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Leppington

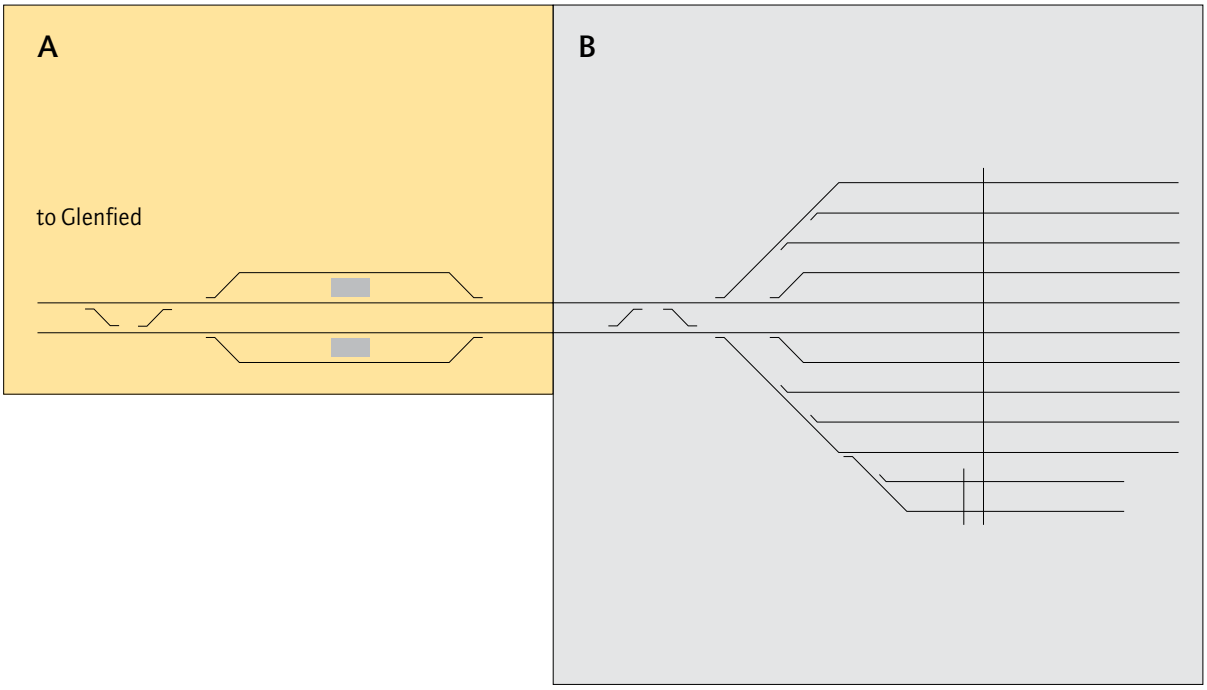
Location

This unit includes:

Leppington at 49.060km

⚠ WARNING: This location has narrow track clearances

Diagrams



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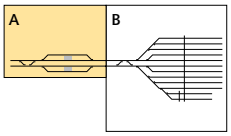
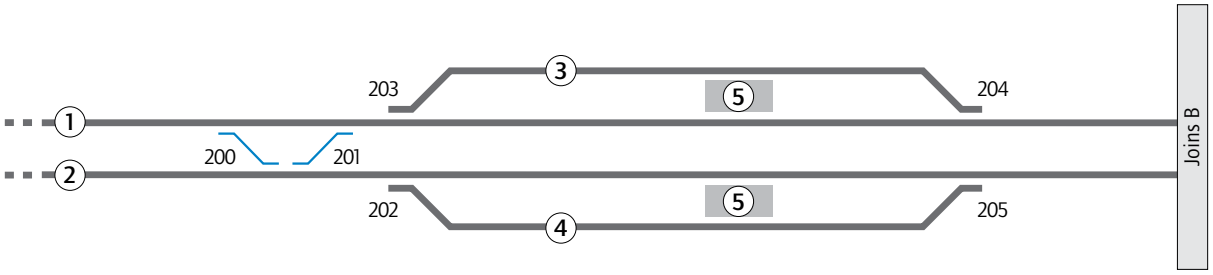
Leppington

A



to Glenfield



KEY

1	Down Leppington Main line	3	Down Leppington Loop line 872m	5	Leppington
2	Up Leppington Main line	4	Up Leppington Loop line 872m		

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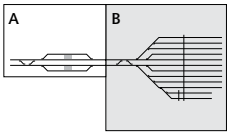
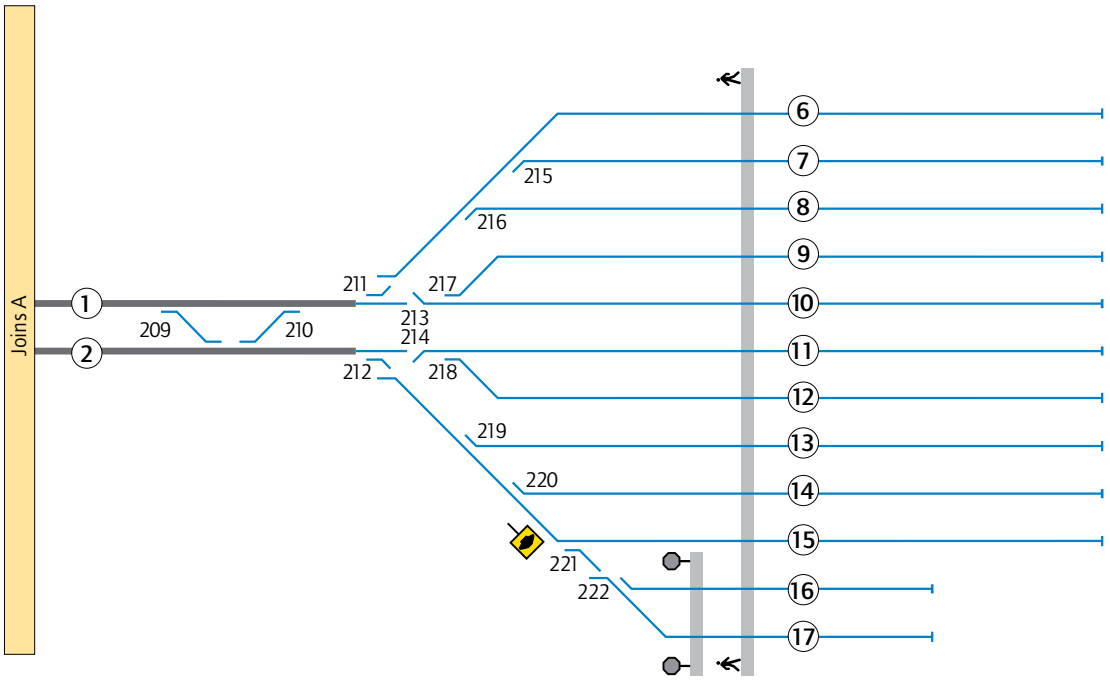
Leppington

B





KEY

1	Down Leppington Main line	9	No 7 siding 354m	14	No 2 siding 354m
2	Up Leppington Main line	10	No 6 siding 354m	15	No 1 siding 354m
6	No 10 siding 354m	11	No 5 siding 354m	16	No 2 Machine siding 155m
7	No 9 siding 354m	12	No 4 siding 354m	17	No 1 Machine siding 156m
8	No 8 siding 354m	13	No 3 siding 354m		

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Leppington

Network Control

Signaller at Rail Operations Centre (ROC)

Yard limits

Down Leppington Main line	YL	49.060m Down signal LE 1
Up Leppington Main line	EYL	50.183km Up signal GL 50.0

Location details

Interlocked points without ground frames are operated from ROC.

54.580km Leppington. Platforms 1 and 2, 3 and 4

Level crossings

53.133km Network Access on/off pad

53.187km Access Pedestrian Walkway across all Service Roads

Special instructions

Emergency Override Working

Leppington Station is configured to enable the continued passage of trains during the loss of communication between Rail Operations Centre (ROC) and Leppington Interlocking via the Leppington Override Facility.

Once the override is initiated all non through routes will cancel. Through routes will be set if not already set. These routes will auto re-clear after the passage of a train.

The mode of operation for Leppington's override is selected by using a three position switch located within a SL Locked stainless steel box mounted on the outside wall of the LE16 Signal Equipment Room (LE16 SER).

AUTO	N/A – Booked out of use
OFF	Crossover, Up Main to Down Main
FORCED	When selected emergency override will be enabled.

'Override' indications are provided locally at LE16 and the current status is displayed at ROC via ATRICS.

☞ NOTE: The AUTO and FORCED are booked out of use until further notice.

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☞ NOTE: **Signaller**

Before authorising the use of the Emergency Override facility the Signaller must ensure that protecting signals affected by the Emergency Override facility are not being held at stop to protect work on track, rail traffic movements or other conditions affecting the network.

Competent Worker

Follow the directions of the Signaller to operate the Emergency Override facility.

Signal Key Switches

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

The removal of a Worksite Protection key will cause the protecting signal to return to STOP and will also affect the aspects displayed by signals approaching the protecting signal.

To avoid the possibility of altering the aspect displayed to Drivers on approaching signals, the table below also indicates the first signal that will be unaffected by removal of the Worksite Protection key.

The Signaller MUST not give permission to remove the Worksite Protection key from a protecting signal displaying a proceed indication unless the line is unoccupied between the first unaffected signal and the worksite.

Line	*Worksite limit*	*First unaffected signal/s*	*Protecting signal fitted with a Key Switch*
Down Leppington Main line	43.928km to 44.328km	GD11 Down East Hills line & GD13 on the Down Main line	GL43.5
Up Leppington Main line	44.312km to 43.726km	GL46.8 on the Up Leppington Main line	GL44.8

Passing Signals fitted with a Signal Key Switch at STOP

Instruction sign displayed

If a Handsignaller is positioned at the signal, the signal must only be passed at STOP on the authority of the Handsignaller working under the directions of the Protection Officer.

If a Handsignaller is not positioned at the signal, the Driver must contact the Signaller to find out why the signal is at STOP.

If it is known that a TWA has been established using a Signal Key Switch, the signal must only be passed at STOP on the authority of the Handsignaller working under the directions of the Protection Officer.

If the Signaller is not aware a TWA has been established using a Signal Key Switch, the Driver is to be informed that there is no known TWA in place, and provided with any other information known about the block ahead. This signal may then be passed at STOP in accordance with the requirements for passing automatic signals in NSG 608.

Instruction sign not displayed

If a Signal fitted with a Signal Key Switch is indicating STOP and the instruction sign is not displayed, the normal provisions of NSG 608 will apply.

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Leppington

Ground Based Warning System Procedures

As part of planning approval requirements for Leppington Stabling Yard, alternative operational procedures for the sounding of train whistles have been introduced.

These procedures are exceptions to NTR 408 Using train whistles, OSP 16 Shunting in Yards and Maintenance Centres, and Driver's Train Preparation Procedures.

Train whistles must not be sounded during normal operations within Leppington Stabling Yard. This includes but is not limited to, using the train whistle during Driver's Train Preparation Procedures as a vigilance control task link and for general movements.

Modified Procedures for Trains Departing Leppington Stabling Yard

The Ground Based Warning System (GBWS) operating panel is mounted on the departure end access platforms on all roads in the Stabling Yard adjacent to the Drivers cab. A GBWS operating panel is also mounted at the Amalgamation and Division areas of both the yard and sidings sections of stabling roads 1 and 2.

The GBWS will consist of two modes, ***Power against Brake Test (PABT)*** and ***Depart***. When activated, the GBWS will omit one audible warning sound for approximately 2 seconds. This configuration was determined the most appropriate to replicate a town horn.

The audible warning has been programmed to sound 20 seconds after activation, allowing time for drivers to re enter their cab and be ready to conduct movements.

The visual alerts will also commence 20 seconds after activation and continue to flash for the following pre determined times:

- 60 seconds for a Power Against Brake Test (PABT)
- 1 minute 20 seconds for a departure from the yard (top end)
- 2 minutes for a departure from the sidings (bottom end)

Operation of the GBWS in Leppington Stabling Yard with 8 cars

Power against Brake Test (PABT) function:

DRIVER

- After the train continuity is complete advise the guard that you will be conducting the PABT
- Secure train by applying the park brakes
- Exit the crew compartment and press the PABT button on the GBWS panel
- The "PABT" button will illuminate to indicate the system has activated

☞ NOTE: The audible warning and visual warning lights will begin to flash both sides of the train 20 seconds after the PABT button is pushed

- Re-enter the crew compartment and release the park brakes

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- Check that the area in front of the train is clear and the warning lights are flashing
- Conduct the PABT as per procedure

☞ NOTE: If the wrong mode button is pressed, there are 2 options for cancelling the selected mode;

  - Re push the same button at any time to cancel the GBWS activation.
  - Push the alternate button within 20 seconds to switch GBWS functions.

- If the visual warnings end before the PABT test is fully completed, repress the PABT button to reactivate the system
- Re apply the train park brakes

Depart function:

DRIVER

- Approximately 1 minute prior to departure contact the signaller via a text message or voice call on the train radio telling the signaller that you are OK to depart
- Check the departure signal is displaying a proceed indication
- Check or re-apply park brakes to the train
- Give the guard the all right bell **signal (-)**
- After receiving the all right bell **signal (-)** from the guard
- Exit the crew compartment and press the DEPART button on the GBWS panel

☞ NOTE: that the depart button will illuminate to indicate the system has activated.

☞ NOTE: if the wrong mode button is pressed, there are 2 options for cancelling the selected mode;

  - Re push the same button at any time to cancel the GBWS activation.
  - Push the alternate button within 20 seconds to switch GBWS functions.

- Re-enter the crew compartment and release the park brakes
- Check that the area in front of the train is clear and warning lights are functioning
- Conduct an inching movement prior to moving and then depart the stabling yard
- Drivers are to test the trains whistle at the whistle signs that are located on both the Up and Down Leppington Lines at 52.100km

Operation of 4 cars from the mid road GBWS panel (Roads 1 and 2)

Power against Brake Test function:

DRIVER

- Conduct the PABT using the GBWS as outlined above for 8 cars

Depart function:

DRIVER

- Conduct either the departure procedures using the GBWS as outlined above for 8 cars

Operation of the GBWS in Leppington Stabling Yard with 4 cars (Roads 3 to 10)

DRIVER

- After the train continuity is complete, contact the NCO for authority to shunt to the access platform.

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- Advise the guard that authority to shunt has been received and for guard to proceed to departure end access platform to activate the GBWS
- Driver notes GBWS system is activated and they have received hand signals from the Guard to shunt forward.
- Check that the area in front of the train is clear
- Conduct inching movement before shunting forward
- Stop train adjacent to access platform
- Wait for guard to return to their operating cab of the train
- Receive guards all right bell signal (-) to indicate that the guard is in in their operating cab

After receiving the guards bell signal to indicate that the guard is in their cab, conduct the PABT and departure procedures using the GBWS as outlined above for 8 cars.

GUARD

- After the train continuity is complete
- Driver will tell you that they have the authority to shunt to the access platform
- Driver will tell you to proceed to departure end access platform to operate the GBWS
- Press the DEPART button on the GBWS panel

☞ NOTE: The depart button will illuminate to indicate the system has activated.

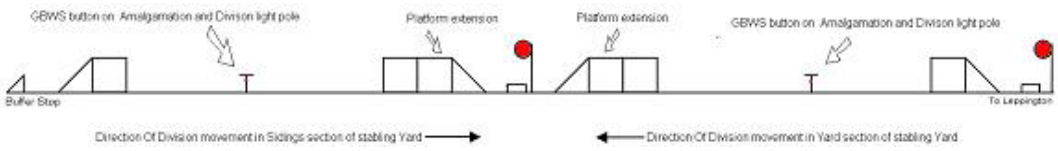
☞ NOTE: The GBWS warning will sound and the amber warning lights will begin to flash on either side of your train

- Using hand signals, hand signal the Driver to shunt forward to the access platform
- After train has stopped at the access platform press the depart button again if required to cancel the GBWS.
- Return to the correct crew compartment and give the driver all right bell signal (-)
- Await driver to conduct either the PABT and departure procedures using the GBWS as outlined above for 8 cars.

Amalgamation and Division Procedures Using the Mid Road GBWS

To accommodate the amalgamation and division of trains within Leppington Stabling Yard roads one and two have been upgraded. This involves lengthened access platforms and the addition of a GBWS panel installed at the amalgamation and division points on these road in both the sidings and yard sections.

Additional signage will be placed alongside roads one and two to indicate to drivers where they are to stop the train after train division.



Simplified diagram of a modified stabling road at Leppington

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DRIVER

- Conduct amalgamation and division of the trains with the Guard as per TWP116 – Division and Amalgamation of Trains
- Ensure Guard has operated the GBWS before moving the train

☞ NOTE: To position the train correctly, drivers are to stop their trains at the posted signage in line with their shoulder

☞ NOTE: When dividing, the moving portion of the train **must** proceed in the direction of travel towards the **centre walkway of the yard** from either the sidings or yard sections of the stabling yard (centre walkway).

GUARD

- Conduct the amalgamation and division of the trains with the driver as per TWP116 - Division and Amalgamation of Trains
- Before moving the train, press the PABT button on the GBWS panel at the amalgamation and division point

☞ NOTE: The GBWS panels at the amalgamation and division point will work the same as the departure end GBWS panels.

☞ NOTE: The GBWS warning sound will sound and the Amber warning lights will begin to flash on either side of your train

Degraded Operation Procedures

When the ground based warning system is unavailable at Leppington Stabling Yard, alternative departure procedures utilising a Qualified Worker will apply. Drivers departing the yard prior to the arrival of the Qualified Worker will sound their Town Horn as per normal protocols. This will continue for departing trains until a Qualified Worker attends the location.

These procedures are exceptions to NTR 408 Using train whistles, OSP 16 Shunting in Yards and Maintenance Centres, and Driver's Train Preparation Procedures.

Train whistles must not be sounded during normal operations within Leppington Stabling Yard. This includes but is not limited to, using the train whistle during Driver's Train Preparation Procedures as a vigilance control task link and for general movements.

☞ NOTE: In an emergency situation, the Driver must still sound the train whistle if required.

Whistle Sign

Whistle sign's have been installed at 52.102km on both the Up Main and Down Main Leppington line to indicate to Drivers of trains departing Leppington Stabling Yard that they must test the train whistle at that location. If the train whistle fails to operate, the Driver must carry out the instructions shown in NTR 408.

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MODIFIED PROCEDURES FOR TRAINS DEPARTING LEPPINGTON STABLING YARD WHEN GBWS IN DEGRADED MODE

In the event that the GBWS is in degraded mode, alternate departure procedures utilising a Qualified Worker will apply.

Once the Qualified Worker arrives on-site, the following interim instructions would apply to crews of ALL sets when GBWS is in degraded mode;

DRIVER

1. Approximately 1 minute prior to scheduled departure time advise the Guard and the Qualified Worker to commence checking procedure.
2. After receiving conformation from the Guard and the Qualified Worker, the departure procedure is completed.
3. Visually inspect the front of the Train from the Driver's cab window.
4. Confirm that the departure signal has a PROCEED indication, then perform inching movement prior to departure.
5. Trains must proceed to the Whistle sign's on both the Up Main and Down Main Leppington lines in accordance with the train whistle failure instructions in NTR 408.
6. Test Train whistle at Whistle sign located on either the Up Main or Down Main Leppington lines.

GUARD

1. Receive instruction from Driver to commence checking procedure.
2. Make visual inspection of both sides of the train to ensure no one is on or about the train.
3. Use the Guard's whistle to give one long, loud whistle blast to warn anyone who may be in the Danger Zone that the train is about to depart.
4. Communicate with the Driver and advise that the departure procedure has been completed.

QUALIFIED WORKER

The Qualified Worker must be standing adjacent to the leading crew compartment. After receiving verbal confirmation from the Driver that the train preparation is complete or the Driver has changed ends, the Qualified Worker must carry out the following:

1. Check the first 4 cars on the left-hand side of the train and use the whistle as supplied to give one long, loud whistle blast to warn anyone who may be in the Danger Zone that the train is about to depart.
2. Check the first 4 cars on the right-hand side of the train and use the whistle as supplied to give one long, loud whistle blast to warn anyone who may be in the Danger Zone that the train is about to depart.
3. Verbally advise Driver that both sides of the train have been checked and all is clear from any obstruction.
4. Contact the signal box for a PROCEED indication.

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Leppington

Maintenance Window Local Possession Authority (LPA)

During Maintenance Window LPA's (MW41), a worksite may be established within 500 metres of the LPA limit for maintenance activities, inspections and testing if:

- a set of points can be secured to prevent access to the portion of track, or
- a Work On Track Authority adjoining the LPA limit is authorised, or
- Lookout Working is established in accordance with NWT 310 *Lookout Working*.

⚠ WARNING:Worksites with associated rail traffic must not be established within 500 metres of an LPA limit unless a TOA adjoining the LPA limit has been authorised.

Points that are clipped and locked to protect a Maintenance Window LPA may be unclipped in accordance with NSG 616 *Precautions during signalling equipment testing.*

Related documents

NLA 512 Glenfield–Leppington

Effective date

17 August 2019

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