

# Lithgow

## Location

This unit includes:

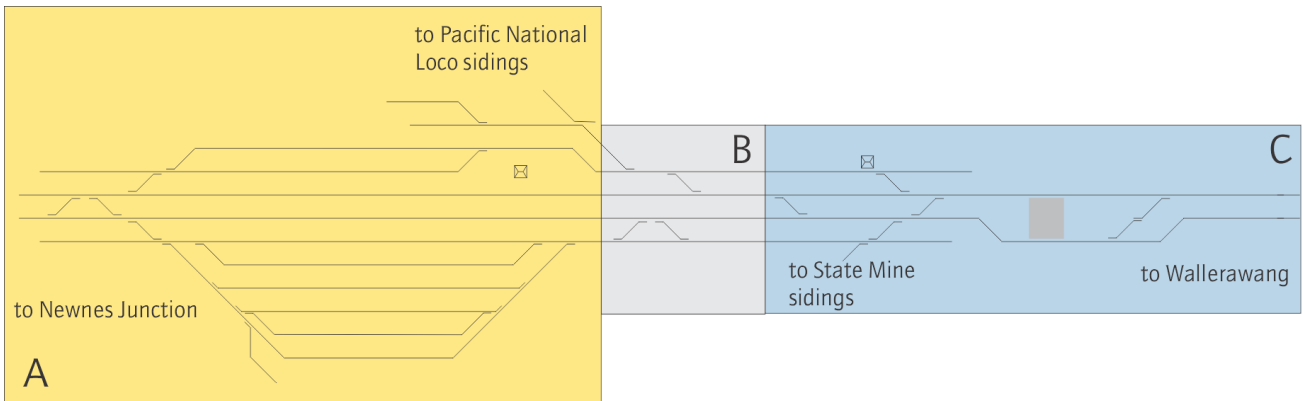
- Lithgow Coal Stage at 154.128km
- Lithgow Yard at 155.170km
- Lithgow at 155.687km.



### Warning

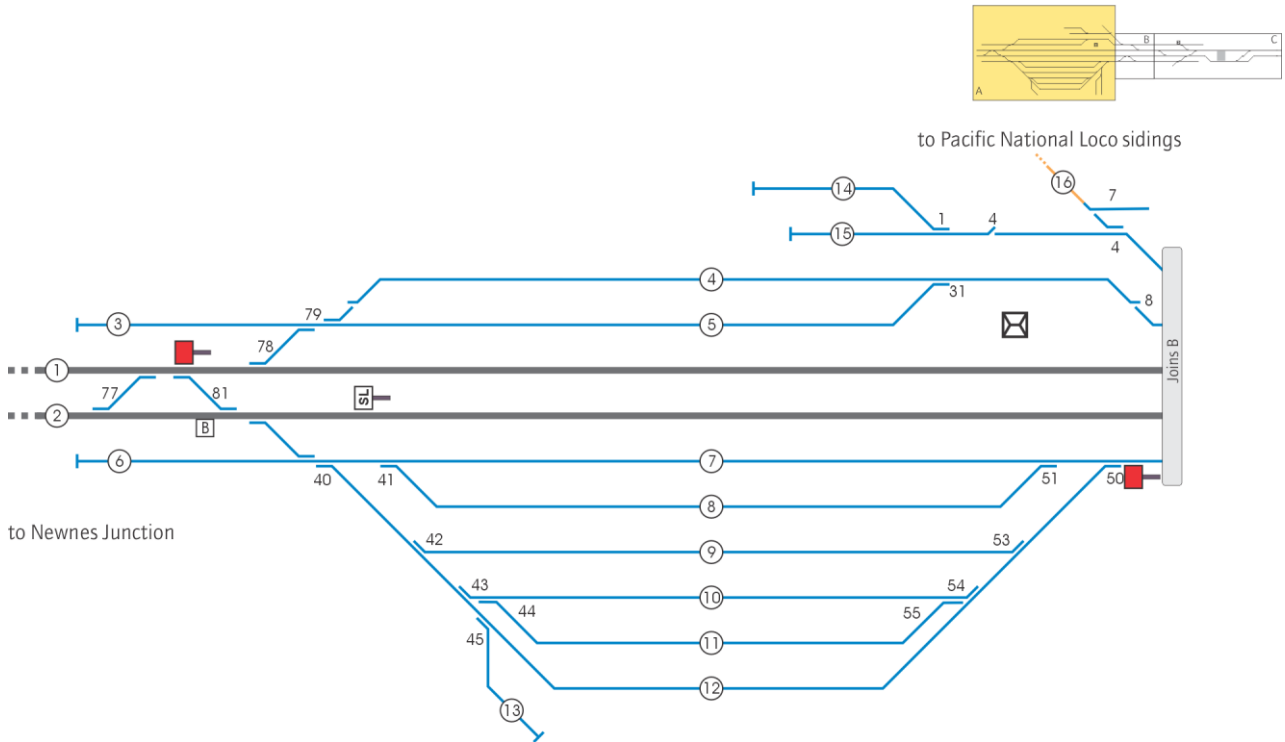
This area has narrow track clearances

## Diagrams



# Lithgow

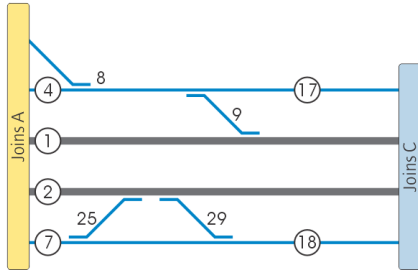
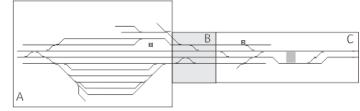
A



Key		
1 Down Main line	7 No 1 Up siding 526m	12 No 6 Up siding 408m
2 Up Main line	8 No 2 Up siding 506m	13 Repair siding 79m
3 Substation siding 137m	9 No 3 Up siding 506m	14 No 2 Electric Storage siding 411m
4 No 2 Down Reception siding 591m	10 No 4 Up siding 313m	15 No 1 Electric Storage siding 290m
5 No 1 Down Reception siding 591m	11 No 5 Up siding 313m	16 to Turntable sidings
6 Up Shunting Neck 353m		

# Lithgow

B



Key		
1 Down Main line	4 No 2 Down Reception siding 591m	17 Browns No 1 siding 887m
2 Up Main line	7 No 1 Up siding 526m	18 Departure road 832m

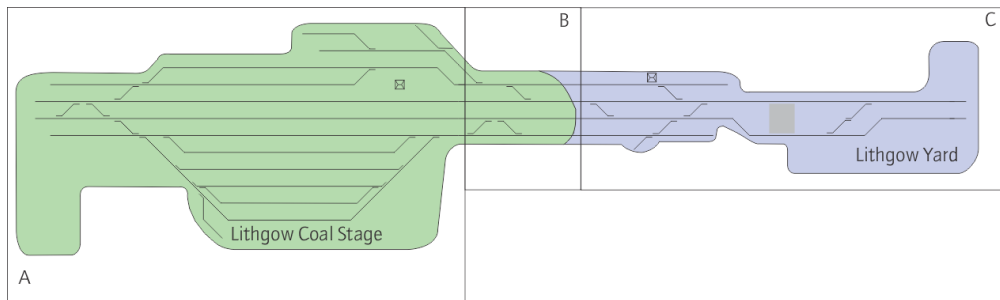


# Lithgow

## Network Control

Signallers at Lithgow Coal Stage and Lithgow Yard

## Yard Limits



### Protecting the Possession Area

Lithgow Coal Stage abuts Lithgow Yard on the Main lines and Zig Zag on the Up Main line.

Down Main line	<b>YL</b>	151.690km Lithgow Coal Stage Down signal 94.3
	<b>EYL</b>	154.464km Down starting 95.9
Up Main line	<b>EYL</b>	150.988km Zig Zag Up signal 93.8
	<b>YL</b>	154.881km Lithgow Yard Up signal 96.2

### Lithgow Yard

Lithgow Yard abuts Lithgow Coal Stage on the Main lines.

Down Main line	<b>YL</b>	154.413km Lithgow Yard Down signal 95.9
	<b>EYL</b>	156.361km Down signal 97.1
Up Main line	<b>EYL</b>	154.881km Lithgow Yard Up signal 96.2
	<b>YL</b>	156.024km Lithgow Yard Up signal 97.0

# Lithgow

## Location details



### Lithgow Coal Stage

Interlocked points without groundframes are operated from Lithgow Coal Stage signal box.

- 153.288km Up STOP sign on Substation siding
- 153.418km Up siding to Up Main line, operated from lever 2: key from releasing switch B, released from Lithgow Coal Stage signal box
- Frame B closing lever 8 releases signal levers 1, 3 and 6 for through-shunting movements on the Main lines and Up Shunting Neck. Secured with a clip and SL lock
- 153.741km Up SHUNT LIMIT sign on Down Main line
- 154.128km Lithgow Coal Stage signal box
- 154.138km Up electric train STOP sign on No 1 Up siding
- 154.783km Down SHUNT LIMIT sign on Up Main line



### Lithgow Yard

Interlocked points without groundframes are operated from Lithgow Yard signal box.

- 155.147km Departure road to State Mine Sidings operated from lever 2: key from releasing switch F located at Lithgow Yard Box
- See Special instructions
- 155.170km Lithgow Yard signal box
- 155.562km Down SHUNT LIMIT sign on Up Main line
- 155.687km Lithgow. Platform 1 and 2
- 156.009km Lever 2 is unlocked by Releasing Switch 2 and operates two points Down Main line to Up Main line
- 156.538km Bearing and Brake Temperature System (BBT), Up Main line

## Level crossings

- 155.272km Network access

## Special instructions

### **Zig Zag–Lithgow Coal Stage**

Bank locomotive working is authorised between Lithgow Coal Stage and Zig Zag.

A coupled bank locomotive may release only at an attended yard.

A non-coupled bank locomotive must release from an assisted train before the Zig Zag Up accept.

If the assisting non-coupled bank locomotive cannot release from the assisted train, it must be detached at an attended yard.

If pilot staff working is in use, the Driver of an assisting non-coupled bank locomotive must hold the pilot staff during the assist and the return to Lithgow Coal Stage.

If an assisted train fails, the bank locomotive must be coupled to the failed train.

The speed of a propelled train must not exceed 15km/h.

If the failed train returns to Lithgow Coal Stage, the Driver of the bank locomotive must hold the documentation for special working.

### **Frame F method of operation**

When it is required to shunt the State Mine Siding the signaller at Lithgow Yard signal box will ensure one of the following possible conditions are fulfilled.

Ensure lever 12 is in the Normal position, or levers 7 and 3 are in the Normal position, or levers 8 and 3 are in the Normal position. Any one of these conditions will allow the release to be taken.

The Qualified Worker may then operate the releasing switch handle from the Normal to the Reverse position, then turn and remove the key for Frame F.

### **Narrow Track Clearances – Lithgow**

Simultaneous train movements on the Main Lines are permissible, however, no simultaneous train movements are permitted where 10 or 12 points are reverse due to conflicting Kinematic Envelopes (KE) when a train is on a turnout route.

The KE restrictions are,

- Down Main: Between 155.100km (aligns with 18 signal) and 155.260km (7 signal) when 12 points are reverse
- Up Main: Between 155.100km and 155.260km when 10 points are reverse.

## Lithgow

### Provision of Kinematic Envelope Locking

Additional locking is provided on signal levers 3, 4, 19 and point levers 10 & 12 to assist the signaller in managing the KE restrictions.

- 10 points will be locked Normal if lever 3 or 12 is Reverse, or a train has entered the route with 96.4A track occupied after using lever 3 or 12 Reverse.
- 12 points will be locked Normal if lever 4, 10 or 19 is Reverse, or a train has entered the route with 96.3A track occupied after using lever 4, 10 or 19 Reverse.



#### Note

A set back on the Down Main from 7 signal to either the Departure Road or State Mine Siding will require 8 & 12 points reverse. However 12 points may be locked normal due to KE restrictions. To free 12 points first pull 8 lever reverse

Indicator lamps are located behind 10 and 12 levers and will illuminate when the KE locking is released. The lamps are labelled 'KE LOCKING FREE'.



#### Note

The lamps only indicate the release of the KE locking, there may be locking from other levers still applied

### Provision of 12 Emergency Release

An emergency release push button and indicator are provided on the shelf above 12 lever.

If it is required to operate 12 points reverse when a train is occupying the Down Main between the Down Home (96.3) and Down 2nd Home (96.7) signals, but outside the area where KE restrictions apply, the KE locking may be released using the 12 Emergency Release push button.

To use 12 Emergency Release:

- Ensure the KE restricted area (155.100km to 155.260km) is clear of rail traffic.
- Ensure levers 4, 10 and 19 are in the normal position.
- After 5 minutes, the release will become available, indicated by the illumination of the emergency release lamp.



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- When the indicator is lit, depress the emergency release push button for one second and then release. The '12 KE LOCKING FREE' indicator will illuminate.
- 12 Points will now be free to move Reverse subject to any locking applied by other levers.

### **Establishing worksites using Wireless Automatic Track Warning System (ATWS) as a safety measure**

The following locations may establish a worksite inside yard limits using Lookout Working with wireless ATWS as a safety measure.

Protection Officers must:

- Be inducted into the ATWS area implementation and management plan,
- Establish worksites in accordance with the protection arrangements and details for each location set below.

#### **Lithgow**

Routine Network Maintenance Worksite Protection Plan: WT08BWS 10171

Worksite location: Up and Down Main lines between 153.124 KM and 153.433KM

Sensor 1 location: Up Main line at 153.988 KM

Sensor 2 location: Down Main line at 152.710 KM

Points clipped and locked: 78 and 2 FRB (B Frame)

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### **Related documents**

*NLA 212 Penrith-Wallerawang*

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### **Effective date**

6 September 2024