Lidcombe – Penrith

Network Control

Signallers at Auburn Maintenance Centre, Clyde, Rail Operations Centre (ROC), Blacktown, St Marys and Penrith.

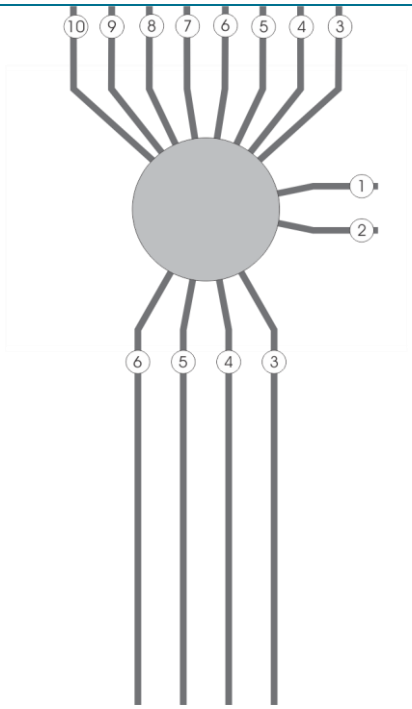
Systems of Safeworking

The lines between Lidcombe and Penrith are Rail Vehicle Detection (RVD) territory. They include the sections:

- Strathfield — Auburn
- Auburn — Clyde (Main line)
- Clyde — Granville (Main line)
- Auburn — Granville (Suburban line)
- Granville — Blacktown
- Blacktown — St Marys
- St Marys — Penrith

Lidcombe - Penrith

Diagram



Location details

Lidcombe 16.337km (NLA 120)

! Controlled from ROC (Lidcombe panel)

① Down Main South line (Lidcombe — Campbelltown)

② Up Main South line (Lidcombe — Campbelltown)

③ Down Suburban line

④ Up Suburban line

⑤ Down Main line

⑥ Up Main line

⑦ Down Enfield West Fork line

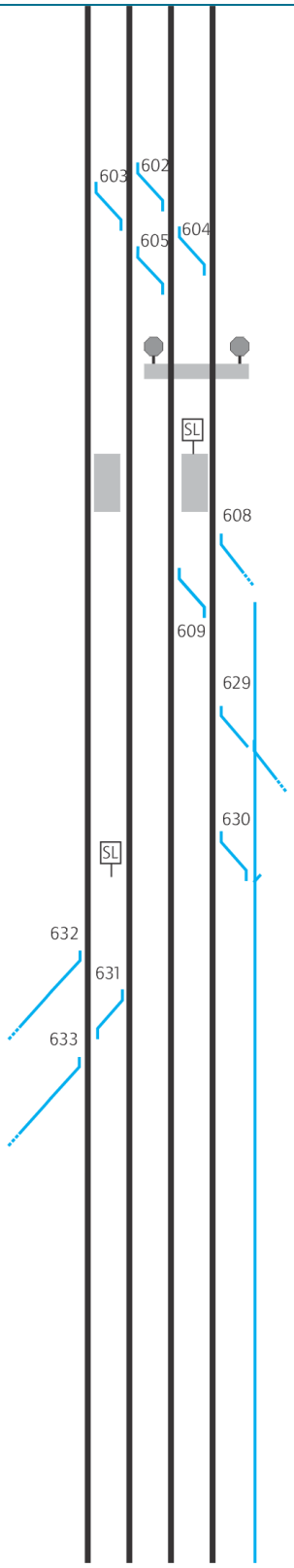
⑧ Up Enfield West Fork line

⑨ Down Homebush Bay West Fork line (Olympic Park)

⑩ Up Homebush Bay West Fork line (Olympic Park)

Lidcombe - Penrith

Diagram



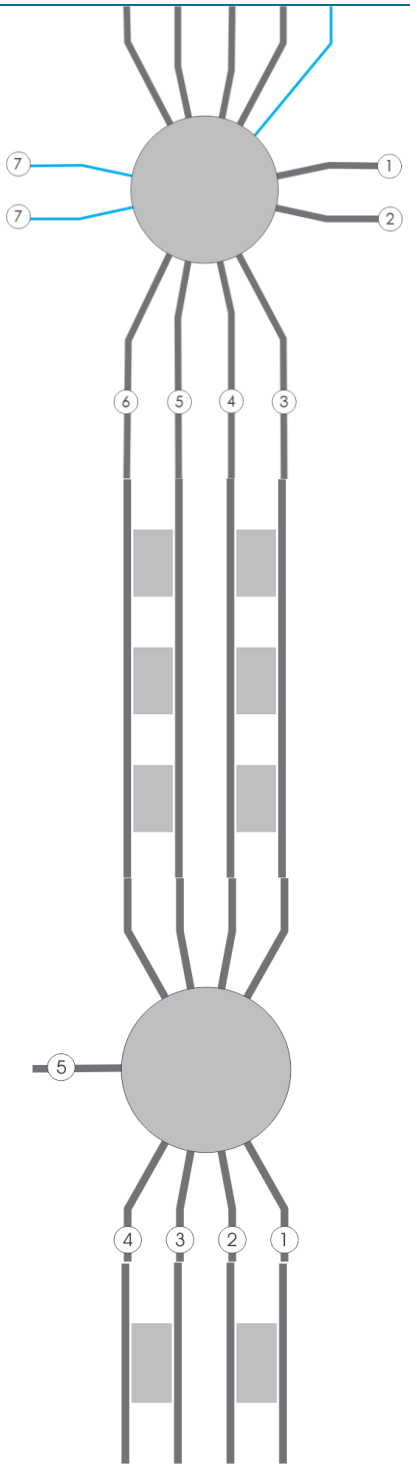
Location details

Auburn 18.551km

- Auburn abuts Strathfield on the Suburban lines, Granville on the Down Suburban line and Auburn Maintenance Centre on the Down Relief line, Storage road 1 and Arrival roads 1, 2 and 3
- Controlled from Rail Operations Centre (ROC)
- 602 Down Main line to Up Suburban line
- 603 Up Main line to Down Suburban line
- 604 Up Suburban line to Down Suburban line
- 605 Down Main line to Up Suburban line
- 18.184km Network Access
- SL 18.425km Up **SHUNT LIMIT** sign on the Down Suburban line
- 18.551km Auburn. Platforms 1 and 2, 3 and 4
- 608 Down Suburban line to Arrival Roads
- 609 Up Suburban line to Down Suburban line
- See Special instructions
- 629 Down Suburban line to Storage Roads
- 630 Down Suburban line to Down Relief line
- SL 18.925km Up **SHUNT LIMIT** sign on the Down Main line
- 632 Up Main line to Clyde Up Yard
- 631 Down Main line to Up Main line
- 633 Up Main line to Clyde Up Yard
- 18.940km Down Suburban signal AN73, Override Switch (Booked out of use)
- EYL 18.993km Storage road 1 Up signal AN72
- EYL 19.261km Down Relief signal AY917
- EYL 19.365 Arrival road 1 **YARD LIMIT** sign
- EYL 19.404km Arrival road 3 signal AY917
- EYL 19.427km Arrival road 2 **YARD LIMIT** sign
- EYL 19.564km Down Main signal M12.15
- EYL 19.572km Down Suburban signal CL103
- YL 19.572km Up Suburban signal AN96
- YL 19.572km Up Main signal AN98

Lidcombe - Penrith

Diagram



Location details

Clyde and Granville 20.660km (NLA 206)

① Down Old South Main line (Granville–Cabramatta)
② Up Old South Main line (Granville–Cabramatta)
③ Down Main line
④ Up Main line
⑤ Down Suburban line
⑥ Up Suburban line
⑦ to Clyde Up Yard

- 26.561km Wentworthville. Platforms 1 and 2, 3 and 4
- 28.271km Pendle Hill. Platforms 1 and 2, 3 and 4
- 29.892km Toongabbie. Platforms 1 and 2, 3 and 4

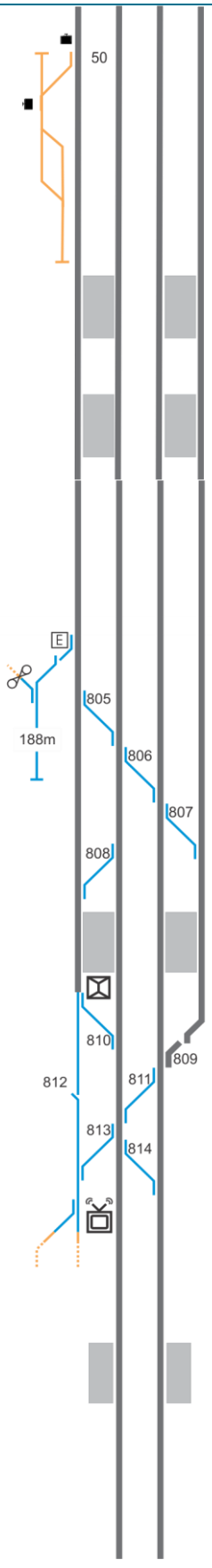
Blacktown 34.836km (NLA 208)

① Down Main line
② Down Suburban line
③ Up Suburban line
④ Up Main line
⑤ Blacktown-Richmond line (Blacktown-Richmond)

- 38.518km Doonside. Platforms 1 and 2, 3 and 4

Lidcombe - Penrith

Diagram



Location details

50 Up Main line to Rooty Hill Sidings

! See Special instructions

40.811 Rooty Hill, Platforms 1 and 2, 3 and 4

43.281 Mount Druit, Platforms 1 and 2, 3 and 4

St Marys 47.328km

YL 45.671km Down Main signal SM447M

YL 45.671km Down Suburban signal SM445S

EYL 45.924km Up Main signal M28.6

EYL 45.924km Up Suburban signal S28.6

E 46.490km Up Main line to Plasser Australia siding: key from releasing switch E, released by release 818

Plasser Australia siding to Plasser Works

805 Up Suburban line to Up Main line

806 Up Suburban line to Down Suburban line

807 Down Suburban line to Down Main line

808 Up Main line to Up Suburban line

47.328km St Marys. Platforms 1 and 2, 3 and 4

47.511km Signal box

810 Up Suburban line to Up Main line

809 Down Main line to Down Main line, Down Suburban line ends

811 Down Main line to Up Main line

812 Catch point on No 1 Storage siding

813 Up Main line to No 1 Storage siding

814 Down Main line to Up Main line

47.898km Pantograph Condition Monitoring System (PCMS), Up Main line

No 1 Storage siding to No 2 Storage siding

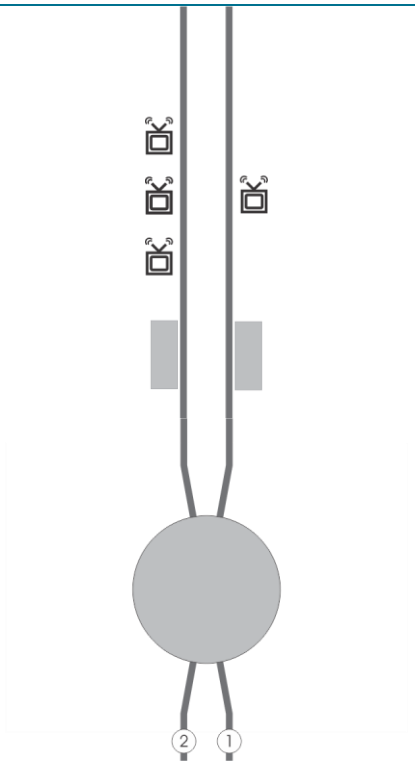
YL 48.715km Up signal SM482M

49.003km Werrington. Platforms 1, 2

EYL 49.274km Down signal 30.5

Lidcombe - Penrith

Diagram



Location details

- 51.825km Bearing and Brake Temperature System (BBT), Up and Down Main line
- 51.830km Wheel Impact Load Detector (WILD), Weighbridge (WB), Up Main line
- 51.870km Bearing Acoustic Monitor (BAM), Up Main line
- 52.621km Kingswood. Platforms 1, 2

Penrith 54.986km (NLA 210)

① Down Main line (Penrith–Wallerawang)

② Up Main line (Penrith–Wallerawang)

Special instructions

Signal Key Switches

Signal Key Switches are fitted to the automatic signals listed in the table below.

Signal Key Switch may be used for worksite protection in accordance with the following Network Rule & Procedures:

- NWT 306 Track Work Authority
- NWT 320 Signal Key Switch Blocking
- NPR 702 Using a Track Work Authority
- NPR 753 Using Signal Key Switch Blocking
- NPR 754 Using a signal key switch

Line	*Worksite limit*	*First affected signal/s*	*Protecting signal fitted with a Key Switch*
Down Main	Signal M18.1 to Signal BN1 M	M17.3	M18.1
Up Main	Signal M18.2 to Signal GE480	M19.2	M18.2
Down Suburban	Signal S17.7 to Signal BN3 S	S16.9	S17.7
Up Suburban	Signal S18.6 to Signal GE478	S19.6	S18.6

Maintrain, Auburn Maintenance Centre and Manildra (Goods) sidings

The siding owners control rail traffic movements in their sidings.

Signal failures within the AMC

Signals must only be passed at **STOP** in accordance with NSG 608.

When authorising a signal within the AMC to be passed at **STOP** the Signaller must establish a three-way conversation on open channel (869) with the Driver and AMC Yard Master.

Failure of Phoenix system at Clyde

Should a failure of the Phoenix system occur at Clyde signal box, a second Phoenix workstation is located within the AMC and may be utilised for the control of signalling equipment.

The Phoenix workstation within the AMC must only be operated by a Qualified Sydney Trains employee.

Operation of signalling equipment within the AMC

The signaller at Clyde must not operate any signalling equipment within the AMC lease area without the authority of the AMC Yard Master.

Worksite protection

If work on track on the Transfer road or Clyde Down Relief line has the potential to encroach on an adjacent track within the AMC lease area, the Protection Officer must make arrangements with the AMC Yard Master for protection on the AMC track.

Operation of trains conveying passengers on the Down Relief line

When it is necessary to operate trains conveying passengers on the Down Relief line, block working must be implemented in accordance with NSY 512 Manual block working.

Points must be independently set for the route with blocking facilities applied.

Auburn Override facilities

Override facilities have been provided in an XL-locked box on the outside wall of location AN13 and AN 73. The override facility allows automatic operation of the Up and Down Suburban lines and the Up and Down Main lines during telemetry failure between Auburn and Lidcombe.

The AN13 override facility will not operate points 602 and 603.

The override facility has three indications: **AUTO**, **OFF** and **FORCED**.

When the override switch is placed in the **AUTO** or **FORCED** positions the **OVERRIDE** light will illuminate to confirm that the interlocking has responded to the override mode.

A three-position switch is provided to allow selection of either **AUTO**, **OFF** or **FORCED**.

The override switch selection provides the following modes:

AUTO: When selected emergency override will be enabled when communication with the control system is lost for 180 seconds

OFF: Emergency override is disabled

FORCED: When selected emergency override will be enabled

Note

AUTO and **FORCED** mode are disconnected and booked out of use until further notice.

When the override facility switch is placed into the FORCED position, the signals will return to stop; all non-through routes will cancel and the points will return to the normal position. The through signals will auto-reclear after the passage of each train.

Override switch and set indications are provided inside the override box at AN13 and AN73 locations. Override switch indication is provided on the ATRICS at Strathfield Signal Box.

Rooty Hill Sidings

Rail traffic that does not reliably operate track-circuits

If rail traffic that does not reliably operate track-circuits needs to enter or exit the siding, 50 points must be manually operated using the **EOL** key.

A Signal Maintenance Representative must attend to power operate the points when the movement is complete.

Procedure for entry to Rooty Hill Sidings

Entry to Rooty Hill Sidings is controlled from RH3 Signal on the Up Main line using a track released push button control.

A **POINTS CLEARED 530M** board is provided to indicate to the Driver that the train is clear of RH3 Signal.

Qualified Worker

1. When the train is clear of RH3 Signal, press the 'Cancel' button, (the **POINTS FREE** light will begin to flash).

When the **POINTS FREE** light remains steady:

2. Press the **SIDING** button to set the route to enter (50 points will set for the Siding).

When 50 points are set:

- the **POINTS FREE** light goes out, and
- the **SIGNAL REPEATER** light shows green, and
- RH3 Signal will display a **PROCEED** indication.

After the train has entered Rooty Hill Sidings, RH3 Signal and 50 points will automatically set to their normal positions.

Note

If it is necessary to cancel the route, press the **CANCEL** button. After a timeout period, RH3 Signal and 50 points will automatically set to their normal positions and Up Main line Signals will re-clear.

Procedure for departure from Rooty Hill Sidings

Departure from Rooty Hill Sidings is authorised by the Signaller at St Marys, who will give a release to allow a Qualified Worker to operate the push button control.

This release will be available for 120 seconds.

The push button control is located approximately 50M on the approach side of RH4 Signal.

Note

If a shunting movement will proceed beyond RH4 Signal onto the Main line, the whole train must clear RH3 Signal.

RH3 Signal must be cleared for the movement back into the siding.

Qualified Worker

When the departing train is at the push button control for RH4 Signal

1. Ask the Signaller for the release.
2. When the release is given press the **CANCEL** button to free the points (points free light will begin to flash).

When the **POINTS FREE** light remains steady:

3. Press the **MAIN** button to set the route to depart (50 Points will set for the Up Main).

When 50 Points are set:

- the **POINTS FREE** light goes out, and
- the **SIGNAL REPEATER** light shows green, and
- RH4 Signal will display a proceed indication.

After the train has departed Rooty Hill Sidings, RH4 Signal and 50 points will automatically set to their normal positions.

Note

If it is necessary to cancel the route, press the 'Cancel' button. After a timeout period, RH4 Signal and 50 points will automatically set to their normal positions and Up Main line Signals will re-clear.

Local Control Override Switch

A local control override switch is provided on the external wall of the location. The system is non-operational, with the override locked permanently in the **FORCED** position. In this mode the signalling operates automatically or from the local pushbuttons.

Work on Track

Any work on track to be conducted in the Rooty Hill Sidings must be protected in accordance with the table below:

Location of Work	*Procedure*
Work between 50A points and RH4 signal using Lookout Working	Sydney Trains Network Rules & Procedures
Work between 50A points and end of terminal lines in Rooty Hill Siding (including shunting neck) using a Track Occupancy Authority	See Special Instructions below
Work between RH4 signal and end of terminal lines in Rooty Hill Siding (including shunting neck) using the maintenance isolation switch	See Special Instructions below
Local Possession Authority on the Up Main line, including Rooty Hill Siding	See Special Instructions below

Special Instructions for Protection of Work on Track

Work between 50A points and end of terminal lines in Rooty Hill Siding (including shunting neck) using a Track Occupancy Authority (TOA).

In addition to the requirements of NWT 304 Track Occupancy Authority, before a TOA is authorised, the Network Controller or Signaller St Marys must get an assurance from the Holcim Operator that the siding is unoccupied or any rail traffic in the siding will not be authorised to move.

Work between RH4 signal and end of terminal lines in Rooty Hill Sidings (including shunting neck) using the maintenance isolation switch.

A maintenance isolation switch is provided to allow the Holcim Operator to protect maintenance activities.

When operated to the **SIDING ISOLATED** position 50 points will lock in the normal position preventing access to the siding.

Holcim Operator

Before work begins:

1. Tell the Signaller that the maintenance isolation switch will be operated.
2. Make sure the points normal indicator shows a yellow light.
3. Operate the switch to the **SIDING ISOLATED** position.

When work is complete:

1. Operate the maintenance isolation switch to the **NORMAL** position.
2. Tell the Signaller that the maintenance isolation switch is restored to normal.

Local Possession Authority (LPA) on the Up Main line, including Rooty Hill Sidings

In addition to the requirements of NWT 302 Local Possession Authority, before an LPA that includes Rooty Hill Sidings within the limits is authorised, the Network Controller or Signaller St Marys must get an assurance from the Holcim Operator that the siding is unoccupied or any rail traffic in the siding will not be authorised to move.

Related documents

NLA 100 Central

NLA 110 Central–Lidcombe

NLA 120 Lidcombe

NLA 202 Clyde Down Sidings

NLA 204 Clyde Up Yard

NLA 206 Clyde & Granville

NLA 208 Blacktown

NLA 210 Penrith

NLA 212 Penrith–Wallerawang

NLA 222 Blacktown–Richmond

NLA 500 Lidcombe–Campbelltown

NLA 506 Granville–Cabramatta

Effective date

15 April 2024