




The 'Operating Procedures' contained in this document titled "Burnley Group Operating Procedures" refer to the area bounded by Richmond, Glen Waverley, Alamein, Belgrave & Lilydale.

Approval

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Amendment Record

Approval Date	Version	Description
04/08/2010	1	Initial Issue under MTM withdrawn cml-8.17-ims-03
14/02/2011	2	Changes to reflect MTM Organisational changes – Manager Rail Safety retitled Manager Safeworking & Signalling (13/12/2010)
19/09/2011	3	Procedure 4A updated to reflect changes per SW.317/2011 24/08/2011). SW.171/2008 (11/04/2008) is Cancelled. Document Number changed from L1-OPS-OPP-003 to conform with new DIN document types.
16/11/2011	4	Procedures No. 15 & 16 updated to reflect changes per SWP.007/2011 (09/11/2011) & SWP.008/2011 (14/11/2011). Procedure No. 15A is deleted.
22/11/2011	5	Procedure No. 16 restored to version 3 account: SWP.008/2011 (14/11/2011) not implemented.
19/12/2011	6	Procedure 16 updated per SWP 009/2011 (15/12/2011)
30/08/2012	7	Procedure 3 updated, reference to Points 280 & 285 reinserted.

Approval Date	Version	Description
24/10/2012	8	General clean up of Procedure and Manager Safeworking & Signalling title change to Manager Rail Standards.
08/11/2012	9	Camberwell Operating Procedure No.4A Cancelled per SW.372/2012 (29/10/2012)
12/11/2013	10	General clean up of Procedure and changes to reflect MTM Organisational changes – Manager Rail Standards retitled Head of Operational Rail Safety (01/04/2013). Riversdale Operating Procedure No. 13 updated per SW.013/2013
29/09/2014	11	The following signalling restrictions are included; Blackburn – Signalling Restriction (SW.103/2014). Blackburn – Signalling Restriction (SW.005/2010). Procedure No. 17 added relating to Glen Waverley – Automatic Working of Points And Signals.
07/01/2016	12	Operating procedure No. 3 updated to reflect the provision of voice recording facilities and the Issue of caution orders as advertised per SWP.009/2015. Operating Procedure No. 16, titled “Gardiner Operation of Tramway Square” is withdrawn as advertised per SWP.001/2016
20/01/2016	13	Operating procedure No. 8 now titled Ringwood and Bayswater failure of signals is updated to reflect the provision of voice recording facilities at Ringwood for the Issue of caution orders as advertised per SWP.003/2016. Operating procedure No. 9 titled Bayswater Train Maintenance Facility & Stabling sidings is updated to remove reference to the failure of main line signals at Bayswater as advertised per SWP.004/2016.
22/11/2016	14	Operating procedure No. 1 titled ‘East Richmond - Emergency Operation of Electro - Hydraulic Points’ is withdrawn, Key switch function obsolete, Advertised vide SWP.008/2016.
21/10/2016		New operating procedure No. 10A titled Upper Ferntree Gully – Operation of Rail Master Reset 5P Key Switch. Advertised vide SW.341/2016
22/11/2016		Operating procedure No. 8 titled Ringwood - Failure of Signals is updated to reflect failure of Signals at Ringwood only. Advertised per SWP.012/2016.
22/11/2016		Operating procedure No. 9 titled Bayswater Failure of Signals and Train Maintenance Facility Procedures is updated to reflect signal alterations at Bayswater. Advertised vide SWP.013/2016.

16/11/2016		<p>Operating procedure No. 4 titled Camberwell Failure of Signals is updated to reflect the provision of voice recording facilities at Camberwell for the Issue of caution orders and the manual operation of HWMKII type point machines as advertised vide SWP.014/2016.</p> <p>The Special Instruction relating to the “Failure of Home Departure Signals when Box Hill is Switched Out” has been removed from operating procedure No. 2 and included within Operating Procedure No. 4.</p> <p>Operating procedure No. 7 & 7A relating to signalling restrictions are withdrawn a/c Blackburn Road grade separation works.</p>
04/01/2017		<p>Operating procedure No. 6 updated to reflect transfer of signal control to Ringwood as advertised per SWP.001/2017.</p>
20/03/2017	15	<p>Operating procedure No. 4 titled Camberwell Failure of Signals is updated to reflect the provision of an emergency signal control panel at Glenferrie (clause f) as advertised vide SWP.003/2017.</p>

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1. Spare

2. Burnley – Camberwell – Box Hill – Riversdale ATC Single Line Sections Issue of Caution Orders

The Automatic and Track Control (ATC) system of train signalling is in force for the Centre Line between Camberwell and Burnley, for the Centre Line between Camberwell and Box Hill and for the bi-directional 'X' Line between Camberwell and Riversdale.

The authorisation form for the issue of an ATC Caution Order (Form 2382) will not apply to the Single Line Sections Burnley – Camberwell, Camberwell – Box Hill and Camberwell – Riversdale. The Signallers at Burnley, Camberwell, Box Hill and Riversdale will be responsible for the authorisation and issue of ATC Caution Orders over the single line section.

If the Home Departure signal fails to assume the 'Proceed' position when required, the Signaller at both ends of the section must ascertain if:

1. The Block Light is illuminated,
2. the applicable control lever has been reversed,
3. the opposing Home Departure signal will assume the 'proceed' position,
4. if either Signaller has placed a train or vehicle outside the Home Departure signal.

Upon confirmation that the Home Departure signal has failed, the Signaller at the opposite end of the Single Line Section must sleeve the lever of the Home Departure Signal in the 'Normal' position. When this has been confirmed, the Signaller at the location where the Home Departure Signal has failed must secure the signal in the 'Normal' position and then complete a Systems Caution Order and hand deliver or transmit (where authorised) to the train driver as authority to pass the defective signal.

3. Burnley and Burnley Stabling Sidings - Failure of Signals

The points and signals at Burnley and Burnley stabling sidings are controlled from Burnley Signal box.

The PABX telephone line at Burnley 9610 6442 / 56442 is recorded.

The Signal Post telephones lines are not recorded.

(a) Should a signal failure occur, the following procedure must be complied with:

- The Driver must immediately contact the Signaller at Burnley by calling PABX number **9610 6442 / 56442**.
- The Driver must state name, grade, the number of the home signal which is at the 'stop' position, the train number, originating station and destination.
- The Signaller must observe the signal control panel indications to check that all points in the route are set, locked and detected by ensuring:
 1. Points are not indicated as being "out of correspondence".
 2. All point levers in the affected route are to be operated to the required position and positive detection is displayed.
 3. If positive detection of the point's position is displayed "lever sleeves" must be placed on the points in the required position.
- The Signaller must then complete a Caution Order and transmit the contents to the Driver. The Signaller and Driver must exchange names and the Driver's name endorsed on the Caution Order. It will not be necessary for the Driver to take down details of the Caution Order, however must confirm;
 - The train describer number,
 - The number of the signal concerned,
 - The line to which the authority applies (applicable for parallel single lines).

(b) Failure of Points - Positive Detection Unavailable on Points

If positive detection is not available on the points ahead of the defective signal, the Signaller must arrange for the points to be secured in the correct position prior to a caution order being issued.

The Signal Maintenance Technician or Competent employee may manually operate the points under direction from the Signaller. Once the points have been manually operated to the required position, a caution order can be transmitted or hand delivered to the Driver.

Note: A suitably qualified competent employee may be appointed to operate the point machine and hand deliver the Caution Order to train drivers under the direction of the Signaller.

(c) Burnley Stabling Sidings Switched 'Out'

Should a train arrive at the Home Signal and the Signal is at the 'Stop' position and the illuminated Letter 'A' is not displayed, the Driver must contact the Signaller at Burnley.

If the points are in the correct position and positive detection is available, the Signaller must then give the Driver verbal instructions to pass the defective Signal.

The Signaller and Driver must exchange names for record purposes.

(d) Burnley Stabling Sidings Switched ‘In’

Should a train arrive at the Home Signal and the Signal is at the ‘Stop’ position and the illuminated Letter ‘A’ is not displayed, the Driver must contact the Signaller at Burnley.

If the Burnley Signal Control panel is switched in the Signaller Burnley must deal with the signal failure in accordance with clause (a) above.

(e) Failure of the Security Gates (Burnley Sidings)

If the security gates fail to operate when required, a competent employee will attend to manually operate the gates under the directions of the Signaller at Burnley.

If the gates have failed and are required to be manually operated, the Signaller must first ensure the lever on the Burnley signal control panel is in the position the gates are required to be in. The competent employee must then open the cabinet located adjacent to the left hand (down side) of the security gates. The door is secured by a ‘5P’ padlock. The Release Key (for releasing the braking system on the gates) must be obtained from the cabinet and placed in the key switch which is situated on the exterior of the second cabinet situated nearby. The key must then be placed to the ‘Brake Release’ position. The gates can then be pushed by hand. When the gates have been opened, they must be secured open with the chain provided on the post.

Once the security gates have been secured ‘Open’ and the lever is in the corresponding position, positive detection should be obtained. This will then allow the respective signals to be operated.

(f) Operation of Track Maintenance and Road-Rail Vehicles

For the movement of all track maintenance and road rail vehicles the Signaller, must ensure either the relevant point unit levers are placed in the “N” or “R” position and a “lever sleeve” is placed on each set of points in the route prior to clearing the signal.

4. Camberwell - Failure of Signals

Camberwell is provided with a “Sigview” type route setting control panel.

The PABX telephone line at Camberwell 9610 6410 / 56410 and 9610 6411 / 56411 are recorded.

The Signal Post telephone lines are not recorded

The issue of an authority to pass a fixed signal at the stop position by the Signaller at Camberwell can be undertaken via the recorded telephone line.

(a) Should a signal failure occur, the following procedure must be complied with:

- The Driver must immediately contact the Signaller at Camberwell by calling PABX number 9610 6410 / 56410 and 9610 6411 / 56411.
- The Driver must state name, grade, the number of the absolute signal which is at the ‘stop’ position, the train number, originating station and destination.
- The Signaller must observe the VDU screen to check that all points in the route are set, locked and detected by ensuring:
 1. The points are not indicated “WHITE” and a flashing red light is not displayed over the affected point lever to indicate they are out of correspondence.
 2. All point levers in the affected route are to be operated to the required position and positive detection is displayed.
 3. If positive detection of the point’s position is displayed a “block” must be placed on the points in the required position.
- The signaller may then issue the appropriate authority to the Train Driver to pass the fixed signal at the stop position. The signaller and train driver must exchange names for record purposes. It will not be necessary for the Driver to take down details of the authority, however must confirm:
 - The train describer number,
 - The number of the signal concerned.

Where a caution order is required, the Signaller must complete the details on the Caution Order form and transmit the contents to the Driver. The Signaller and Driver must exchange names and the Driver’s name must be endorsed on the Caution Order.

The Signaller at Camberwell will issue authority to pass defective signals as indicated hereunder:-

DOWN HOME SIGNALS

TYPE OF CAUTION ORDER ISSUED

No. CAM 302	Verbal Instructions
No. CAM 304	Signaller’s Caution Order (2377)
No. CAM 306 to Down Box Hill Line	Signaller’s Caution Order (2377)
No. CAM 306 to Down Alamein Line (Y)	Signaller’s Caution Order (2377)

No. CAM 306 to Box Hill via Centre Line	ATC Caution Order (2367)
No. CAM 306 to Alamein via X Line	ATC Caution Order (2367)
No. CAM 312	Signaller's Caution Order (2377)
No. CAM 314 all routes	Signaller's Caution Order (2377)
No. CAM 316 to Down Box Hill Line	Signaller's Caution Order (2377)
No. CAM 316 to Box Hill via Centre Line.	ATC Caution Order (2367)
No. CAM 316 to Alamein via X Line	ATC Caution Order (2367)
No. CAM 326 to Down Box Hill Line	Signaller's Caution Order (2377)
No. CAM 326 to Box Hill via Centre Line	ATC Caution Order (2367)
No. CAM 326 to Alamein via X Line	ATC Caution Order (2367)

UP HOME SIGNALS

No. CAM 325	Verbal Instructions
No. CAM 321 all routes	Signaller's Caution Order (2377)
No. CAM 317 to Up Line	Signaller's Caution Order (2377)
No. CAM 317 to Centre Line	ATC Caution Order (2367)
No. CAM 317 to Siding 'A'	Signaller's Caution Order (2377)
No. CAM 335	Verbal Instructions
No. CAM 333	Signaller's Caution Order (2377)
No. CAM 331 all routes	Signaller's Caution Order (2377)
No. CAM 327 all routes	Signaller's Caution Order (2377)
No. CAM 343	Signaller's Caution Order (2377)

DOWN DWARF SIGNALS

No. CAM 324	Verbal Instruction
No. CAM 336 to Down Box Hill Line	Verbal Instruction
No. CAM 336 to Box Hill via Centre Line	ATC Caution Order (2367)
No. CAM 336 to Alamein via X Line	ATC Caution Order (2367)

UP DWARF SIGNALS

No. CAM 311	Verbal Instructions
No. CAM 357	Verbal Instructions
No. CAM 367	Verbal Instructions
No. CAM 377	Verbal Instructions

(b) Special Instruction for the Failure of Home Departure Signals when Box Hill is Switched Out

During the times when Box Hill Signal box is switched out and there is a failure of Home Departure signal Nos. CAM 306, CAM 316 & CAM 326 and / or Dwarf signal No. CAM 336 the following instructions MUST be complied with:

- the Signaller must ensure that the indicating light is displayed indicating the controlling track section is clear,
- if the indicating light has failed the Signaller must ensure the controlling track section is clear,
- the Signaller must communicate with the Train Controller and advise of the failure,
- the Signaller at Camberwell and the Train Controller must jointly ensure that the Signaller is not in attendance and the Signalbox is switched out,
- After it is found that the Signaller at Box Hill is not in attendance and the Signalbox is switched out, the Signaller must ensure the route is correctly set and sleeved for the movement to the Centre line.
- The Signaller must fill in an ATC Caution Order to pass the Home Departure signal at the 'Stop' position and transmit or hand deliver it to the Driver.

The above instructions are to be again followed should it be necessary for more than one Caution Order to be issued.

(c) Failure of Points

Two (2) types of point machines (HWMKII and Electro Hydraulic) are provided at Camberwell and both have emergency point handles for use in case of failure.

The **electro hydraulic** point machine handle (for use on the points in the Camberwell Sidings Nos. 226U, 236, 246, 256, 237, 247 and Derails Nos. 257, 267 & 277) is kept in a locked metal box at each end of the yard and can be removed from the box without affecting the signalling.

The Signaller must, before moving points or derail / crowders manually, ensure the unit lever switch on the control panel is operated to the position the infield points / derails are required to be set, either 'Normal' or 'Reverse'.

After being manually operated the points position should correspond with the position of the unit lever.

See Section 27 of the 1994 Book of Rules for instructions in regard to the manual operation of electro-hydraulic point machines.

Electro – Hydraulic point machines can only be restored to the ‘Power’ position by a Signal Maintenance Technician.

All Main Line points are the **HWMKII type**; the handle is kept in a locked box in the signal box and can be removed at any time without affecting the signalling.

The Signaller must before moving points by hand, ensure the unit lever switch on the control panel is operated to the position the infield points / derails are required to be set, ‘Normal’ or ‘Reverse’. After being manually operated the position of the points should correspond with the position of the unit lever.

After the points have been manually operated they can be restored to the motor position but must be clipped before a train movement in the facing direction is permitted, this applies even if detection is restored.

The points must continue to be clipped until inspected by the Signal Maintenance Technician who must advise the Signaller the points may be operated and a movement permitted without the use of a point clip.

Instructions for the manual operation of the HWMKII are:-

- Remove the padlock (5P) from the crank handle access cover.
- Open the lid (this action disables the point motor and any signals affected by these points will be maintained at ‘Stop’).
- Insert the crank handle into the machine and turn it until the points are in the required position. Turn the handle until it stops to ensure the stroke is complete.
- Remove the crank handle.
- Close the machine lid.
- If the points are double ended the same process as above applies.
- With the lid closed and providing that there are no point detection faults, the power to the motor and the signalling controls are restored.

Note: Points must be clipped either normal or reverse before a facing train movement is permitted even if detection is restored until they have been inspected by a Signal Maintenance Technician.

Note: A suitably qualified Signaller may be appointed to operate the point machine and issue the appropriate authority to train drivers under the direction of the Signaller at Camberwell.

(d) Operation of Track Machines and Road/Rail Vehicles

For the movement of all track maintenance and road rail vehicles the Signaller must ensure the point unit levers are placed in the “N” or “R” position and a point “block” is placed on each set of points in the route prior to clearing the signal.

(e) Camberwell - Stabling Sidings

(1) Movement from the Sidings to No. 3 Track

Set back movements are not permitted from the Up Main Line to No.3 Track.

A train which is to proceed from Siding 'B', 'C' or 'D' to No.3 Track must first be signalled to Siding 'A'

The train may then be signalled in the usual manner to No.3 Track, via Dwarf Signal No. CAM 324.

(2) Camberwell Stabling Sidings Security Gates

Under normal operating conditions the gates open and close automatically as routes are set and cancelled providing the unit lever switch on the signal panel is in the centre position.

If manual operation is required due to failure, a Signal Maintenance Technician must operate the gates. The unit lever on the signal control panel must be positioned to correspond with the position of the gates in-field, once the gates have been detected trains may be signalled in the normal manner.

(3) Maintainer's Control Unit

A Maintainer's Control Panel is provided in the yard between 'D' and 'E' sidings.

If it is necessary for access to a particular siding to be prevented whilst train maintenance activities are being carried out, the Maintainer must operate the applicable switch, which when 'Reversed' will prevent a route from being set into that siding.

A red light will be illuminated on the Maintainer's panel to indicate the siding is blocked. An indicating light is also displayed on the Signaller's panel next to each siding to indicate the siding is under maintenance control.

Procedure for Use

- The Train Maintainer must contact the Signaller at Camberwell on the post phone provided adjacent the Maintainer's Control Unit and request permission from the Signaller to lock out the required siding.
- If the Signaller can grant permission, the Train Maintainer must place the required Enable/Disable switch into the Disable position.
- When the switch is placed in the Disabled position the Train Maintainer must observe that the Red light beside the switch has illuminated.
- The Signaller must confirm with the Train Maintainer that the Red light has illuminated and that the indicating light on Signaller's VDU has also illuminated.
- The Signaller must then apply blocking facilities to the affected siding(s).
- The Signaller can then inform the Train Maintainer that the siding is locked out and that work may commence.

- The Train Maintainer must then lock the Control Unit box with the Train Maintainer's special padlock.
- The Signaller must record the following information in the Train Register Book:
 - The Siding isolated and time.
 - The train unit numbers being attended.
 - Maintainer's name and contact telephone number
 - When required, that the Overhead is isolated.
- When the Train Maintainer has finished maintenance activities the Signaller must be advised and requested to place the switch concerned into the enable position, both the Train Maintainer and the Signaller must confer and ensure that the Red light beside the switch and the indicating light on the Signaller's VDU have been extinguished.
The Signaller may then remove the lever sleeves and enter the time in the Train Register Book.

(f) Emergency Signal Control Panel

An emergency signal control panel for the control of the Camberwell area and a 5P key switch is located in the Station Masters Office at Glenferrie.

The function of the key switch is to transfer control from Camberwell Signal Box Sigview panel to the emergency panel located at Glenferrie.

The Station Master at Glenferrie or the Train Services Officer - Signaller Specialist will arrange access for the Signaller in the event it is deemed necessary for operations to be transferred.

The interlocking (IXL) LINK ALIVE light when Illuminated (steady) indicates that the communication links between the Sigview at Glenferrie and the computer based interlocking (CBI) is healthy.

Note: Prior to transferring control the operator should check that the light is illuminated and the Sigview equipment is healthy. Only if these conditions are met will the Glenferrie emergency panel be available to control the signalling.

Taking Control

Insert Key and turn to the LOCAL (R) position to activate the 'switch in' sequence to take control.

The LOCAL light will flash until control of the interlocking has been successfully switched to the local panel.

When the LOCAL light is illuminated (steady), Indicates that control has been successfully switched to the emergency Sigview control panel at Glenferrie.

Relinquishing Control

Turn the key to the REMOTE (N) position. The Remote light will flash as it relinquishes control of the interlockings, the local light will extinguish when this is successful.

When the control is returned to Camberwell, the Remote Light at Glenferrie will become steady.

The key can then be returned to the centre position and removed.



5. Spare

6. Blackburn - Failure of Signals

The points and signals at Blackburn are remotely controlled from Ringwood Signal box.

The post telephones and the PABX telephone line 9610 8865 (58865) at Ringwood are recorded.

The issue of an authority to pass a Fixed Signals at the stop position by the Signaller at Ringwood can be undertaken via the recorded telephone line.

(a) Should a signal failure occur, the following procedure must be complied with:

- The Driver must immediately contact the Signaller at Ringwood by calling PABX number **9610 8865 / 58865** the signal post telephone provided.
- The Driver must state name, grade, the number of the absolute signal which is at the 'stop' position, the train number, originating station and destination.
- The Signaller must observe the VDU screen to check that all points in the route are set, locked and detected by ensuring:
 1. The points are not indicated "WHITE" and a flashing red light is not displayed over the affected point lever to indicate they are out of correspondence.
 2. All point levers in the affected route are to be operated to the required position and positive detection is displayed.
 3. If positive detection of the point's position is displayed a "block" must be placed on the points in the required position.
- The signaller may then issue the appropriate authority to the Train Driver to pass the fixed signal at the stop position. The signaller and train driver must exchange names for record purposes. It will not be necessary for the Driver to take down details of the authority, however must confirm:
 - The train describer number,
 - The number of the signal concerned.

Where a caution order is required, the Signaller must complete the details on the Caution Order form and transmit the contents to the Driver. The Signaller and Driver must exchange names and the Driver's name must be endorsed on the Caution Order.

(b) Failure of Points - Positive Detection Unavailable on Points

If positive detection is not available on the points ahead of the protecting fixed signal, the Signaller must arrange for the points to be secured in the correct position prior to issuing the authority to pass the signal at stop.

The Signal Maintenance Technician, Signaller / TSO Signaller specialist may manually operate the points under direction from the Signaller at Ringwood. Once the points have been manually operated to the required position, the Ringwood Signaller can issue the appropriate authority to the Driver.

Note: A suitably qualified Signaller may be appointed to operate the point machine and issue the appropriate authority to train drivers under the direction of the Signaller at Ringwood.

Points No. 206 are provided with a dual control point machine and can be manually operated in the event of a failure.

Points No. 202 & 204 are also available for manual operation. The crank handle for the operation of the points is located on the interior station wall at Blackburn.

When the crank handle is removed from the circuit controller, all signals protecting the points will be secured at the 'Stop' position.

Once the crank handle has been removed from the circuit controller the points affected must be secured with a point clip in the required position.

(c) Blackburn Switch Out facility

Home Signals No. BBN302, BBN303, BBN308 & BBN310 are provided with an illuminated letter "A" and the facility exists for the Signaller at Ringwood to switch out the Blackburn signal control panel.

In the event of a failure of a home signal and the illuminated letter "A" is not displayed, the Signaller must switch in the signal control panel and deal with the failure in accordance to clause (a) & (b) above.

(d) Operation of Track Maintenance and Road-Rail Vehicles

For the movement of all track maintenance machines and track vehicles the Signaller must ensure the relevant point unit levers are placed in the "N" or "R" position and a "lever sleeve" is placed on each set of points in the route prior to clearing the signal.

7. Spare

8. Ringwood Failure of Signals

The PABX telephone line at Ringwood 9610 8865 / 58865 is recorded.

The Signal Post telephones lines at Ringwood are not recorded.

The issue of an authority to pass a Fixed Signals at the stop position by the Signaller at Ringwood can be undertaken via the recorded telephone line.

(a) Should a signal failure occur, the following procedure must be complied with:

- The Driver must immediately contact the Signaller at Ringwood by calling PABX number **9610 8865 / 58865**.
- The Driver must state name, grade, the number of the absolute signal which is at the 'stop' position, the train number, originating station and destination.
- The Signaller must observe the VDU screen to check that all points in the route are set, locked and detected by ensuring:
 1. The points are not indicated "WHITE" and a flashing red light is not displayed over the affected point lever to indicate they are out of correspondence.
 2. All point levers in the affected route are to be operated to the required position and positive detection is displayed.
 3. If positive detection of the point's position is displayed a "block" must be placed on the points in the required position.
- The signaller may then issue the appropriate authority to the Train Driver to pass the fixed signal at the stop position. The signaller and train driver must exchange names for record purposes. It will not be necessary for the Driver to take down details of the authority, however must confirm;
- The train describer number,
- The number of the signal concerned.

Where a caution order is required, the Signaller must complete the details on the Caution Order form and transmit the contents to the Driver. The Signaller and Driver must exchange names and the Driver's name must be endorsed on the Caution Order.

(b) Failure of Points - Positive Detection Unavailable on Points

If positive detection is not available on the points ahead of the protecting fixed signal, the Signaller must arrange for the points to be secured in the correct position prior to issuing the authority to pass the signal at stop.

The Signal Maintenance Technician, Signaller / TSO Signaller specialist may manually operate the points under direction from the Signaller at Ringwood. Once the points have been manually operated to the required position, the Ringwood Signaller can issue the appropriate authority to the Driver.

Note: A suitably qualified Signaller may be appointed to operate the point machine and issue the appropriate authority to train drivers under the direction of the Signaller at Ringwood.

(c) Operation of Track Maintenance and Road-Rail Vehicles

For the movement of all track maintenance machines and track vehicles the Signaller must ensure the relevant point unit levers are placed in the “N” or “R” position and a “lever sleeve” is placed on each set of points in the route prior to clearing the signal.

(d) Failure of Train Stabling Siding Compound Gates

The train stabling compound gates are motor operated and interlocked with the fixed signals leading to and from the Stabling Sidings.

If the train gates fail to respond to the remote operation from the signal box, they can be manually operated from the control panel located in a cabinet outside the train gates next to the down Belgrave line.

To manually operate the gates:

- 1) Place the Auto / Manual key-switch on the control panel to the ‘Manual’ position. The key for the switch is kept in the signal box and a duplicate key is kept in the Ringwood Maintenance Depot.
After the AUTO / MANUAL switch has been operated to the MANUAL position, the train gates can only be operated from the control box.
- 2) Operate the button for the gate locking mechanism (labelled LATCH / UNLATCH) as required.
- 3) Operate the OPEN / CLOSE button to open or closed the gates as required.

NOTE: When the AUTO / MANUAL switch is returned to the AUTO position and the system has been restored to normal working order, the gates will automatically assume the position called by lever in the signal box.



9. Bayswater Failure of Signals and Train Maintenance Facility Procedures

The points and signals at Bayswater are controlled from Ringwood Signal box.

The PABX telephone line at Ringwood 9610 8865 / 58865 is recorded.

The Signal Post telephones lines at Bayswater are recorded.

The issue of an authority to pass a fixed signal at the stop position by the Signaller at Ringwood can be undertaken via the recorded telephone line.

(a) Should a signal failure occur, the following procedure must be complied with:

- The Driver must immediately contact the Signaller at Ringwood by calling PABX number **9610 8865 / 58865** or by the post telephone provided.
- The Driver must state name, grade, the number of the absolute signal which is at the 'stop' position, the train number, originating station and destination.
- The Signaller must observe the VDU screen to check that all points in the route are set, locked and detected by ensuring:
 1. The points are not indicated "WHITE" and a flashing red light is not displayed over the affected point lever to indicate they are out of correspondence.
 2. All point levers in the affected route are to be operated to the required position and positive detection is displayed.
 3. If positive detection of the point's position is displayed a "block" must be placed on the points in the required position.
- The signaller may then issue the appropriate authority to the Train Driver to pass the fixed signal at the stop position. The signaller and train driver must exchange names for record purposes. It will not be necessary for the Driver to take down details of the authority, however must confirm:
 - The train describer number,
 - The number of the signal concerned.

Where a caution order is required, the Signaller must complete the details on the Caution Order form and transmit the contents to the Driver. The Signaller and Driver must exchange names and the Driver's name must be endorsed on the Caution Order.

(b) Failure of Points - Positive Detection Unavailable on Points

If positive detection is not available on the points ahead of the protecting fixed signal, the Signaller must arrange for the points to be secured in the correct position prior to issuing the authority to pass the signal at stop.

The Signal Maintenance Technician or Signaller / TSO Signaller Specialist may manually operate the points under direction from the Signaller at Ringwood. Once the points have been manually operated to the required position, the Signaller can issue the appropriate authority to the Driver.

Note: A suitably qualified Signaller may be appointed to operate the point machine and issue the appropriate authority to train drivers under the direction of the Signaller at Ringwood.

(c) Home Signal BAY305

Home signal BAY305 is not provided with a train stop or low a speed aspect.

A train cannot be signalled from sidings Nos. 3-7 to stand at signal No. BAY305 to wait line clear. Signal BAY305 cannot be used as an exit symbol, all up movements via BAY305 require to be signalled as a through movement. If a train stops at signal BAY305 due to inability to proceed, the signal can be cancelled however the route locking will not release until the train has been moved and the approach track circuit is clear.

(d) Bayswater - Siding Axle Counters

Axle counter units are provided for train detection purposes within the Sidings area on the down side of points No. 205U (near train stabling siding compound gates).

In the event an axle counter unit has been disturbed due to a fault event or following track maintenance activities the axle counter section concerned can be reset by the Signal Maintenance Technician (SMT).

Prior to an axle counter reset being activated by the SMT the following must apply:-

- The Signaller must inform the Fleet Maintenance Production Coordinator at Bayswater of the intention for the SMT to re-set an axle counter section and no rail traffic movements are to be undertaken within the affected area.
- The SMT has confirmed by observation the axle counter section to be reset is clear of rail traffic,
- The Signaller must ensure all fixed signals protecting the area to be reset are at the stop position with blocking commands applied and advise the SMT accordingly.
- The Signaller must record across the figure line of the train register book the details of the axle counter section to be reset, the Signals secured at "Stop" with blocking facilities applied and the Signal Maintenance Technicians contact details.
- Once the above steps have been undertaken the SMT can reset the applicable axle counter section.

(e) Bayswater – Auto Normalising Points

Points Nos. 205 and 223 have an 'Auto – Normalising' feature and will self restore to the Normal position, 10 seconds after the train movement is clear of the track circuits.

In the event that the Signaller requires the points to be held in the reverse position, the points must be locked in the reverse position by the operation of the point unit lever or drop down menu. A point block must also be applied.

(f) Operation of Track Maintenance and Road-Rail Vehicles

For the movement of all track maintenance machines and track vehicles the Signaller must ensure the relevant point unit levers are placed in the "N" or "R" position and a "lever sleeve" is placed on each set of points in the route prior to clearing the signal.

(g) Bayswater Sidings Train Stabling Compound Gates

The train stabling compound gates (Gate control No. BAY203) are motor operated and interlocked with the fixed signals leading to and from the stabling sidings.

If the train gates fail to respond to the remote operation from the signal box, they can be manually operated by a competent employee. A 5P key switch is provided in a cabinet next to the gate control box near the train gates along with a telephone to the Signaller at Ringwood.

To manually operate the gates;

- 4) The Competent Employee will after consulting with the signaller at Ringwood, place a 5P key into the key-switch and turn to the "Release" position. If the "Brake Power Release" LED is illuminated, this function has disengaged the driver motors and magnetic lock.
- 5) The train gates can now be manually pushed open and locked in position by the latch and padlocks provided.
- 6) The signaller must then ensure the gate control No. BAY203 on the signal control panel corresponds to the open position of the train gates.
- 7) The competent employee must then turn the key switch back to the "Normal" position. This function will then detect the gates in the open position and allow trains to be signalled to or from the siding.
The train gates are to be left in the open position until the fault is rectified by the Signal Maintenance Technician.

NOTE: In the event of a power failure, battery back up is provided within the gate control mechanism to enable the key switch release to disengage the drive gears and magnetic lock. If the battery back up fails and the "Brake Power Release LED is not illuminated the gates are not available for manual operation. The services of a Signal Maintenance Technician is required.

(h) Bayswater Train Maintenance Facility Sidings

Train Maintenance Siding Nos. 3 to 7 are under the control of the Fleet Maintenance Production Coordinator at Bayswater who will arrange for train movements to or from the respective siding in conjunction the Fleet Controller and Signaller.

Train Maintenance Building Siding Nos. 3 & 4

The Signaller can place a train into siding Nos. 3 & 4 when requested to do so by the Fleet Maintenance Production Coordinator.

Train movements into sidings 3 & 4 can only be made when a release is activated by the Fleet Maintenance Production Coordinator.

For train movements arriving into the siding the Fleet Maintenance Production Coordinator will operate the key switch to the 'Release' position (light will illuminate at the top of the switch to indicate the release has activated). The key can then be returned to the centre position and removed.



Operators key switch;

- Centre position – Key can be inserted or removed
- Right hand position – Release given to Signaller to allow train to enter the siding. (light illuminated above key switch to indicate release given)
- Left hand position – release cancelled

The release will remain active until the route has been set or the Production co-ordinator has cancelled the request by turning key switch to the cancelled position.

A 'Green' release symbol will be displayed on the Signaller's control panel adjacent to siding No. 3 or 4. A blue symbol indicates the release has not been initiated.



Access to Maintenance Building

All trains entering the Maintenance Building MUST STOP before the concrete apron at the front of the building until the building doors are fully opened and the 'ALL RIGHT' hand signal is displayed by the Production Coordinator.

When a train movement is ready to depart the maintenance sidings, the Train Driver will advise the Signaller, the track from which the train movement will depart and the train's destination.

Failure of a Fixed Signal Controlling the Entrance / Exit to the Maintenance Building Siding Nos. 3 & 4.

When any signal controlling the entrance or exit to the Train Maintenance Facility sidings Nos. 3 & 4 fails at the stop position, the Signaller before authorising the Train Driver to pass the respective signal must have a clear understanding with the Fleet Maintenance Production Coordinator of the movement to take place.

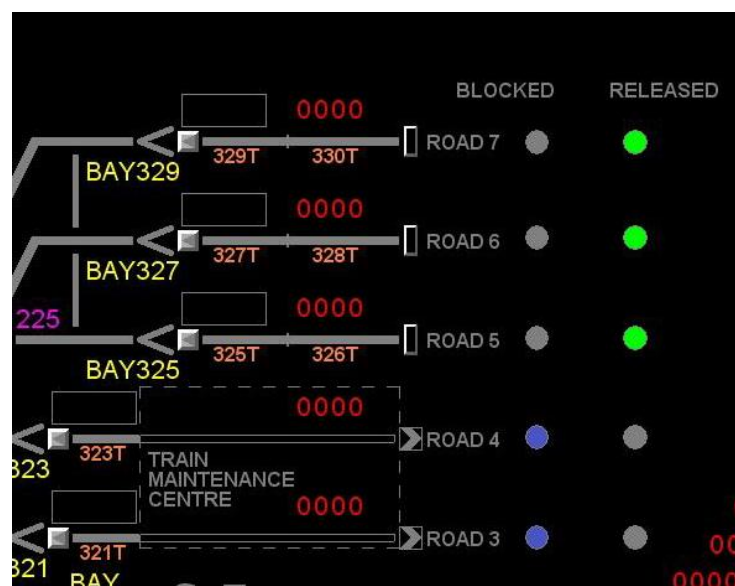
Siding Nos. 5 - 7

The Signaller can place a train into the Siding Nos. 5 to 7 as required.

If the Production Coordinator requires to undertake maintenance or to restrict access to a train from entering siding Nos. 5 to 7, the Production Coordinator can 'lock out' the siding by activating a key switch. The operation of the key switch will prevent the Signaller from signalling a train into the respective siding.

The Signaller at Ringwood is to be advised of the intent prior to the activation of the key switch.

When the key switch is operated by the Production Coordinator a 'Blue' road blocked symbol will be displayed on the Signaller's control panel.



(i) Train Maintenance Facility Road Vehicle Access

Boom barriers are provided to prevent road vehicle access towards the Train Maintenance Facility.

The normal position of the boom barrier arms are in the lowered position and will only be raised to allow road vehicle access into the maintenance facility area. The Fleet Maintenance Production Co-ordinator is responsible for the road vehicle movements once located within the maintenance facility area.

The boom barriers are interlocked with the signalling system.

When road vehicle access is required the Fleet Maintenance Production Co-ordinator must contact the Signaller at Ringwood and request permission to raise the boom barrier arm.

If there are no train movements in progress the Signaller can operate a release which will be indicated in the control box at the boom barrier.

When the release light is illuminated the Fleet Maintenance Production Co-ordinator can activate the boom raise control and raise the boom barrier arm.

The Fleet Maintenance Production Co-ordinator is to leave the boom barrier arm raised until the road vehicle has cleared all tracks and it is safe to allow train movements to commence.

When it is safe to do so the Fleet Maintenance Production Co-ordinator will activate the boom barrier lowered control. Once the boom barrier arms are detected in the lowered position the release will normalize and train movements can be signalled to or from the sidings.

Failure of Boom Barrier

In the event of a failure of the boom barrier the Signal Faults Centre is to be advised.

If the boom barrier arm is not in the lowered position, the Fleet Maintenance Production Co-ordinator must ensure the crossing is protected prior to any train movement.

An emergency chain is provided, the chain can be secured (by padlock) across the roadway between the boom barrier masts. A reflective road closed sign is attached to the chain.

Once the crossing is protected the route can then be set from the signal control panel but the protecting signal will be held at the stop position.

The Signaller will be required to “key” each set of points including gate controls to the required position prior to issuing the train driver with the appropriate authority to pass the fixed signal at danger.

Where the movement is towards sidings 3 or 4, the Signaller before authorising the Driver to pass the respective fixed signal must ensure the release has been activated and have a clear understanding with the Fleet Maintenance Production Coordinator of the movement to take place.

10. Ferntree Gully – Upper Ferntree Gully – Upwey Belgrave Failure of Signals

The Automatic and Track Control (ATC) system of signalling is in force between Ferntree Gully and Belgrave. The Signaller at Upper Ferntree Gully will, in addition to performing the signalling duties, act as the Train Controller as far as the routing of trains is concerned and the authorising and issue of Caution Orders between Ferntree Gully and Belgrave.

The Signals and Points at Ferntree Gully, Upwey and Belgrave are remotely controlled from the Signal Control Panel at Upper Ferntree Gully. The post telephones at Ferntree Gully, Upwey and Belgrave are connected to Upper Ferntree Gully Signal box at all times.

The issue of the authorisation Form No.2382 by the Train Controller at Metrol will not be required.

(a) Should a Signal Failure occur the following Procedures must be observed:

Should a train be detained at a Home signal at Ferntree Gully, Upwey or Belgrave and the Signal is at the 'Stop' position and there is no sign of an approaching train, the Driver must contact with the Signaller at Upper Ferntree Gully via the post telephone at the signal.

If the post telephone has failed, the Driver must contact with the Signaller via the radio on telephone number 58762.

The Driver must state their name and grade, the number of the signal displaying the 'Stop' indication and the train number, originating station and destination.

The Signaller must ensure the points are correctly set and locked for the intended movement.

The Signaller must then complete the appropriate Caution Order and dictate the contents to the Driver. The Driver must take down the details of the Caution Order in the book provided in the post telephone cabinet. The Caution Order must then be repeated back to the Signaller.

A supply of Caution Orders is kept in each post telephone cabinet at Ferntree Gully, Upwey and Belgrave.

If positive detection is not available on the points ahead of the signal, the Signaller must instruct the Driver to place the points into the 'Hand' operating position and then to the required position. On confirmation from the Train Driver that the points have been correctly set, the Signaller may then dictate a Caution Order to the Train Driver.

The points are to be left in the 'Hand' operating position after the train has departed.

At Upper Ferntree Gully the signaller will hand deliver Caution orders and operate point machines as required.

Note: A suitably qualified competent employee may be appointed to operate the dual control point machine and hand deliver the Caution Order to Train Drivers under the direction of the Signaller.

The Signaller will issue Caution Orders as indicated hereunder:

Form 2367 – ATC System Caution Order

Form 2377 – Signaller’s Caution Order.

LOCATION	SIGNAL POST NO.	AUTHORITY REQUIRED
FERNTREE GULLY		
	2R	2367
	2L	2377
UPPER FERNTREE GULLY		
	10	2377 Signaller to deliver
	16	2367 Signaller to deliver
	18	2367 Signaller to deliver
	20	2367 suitably amended – Signaller to deliver
	22	2367 to the single line – Signaller to deliver 2377 to Siding ‘B’ – Signaller to deliver
	24	2367 Signaller to deliver
	26	2367 to single line – suitably amended – Signaller to deliver Verbal instructions to Siding ‘C’.
	32	Verbal instructions
	34	Verbal instructions
	36	2377 Signaller to deliver
UPWEY		
	40	2377
	42	2367
	44	2367
	46	2377
BELGRAVE		
	52	2377
	54	Verbal instructions
	56	2367
	58	2367 to single line 2377 to Siding ‘A’

10A Upper Ferntree Gully – Operation of Rail Master Reset 5P Key Switch

A 5P key switch has been installed attached to the Upper Ferntree Gully signal control panel.

The 5P key switch is provided to enable the Signaller to reset the ‘Railmaster’ control system under the direction of the Fault Officer at the Signal Fault Centre.

In the event the ‘Railmaster’ needs to be reset the Signaller must contact the Fault Officer at the Signal Fault Centre.

The Signaller must ensure all trains in the section Upper Ferntree Gully to Belgrave are stationary.

On advice from the Fault Officer at the Signal Fault Centre the Signaller will inset their 5P key into the key switch and turn the key.

The key switch will have a green LED light which will illuminate when the switch is operated to the reset position.

The key can then be returned to the Normal position and removed.

The Key switch must only be operated under the direction of the Signal Fault Officer.

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11. Ferntree Gully**OPERATIONAL REQUIREMENT ACCOUNT OPERATION OF TRAFFIC LIGHT COORDINATION**

VicRoads have advised of an issue affecting the Traffic Lights at Alpine Street, Ferntree Gully. If a Down train is running between Ferntree Gully and Upper Ferntree Gully and Signal No.2L is operated for an Up train, the System calls the Traffic Lights to the Railway phase. The Traffic Lights remain in the Railway phase until the next Up train travels through the Level Crossing at Ferntree Gully.

To prevent this situation occurring, Signallers at Upper Ferntree Gully should not operate signal No.2L while there is a Down train between Ferntree Gully and Upper Ferntree Gully.

12. Lilydale – Mooroolbark Failure of Signals

Failure of Signals

The Automatic and Track Control (ATC) system of train signalling is in force between Lilydale and Mooroolbark. The Signaller at Lilydale will, in addition to performing the safeworking duties, also carry out the duties specified for the Train Controller in so far as they apply. The authorisation of and issue of Caution Orders will be the responsibility of the Signaller Lilydale.

The Signal Control Panel at Lilydale controls all signals and points at Lilydale and Mooroolbark. Provision is made for Mooroolbark and Lilydale to be 'Switched Out' for automatic operation when required. All trains will be routed via No.1 Track at Mooroolbark when that location is switched out. Lilydale is not able to be switched to automatic operation unless Mooroolbark has first been switched out.

The signal post telephones at Mooroolbark and Lilydale are connected to Lilydale at all times, regardless of whether one or both of the locations are switched In or Out.

(a) Lilydale – Switched In

Should Up Home departure signal Nos. LIL 303 or LIL 305 or Dwarf signal No. LIL 307 fail to assume the 'proceed' position when required, the Signaller must comply with the provisions of Section 16, Rule 6B of the 1994 Book of Rules. If the signal has failed, the Signaller must ensure that all points are set correctly and positive detection is available. If positive detection is available, the Signaller must sleeve the opposing Home Departure signal in the normal position and complete a System Caution Order. The System Caution Order must be hand delivered to the Driver as authority for the train to proceed.

In the case of Dwarf signal No. LIL 307, a suitably amended System Caution Order must be hand delivered to the Driver. Prior to passing over Maroondah Highway Level Crossing, the Driver must ensure the boom barriers are in the horizontal position.

If positive detection is unavailable on the points ahead of the signal or the points cannot be operated to the correct position, the Signaller must arrange for the points to be operated to the required position. For facing movements, the points must be secured with a point clip.

(b) Lilydale – Switched Out

Should Up Home Departure Signal No. LIL 305 fail to assume the 'proceed' position when the '5P' key switch is operated, it will be necessary for Lilydale and Mooroolbark to be Switched In. The above procedures in Clause 'A' must then be complied with.

(c) Mooroolbark – Switched In

1. Signal Nos. MLK 300, MLK 301 and MLK 303

Should a Down train arrive at Signal No. MLK 300 or an Up train arrive at Signal Nos. MLK 301 or MLK 303 and the Signal is in the 'Stop' position and the section ahead is clear, the Driver must confer with the Signaller Lilydale via the post telephone, giving name, grade and the number of the Home signal at the 'Stop' position. If the Signal has failed and positive detection is available on the points ahead of the signal, the Signaller

must complete a Signaller's Caution Order (Form 2377) and dictate the details to the Driver.

The Driver must take down the details in the Caution Order book provided in the post telephone cabin. When details have been repeated back correctly, the Driver may pass the Signal at the 'Stop' position. In the case of Manchester Road Level Crossing, the Driver must ensure the boom barriers are in the horizontal position prior to passing over the crossing.

If the points ahead of the signal are in the correct position, but positive detection is not available, a competent employee must attend Mooroolbark to operate the points as required and hand deliver Caution Orders under the directions of the Signaller Lilydale.

2. Signal Nos. MLK 302 & MLK 304

Should a Down train arrive at Signal Nos. MLK 302 or MLK 304 and the Signal is at the 'Stop' position and there is no sign of an approaching train, the Driver must confer with the Signaller Lilydale via the post telephone, giving name, grade and number of the Home signal at the 'Stop' position. The Signaller must then comply with the provisions of Section 16, Rule 6B of the 1994 Book of Rules. If the Signal has failed and positive detection is available on the points ahead of the Signal, the Signaller must sleeve the opposing Home Departure signal in the normal position. The Signaller must then complete a System Caution Order and dictate the details to the Driver. The Driver must take down the details in the System Caution Order book provided in the post telephone cabin. When the details have been repeated back correctly, the train may pass the Signal at the 'Stop' position.

If positive detection is not available on the points ahead of the signal, the points must then be clipped by a competent employee prior to the passage of the train.

If the points are not in the correct position and it is not possible to work around the failure, a competent employee must attend Mooroolbark to operate the points as required and hand deliver Caution Orders under the direction of the Signaller Lilydale.

(d) Mooroolbark – Switched Out

Should a train arrive at Signal Nos. MLK 300, MLK 301 or MLK 303 and the Signal is at the 'Stop' position and the illuminated Letter 'A' is not displayed, the Driver must contact with the Signaller via the post telephone. If the Signal has failed, the Signaller must arrange for Mooroolbark to be 'Switched-in'. The provisions of Clause 'C' (2) must then be complied with.

(e) Post Telephone Failure

Should the post telephone fail to operate when required, the Driver must advise the Train Controller at Metrol via the train radio. The Train Controller at Metrol must then inform the Signaller Lilydale accordingly. If a Signal failure has occurred, it will be necessary for a competent employee to attend the location to issue Caution Orders as required under the direction of the Signaller Lilydale.

The Signaller Lilydale will issue Caution Orders as indicated hereunder:

SIGNAL	TYPE OF CAUTION ORDER ISSUED
LIL 303	ATC Caution Order (2367)
LIL 305	ATC Caution Order (2367)
LIL 307	ATC Caution Order (2367)
MLK 302	ATC Caution Order (2367)
MLK 304	ATC Caution Order (2367)
LIL 302	Signaller's Caution Order (2377)
LIL 304	Signaller's Caution Order (2377)
LIL 306	Signaller's Caution Order (2377)
MLK 300	Signaller's Caution Order (2377)
MLK 301	Signaller's Caution Order (2377)
MLK 303	Signaller's Caution Order (2377)
LIL 309	Verbal instructions
LIL 311	Verbal instructions
LIL 313	Verbal instructions
LIL 315	Verbal instructions
LIL 316	Verbal instructions
LIL 317	Verbal instructions
POST NO.2	Verbal instructions

Note: The authorisation form No.2382 will not be issued by the Train Controller at Metrol.

13. Riversdale - Operation of Tramway Square

Description of Equipment

- Co-ordinated Traffic Light Control Unit;
- Illuminated Rail/Tram Indicator;
- Overhead Switching Lever No.2,
- One lever lock for No. 2 switching Lever,
- Boom lever No. 4,
- One Lever Lock for No. 4 Boom Lever,
- White Availability light to indicate when No. 2 overhead switching lever is free to operate (released by placing No. 4 boom Lever to the Normal position,
- One lever each for Nos. 5 & 6 Tramway “T” signal,
- One lever lock each for Nos. 5 & 6 Tramway signal Levers,
- 5P Key Switch for emergency of activation of Boom Barriers,
- Up & Down Train Annunciators.
- Up & down Tram Annunciators.

(a) Method of Operation

Upon the approach of an Up or Down train, the Signaller must push the “Push to Call” button on the Co-ordinated Traffic Light Control Unit, which will cause the Red “Call Acknowledge’ light to illuminate. The traffic lights including the Tram “T” will cycle to the ‘Stop’.

The Signaller must then ensure that Nos. 5 and 6 Tramway signal levers are placed to the ‘Normal’ position. This action forces the tram “T” signal to be held at the Red “T” indication.

Note: The Signaller at Riversdale is permitted to reverse tram signal levers Nos. 5 & 6 when not required normal for train movements. Section 9, Rule 6, Clause (b) & (c) of the 1994 Book of Rules will not apply at Riversdale.

When the Traffic Lights have reverted to the 'Stop' cycle, the Green 'Boom Lever Free' light will illuminate, and the White Availability Light for No. 4 Boom Lever will illuminate. The lever Lock applicable to No. 4 Boom Lever will then be energised.

The Signaller must then press the release (located on block shelf) for the Lever Lock on No. 4 Boom Lever, and operate the lever to the 'Special Notch' position. This operation will cause the level crossing protection equipment to commence operation. When the Boom Barriers have been detected in the horizontal position, the Lever Lock on No. 4 Boom Lever will again be energised, allowing the Signaller to place the lever to the Normal position.

The white availability light for No. 2 Overhead switching Lever will then illuminate and the foot release for the lever lock can then be operated. The operation of the lever lock releases No. 2 Overhead switching lever which can now be placed to the normal position. By placing No. 2 lever to the Normal position, overhead power is switched from Tram to Rail. No. 2 lever in the normal position interlocks No. 4 lever in the normal position.

The illuminated Rail/Tram Indicator will then indicate that Rail power is applied. The Signaller must ensure that the indicator is showing “Rail” power prior to operating the relevant train signals.

When the last vehicle of the train has cleared the section insulator, the Lever Lock applicable to No. 2 Overhead switching lever will be energised allowing the lever to be placed to the reverse position. This action switches the overhead power from Rail to Tram. The reversing of No. 2 Overhead switching lever also releases No. 4 boom lever. When No. 4 boom lever is reversed, the level crossing protection equipment will cease operation.

(b) Failure of Lever Lock on No. 2 Overhead Switching Lever and/or No. 4 Boom Lever.

1. Failure of Lever Lock on No. 2 Overhead Switching Lever in the Reverse Position

Should the Lever Lock on No.2 Overhead Switching lever fail to energise whilst the lever is in the Reverse position, and the Traffic Light Co-ordination Unit has correctly responded, the provisions of Section 9, Rule 7, Clause (d) of the 1994 Book of Rules must be observed.

2. Failure of the No. 2 Overhead Switching lever in the Normal Position

Should the Lever Lock on No. 2 Overhead Switching lever fail to energise whilst lever is in the Normal position, and the Traffic Light Co-ordination Unit has correctly responded, the provisions of Section 9, Rule 7, Clause (d) of the 1994 Book of Rules must be observed.

3. Failure of No. 4 Boom Lever in the Special Notch Position

Should the lever lock on No. 4 Boom lever fail to energise after the booms are horizontal (to allow No. 4 lever to be placed to the Normal position), the provisions of Section 9, Rule 7, Clause (d) of the 1994 Book of Rules, must be observed.

(c) Failure of Lever Lock on Tramway Signal Levers Nos. 5 & 6

Should Tramway Signal lever No.5 and/or 6 fail in the Normal position, the paper seal provided in the cover of the Lever Lock must be broken, and the armature of the lock held in the lifted position until the lever is operated. Before operating the lever, the Signaller must ensure that Trains and Trams are clear of the level crossing section insulators.

(d) Failure of the Co-ordinated Traffic Light Control Unit

If after the 'Push for Call' button has been operated, the 'Call Acknowledge' Light does not illuminate; the Signaller must wait for a period of twenty five (25) seconds.

If at the expiration of the twenty five (25) seconds, the 'Boom Lever Free' light does not illuminate, the paper seal provided in the cover of the lock must be broken, and the armature of the lock held in the lifted position until No. 4 lever is operated. Before operating No. 4 lever, the Signaller must ensure that Trains and Trams are clear of the level crossing section insulators and levers 5 and 6 are in the normal position.

Operation of lever lock No. 4 forces the traffic light system to lose power, and an automatic two (2) minute release will activate which illuminates the 'Boom Lever Free' indication, and releases the Lever Lock on No. 4 Boom Lever.

At the expiration of the two (2) minutes, the 'Boom Lever Free' indication will remain illuminated, and the lever Lock will remain released.

NOTE: The signaller must ensure the Red tram T indications are displayed at the traffic lights prior to authorising a train movement over the level crossing.

'Push for Call' Button Accidentally Operated

If the 'Push for Call' button is accidentally operated after the 'Boom lever free' light is displayed, the Signaller must operate the Cancel button (held for a least 1 second). This will cancel the call and release the Traffic Lights for normal use after approximately 60 seconds.

If the 'Boom Lever Free' indication remains illuminated owing to a failure of the traffic Lights, the Signaller must advise the Signal Fault Centre in order for the Traffic Light failure to be reported.

(e) Boom Barrier Manual Operation Switch

A Boom Barrier Manual Operation Switch is provided inside the Signalbox directly above lever No 4. This switch is operated by a 5P key and operates as a test switch.

(f) Manual Operation, of Level Crossing Boom Barriers

In the event of the Level Crossing Boom Barriers remaining in the horizontal position when they should be in the raised position (i.e. during a loss of the level crossing power supply), the Signaller prior to verbally authorising a Tram to pass over the tram square and the Red "T" is displayed, must ensure the Overhead is switched for Tram power, the booms are raised and that all other conditions are safe for the passage of the Tram.

Note: Signallers are not permitted to latch boom barrier arms or direct road traffic over a level crossing. In the event of the level crossing boom barriers failing in the lowered position the Signal Maintenance Technician must attend.

If the fault exists with the overhead switching so that power cannot be switched for Tram operation, the Tram Driver must be instructed to coast over the level crossing with the trolley pole / pantograph lowered.

The same course must be followed if the power is unable to be switched for Rail operation, with the Train Driver being instructed to coast over the Level Crossing with pantographs lowered. The provisions of Section 9, Rule 7, Clause (I) of the 1994 Book of Rules must be observed in this instance.

(g) Operation of Track Machines and Road/Rail Vehicles.

When a Track Machine, Road Rail vehicle or any other non track circuited vehicle is to proceed from Riversdale to Ashburton and return on the up line from Ashburton the Signaller Riversdale must not allow the machine or vehicle to depart until advice is received from the Signaller Ashburton that the Ashburton Signalbox is switched in.

If a Track machine, Road Rail Vehicle or any other non track circuited vehicle is to work on the down line towards Ashburton then return to Riversdale on the down line it will not be necessary for Ashburton Signalbox to be switched in unless the vehicle is required to proceed beyond signal '4' at Ashburton.

NOTE; Track machines, Road Rail Vehicles or any other non track circuited vehicles are not permitted to operate within Ashburton station limits including the single line Ashburton-Alamein unless the Ashburton Signalbox is switched in.

14. Ashburton - Failure of Signals or Points When Signal Panel is Switched Out

Down Home Signal Post No. 4

When a Down train is stopped at the Down Home signal No.4, the Driver of the train must endeavour to contact the Signaller, either by telephone or radio.

If the Driver cannot contact the Signaller, the Driver must immediately inform the Train Controller at Metrol by radio.

The Train Controller at Metrol must then refer to the train control graph to ascertain whether or not a Signaller is on duty.

If there is no Signaller on duty, the Train Controller at Metrol must:

be satisfied that there is no opposing train between Ashburton and Alamein, and confirm the position of the previous train.

Once the Train Controller at Metrol is satisfied on these two (2) points, the Driver of the Down train waiting at the Down Home signal No.4 must be instructed to inspect the points.

If the points are set for the Down train, the Driver must advise the Train Controller at Metrol and providing conditions have been met, may authorise the Driver by radio to pass the signal at the 'Stop' position.

The Train Controller and Driver must exchange names for record purposes.

If the points are not set for the Down train, the Driver must:

1. inform the Train Controller at Metrol
2. unlock the dual control point machine when instructed by the Train Controller at Metrol, and
3. place the points into the correct position for the train.

When the Driver has completed these tasks, the Train Controller at Metrol may authorise the Driver by radio to pass the signal at the 'Stop' position.

The Train Controller and Driver must exchange names for record purposes.

Down Home Signal Post No.6

If the Down Home signal No. 6 is at the 'Stop' position, the Driver of the Down train must comply with the instructions laid down relating to the Down Home signal No.4.

Once the Train Controller at Metrol is satisfied that there is no opposing train between Ashburton and Alamein, the Driver may be authorised by radio to pass the signal at the 'Stop' position.

Failure of Up Home Signal Post No.10

If an Up train is stopped at Up Home signal No.10, the Driver of the train must comply with the instructions laid down in relation to the Down Home signal No.4.

If there is no Signaller on duty, the Train Controller at Metrol must be satisfied that no opposing Down train has been authorised to enter the platform track.

When it is safe to do so, the Train Controller at Metrol may authorise the Driver by radio to pass the Up Home signal No.10 and enter the platform track.

Failure of Home Signal No.8

If an Up train is stopped at the Up Home signal No.8, the Driver of the train must comply with the instructions laid down relating to the Down Home signal No.4.

If there is no Signaller on duty, the Train Controller at Metrol must:

1. instruct the Driver to unlock the dual control point machine,
2. lock the selector lever in the 'hand' operating position,
3. place and lock the hand throw lever in the 'reverse' position if Required, and
4. exchange names with the Driver.

When the Train Controller at Metrol is satisfied that the track has been correctly set, the Driver can be authorised by radio to pass the Up Home signal No.8 at the 'Stop' position.

If the Driver has operated the selector lever or the hand throw lever, it will not be necessary for the Driver to restore the levers to the 'normal' position after the train has cleared the points.

Operation of Track Machines and Road/Rail Vehicles.

Track Machines, Road Rail Vehicles or any other non track circuited vehicles are not permitted to operate within Ashburton station limits including the single line Ashburton-Alamein unless the Ashburton Signalbox is switched in.

15. Kooyong - Operation of Tramway Square

(a) Description of Equipment

- Illuminated Rail / Tram Indicator
- White Availability light for the operation of Nos.11 & 12 Tramway 'T' Signal levers.
- White Availability light to indicate when No.15 Boom / Overhead Lever is free to be operated.
- Co-ordinated Traffic Light Control Unit.
- Two (2) lever Locks for No.15 Boom / Overhead Lever.
- A separate Lever Lock for Nos.11 & 12 Tramway 'T' Signal Levers.
- Up & Down Annunciators
- Tram Post Telephone.

(b) Method of Operation

Upon the approach of an Up or Down train, the Signaller must push the 'Push to Call' button on the Co-ordinated Traffic Light Control Unit, which will cause the Red 'Call Acknowledge' light to illuminate. The traffic lights including the Tram 'T' will revert to the 'Stop' cycle.

The Signaller must then ensure that Nos.11 and 12 Tramway signal levers are placed the 'Normal' position. This action forces the tram 'T' signal to be held at the Red 'T' indication.

Note: The Signaller at Kooyong is permitted to reverse tram signal levers Nos.11 & 12 when not required normal for train movements. Section 9, Rule 6, Clause (b) & (c) of the 1994 Book of Rules will not apply at Kooyong.

When the traffic lights have reverted to the 'Stop' cycle, the Green Stop Lever Free light and the White Availability light for No.15 Boom / Overhead Lever will illuminate. The lever lock applicable to No.15 Boom / Overhead Lever will then be energised.

The Signaller must then press the foot release for the lever lock on No.15 Boom / Overhead Lever, and operate the lever to the 'Special Notch' position. This operation will cause the Level Crossing protection equipment to operate. When the boom barriers have been detected horizontal, the Lever Lock on No.15 Boom / Overhead Lever will again be energised, allowing the Signaller to place the lever to the Normal position.

The operation of No.15 Boom / Overhead Lever to the Normal position will lock the boom barriers in the horizontal position, and switch the overhead power from Tram to Rail.

The Rail/Tram Indicator will then indicate that Rail power is applied. The Signaller must ensure that the indicator is showing Rail power prior to operating the relevant train signals.

When the last vehicle of the train has cleared the section insulator, the Lever Lock on No.15 Boom / Overhead will be energised, allowing the lever to be placed to the Reverse position. The reversing of the lever will cause the Level Crossing protection equipment to cease operation, and will switch the overhead power for Tram operation over the crossing.

The Signaller must ensure that the indicator is showing that the Overhead Power is switched for Tram operation, prior to operating the relevant Tramway Signals.

(c) Failure of Lever Lock on No.15 Boom / Overhead Lever

i. Failure of Lever Lock on No.15 Boom / Overhead Lever

Should the lever lock on No.15 Boom / Overhead Lever fail to energise whilst the lever is in the Reverse position, and the Co-ordinated Traffic Light Control Unit has correctly responded, the provisions of Section 9, Rule 7, Clause (d) of the 1994 Book of Rules must be observed. The Lever Lock closest to No.15 Boom / Overhead Lever must be operated in this instance.

ii. Failure of the Boom / Overhead Lever in the ‘Special Notch’ Position

Should the Lever Lock on No.15 Boom / Overhead Lever fail to energise whilst the lever is in the ‘Special Notch’ position, the provisions of Section 9, Rule 7, Clause (d) of the 1994 Book of Rules must be observed. The Lever Lock *furthest* from No.15 Boom / Overhead Lever must be operated in this instance.

iii. Failure of the Boom / Overhead Lever in the Normal Position

Should the Lever Lock on No.15 Boom / Overhead Lever fail to energise whilst the lever is in the Normal position, the provisions of Section 9, Rule 7, Clause (d) of the 1994 Book of Rules must be observed. The Lever Lock *closest* to No.15 Boom / Overhead Lever must be operated in this instance.

(d) Failure of the Lever Lock on Tramway Signal Levers Nos. 11 & 12

Should Tramway ‘T’ signal lever Nos. 11 and/or 12 fail to release in the Normal position, the paper seal provided on the cover of the Lever Lock must be broken, and the armature of the lock held in the raised position until the lever is operated. Before operating the lever, the Signaller must ensure that Trains and Trams are clear of the Level Crossing section insulators.

(e) (i) Failure of Co-ordinated Traffic Light Control Unit

If after the ‘Push for Call’ button has been operated, the ‘Call Acknowledge’ light does not illuminate, the Signaller must wait for a period of thirty (30) seconds.

If at the expiration of the thirty (30) seconds, the ‘Gate Stop Lever Free’ light does not illuminate, the paper seal provided in the cover of the Lever Lock closest to No.15 Boom / Overhead Lever must be broken and the armature of the lock held in the lifted position until No.15 lever is operated. Before operating No.15 Boom / Overhead Lever, the Signaller must ensure trains and trams are clear of the Level Crossing section insulators.

If the Traffic Light system loses power, or is in the ‘flashing amber’ cycle, an automatic two (2) minute release will activate. This will illuminate the ‘Gate Stop Lever Free’ indication, and will release the Lever Lock closest to No.15 Lever. The ‘Gate Stop Lever Free’ indication will remain illuminated, and the Lever Lock will remain released.

The Lever Lock closest to No.15 Boom / Overhead Lever must be used in the event of a failure of:

- The 'Push for Call' button,
- The Automatic two (2) minute timing release, or
- If the traffic lights do not cycle to the railway phase.

Note: When No.15 Boom / Overhead Lever is manually released, it will force the Traffic Lights into the 'flashing amber' cycle.

(ii) Push for Call Button Accidentally Operated

If the Push for Call Button is accidentally operated after the 'Gate Stop Lever Free' light is displayed, the Signaller must operate the Emergency Release Button. This will cancel the call and release the Traffic Lights for normal use.

If the 'Gate Stop Lever Free' indication remains illuminated owing to a failure of the traffic lights (which have reverted to the emergency mode, or for any other reason), the Signaller, must advise the Signal Fault Centre in order for the Traffic Light failure to be reported.

(f) Manual Operation of Level Crossing Boom Barriers

In the event of the Level Crossing Boom Barriers remaining in the horizontal position when they should be in the raised position (i.e. during a loss of the crossing power supply), the Signaller prior to verbally authorising a Tram to pass over the tram square and the Red 'T' is displayed, must ensure the Overhead is switched for Tram power, the booms are raised and that all other conditions are safe for the passage of the Tram.

Note: Signallers are not permitted to latch boom barrier arms or direct road traffic over a level crossing. In the event of the level crossing boom barriers failing in the lowered position the Signal Maintenance Technician must attend.

If the fault exists with the overhead switching so that power cannot be switched for Tram operation, the Tram Driver must be instructed to coast over the level crossing with the trolley pole / pantograph lowered.

The same course must be followed if the power is unable to be switched for Rail operation, with the Train Driver being instructed to coast over the Level Crossing with pantographs lowered. The provisions of Section 9, Rule 7, Clause (I) of the 1994 Book of Rules must be observed in this instance.

16. Spare

17. Glen Waverley – Automatic Working of Points and Signals

The points and Signals at Glen Waverley are operated as shown hereunder:-

For trains arriving and departing from No. 2 (platform) road, the signal box will be closed and No. 11 points and the main line signals will operate automatically.

For any train or shunting movement to roads other than No.2 the signals and points will be operated from the control panel located in the station office.

When the signal box is closed and automatic working is in operation with No. 2 (platform) road clear, the signals will be at proceed for the down train. When the whole of the train has cleared the track section between signal No. 10 and signal No. 18 and signal No. 10 has assumed the stop position, No. 11 points will operate to the reverse position, ie, for the up main line and signal No. 18 will display a proceed aspect.

In the event of a failure of the automatic operation the signal box must be opened and traffic worked from there in accordance with the regulations.

An automatic low speed signal is provided on signal No. 10 and providing the track circuits are functioning correctly, it will operate automatically should a failure of the signal or train stop occur. If a complete failure of the automatic operation occur an alarm bell will operate within 1½ minutes from the commencement of the previous movement. A cut out switch for the alarm bell is provided under a paper seal.

Switching In and Out

The closing lever has three positions “IN” (left), “OUT” (centre) and “LIGHTS OUT” (right)

Switching In

Place closing lever to “IN” and after observing the position of trains on the illuminated track diagram, restore the necessary signal lever. The signal box must then be worked in accordance with the regulations.

Switching Out

Reverse No. 11 points. Place No. 18 signal lever to reverse position and observe No. 18 signal clear. Place No. 10 signal lever to reverse.
Place closing lever No. 2 to the central position and observe white light in the centre of the lever to indicate switching out is effective. The closing lever should then be placed to the LIGHTS OUT position and this will switch out all indication lights and the illuminated track diagram.