

Lidcombe – Penrith

Network Control

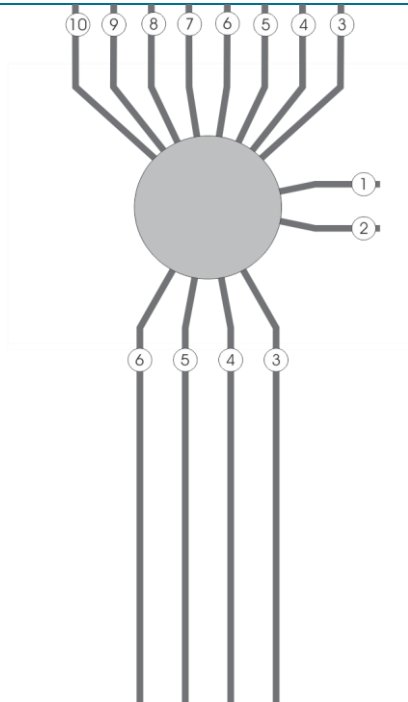
Signallers at Auburn Maintenance Centre, Clyde, Rail Operations Centre (ROC), Granville, Blacktown, St Marys and Penrith.

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

Diagram



Location details

Lidcombe 16.337km (NLA 120)

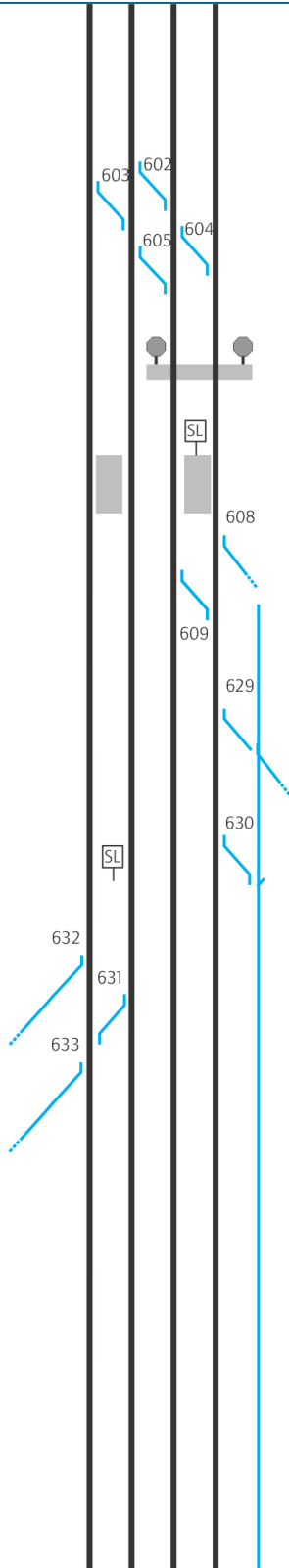


- ! Controlled from ROC (Lidcombe panel)
- ① Down Main South line (Lidcombe — Campbelltown)
- ② Up Main South line (Lidcombe — Campbelltown)
- ③ Down Suburban line
- ④ Up Suburban line
- ⑤ Down Main line
- ⑥ Up Main line
- ⑦ Down Enfield West Fork line
- ⑧ Up Enfield West Fork line
- ⑨ Down Homebush Bay West Fork line (Olympic Park)
- ⑩ Up Homebush Bay West Fork line (Olympic Park)

Lidcombe - Penrith

Diagram

Location details



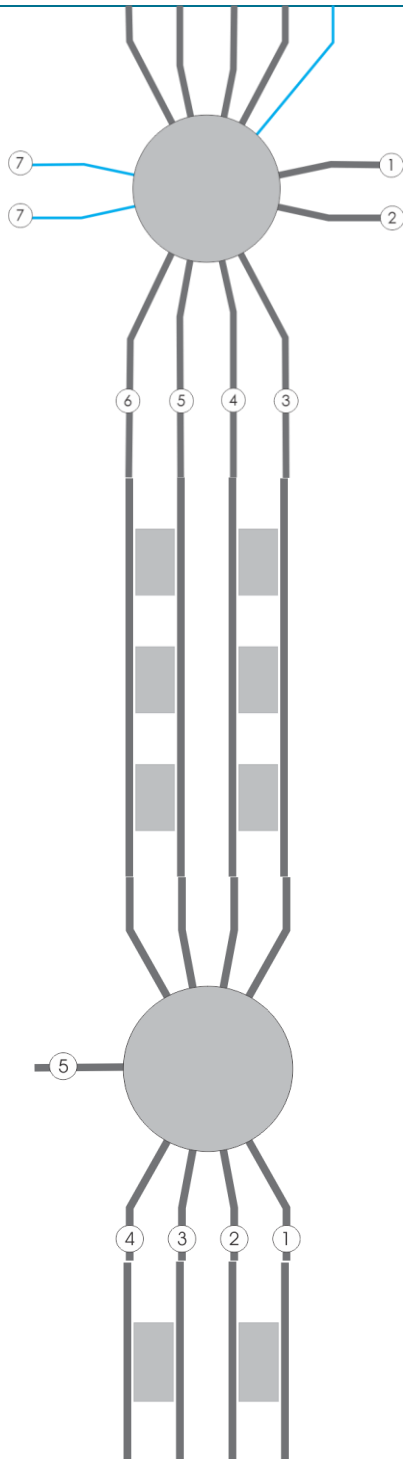
Auburn 18.551km



- ! 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 West line
- ④ Down Suburban West line
- ⑤ Up Suburban West line
- ⑥ Up Main West 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

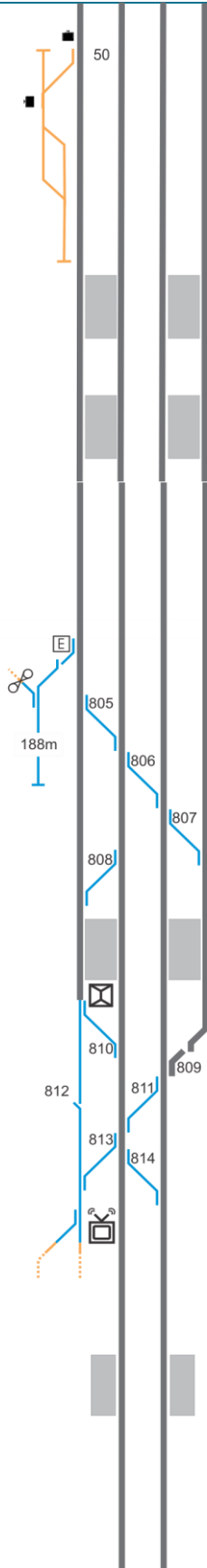
Blacktown 34.836km (NLA 208)

- ① Down Main West line
- ② Down Suburban West line
- ③ Up Suburban West line
- ④ Up Main West 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 West line to Rooty Hill Sidings

! See Special instructions

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

█ 40.811 Mount Druit, Platforms 1 and 2, 3 and 4



St Marys 47.328km

YL 45.671km Down Main West signal SM447M

YL 45.671km Down Suburban West signal SM445S

EYL 45.924km Up Main West signal M28.6

EYL 45.924km Up Suburban West signal S28.6

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

↘ Plasser Australia siding to Plasser Works

805 Up Suburban West line to Up Main West line

806 Up Suburban West line to Down Suburban West line

807 Down Suburban West line to Down Main West line

808 Up Suburban West line to Up Main West line

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

☒ 47.511km Signal box

810 Up Suburban West line to Up Main West line

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

811 Down Main West line to Up Main West line

812 Catch point on No 1 Storage siding

813 Up Main West line to No 1 Storage siding

814 Down Main West line to Up Main West line

☒ 47.898km Pantograph Condition Monitoring System reports to Mechanical Controller at RMC

↘ No 1 Storage siding to No 2 Storage siding

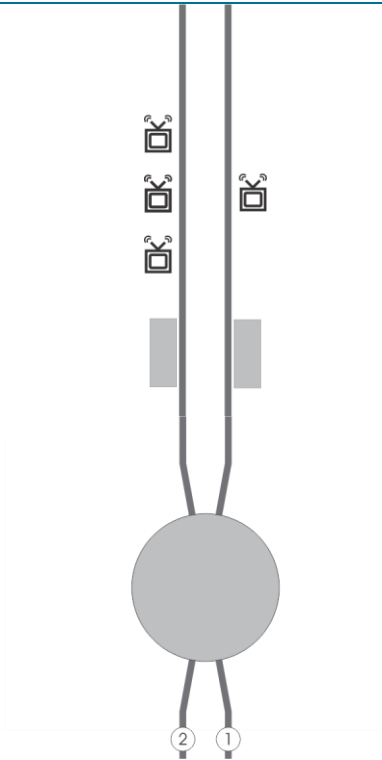
YL 48.715km Up signal SM482M

█ 49.003km Werrington. Platforms 1, 2

EYL 49.274km Down signal 30.5

Lidcombe - Penrith

Diagram



Location details

- 📡 51.830km Wheel impact load detector: reports to Rolling Stock division
- 📡 51.865km Bearing and brake temperature and dragging equipment detectors broadcast WB radio message, Down detector reports to Penrith and Up detector reports to St Marys. Signaller tells Network Controller and warns Train Crew
- 📡 51.870km Acoustic bearing monitor: reports to Rolling Stock division
- ▬ 52.621km Kingswood. Platforms 1, 2

Penrith 54.986km (NLA 210)

- ① Down Main West line (Penrith–Wallerawang)
- ② Up Main West 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

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

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

Lidcombe - Penrith



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

Train Operations

Entry to Rooty Hill Sidings from the Up Main West line will be authorised via Signal RH3 (LED type) using an adjacent pushbutton control. Trains to enter Rooty Hill Sidings will travel on the Up Main West line from St. Marys and must stop with the train fully behind RH3 Signal. A "Points Cleared 530m" board will be provided as a reference point.

Entry to the Up Main West line from Rooty Hill Sidings will be authorised via a 120" release given by the St Marys Signaller. Once the release has been acknowledged, Signal RH4 (LED type) will be able to be operated using a pushbutton control. The pushbutton will be located approximately 50M on the approach side of RH4 Signal.

Pushbutton Operation

Rooty Hill Sidings to the Up Main West. RH4 Signal

1. Contact the St Marys Signaller to obtain a release to exit Rooty Hill Sidings. Once the release is acknowledged press the 'Cancel' button. The Signal will display red lights, the Points Indicator arrow in RH4 signal will extinguish and the 'Points Free' green light will begin to flash.
2. Once the 'Points Free' light is steady, press the 'Main' button and 50 Points will set reverse.
3. Once the Points are reverse, RH4 Signal will display a proceed indication. This is also indicated by the 'Signal Repeater' displaying a green light. The 'Points Free' light will be extinguished.
4. When the train movement has completed, the points will automatically set normal. The Points Indicator arrow in RH4 signal will display an arrow pointing to the left. All lights in the push button control will extinguish.

Lidcombe - Penrith



Note

If necessary, RH4 Signal can be set to stop by pressing the 'Cancel' button. RH4 Signal will display red lights and after a timeout period the points will automatically set normal. The Points Indicator in RH4 signal will display an arrow and the Up Main West line Signals will re-clear.

Up Main West to Rooty Hill Sidings. RH3 Signal

1. With the train at RH3 Signal, press the 'Cancel' button. Signal RH4 will display red lights, the Points Indicator arrow in RH4 signal will extinguish and the 'Points Free' green light will begin to flash.
2. Once the 'Points Free' light is steady, press the 'Siding' button and 50 Points will set reverse.
3. Once the points are reverse, RH3 signal will display a proceed indication. This is also indicated by the 'Signal Repeater' displaying a green light. The 'Points Free' light will be extinguished.
4. When the train movement has completed, the points will automatically set normal. The Points Indicator arrow in RH4 signal will then display an arrow pointing to the left and the Up Main West line Signals will re-clear. All lights in the push button control will extinguish.



Note

If necessary RH3 Signal can be set to stop pressing the 'Cancel' button. RH3 Signal will display red lights and after a timeout period, the points will automatically set normal. The Points Indicator arrow in RH4 signal will display an arrow and the Up Main West line Signals will re-clear once the train has further proceeded towards Sydney.

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.

Pantograph Condition Monitoring System (PCMS)

The PCMS installed on structure SL47+908 MUST be isolated as per Safe Work Instruction DSVD2016/34982 prior to any work under possessions and OHW infrastructure work between SL47+880 and SL47+931 on the South line. Contact Electrical Operating Centre (ICON Electrical) on 02 9379 4911 for advice.

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

28 August 2022