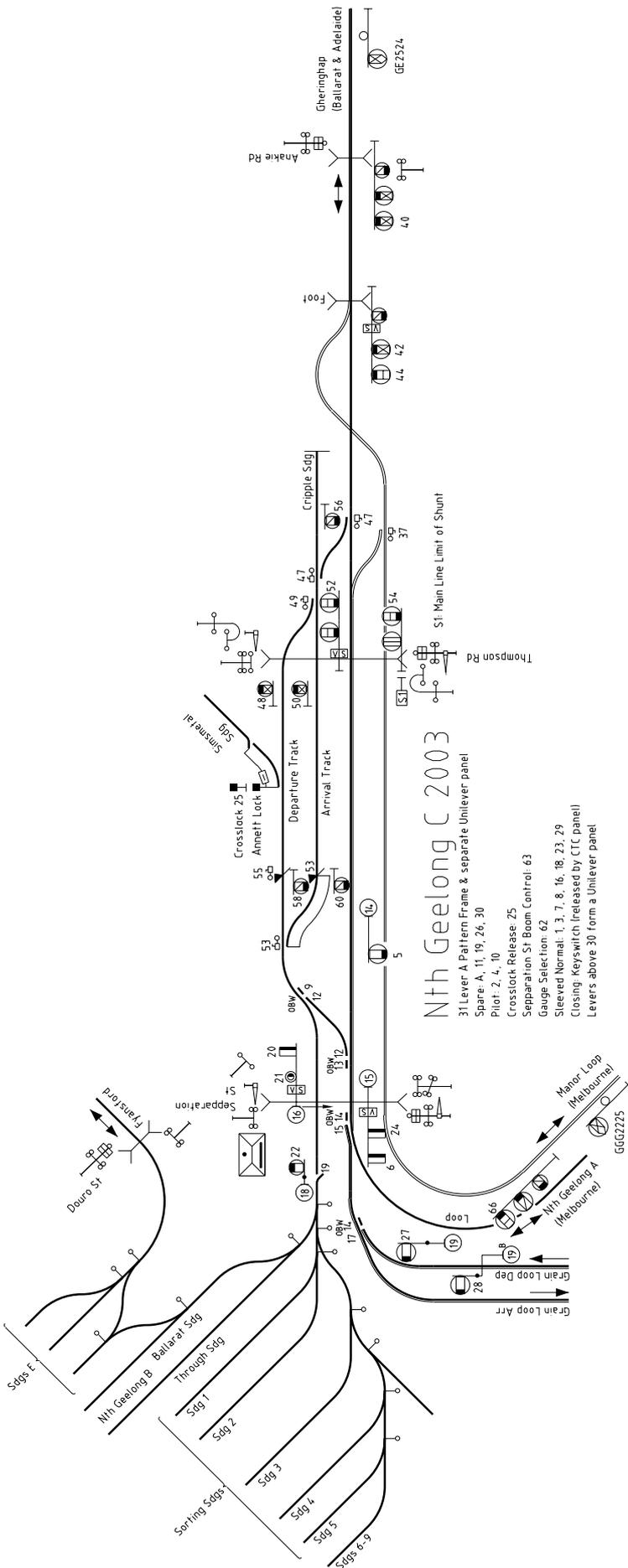
North Geelong C is a switch in/out location within the CTC section Manor Loop - Gheringhap. The ARTC Train Controller provides the release to allow the signalbox to switch in. When the signalbox is switched out, Homes 40, 44, 65, and 66 work automatically in conjunction with the Departure Home signals at Manor Loop and Gheringhap, and the Signaller can operate Points 47 and Dwarfs 48, 50 and 56 for shunting moves in addition to all the remaining signalling on the Freight Australia main line and sidings. The CTC system shows indications for all standard gauge main line signals and points.

When a Signaller is not in attendance at North Geelong C incoming phone calls will be transferred to North Geelong A.

Switching in North Geelong C.

North Geelong C is provided with a keyswitch that allows the signalbox to be switched in for movements to and from the ARTC main line. North Geelong C will normally only switch in for movements arriving and departing North Geelong Yard and will immediately switch out when the movement is clear of the main line.

To switch in North Geelong C the Signaller will request a release from the ARTC Train Controller. When this release is granted the 'North Geelong Switched In' indication on the North Geelong C panel will



flash. When the signaller accepts the release by operating the 'Switch in/out' key to the 'In' position, the 'switched in' indication on the panel will change to a steady indication and an indication will be shown on the CTC system.

The main line Home signals at North Geelong C will return to the Stop position when the signalbox switches in. If any standard gauge movement is approaching North Geelong C the train crew must be advised that the Home signals may return to Stop before the signalbox is switched in.

Operation of Down broad gauge movements

When a broad gauge movement is to depart North Geelong C for Gheringhap, the Signaller must confirm that the train has been issued with a Train Order to proceed beyond Buchters Rd. The Signaller will then request permission from the ARTC Train Controller for the train to depart. If the movement can be accepted the Train Controller will set the gauge selection control to 'Broad'. This will display the 'Broad' indication on the CTC system and light the 'Broad Gauge' block indication on the North Geelong C panel. The Signaller will place lever 62 to the 'V' position and clear the signals for the movement to depart.

Operation of Down standard gauge movements

When a standard gauge movement is to depart or proceed through North Geelong C for Gheringhap, the Signaller must request permission from the ARTC Train Controller for the train to depart. If the movement can be accepted the Train Controller will set the gauge selection control to 'Standard'. This will display the 'Standard' indication on the CTC system and light the 'Standard Gauge' block indication on the North Geelong C panel. The Signaller will place lever 62 to the 'S' position and clear the signals for the movement to depart.

Operation of Up broad gauge movements

When a broad gauge movement is to depart Gheringhap for North Geelong C, the ARTC Train Controller must request a release from the Signaller at North Geelong C. If the Signaller can accept the movement, lever 62 must be placed to the 'V' position. The ARTC Train Controller can place the gauge selection control to 'Broad' which will display the 'Broad' indication on the CTC system and light the 'Broad Gauge' block indication on the North Geelong C panel. The Train Controller will then clear the signals for the movement to depart Gheringhap.

Operation of Up standard gauge movements

When a standard gauge movement is to depart Gheringhap for (or proceed through) North Geelong C, the ARTC Train Controller must request a release from the Signaller at North Geelong C. If the Signaller can accept the movement, lever 62 must be placed to the 'S' position. The ARTC Train Controller can place the gauge selection control to 'Standard' which will display the 'Standard' indication on the CTC system and light the 'Standard Gauge' block indication on the North Geelong C panel. The Train Controller will then clear the signals for the movement to depart Gheringhap.

Switching out North Geelong C

North Geelong C can only be switched out if: movements are not simultaneously approaching

from Manor Loop and Gheringhap; the Home Departure signals at Manor Loop and Gheringhap are both at stop; there is no broad gauge movement between North Geelong C and Gheringhap; and that the gauge selection control and lever 62 at North Geelong are set to standard gauge.

To switch out North Geelong C, the Signaller will request permission to switch out. The Signaller will place the switch in/out keyswitch to 'Out' which will cause the 'North Geelong Switched In' indication to flash and the 'Cancel' button on the CTC system to become available. The Train Controller can then cancel the release which will cause the 'switched in' indication on the North Geelong C panel to go out and the CTC system to indicate that North Geelong C is switched out.

Opposing Standard Gauge Movements

The ARTC Train Controller must ensure that opposing standard gauge trains do not approach Gheringhap simultaneously unless the Up movement will enter the Grain Loop and the Signaller can accept it.

Standard gauge movements approaching North Geelong C

The ARTC Train Controller must liaise with the Signaller, North Geelong C, about the approach of standard gauge movements requiring to enter the North Geelong Grain Loop. Prior to the movement departing from Wingeel Loop or Laverton Loop, the Train Controller must advise the Signaller of the anticipated arrival time of the movement at North Geelong to ensure that the movement can be accepted. The Signaller is responsible for ensuring a clear path into the Grain Loop once the movement has been accepted. If the movement cannot be accepted, it must not be advanced beyond Manor Loop or Gheringhap. (Note: Movements from Melbourne must go to Gheringhap to reverse before entering the Grain Loop.)

Broad gauge movements

To ensure equitable access for other operators, Freight Australia must ensure that broad gauge movements entering the North Geelong Grain Loop operate according to schedule. Should a broad gauge movement be running outside its normal schedule, or an unscheduled shunting operation is required within the Grain Loop, the Signaller must ensure that the movement will not block an approaching standard gauge movement. If the movement is likely to block a scheduled standard gauge movement the Signaller must first check with the ARTC Train Controller if the standard gauge movement is on time. When ARTC becomes aware that a standard gauge train will not make the arranged arrival time, they must notify Freight Australia to ensure the path still exists or arrange another path.

Standard Gauge Turnout (Points 37)

Points 37 will self restore to the normal position after the passage of a movement. If a vehicle which cannot be depended upon to operate the train circuits passes over Points 37 the Signaller must apply a blocking command to the points to prevent their operation.

Aspects on Dwarfs 48 and 50

Dwarfs 48 and 50 display 'Clear Low Speed' for moves onto the main line. The Driver may resume normal line speed immediately the movement has cleared the points.

Signal Failure

When North Geelong C is switched out, Homes 40, 44, 54, and 66 can be passed at Stop on the verbal authority of the ARTC Train Controller. Prior to passing over any points the train crew must ensure that they are set for the movement. Prior to entering any level crossing the train crew must ensure that the protection equipment is operating correctly.

When North Geelong C is switched, the Signaller must first advise the ARTC Train Controller. Permission to pass a signal at Stop is then granted as follows:

Homes 40 & 66 and Dwarf 56. The Signaller will verbally authorise the movement to pass the signal.

Home 44. If the movement is towards Manor Loop, the ARTC Train Controller is responsible for issuing a CTC Caution Order. The Order is to be dictated to the Signaller who will deliver it to the train crew. Otherwise, the Signaller is responsible for issuing a Signaller's Caution Order.

Homes 52 and 54. The ARTC Train Controller is responsible for issuing a CTC Caution Order. The Order is to be dictated to the Signaller who will deliver it to the train crew. In the case of Home 54, the Signaller must manually operate the Thompsons Road level crossing protection equipment by means of the test switch prior to delivering the order to the train crew.

Dwarfs 48 and 50. For movements towards Gheringhap, the ARTC Train Controller is responsible for issuing a CTC Caution Order. The Order is to be dictated to the Signaller who will deliver it to the train crew. Otherwise the Signaller will verbally authorise the movement to pass the signal.

83. Buchters Road/Gheringhap

The section of track between North Geelong C and the standard gauge loop at Gheringhap is worked under the CTC system. Section Authority working is in force on the standard gauge line beyond Homes 83/30 and 83/32 and Gheringhap is a Section Authority Terminal Station. Train Order working is in force on the broad gauge line beyond the point of divergence of the broad and standard gauge lines at Buchters Road.

Train Control Liason

The Freight Australia Train Controller will confer with the ARTC Train Controller over the passage of Broad Gauge movements between North Geelong C and Gheringhap. A Broad Gauge movement must not proceed unless it will clear the ARTC main line without causing delay to Standard Gauge movements.

Broad gauge movements between North Geelong C and Gheringhap

The Freight Australia Train Controller must issue a Train Order for the Buchters Road - Gheringhap section prior to the departure of a broad gauge movement from North Geelong C. After being notified of the issue of the Train Order the ARTC Train Controller will clear the necessary signals and controls for the movement.

Prior to issuing a Train Order for a movement to proceed to Buchters Road from Gheringhap the Freight Australia Train Controller must advise the ARTC Train Controller of the movement and the time that the movement will arrive at Gheringhap. The ARTC Train Controller will confirm with the Freight Australia Train Controller that the movement can be accepted at North Geelong C and then operate the necessary signals for the movement to proceed.

When a movement is to proceed through Gheringhap the Train Order text is to indicate which track at Gheringhap the movement is to take: PROCEED FROM BUCHTERS ROAD TO GHERINGHAP KEY MAIN (or LOOP) THEN PROCEED TO [...] WITH MASTER KEY [...]; or PROCEED TO GHERINGHAP KEY MAIN (or LOOP) THEN PROCEED TO BUCHTERS RD WITH MASTER KEY [...]

When a movement is to cross an opposing movement at Gheringhap the Train Order text is to indicate which track at Gheringhap the movement is to take: PROCEED FROM BUCHTERS ROAD TO GHERINGHAP KEY LOOP (or MAIN) CROSS (or PASS) [...] LOCOMOTIVE [...] WITH MASTER KEY [...]; the opposing movement will receive: PROCEED TO GHERINGHAP KEY MAIN (or LOOP) CROSS (or PASS) [...] LOCOMOTIVE [...] WITH MASTER KEY [...]

The Freight Australia Train Controller will advise the ARTC Train Controller of the intended movement and that a Train Order has been issued for a movement to proceed from or toward Buchters Road. The ARTC Train Controller shall set the signals at Gheringhap for the movement.

Operation of DICE

Once the locomotive passes the DICE Approach Zone Board the Driver will enter the DICE code for the required track at Gheringhap Loop. Note that if the movement is to enter the Loop Track the DICE command will not be accepted by the system until the movement has occupied the approach train circuit (at Buchters Road or the Up Distant GHP/U33) for three minutes.

When departing from the loop track the Driver is to enter the DICE command (indicated by the DICE Board adjacent to the fouling point of the loop). The points self normalise behind the train. It is not necessary to enter a DICE command for movements departing from the main track.

V5PSW keyswitches are provided on Posts 31 and 33 and at the fouling points of the Loop Track to call the route in case of failure of the DICE equipment. See Rule 31, Section 27, Book of Rules.

e) Operation of Gheringhap Engineers Siding

The points to the standard gauge Engineers Siding are worked by a non-trailable T21 point machine and released by the CTC system. A standard V5PSW keyswitch release is provided. The points are equipped with a point indicator (switch stand) which shows a yellow circle when the points are set and locked for the loop track and a white square when the points are set for the siding. See Clause I, Rule 18, Section 27.

f) Medium Speed Aspects on Home 83/32

A movement passing this signal may resume line speed once it has passed the points protected by the signal.

g) Medium Speed Aspect on Home 83/6 for Broad Gauge Movement.

A Broad Gauge Movement passing this signal may resume line speed once it has passed the gauge splitter protected by this signal.

h) Clear Normal Speed Aspects on Automatic GE 793 and Homes 83/6, 83/10, and 83/26

When Clear Normal Speed is displayed on these signals (which will only be for standard gauge movements) the movement must still respect the speed restriction applicable to the gauge splitter at Buchters Road.

i) Signal or Point Failure

Homes 83/30, and 83/32. Should any of these Home Departure signals fail to display a 'Proceed' aspect, the Train Controller will issue a Signallers Caution Order after confirming that that a Section Authority has been issued to enter the section. The Driver will not be required to record the Caution Order, but the Driver and Train Controller must exchange names. Should the points fail or detection be lost, the Train Controller will instruct the Driver to place the points in the Hand Operating mode and set the points for the movement prior to issuing the Caution Order.

Homes 83/10, 83/12, 83/14, and 83/26. Should any of these Home Departure signals fail to display a 'Proceed' aspect, they will be treated according to the applicable CTC rules.

Home 83/6 (Broad Gauge Movement). Should any of this Home signal fail to display a 'Proceed' aspect for a Broad Gauge movement, the Train Controller will issue a Signallers Caution Order after confirming that that a Train Order has been issued to enter the section. The Driver must be instructed to stop and inspect the points leading to the Gypsum Siding before the train passes over them. The Driver will not be required to record the Caution Order, but the Driver and Train Controller must exchange names.

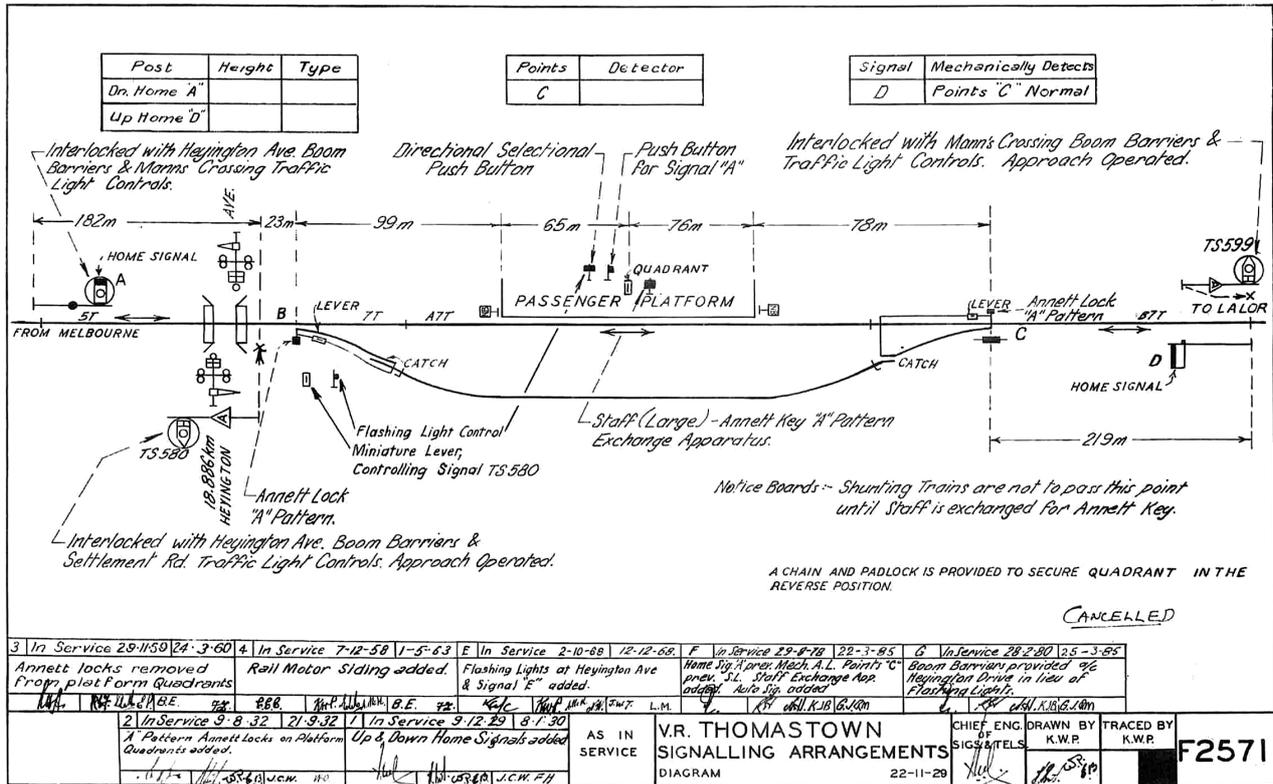
DICE Signalling (Broad Gauge Loop). If the DICE equipment fails the Train Crew must contact the Freight Australia Train Controller who will instruct the crew in the manual operation of the loop using the key switch. Should this fail, the Freight Australia Train Controller will instruct the Driver to place the points in the Hand Operating mode and set the points for the movement. Verbal permission will then be given to pass the Home signal at Stop.

THOMASTOWN

A small suburban station

By David Langley.

The SRSV was recently given a bundle of signalling diagrams by the ARE who found them to be surplus to their requirements. Among them were a couple that drew my attention because of the number of alterations that had occurred at that location during the life of the diagram. One of these was F2571, the Signalling Arrangements at Thomastown, nowadays a northern suburban station, on the Epping line.



The diagram that sparked my curiosity about Thomastown, Signalling Arrangements diagram No F2571 dated 22-11-1929. The boxes numbered 1, 2, 3, 4, E, F, and G show details of all the changes that occurred at Thomastown from the time of the issue of the diagram until 1980 when the diagram was replaced by a new diagram - a copy of which I do not have, but the litho diagrams for the line tell the story anyway. You will notice that sometime between 1958 and 1968, the method of numbering the alterations was altered from numerals to letters. I guess there must have been a good reason, but I have no idea what it was. Now on with the story...

Early days

Thomastown was opened on 23 December 1889 as one of the stations on the new line from Preston Reservoir (renamed Reservoir on 1 December 1909) to Whittlesea, along with Epping, South Morang, Mernda and Yan Yean. The last three were all located on the now closed Epping to Whittlesea section. Other stations in the area are Ruthven opened 5 August 1963, Keon Park opened 16 December 1929 (renamed Keonpark on 29 February 1972) and Lalor (on the upside of the level crossing) opening on 29 September 1947 as Railmotor Stopping Place (RMSP) No 77, not becoming Lalor until 26 February 1952. The RMSP was replaced on 5 August 1952 by the opening of a proper station on the present site. There were a number of other RMSP's along the line but they fall outside of our area of discussion. Fowler's Siding, located just on the down side of Keon Park, opened on 13 September 1927 and lasted until 23 January 1986.

My copy of a PCR book, believed to be dated around 1908, shows Thomastown at 12 miles 52 chains 59 links, as measured from Spencer Street via North Fitzroy, and no mention is made of the Rushall Loop affecting the distances on the Epping line even though the line from Princes Bridge

to Victoria Park had been opened in 1901. The 1962 PCR Book shows two distances for Thomastown - one from Flinders Street via Clifton Hill as 11 miles 07 chains 51 links and one from Spencer Street via North Fitzroy as 12 miles 52 chains 59 links. By the 1975 PCR Book, distances on the Epping line are only shown via Clifton Hill as the North Fitzroy line had closed as a through route on 21 June 1965.

Thomastown was a staff and ticket station from opening and the sections were Reservoir-Thomastown-Epping. South Yan Yean (later Mernda) was also a staff and ticket station at the time dividing the Epping to Whittlesea section.

Electric staff replaced the staff and ticket system between Preston Reservoir and Whittlesea on 4 November 1901 with the sections becoming Preston Reservoir-Epping-Whittlesea. South Yan Yean was closed as a staff station at this time and Epping closed soon after, on 3 February 1903, leaving just one section of electric staff. Weekly Notice No 11 of 1906 informs all and sundry that the electric staff system was replaced by a single section of staff and ticket which was probably not surprising considering the pattern of the train service.

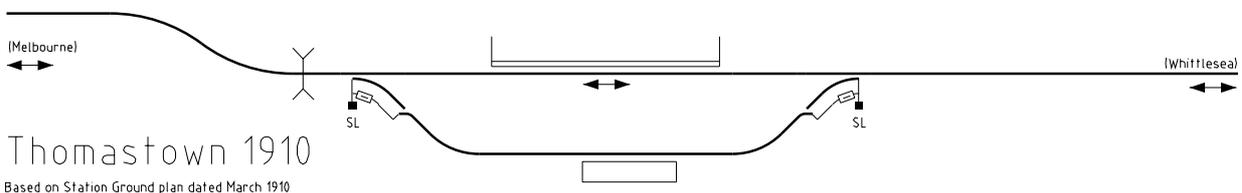
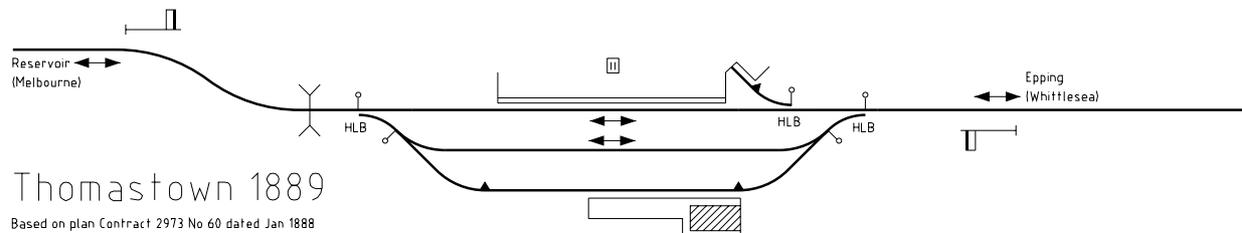
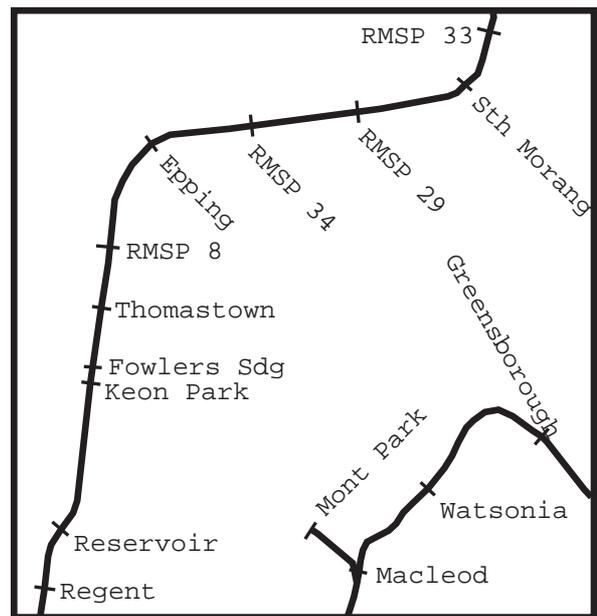


General view of Thomastown looking towards Melbourne probably just before resignalling in 1988. Notice that the siding remains unwired. Photo: David Langley

Early days

The working timetable dated 17 March 1890 shows that there were five trains each way between Melbourne and Whittlesea on weekdays only, there were none on Sundays. There were two scheduled crosses at Thomastown, No 3 Down (0732 Melbourne to Whittlesea Mixed - trucks were attached at North Fitzroy) crossed No 3 Up (0742 Whittlesea to Melbourne passenger), with the up going into the loop, and No 12 Down (1740 Melbourne to Whittlesea passenger) crossed No 12 Up (1756 Whittlesea to Melbourne passenger) with the down going into the loop. During the afternoon there was also a cross at Epping. Goods traffic on the line was handled by the two mixed trains in each direction but it is not obvious from the timetable just how the intermediate stations were served as no time was allowed for shunting.

During the depression of the 1890s travel demand fell away, economies of expenses were sought and one way was the reduction of train services, which subsequently required





The Down end points at Thomastown, probably just before resignalling in 1988. The rotary point detector in the wire lead to the Up Home is on the left of the photo. The Annett lock securing the points is on the right hand side of the points. An Up Comeng set - in orange - is in the platform. Photo: David Langley.

fewer manned stations, thus reducing the wages bill. So on 9 May 1892, Thomastown was closed as a staff station as by now the train service had been reduced to three each way.

There was additionally, though, a Sunday afternoon down goods to Whittlesea returning during the evening as a milk train. It is known that there were a number of milk loading platforms on the line, and even though this train has no times shown, it must have stopped at these platforms to load milk churns. No doubt, milk was also loaded into one or other of the mixed trains on other days, again the timetable is not forthcoming.

Back at Thomastown, the up and down home signals that had been provided on opening were removed on 26 March 1902 and the points were provided with staff locks with the key being the electric staff for the section but by February 1906 it was the train staff for the section. A contract plan date January 1888 has recently come to light and it shows that Thomastown was provided with a crossing loop, up and down home signals and a carriage dock (located at the down end of the platform) from opening.

Figure 1 shows the track and signal arrangements at Thomastown at the time of opening. Figure 2, adapted from a Station Ground plan dated March 1910, shows the layout after the removal, possibly also on 26 March 1902 but I have not seen a direct reference about it, of the aforementioned crossing loop and carriage dock.

From this time until 1929, the original drawing date of the diagram which caused this article to be written, very little happened at Thomastown. The station had become unattended in Jan 1903 but was again attended in 1909 this time under caretaker conditions.

The hand gates at the level crossing at 13 miles 15 chains 48 links (later Settlement Road) were removed and replaced by cattle grids on 12 January 1911 whilst an occupational crossing at 12 miles 10 chains 66 links, which appears to have become Mann's Road, were similarly replaced by cattle grids in May 1911. At this stage the level crossing, nowadays known as Heyington Avenue and located just at the

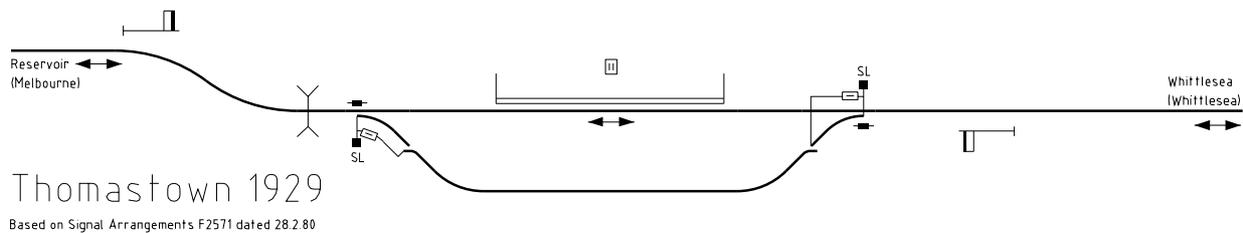
up end of Thomastown, was equipped with cattle pits although during the planning stages of the line, hand gates were shown on the contract plan. It appears that this crossing was, at first, only used for access to the goods yard and it is not known when it became a public road crossing.

A look at the 1918 timetable, the last one I have with a full steam suburban service, shows that there were two trains each way between Melbourne and Whittlesea on weekdays, three on Saturdays (there being an additional middle of the day train) and one on Sundays. There was also a mixed train on Tuesdays and Thursdays between Whittlesea and Reservoir connecting there with local suburban trains to and from Melbourne. On the first Saturday of the month there was a train at 2300 from Whittlesea to Reservoir, which formed a 0008 train from Reservoir to Whittlesea next morning, connecting at Reservoir with the 2330 train from Princes Bridge, enabling a late train home for people returning from an evening in Melbourne.

Electrification

Electrification came to Melbourne suburban lines in 1919 and the line to Reservoir was completed on 15 June 1921. Electrification was extended to Thomastown on 16 December 1929 and here the wires stopped for 30 years until the line to Lalor was converted on 30 November 1959. Electric trains from Princes Bridge connected at Thomastown with a local rail motor service to and from Whittlesea, although there were some through trains between Whittlesea and Spencer Street which ran via North Fitzroy.

Circular A 2722/29 states that Thomastown became a staff station again "after the dispatch of the 6.10pm down on Saturday 14 December 1929", with the sections becoming Reservoir-Thomastown-Whittlesea. This was because now there were Thomastown local electric trains in addition to the Whittlesea railmotors which, at this stage, connected at Reservoir with suburban electric trains. Up and down home signals were provided, but the siding points remained staff locked although point detectors were added.



No crossing loop was provided and the goods loop was not wired for electric traction. Figure 3, adapted from Signaling Arrangements F2571, shows the layout at Thomastown after re-opening as a staff station.

A stationmaster was appointed to Thomastown on 16 December 1929 to take charge of matters but this appointment was relatively short-lived because a Porter-in-Charge replaced the SM on 9 January 1938 and the SM was not reinstated until 25 July 1955.

The Working Time Table dated 14 October 1929 shows the Whittlesea rail motor service (which was worked by one of the four Leyland rail motors) connected at Reservoir, but the next WTT in my collection, that of 7 May 1934, shows the rail motors now mostly connecting at Thomastown with the through Melbourne trains also mostly being worked by rail motors now instead of the former passenger and mixed trains. There remained a Saturday afternoon through passenger train, which returned to Melbourne in the evening as a Mixed train, and the Sunday day return was still a passenger train although this became a P.E. Rail Motor and trailer at a later stage.

The evening through train from Spencer Street was P.E. rail motor and this car returned to Spencer Street after a 20 minutes stay at the terminus. The morning through and local trains were operated by the Leyland rail motor that had stabled at Whittlesea and I suppose that a changeover, as required, could have been effected whilst the Leyland was at Spencer Street. The Leyland cars remained at Whittlesea until around 1947 when petrol-electric rail motors were rostered to run the whole service. The Sunday service had by this time ceased (a casualty of the 1939 conflict) and the morning through trains ceased concurrently with the allocation of petrol-electrics thus suggesting that the service ran for the railways convenience rather than for passenger convenience, it did, after all, run "the long way round".

Following the introduction of the rail motors, there was a lengthy gap in the passenger service during the middle of the day and this is when the goods train ran on Mondays, Wednesdays and Fridays (replacing the mixed trains which by now have disappeared). During this gap, the rail motor was stabled at Thomastown, possibly having arrived in the platform behind the waiting electric train. It would shunt to the siding prior to the arrival of the goods train which had waited at Reservoir for the up electric train to pass, the line still being single between Keon Park and Reservoir. The rail motor remained stabled in the siding until required for its evening run to Whittlesea.

In the 1934 timetable, the Thomastown week day service was provided by six through electric trains and one trip by the rail motor into Reservoir. There were five electric trains on Saturday with a couple of trips by the rail motor into Reservoir, and on Sunday there is just one electric train during the mid afternoon, but, of course, there was the Sunday through train as well.

Manning the Station

From 1 February 1932, the signalman at Thomastown ceased duty at 1440 and it was Guard-in-Charge working for the remainder of the day and the need to have one home signal

off when unattended occurred regularly. Perhaps something happened, and if it did I have yet to discover what it was, but on 9 August 1932, A pattern Annett locks were fitted to the signal quadrants. This meant the arrival home signals were now interlocked as only one key was provided and it was needed to unlock the required quadrant lever. Additionally the provision of pins and padlocks on the quadrants allowed for either signal quadrant to be secured reverse as required.

Concurrently (we assume) instructions were issued with regard to rail motors being signaled into the platform at Thomastown behind the connecting electric train and these have been extracted from the General Appendix for 1953 and publishing below.

THOMASTOWN-WHITTLESEA.

Special Instructions in connection with the Signaling of Rail Motors when connecting with Electric Trains at Thomastown.

1. (a) When an Up Rail Motor is scheduled to connect with an Electric train at Thomastown and there is not sufficient time for the Rail Motor to be brought to the Platform and shunted prior to the arrival of the Electric train, the following instructions are to be observed :-

b) Immediately the Electric train has arrived and the Driver and Guard have changed ends, the Signaller at Thomastown must arrange for the Electric train to be drawn forward a sufficient distance to permit of the complete Rail Motor entering the platform.

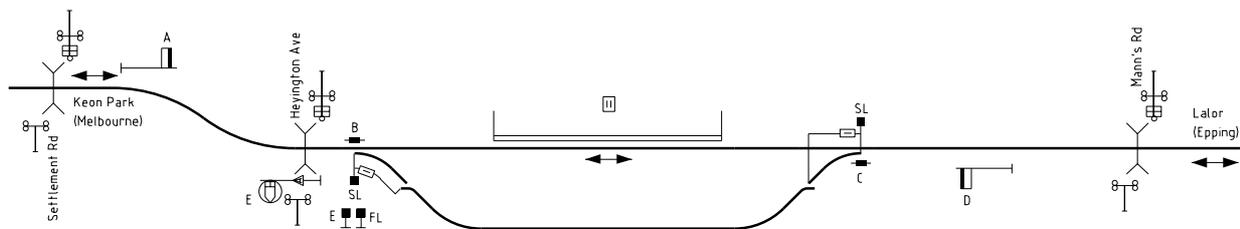
When the Electric train has again stopped the Signaller must arrange for the Guard of the train to display a Red Hand Signal at the required position on the platform.

(c) When the Signaller has observed that the Guard is displaying the Red Hand Signal and the approaching Rail Motor has been brought to a stand at the Home Signal, he may place the Home Signal at Proceed for the Rail Motor to arrive.

2. The Station-master, Whittlesea, prior to the departure of an Up Rail Motor which will be operated at Thomastown in accordance with the above instructions, must instruct the Driver of the arrangements in force at that station.

By 4 July 1940, Thomastown was Porter-in-Charge during the time that the Whittlesea rail motor was operating but was Guard-in-Charge at other times. There are also references to the signalman from Reservoir traveling to Thomastown to attend to the signalling. Again this coincided with the times when the rail motor was connecting with suburban electric trains. By 1948 we are told that it is Guard-in-Charge for all trains except it seems for a short period on Sunday evening when the Reservoir signalman attended.

A short dead end siding was provided on 7 December 1958 and was connected to the down end of the loop goods siding. This siding enabled the Whittlesea railmotor to sta-



Thomastown 1968

Based on Signal Arrangements F2571 dated 28.2.80

ble clear of the platform and goods siding. Perhaps the amount of goods offering was starting to tax the accommodation or the stabled railmotor was getting in the way of the goods trains. With the spread of suburbia and its requirements for home heating, the traffic at Thomastown would most likely have been briquettes and perhaps mallee roots, although in earlier years it would have been outwards produce from the farms in the area. Milk was sent away from a number of locations including some milk loading platforms located between the existing stations and the Sunday evening train was at times shown as Passenger and Milk.

It is curious that this siding was provided rather than a dock platform but maybe it was obvious that the rail motor service was soon to close and this siding was a cheap solution to the problem of stabling the railmotor clear of the siding. The rail motor service did succumb, not quite a year later, on 30 November 1959, along with the line between Lator and Whittlesea, and the dead end siding was presumably removed soon after, although we are not told when.

Extension of electrification to Lator

The Whittlesea line was closed beyond Lator concurrently with the extension of the electrification to Lator on 30 November 1959, although five years later the wires were extended to the new station at Epping (not the original station) on a reopened section of the Whittlesea line. (At the date of writing, this is the only section that has been reopened even though the spread of suburbia hasn't stopped at Epping.)

The line to Lator was now electrified and as electric trains could not cross at Thomastown (the siding was still not wired for electric traction), the need for Thomastown to be a staff station was diminished. New staff and ticket boxes were provided for the long section Keon Park-Lator and Thomastown was closed as a permanent staff station but the short section staffs and ticket boxes were retained and Thomastown could open as a staff station as required. It, in fact, did so on the days the goods ran which by now was on Wednesdays. The Annett locks were removed from the signal quadrants on 29 November 1959 as both signals had to be at proceed when the station was closed as a staff station, which now was just about all the time, and presumably the standard chain with padlock was provided to enable the levers to be secured reverse.

Following the closure of the line between Lator and Whittlesea, the goods train to Thomastown continued to run on Wednesdays only. By February 1968 this became Tuesday and Wednesday. By November 1974 the goods service was altered to run on Monday, Thursday and Friday to and from Thomastown following the cancellation of the separate Reservoir local goods service. (These local Reservoir goods trains formerly ran on the other days of the week thus giving a five days per service on the line but they really are the subject of another article. However, when the Reservoir goods did run it was shown as operating a switch trip to Fowler's Siding as required.) Unfortunately my collection of suburban timetables is a bit sparse at this time and my next dated 1980 shows the goods trains now run-

ning on Monday, Wednesday and Fridays, which as far as can be ascertained was the service until the end.

Level crossings, traffic lights, and signalling

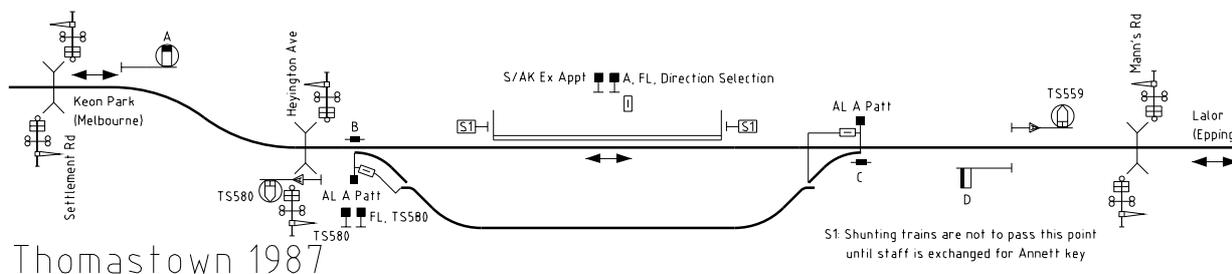
The first set of flashing lights in the area were provided on 25 May 1961 at Settlement Road, but there were no changes to the signalling. Then, on 22 August 1968, flashing lights were provided at Mann's Road. Just prior to this, on 14 July 1968, the down home signal for Thomastown was moved 130 feet further out, but whether this is related to Mann's Road or not, I cannot tell. But the relocation is certainly related to the provision of flashing lights at Heyington Avenue which happened on 2 October 1968. A down train, stopped at the home signal, could have reached the crossing before the correct amount of warning time had elapsed thus the signal was moved further from the crossing. In addition, a new up two position (light) automatic signal - lettered E - was provided and was interlocked with the flashing lights. This signal was controlled by a miniature lever in a box near the up end siding points. This lever enabled signal E to be maintained at stop when shunting movements were taking place thus preventing unnecessary operation of the Heyington Avenue flashing lights. So that shunting movements could be carried out over the level crossing, two push buttons were provided near the up end points so that the flashing lights could be started and stopped as required.

Traffic light co-ordination was provided at Settlement Road level crossing on 24 September 1978 and a number of signalling alterations were carried out. A new down advance starting signal (Post 32, lever 4 Keon Park) was provided on the Melbourne side of the crossing and up automatic E was incorporated into the traffic light co-ordination circuits. Push buttons for the selection of express and stopping trains were also provided at Keon Park and Lator and had to be operated before clearing the down signal Post 32 at Keon Park or the up home signals Posts 2 & 3 at Lator.

The down home for Thomastown was converted to a light signal at the same time with push buttons being provided on the platform in lieu of the quadrant lever whilst the siding points were now secured by A pattern Annett locks rather than staff locks. A staff/annett key exchanger was provided on the platform at Thomastown along with two traffic direction selection buttons. Notice boards were provided at either end of the platform and were lettered "SHUNTING TRAINS ARE NOT TO PASS THIS POINT UNTIL STAFF IS EXCHANGED FOR ANNETT KEY".

When the goods (or any other train for that matter) was required to shunt at Thomastown, the staff was exchanged for the annett key via the exchanger thus switching the flashing lights at Heyington Avenue to manual operation. When shunting operations had been completed and the train was ready to depart, the staff would be retrieved. In order that the level crossing circuits would activate correctly, the up or down "traffic direction" button was then operated and the train could depart after the necessary signal had cleared.

As Thomastown was opened as a temporary staff sta-



Thomastown 1987

Based on Signalling Diagram 188

tion for the running of the goods, the Keon Park-Lalor staff was not available, so which of the local staffs was exchanged? It is thought that it would most likely be the Keon Park-Thomastown staff. Unfortunately the instructions are a bit vague on just which staff was exchanged for the Annett key. Jack McLean, doyen of VR safeworking, suggests that it could have been either but as he didn't go there to watch what happened, he can't say for sure.

On 12 October 1978, signal E was renumbered TS580 and I can only assume that this was just merely to bring the automatic signals on the line into the general numbering scheme where TS was the prefix for automatic signals between Northcote Loop Junction and Whittlesea. But, except for TS599, it would another ten years before there were many more automatic signals in the area.

On 25 October 1978, TS599 - a down two position automatic (light) signal - and up home signal Post 1 (Lalor lever 10) were added. TS599 was provided due to speed selection for Mann's Road level crossing where traffic light co-ordination had been provided. That would explain the conversion of Thomastown down home signal to a light signal, permitting conditional clearing of the signal if the warning time for Mann's Road was insufficient. Post 1 (lever 10 Lalor) was added to enable the shunting of suburban trains at Lalor to take place without causing the flashing lights at Mann's

Road to operate unnecessarily. TS599 was presumably held at stop when the staff had been exchanged for the Annett key at Thomastown thus preventing any approach call being put into the traffic light circuits at Mann's Road. This probably did not (but I cannot say for sure) prevent correct operation of Mann's Road flashing lights for an up train, the shunting train at Thomastown being protected by the arrival home signal being held at stop.

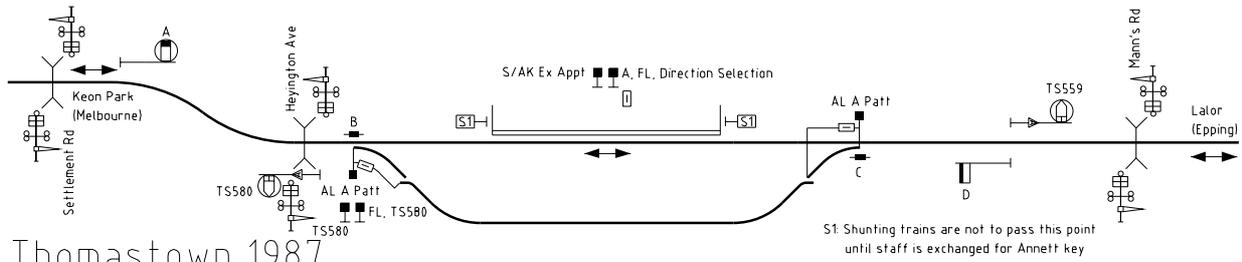
Towards the end of 1979, the three level crossings being considered here all had boom barriers added to the existing flashing lights. Mann's Road was done on 30 October 1979, Settlement Road on 9 December 1979 and finally Heyington Avenue on 28 February 1980. As the line is single, the work involved was simpler than on double line as outer approach sections are not required and with traffic light co-ordination at two of the crossings, and possibly all three (my information does not say), the existing approach controls would have given sufficient extra time to allow the booms to descend.

Resignalling the line

And thus we reach the final stage in the Thomastown signalling story, the abolition of all local sidings and signals and the provision of three position signals throughout. This project was actually part of the re-signalling of the whole



The Up end of Thomastown just prior to resignalling. Two position automatic signal TS580 protects the boom barriers at Heyington Ave. The pushbuttons that control the signal and boom barriers can be seen immediately behind the small point lever. Photo: David Langley.



Thomastown 1987

Based on Signalling Diagram 1'88

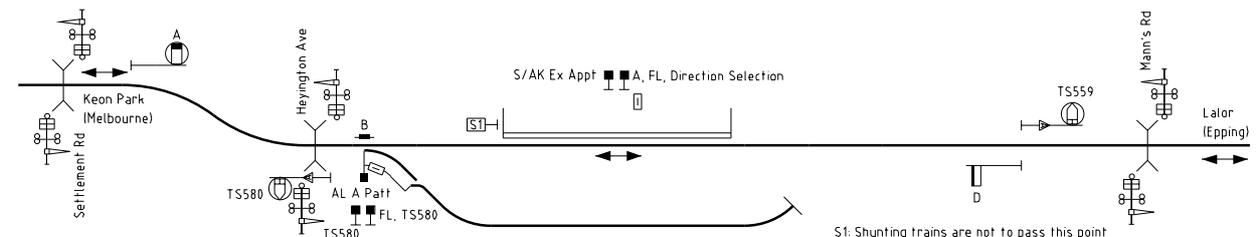
line between Clifton Hill and Epping together with the provision of electric trains workshops and stabling sidings at Epping.

At Thomastown the first stage was when the down end of the annett locked siding was abolished on 22 January 1988 although the up home signal was still required to protect Thomastown when it was opened as a staff station..

Three position signalling was provided between Reservoir and Keon Park on 8 May 1988 and the up repeater T554 (the line prefix had been altered by now to just T) for Keon Park was provided some 555 metres on the upside of auto signal TS580. Signalling diagram 15'1988 shows the arrangements and confirms that both T554 and TS580 existed at the

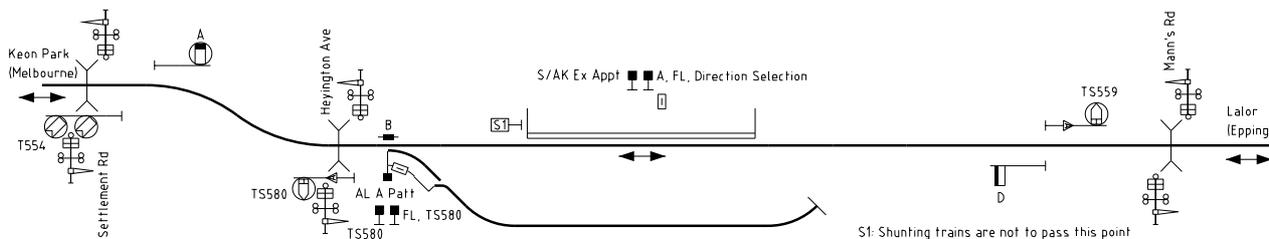
same time.

But it was barely over a month later, 19 June 1988 to be precise, when TS580 succumbed, along with the up and down home signals for Thomastown, and TS599 and Post 1 at Mann's Road. The goods siding at Thomastown was also removed at this time. New automatic signals were provided, although for a time, the future T614 on the upside of Lalor was a temporary up departure home signal whilst Lalor was still locally controlled and retained its Siemen's signals. Figure 6 is a portion of the signalling diagram 23'1988 suitably altered to show T614 remaining as Lalor's up home signal. The diagram had been issued for the final signalling arrangements including the resignalling of Lalor.



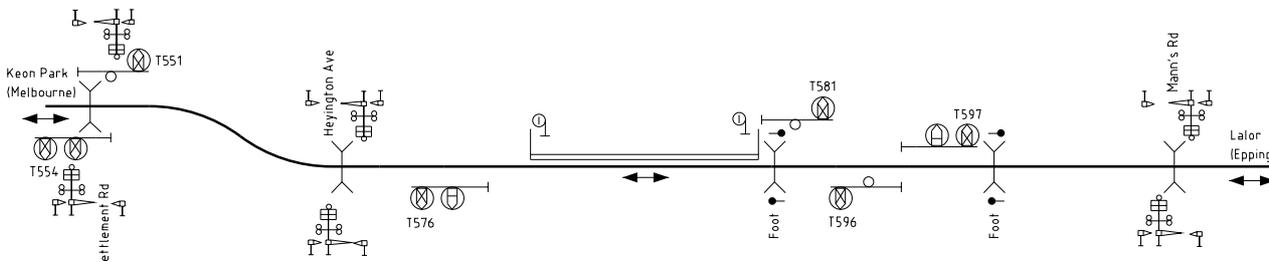
Thomastown 1988a

Based on Signalling Diagram 1'88



Thomastown 1988b

Based on Signalling Diagram 15'88



Thomastown 1988c

Based on Signalling Diagram 15'88

Some further crossing protection took place at this time with the provision of pedestrian boom barriers at Settlement Road, Heyington Avenue and Mann's Road and pedestrian gates at Messmate Street and Derrick Street.

Acknowledgements.

Articles like this are always the product of many years of information gathering, some of which is sourced from other researchers and to that end I would like to thank Jack McLean, Andrew Waugh and Keith Lambert for adding to my knowledge on these matters.



The Thomastown Up Home signal and the Down two position Automatic TS559 that protects Mann's Crossing. Photo David Langley.