KiwiRail

Local Network Instructions:

L4 All Lines South of Waikanae and Masterton inclusive

Publication date 13 Jan, 2025

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1. General Instructions

Heat Sheets

The Daily Heat Sheets for the Wellington Metro area and Wellington - Palmerston North can be found here.

1.1 Bulletins

Terminals must be supplied with all Bulletins for the areas shown:

Terminal	All Bulletins affecting
Wellington	• Palmerston North–Wellington • Palmerston North–Woodville–Wellington • Johnsonville Line • Melling Branch • Gracefield Branch
Paekakariki	• Waikanae–Wellington • Johnsonville Line • Upper Hutt–Wellington
Palmerston North	• Palmerston North–Wellington • Woodville–Wellington
Upper Hutt	• Upper Hutt–Wellington • Waikanae–Wellington • Johnsonville Line • Melling Branch
Masterton	• Masterton–Wellington

Exceptions: Wellington Station.

Changes to Bulletins or Speed Restriction Information for Passenger Services in the Wellington Suburban Area -

Train Control or Network Access Planning (whoever makes the change) will transmit:

- Bulletins or speed restriction information by email.
- Heat restriction changes by telephone

To the Service Coordination Centre, Wellington.

Service Coordinator Wellington receiving such information must:

- Ensure it is posted on the bulletin board for all Operators, and that Operators of trains in continuous shift operation are advised of the information directly, and fax updated Heat Restriction Daily Summary sheet changes to Paekakariki, Upper Hutt and Masterton depots (for Operators booking on at these depots).

NOTE
The Train Controller must update services after they have departed Wellington until their return to Wellington.

- When instructed by the Train Controller, must not allow trains to be dispatched until the speed / heat restrictions, bulletins or critical information is received by the respective Operators.

Operators must:

- Call the Train Controller to request advice of active heat restrictions when:
  - on a train at 1000 hrs each day, or
  - if departing from origin (except Wellington platforms),
  - or a crew change station between 1000 hrs and 2000 hrs daily.

1.2 Automatic Signalling

Automatic Signalling is in operation on the:

- North Island Main Trunk between Wellington and Waikanae
- Wairarapa Line between Wellington and Featherston
- Johnsonville Line between Wellington and Johnsonville

Tawa is a **switch out** signal box. Tawa will be switched in only as required for train purposes.

1.2.1 R Lights Fitted to Starting Signals

SO02 Automatic Signalling Rules, 4.1 Starting Signal Movement Authority is modified as follows:

Starting Signals

5. To pass when failed – displaying with “Block Entry Restricted Speed” aspect	• “R” aspect illuminated, Proceed. • “R” light not illuminated, Verbal from Signaller.

Lights are located on Starting signals.

1.2.2 Emergency Signalling Panels

Emergency Control panels are provided at South and North Junctions, and Paekakariki for emergency use as directed by the Train Controller.

Instructions for their operation are provided adjacent to the panel.

1.2.3 Non-Illuminated Route Indicators

In some circumstances Route Indicators will not illuminate, e.g., when low-speed signals are displayed, or if failed.

Provided the signal concerned is showing a proceed indication, Operators may proceed with caution in accordance with the fixed signals displayed.

1.2.4 Signalling of Trains Between Wellington and Porirua / Petone

The order of non-passenger trains and passenger trains running out of order must be communicated between the Train Controller and the Signaller.

1.2.5 Johnsonville Line

36 Up Departure signal has a slot release between the Wellington Station control zone and Johnsonville Line control zone.

An automatic feature is provided for the signalling of normal movements up and down the Johnsonville Line. This feature will operate for movements of up to four trains at a time on the line. It is anticipated that this will be the normal mode of operation with the intervention from the Train Controller only required for unusual circumstances (i.e., breakdown situation or train to be berthed on to “wrong” main).

Bi-directional running will operate on both mains at each crossing station. Entry on to the “wrong” main is gained via a low-speed aspect on the Home signal. Departure from the “wrong” main is gained via a normal speed aspect on the respective Departure signal.

The low-speed aspect on the Home signal will illuminate when the signal is cleared to the “wrong” main only. Low-speed aspects are not available to routes occupied or to the “correct” main.

A yellow over red aspect on the Intermediate signal approaching the station indicates the next block section is occupied by an approaching train or that the Home signal is at Stop.

1.2.6 Passing of Home Signals at Stop

At Wadestown, Ngaio, Khandallah and Johnsonville a proceed indication on the Home signal cannot be obtained when the line ahead in station limits is occupied by a train. When it is necessary to authorise another movement into station limits on the occupied line, the Train Controller must arrange for the movement to be piloted once confirmation has been received that:

- the train is already stopped at station limits
- will not again be moved while the piloting is underway, and
- that all Rail Personnel involved have a clear understanding of the intended movement.

1.2.7 Train Crossings

The scheduled train crossings on the Johnsonville Line as detailed in Master Train Plan are to remain in operation and be observed by Train Crews. These crossings may be changed on verbal authority from the Train Controller.

As the signalling will usually be in automatic mode, on occasions trains may arrive at the scheduled crossing station with the Departure signal displaying a Proceed indication. In these circumstances the Operator is to call the Train Controller for further instructions.

1.2.8 Special Trains

The following arrangements will apply:

- Special trains will usually be advised on the Information Bulletin with reference to this instruction.
- The signalling system will be on manual operation for these trains.
- During the hours special trains are running with the signalling system on manual operation, all trains will proceed in accordance with the signal indications.
- When there are changes to the hours special trains run and the signalling system is on manual operation, Train Crews are to be advised by the Train Controller.

1.2.9 Melling Branch

For signalling purposes, the Melling Branch is within station limits at Petone.

1.2.10 Gracefield Branch

For signalling purposes, the Gracefield Branch is within station limits at Woburn.

1.2.11 ‘A’ Lights on Signals

An illuminated 'A' light at Tawa or Taita indicates that the main line points up to the next signal in advance are so secured that the train may pass safely over them. If a signal with an 'A' light is at Stop and the 'A light is illuminated, the main line points in the section ahead are correctly set and secured, but the track may be occupied.

SO02 Automatic Signalling Rules, 6. Passing Intermediate Signals at Stop is modified accordingly provided all other provisions of the rule are complied with.

1.2.12 ‘A’ Lights on Intermediate Signals

Intermediate signals may be equipped with 'A' lights between:

- Porirua and Waikanae, and
- Trentham and Wallaceville

Intermediate 'A' lights will only be illuminated in the following situations:

- When set by the Train Controller for:
  - axle counter failure and reset “sweep” required
  - entry to occupied section to assist a disabled train beyond Intermediate signal, following service to push disabled service through the section
  - automatically illuminate following a communications failure

Ngauranga

No.512 Up Intermediate signal has been fitted with an “A” light, the normal indication for this signal will have the “A” light illuminated (permissive signal).

The Train Controller can hold this signal at Stop (signal blocking applied) which will extinguish the “A” light:

- to provide protection in the event of an emergency
- for planned work (must be published on the Information Bulletin)

A purple “B” will indicate next to the signal on the Train Control panel when signal blocking has been successfully applied.

In the event of a communications failure and signal blocking has been applied; signal blocking will remain applied.

1.2.13 Axle Counters

Automatic Signalling uses continuous track-circuiting and/or axle counters to:

- detect the presence of rail traffic
- prevent following and opposing rail traffic entries into occupied sections of track
- provide advanced warning of the status of the next signal

If an axle counter track section still indicates occupied after a train has exited the section, it will be necessary to undertake an axle counter reset.

Axle Counter Reset Requirements

For most instances, the reset process will require a co-operative reset between the Train Controller and an Operator.

When a track section is showing ‘occupied’ after the passage of a train:

The Train Controller must:

1. confirm that the last signalled train movement has left the section complete and intact
2. confirm that the track indicates as occupied and displays ‘red’ on the panel
3. initiate a ‘reset’ in accordance with Local Signalling Instructions
4. contact the Operator of the next movement and instruct that a ‘sweep’ is to take place
5. set the route and authorise the movement (usually by “A” light or Low-Speed Signal Aspect or Verbal – Starting Signals).

NOTE

Low-speed aspect on Starting signals (**Network Signals, Indicators and Boards Manual, 3.8.2 Low Speed on Starting Signals**) is modified accordingly.

The Operator must:

1. Proceed at low speed being prepared to find and stop short of an obstruction, a displaced rail, or defective level crossing warning equipment
5. Once clear of the section to which the signal applies, confirm with the Train Controller that the train has left the section and is complete
6. This action will normally restore the axle counter to the unoccupied state.

Failure of normal axle counter reset process

If the ‘sweep’ movement fails to reset the track section to the unoccupied state:

- A Signals Maintenance Representative must be in attendance.
- Confirm that the last signalled train movement has left the section complete and intact.
- This will indicate a fault that will require a co-operative reset between the Train Controller and a Signals Maintenance Representative.
- Before authorising the Signals Maintenance Representative to operate the reset button, the Train Controller must confirm that the affected section to be reset is clear of rail vehicles.

Hi-Rail Movements

Hi-Rail movements may only on/off track at road level crossings clear of axle counter heads.

On/off tracking at other locations within axle counter areas is prohibited.

NOTE

Hi-Rail Vehicle (less than 2000kg, i.e., LIV’s) movements may only occur, when a Signals Maintenance Representative is in attendance to reset axle counters.

The Train Controller must confirm a Signals Maintenance Representative is in attendance to reset axle counters before authorising the movement(s).

Reason: Risk of Axle Counter Interference.

The Train Controller must:

Apply **TS12 Hi-Rail Vehicles 4.3 Automatic Signalling Areas** and:

- ascertain that there will be no conflicting movements during the time required by the Hi-Rail vehicle to travel through the area
- lock the route by clearing subsequent signals in the direction of travel for the authorised route
- apply control tags to prevent trains from entering the occupancy area

Track Evaluation Car EM80 or NDT Test Car (Speno) when testing

The recording movements of the track evaluation car EM80 or NDT Test Car when testing must only occur when a Signals Maintenance Representative is in attendance or arrangements made for Infrastructure personnel to reset the axle counters.

Reason: Risk of Axle Counter interference from recording wheels.

1.2.14 Sandite Gel Applicators

Sandite Gel Applicators are designed to assist with the prevention of wheel slip by improving friction conditions in areas of low adhesion at the wheel tread / top of rail interface due to contamination.

Sandite is a water-based thrixotropic liquid, consisting of an engineered composite of abrasive solids, dispersant, thickening / binding ingredient and other additives.

Application heads are on both rails.

Sandite Gel Applicators are currently installed at the following locations:

Line	Meterage	Location	Main	Operational
NIMT	39.00	Paekakariki	Down	Yes
	16.04	Kenepuru	Up	Yes
WAIRARAPA	28.42	Heretaunga	Up and Down	Yes
	31.43	Wallaceville	Down	Yes
JOHNSONVILLE	6.08	Awarua		Yes
	7.15	Box Hill		Yes

1.2.15 Block Entry

The following signals can be used when Starting or Departure signals, or Block Entry boards are not available for use when issuing Safe Working Authorities when required under **SO02 Automatic Signalling Rules, 4. Block Section Entry Authority** and **16. Clearance of Limits of Authority.**

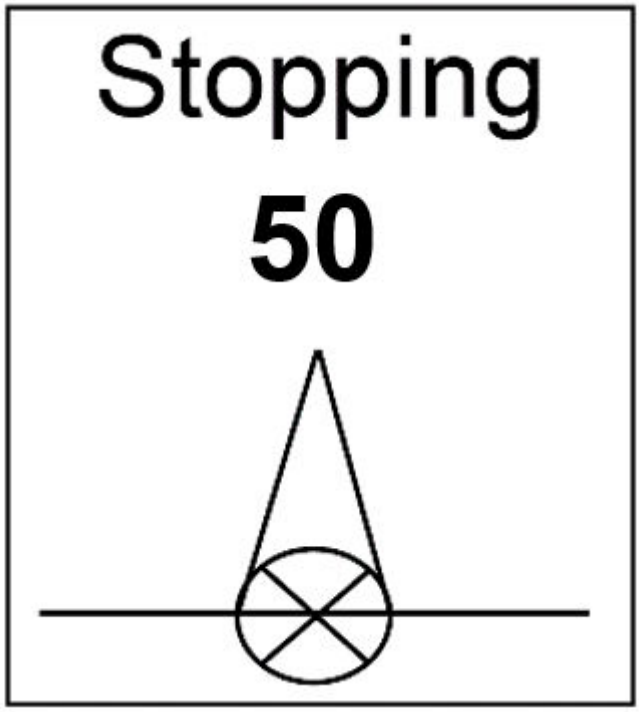
SO02 Automatic Signalling Rules, 4. Block Section Entry Authority and **16. Clearance of Limits of Authority** are modified accordingly.

Location	Signal	Route
Petone	213ABC – Down Directing from Up Main	From Petone Up Main in the Down direction
Taita	29 - Shunt from Down Main	From Taita Down Main in the Up direction
	127 – Shunt & Down Directing from Up Main	From Taita Up Main in the Down direction
Paraparaumu	12R (Fixed Red)	From Paraparaumu Down Main in the Up direction
Wellington	114ABC – Up Directing from E5a	From Freight Yard to NIMT or Wairarapa Down Main in Up direction
	110AB – Up Directing from D3	From Middle Main to NIMT or Wairarapa Down Main in Up direction
	112AB - Up Directing from E3	From Down Main to NIMT or Wairarapa Down Main in Up direction

1.2.16 Wallaceville – Down Stopping Train on Down Main

Train Stops are located:

- in advance of the Train Stop board approaching Wallaceville platform.
  - The speed passing this board must not exceed 50 km/h for movements signalled to stop at Wallaceville platform.
- at Signal W3123



1.2.17 9-Car Wairarapa Services

The following Wairarapa services may operate with 9 cars:

- 1603 - the front most door (Wellington end) must be isolated before the consist is placed to the Masterton platform
- 1606 - the rear most door (Wellington end) must be isolated before the consist is placed to the Wellington platform

Door Management:

The Train Manager must:

- confirm and endorse the M7B Door Isolated
- advise the Operator before departure that the door is isolated
- on arrival at Petone and Waterloo stations, must operate the door control split switch to ensure only the front three (northern) vehicles are available for passenger movements
- ensure the blue markers line up or are in close range to the SEG / SWG door window before releasing the doors at
  - Petone,
  - Waterloo,
  - Upper Hutt,
  - Woodside,
  - Carterton, and
  - Masterton

On-Board Personnel:

- An additional person qualified as a Wairarapa Train Manager must be in the ninth carriage for safety and operational issues (e.g. door Operation) that may arise en route.
- The Train manager must ensure on-board personnel are evenly spaced throughout the train while en route to ensure adequate communication between portable radios.

Radio Communication:

- Channel 46 must be used between on-board personnel within the Rimutaka tunnel for any non-safety critical operations.
- if an emergency is declared while in the tunnel, channel 41 (Operator) and channel 44 (Train Manager) must be used.
- All on-board personnel must carry and use portable radios.

Passenger Numbers:

A maximum of 668 passengers are permitted on these 9-car services, and emergency equipment has been increased to meet this requirement.

Stopping Marks

For down trains only, 9-car stopping marks have been placed at the following locations:

- Renall Street,
- Solway,
- Carterton,
- Matarawa,
- Woodside,
- Featherston,
- Maymorn,
- Waterloo and
- Petone

1.3 Track Warrant Control

The Track Warrant Control system operates on the Wairarapa Line between Featherston and Woodville, except station limits at Masterton.

1.3.1 Wairarapa Line

Featherston to Masterton	
Intermediate boards	• Clareville • Dalefield • Belvedere Road • Carterton • Judds Road
TW Lever Locked sidings	• Waingawa Siding

Dalefield IB:

Should a Down train of over 500 metres be stopped at the Dalefield Intermediate board for more than 9 minutes, the Dalefield Road alarms will commence to back ring.

Judds Road IB:

When stopped at the Intermediate Board:

- Down trains – after 10 minutes the alarms at Judds Road level crossing will commence to back ring.
- Up trains – the alarms at Judds Road level crossing will be operating.

1.4 Shunting Trains and Light Locomotives

1.4.1 Arrangements

The area, hours, and work of shunting trains will be arranged and advised by the Terminal Supervisor/ Team Leader. Work required by the Access Provider is authorised by the Terminal Supervisor/ Team Leader in conjunction with the Train Controller. Shunting trains and light locomotives may run as arranged by each Terminal Supervisor/Team Leader within their respective area (except the Johnsonville line). They may also run as directed by the Train Controller.

1.4.2 Propelling

Wagons may be propelled between Woburn and Gracefield during daylight.

1.4.3 EMUs Running for Training / Mechanical Purposes

Empty EMUs required for training or mechanical purposes may run in the Wellington electrified area.

Empty EMUs must be manned by a fully qualified Operator, accompanied by either:

- Trainee Operator (certified to Stage 6), or
- Train Manager / Operator

Authorised personnel must be in attendance and are responsible for the safe running of the multiple units.

1.4.4 Light Locomotives Running for Training / Testing Purposes

Light Locomotives running for testing / mechanical purposes may run as required between Wellington – Hutt Shops – Masterton under the supervision of the Engineer in Charge.

Prior to leaving Wellington the Engineer in Charge must advise the Train Controller of the intended movements.

1.4.5 Crewing

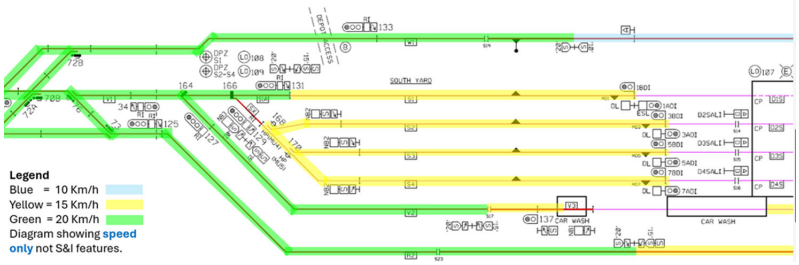
The Train Controller must endorse the train control diagram alongside the plot line for the intended movement when shunting trains and light locomotives are running under ATC conditions.

1.5 Maximum Speeds

1.5.1 Maximum Speed of Motive Power Units and Rolling Stock

Motive Power Type	Speed km/h
FP & FT EMUs	100
EMUs must observe permanent speed restrictions as tabled for: • Wairarapa Line – Passenger (P) • NIMT – Electric Multiple Units (EMU)	
DC, DFT, DXB, DXC and DXR	100
DL	80
UDA wagons – when travelling loaded in the suburban area and required to pass a signal trip arm in the raised position (signal at stop)	10

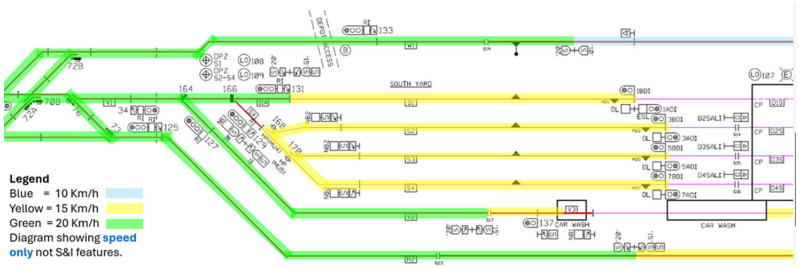
1.5.2 North Island Main Trunk

Portion of Line	Kilometres per hour		
DOWN TRAINS	**Exp P EMU**	**Exp F**	**F**
Waikanae–Wellington	**100**	**80**	**55**
EXCEPT			
Waikanae–Paraparaumu			
Through 21 points at Waikanae	60	60	..
Paekakariki–Linden			
From 38.70 km to 38.50 km (Beach Rd level crossing)	70	70	..
From 10L Signal to 35.35 km (through North Junction turnouts)	65	65	..
From 35.35 km to 32.40 km	70	70	..
From 17.65 km (within Porirua Station Limits), 38 metres before 707 Down Starting signal) to 707 Down Starting signal	65	..	..
Past 291 Intermediate signal	..	55	..
Kaiwharawhara–Wellington			
Arriving Wellington Freight Yard through all turnouts at reverse between Wellington Junction and 16 signal	..	40	40
Through cross overs to Down main	40	..	..
From 2.35 km (Kaiwharawhara) to 0.632km Middle main, Down main	60	..	..
From 0.632 km to platforms Middle main, Down main	20	..	..
From: • 139 shunt from W2 road • 131 shunt from S1 road • 129 shunt from SX road • 127 shunt from V2 road • 135 shunt from R3 road To: • 70a points in the Throat when signalled to the platforms 	as per diagram	..	..

NOTE

Waikanae Loop

Trains may travel up 40 km/h along the loop and through the points, **TO10 Network Line Speeds, 4.3 Turnouts and 4.4 Lines Other than Main and Branch Lines** are modified accordingly.

Portion of Line	Kilometres per hour		
UP TRAINS	**Exp P EMU**	**Exp F**	**F**
Wellington–Waikanae	**100**	**80**	**55**
EXCEPT			
Wellington–Kaiwharawhara			
From Platforms to 0.632 km, Up main, Middle main, Down main	20	20	20
From 0.632 km to 2.35km (Kaiwharawhara), Up main, Middle main, Down main	60	..	..
Departing from Wellington Freight Yard through all turnouts at reverse from 114 signal to Kaiwharawhara	..	40	40
From: • 22ABC - Up Directing from A0 • 24ABC - Up Directing from B0 • 26ABC - Up Directing from CA0 • 28ABC - Up Directing from C0 To: • Passenger yard as per diagram below 	as per diagram	..	..
Kaiwharawhara–Plimmerton			
From 1120 Intermediate signal to 1568 Intermediate signal	..	70	..
From 17.82 km (within Porirua Station Limits 106 metres before 706 Up Departure signal) to 706 Up Departure signal	80	..	..
CIMW Site between 19.40 and 19.60 km **Constant Speed** required over site	..	70	..
From M214 Intermediate signal to M220 Intermediate signal	90	..	..
From 22.51 km to 802 Up Home signal	90	..	..
Pukerua Bay–Paekakariki			
Express Freight Only – From 30.46 km to 3132 Intermediate signal	..	25#	..
From 31.04 km to 32.40 km (including through South Junction turnouts)	40	40	40
From 32.40 km to 35.35 km (including through North Junction turnouts)	70	70	..

- 25 km/h must be maintained until view of 3132 signal is obtained, provided 3132 is displaying a Reduce to Medium speed at which point speed may be increased to 40 km/h.

1.5.3 Johnsonville Line

Portion of Line	Kilometres per hour
	EMU
Wellington–1.5 km	**60**
EXCEPT	
From Platforms to 0.632 km	20
1.5 km–Johnsonville	**50**
EXCEPT	

Portion of Line	Kilometres per hour
Between 2.94 km and 3.59 km including Down trains through No.3 turnout and Up trains through No. 7 turnout, Wadestown	25
Ngaio: Down trains through No.3 turnout and Up trains through No.7 turnout	25
Khandallah: Up trains through No.7 turnout	25
Through all tunnels except the 2.94 km to 3.59 km area	40
10.077 km to end of line applies only to Up (Arriving) trains only	25

1.5.4 Gracefield Branch

Portion of Line	Kilometres per hour
	F
Woburn–Gracefield	**25**

1.5.5 Melling Branch

Portion of Line	Kilometres per hour
	EMU
Petone–Melling	**50**
EXCEPT	
2.455 km to end of line applies only to Up (Arriving) trains only	25

1.5.6 Wairarapa Line

Portion of Line	Kilometres per hour		
	P EMU	**Exp F**	**F**
Wellington–Pomare	**90**	**55**	**55**
EXCEPT			
Wellington–Woburn			
From Platforms to 0.632 km, Up, Middle and Down mains	20	20	20
Between 0.632 km to 2.35 km (Kaiwharawhara), Up, Middle and Down mains	60	..	..
Departing Wellington Freight Yard through all turnouts at reverse from 114 signal to Kaiwharawhara	..	40	40
Arriving at Wellington Freight Yard through all turnouts at reverse between Wellington Junction and 115 signal	..	40	40
Down trains through crossover from Down Main to Centre Main	40	40	40
Up trains through Junction with NIMT at 1.80 km	60	..	..
Past platform at Kaiwharawhara (Down Main) for JP and JT wagons	..	25	25
Past platform at Kaiwharawhara (Down Main) for RM31	Must be piloted		
Past platform at Kaiwharawhara (Up Main) for RM31	25	..	..
Woburn–Pomare			
Passing Randwick Rd, and Whites Line East overbridges at Woburn (with overhead power on) for DL Locomotives.	15	15	15
Past Woburn platform (Down Main) for DL locomotives	..	55	..
Past Woburn platform (Down Main) for RM31	25	..	..
Past Woburn veranda (Down Main) for FIH wagons	..	55	..
Past Waterloo platform (Up Main) for JT wagons	..	15	15
Past Epuni platform (Down Main) for JT and JP wagons	..	25	25
Past NaeNae platform (Down Main) for JT wagons	..	25	25
From 1960 Up Intermediate signal to 25 Up Home signal at Taita #	80	..	..
# From 126 Down Directing from Down main signal to 125 Down Starting signal at Taita	80	..	..
Pomare–Upper Hutt (inclusive)	**90**	**80**	**55**

Portion of Line	Kilometres per hour		
EXCEPT			
Past Pomare platform (Up Main) for RM31	25	..	..
Past Manor Park platform (Down Main) for RM31	25	..	..
Past Manor Park platform (Up Main) for JT wagons	..	25	25
Past Heretaunga platform (Down Main) for RM31	Must be piloted		
Upper Hutt–Masterton	**90**	**80**	**55**
EXCEPT			
Between 39.185 km to 48.100 km (Rimutaka Tunnel)	60	60	..
From 5626 Up Intermediate signal to 2R Up Home signal at Featherston (Up trains) #	..	70	..
From 58.35km to 8L Down Home signal at Featherston (Down trains) #	..	70	..
Past R3 Up Distant signal at Masterton (Up trains)	..	70	..
DL Locomotives passing Masterton Platform	25	25	25

Permanent speed restrictions with # apply between these signals as the stopping distances between signals is inadequate .

When approaching these signals, the train may resume normal line speed providing the second signal is displaying “normal clear speed”.

1.6 Whistle Board Locations

For Down trains km	For Up trains km	Locations at or Between	Warning for
Track Meterage			
-	30.08	Plimmerton and Pukerua Bay	Pedestrian Crossing
31.42	31.06	Pukerua Bay and Paekakariki	Pedestrian Crossing

1.7 Metro Stabling Facilities

The Wellington Metro Service Operator operates stabling facilities for suburban passenger trains to be stabled and cleaned at:

- Wellington (West, South and North yards)
- Paekakariki *
- Waikanae *
- Upper Hutt *
- Masterton *

NOTE

* The Metro Service Operator’s Site Operating Plan applies to the enclosed fenced areas. The fenced roads are designated as Depot Limits.

https://au.promapp.com/tdw/Process/Minimode/Permalink/GnnzyOY8jGwo2hKEO1eYQx

1.7.1 Safety Checks – Entering / Departing Stabling Roads

Before any movement occurs, the Operator of each movement is responsible for ensuring that there are no:

- signs erected on or near the track, indicating that workers are or may be working on or near the train
- collars or signs in the cab, indicating that workers are or may be working on or near the train
- derailers, danger stop discs, warning signs
- other rail vehicles moving within, or entering the stabling area.

Permission to move outside of Depot Limits must also be obtained from the Train Controller (verbal or signal) to ensure a conflicting move has not been signalled.

At Masterton, **Local Network Instruction 11.7.3** applies.

WARNING
If there are warning signs or indications, the movement must not proceed until the person in charge of the work has:

- been located
- has cleared all persons to a safe area and
- has removed the signs

1.7.2 Speed in EMU Siding

The speed of all movements in Fenced Stabling Facilities (Outer Depot Limits *) must not exceed 10 km/h.

The speed of all movements in Wellington Yards and Sidings must not exceed 15 km/h, unless otherwise advised.

1.7.3 Operation of Gates

The gates shown on S&I Diagrams have danger stop signals attached to both sides and are locked with AS4 type padlocks.

The Operator of each movement must be prepared and able to stop immediately prior to stabling gates to ensure that the security gates are open and secure for the movement. The Operator of each movement is responsible for ensuring the gates are secured closed after use.

NOTE
The Paekakariki and Waikanae gates opens outwards, the Masterton gates and Upper Hutt north end gate open inwards.

1.7.4 Personnel working in Stabling Facilities

The Person in Charge of Mechanical Maintenance must:

- check to ensure the Stabling Facilities area has no rail movements before entering
- close the gate and lock with personal padlock (coloured)
- display “Maintenance in progress” sign on gate.

IMPORTANT
The “Do Not Move” sign must be used when working on vehicles in the Stabling Facility in accordance with **TO07 Working on Rail Vehicles, 6.1 Warning Sign.**

1.7.5 Protection of Lines Fouled by Work or Other Activity
Protection for any activity fouling the stabling roads will be in accordance with **TS08 Working Within Non-Interlocked Areas.**

1.7.6 Track Maintenance Machines
Track Maintenance Machines may be stored on the stabling roads with prior permission of the Metro Operators, Operations Manager and protected in accordance with the relevant **Track Safety Rules.**

1.7.7 All Trains Stop Boards
When stopped at the ATSB protecting entry into a fenced stabling facility, the board may be passed under the following conditions:

- If the stabling road(s) are empty, no permission required.
- If the stabling road(s) are occupied, the Operator must ascertain that all vehicles are stationary and will not move before entering.

All Trains Stop board locations are shown on S&I diagrams.

1.8 Matangi EMU – SD10 Auto Couplers
Matangi EMUs fitted with SD10 type automatic couplers do not carry transition heads on-board. SD10 transition heads are stored at fixed track-side locations.

When an MPU with standard or alliance couplings is required to assist a Matangi EMU service with SD10 type automatic couplers, the Train Controller must arrange recovery movements to include collection of a SD10 transition head from one of the locations listed herein. Transition heads may, and can be delivered by a train travelling in the opposite direction as necessary.

SD10 transition heads are stored in secure cabinets accessed by a unique key, to be distributed by Metro Operations.

NOTE
Each transition head comprises 3 parts plus 2 hoses. Those located at stations are stored on a wheeled trolley. Those in the rail corridor are stored on shelves inside the cabinet. Parts are lifted and carried separately; the transition head is never lifted as a complete assembly.

1.8.1 SD10 Storage Locations

NIMT			Wairarapa Line		
Signal	360	U	Ngauranga	4.80 km	SE
Signal	544	D			
Signal (Tunnel #2)	694	U			

NIMT			Wairarapa Line		
Signal (Tunnel #2)	832	U			
Signal (Tunnel #2)	833	D	Petone	10.50 km	X2
Signal (Tunnel #2)	977	U	Ava	12.52 km	NE
Takapu Rd	11.89 km	X2	Woburn	14.37 km	SE
Redwood	13.71 km	X2	Waterloo	15.50 km	X2
Tawa	13.75 km	SE	Epuni	16.54 km	SE
Linden	14.91 km	SE	Naenae	18.25 km	SE
Kenepuru	16.16 km	X2	Wingate	19.49 km	SE
Porirua	17.71 km	NE	Taita	20.55 km	NE
Paremata	21.87 km	NE	Pomare	21.98 km	SE
Mana	23.16 km	X2	Manor Park	23.70 km	NE
Plimmerton	24.48 km	SE	Silverstream	26.83 km	SE
Pukerua Bay	30.35 km	NE	Heretaunga	28.24 km	SE
Sth Junction (7b)	32.50 km	U	Trentham	29.40 km	X2
Signal	3367		Wallaceville	31.30 km	X2
Nth Junction (9b)	35.00 km	D	Upper Hutt	32.40 km	NE
Paekakariki	38.80 km	SE			
Paraparaumu	48.26 km	X2			
Waikanae	55.43 km	NE			

U = Up main

D = Down main

X2 = Up & Down mains

SE/M = South End main platform

SE = South end

NE – North end

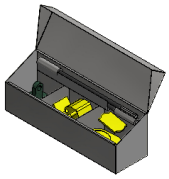
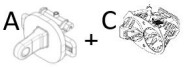
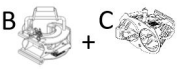
NOTE
The Line Manager responsible for Metro Service Operations is responsible for arranging any SD10 transition head used to be returned to its storage location.

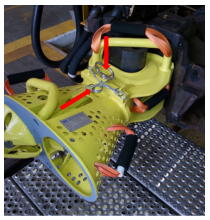
1.8.2 Rescuing Matangi EMUs Fitted with SD10 Auto Couplers

An SD10 adaptor is required for any rescue of Matangi EMU's fitted with SD10 Auto-couplers by vehicles fitted with incompatible drawgear i.e., hook and pin or knuckle style couplers.

IMPORTANT
After the rescue is complete, ensure that the adaptor remains with the last rescued vehicle. The adaptor must be inspected by a fitter before being returned to the storage site.

1.8.3 Fitting of Adaptors

1.	Locate the nearest Adaptor storage cabinet advised by Train Control. Storage cabinets have a large blue and white “SD10” sign on either the front (at platforms and on the rail corridor) or top (in tunnels). The ID indicates track meterage and side of track i.e., U = Up main, D = Down main.	
2.	Open the storage cabinet with the SD10 key supplied to all Metro and Freight personnel operating in the Wellington Metro Area. Cabinets on platforms and on the rail corridor, open at the front. Cabinets in tunnels, open at the top (as shown)	
3.	Identify the parts required:	
4.	For locomotives if fitted with hook and pin couplers	
5.	For locomotives if fitted with knuckle couplers	
6.	If retrieving from a station cabinet, use the trolley to move the adaptor to platform edge adjacent to your vehicle.	
7.	Take required parts off the trolley before stepping down to the ballast. All parts lift off vertically. Remember to return trolley to cabinet.	
8.	Remember to take both BP and MR hoses with you. Hoses can be carried on board, as must be fitted at site of rescue, after coupling to the disabled unit(s).	
9.	Assemble the adaptor using either Step 10 (for hook and pin) or Step 11 (for knuckle type).	
10.	For hook and pin: a. Fit Part A and secure with pin	

	b. Slide Part C onto Part A	
	c. Secure with vertical pin and horizontal R-clip. Make sure both are in place before moving vehicle.	
11.	For knuckle couplers: a. Lower Part B into the closed knuckle coupler	
	b. Slide Part C onto Part B and secure with vertical pin and horizontal R-clip.	
12.	Continue to the rescue site with the adaptor. You may be approaching the disabled vehicle from either the same or the opposite direction. Locate the disabled vehicle and the Metro Locomotive Engineer at the rescue site.	
13.	To couple with the rescue adaptor: • bring the locomotive to a stop approx. 0.5 – 0.75 metres from the disabled unit • drive forward slowly under instruction from the Metro Train Manager • couple up at low speed The Metro train crew will: • prepare the disabled unit for coupling • check alignment • guide the coupling movement • confirm a successful couple If the adaptor sits low when installed on a knuckle style coupler, a wooden spacer may be inserted beneath the top shelf. These are stored on all Matangi auto-coupler vehicles. The spacer must be removed once the vehicles are coupled.	 
14.	Once coupled, the Metro train crew will connect hoses and open air cocks on both vehicles. Normal rescue procedure can then be followed.	

1.9 Use of Individual Train Detection (ITD)

Within the Wellington Electrified Area:

- ITD cannot be used between 0600 – 0830 hrs and 1530 – 1800 hrs weekdays
- A higher level of protection must be used when ITD is not available to be used
- ITD cannot be used in tunnels and bridges at any time
- The use of ITD on the Johnsonville line is prohibited

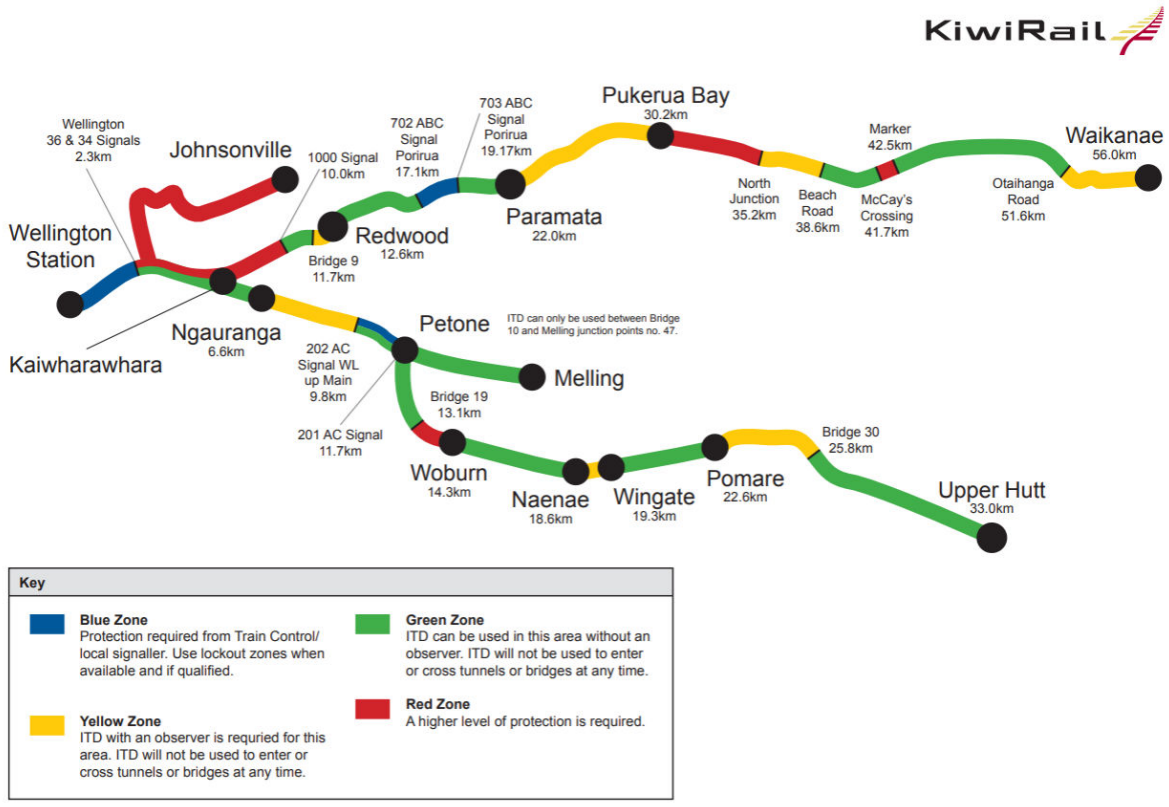
The following restrictions to ITD apply:

Wairarapa Line	
An Observer must always be used for ITD to operate between:	
6.6 km Ngauranga Station	9.8 km Petone Station
13.1 km Bridge 19 Ava	14.3 km Woburn Station

Wairarapa Line	
18.6 km Naenae Station	19.3 km Wingate Station
22.6 km Pomare Station	25.8 km Bridge 30 Silverstream
ITD cannot not used until a risk and task analysis has been carried out and is approved by the Area Manager Wellington for between:	
13.1 km Bridge 19 Ava	14.3 km Woburn Station

NIMT	
An Observer must always be used for ITD to operate between:	
11.9 km Bridge 9	12.6 km Redwood Station
22.0 km Paremata station	30.2 km Pukerua Bay Station
35.2 km North Junction	38.6 km Beach Road
51.6 km Otaihanga Road	56.0 km Waikanae Station
ITD cannot be not used until a risk and task analysis has been carried out and is approved by the Area Manager Wellington for between:	
30.2 km Pukerua Bay Station	35.2 km North Junction
41.7 km McKay's crossing	42.5 km

Map of ITD within the WEA:



1.9.1 Traction Switching at Night

ITD is only permitted at the following locations identified with "Y".

If not permitted, a higher form of protection must be used.

Meterage	Location	Crossing Track Y/N	Adequate View Y/N	Adequate Light Y/N	ITD Permitted Y/N
Wairarapa Line					
3.800 km	Kaiwharawhara substation	Y	Y	Y	Y
9.333 km	Rowing Club Petone	Y	Y	Y	Y
11.549 km	Petone substation	Y	Y	Y	Y
14.508 km	Woburn substation	N	Y	Y	Y
21.680 km	Pomare substation	Y	Y	Y	Y
25.150 km	Silverstream substation	N	Y	Y	Y
32.099 km	Upper Hutt substation	N	Y	Y	Y
Melling Branch					
0.323 km	Petone substation	N	Y	Y	Y
0.387 km	Petone substation	N	Y	N	Y
1.038 km	Lower Hutt substation	N	Y	Y	Y
Johnsonville Line					
5.071 km	Single Switch	Y	Y	N	N
5.163 km	Ngaio substation	Y	Y	Y	Y
8.998 km	Tie Switch 1235	N	Y	Y	Y
North Island Main Trunk					
3.036 km	Tie Switch 101 & 102	Y	Y	Y	Y
9.790 km	Glenside substation	N	Y	N	Y
12.509 km	Switch Hatricks	Y	Y	Y	Y
13.902 km	Tawa X-tie	Y	Y	N	N
16.432 km	Kenepuru substation	Y	Y	Y	Y
19.507 km	Paremata substation	Y	Y	Y	Y
23.300 km	Mana substation	N	Y	Y	Y
25.168 km	Switches 156 & 157	Y	Y	N	N
30.350 km	Pukerua Bay substation	N	N	N	Y
32.372 km	South Junction switch	Y	Y	N	N
35.800 km	Paekakariki	N	Y	Y	Y
45.025 km	Raumati substation	Y	Y	Y	Y
51.675 km	Lindale substation	Y	Y	N	N
54.350 km	Waikanae bypass and switches	N	Y	N	Y

IMPORTANT

At the following locations, a higher form of protection is required:

- All switches within Wellington Station Limits
- NIMT 3.8 km Kaiwharawhara on the bridge
- NIMT 32.407 km South Junction

1.10 Mechanical Train Stop

The Mechanical Train Stop (MTS) is a portable device, that when fitted will stop EMU services by activating the signal trip at Compulsory Stop Boards.

NOTE
The MTS will activate the signal trip on each set in a consist.

Application of MTS:

- MTS will be used to support **TS04 Compulsory Stop Protection**
- **TS04 Compulsory Stop Protection** will remain the primary method of protection
- MTS is a supplementary method of protection and will only stop Motive Power Units fitted with signal trips (FT/FM EMUs)

Work areas protected by MTS will be notified on the Information Bulletin with the following symbol - □

1.11 Detonator Protection for Disabled Trains

For all lines and branches between Upper Hutt and Wellington inclusive, Waikanae and Wellington inclusive and the Johnsonville Line.

Should a train become disabled and require assistance from a relief rail vehicle which will approach from the rear, detonator protection may not be required, if:

- The disabled train is on the ‘normal’ main. That is, prior to disablement the train was travelling in the direction for which the line is principally signalled for, and
- The relief rail vehicle is approaching from the same direction of travel as the disabled train, and
- There are no other hazards or situations that would necessitate the use of detonator protection.

RP16 Disabled Train Recovery is modified accordingly.

Detonator protection must still be applied to protect the rear of disabled trains when:

- The disabled train was travelling in the opposite direction for which the line is principally signalled for prior to becoming disabled, or
- Emergency or environmental situations necessitate their use, for example:
  - protecting an adjacent line
  - poor visibility caused by fog, rain or any adverse weather
  - degraded radio functionality
- The Operator Disabled Train or Operator Relief Train determines detonator protection is necessary.

1.12 Hi-Rail Vehicle No.67286

Hi-Rail Vehicle No.67286 is prohibited from running in the Wellington Suburban area owing to the location of signal trip arms, unless authorised by Signals Engineering and a bulletin issued.

2. Level Crossings

2.1 Automatic Warning Devices

Standard flashing lights and bells are installed except where indicated:

Letter	Meaning
A	Bell signals operate between restricted hours
B	Barrier arms also provided
C	Fitted with strobe lights
D	Fitted with Level Crossing Predictor
E	Signs worded "TRAIN COMING" operates when a train is approaching
G	Pedestrian automatic gates also provided.
H	Hooters sound when a second train is approaching.
M	Manual Control instructions on following pages.
O	Equipped with control panel to switch alarms off
P	When a power failure occurs, and a signal cleared for a movement these level crossing alarms will continue to operate for up to four minutes before cancelling. Under these conditions the Operator should approach the crossing with caution even if the alarms are operating.
R	Fitted with Remote Control for Hi-Rail Vehicles
S	Fitted with special level crossing manual control panel
T	Fitted with remote manual control and barrier raise from Train Control

In signalled areas the alarms will operate in conjunction with the signals leading over them. If it is necessary to pass a signal at “Stop”, all or some of the alarms in the section ahead may not operate correctly. In a number of cases as specified by S&I Diagram, alarms will operate in conjunction with signals controlled by a local panel.

Pressing the “Clear” button will initiate the alarms and after a short delay the signal will clear. Pressing the “Stop” button will restore the signals to Stop and after a time delay the alarms will stop.

Crossings fitted with Level Crossing Predictors do not have a fixed starting point; rather the warning time for the automatic alarms is computed from the speed of the approaching train. Therefore, through movements approaching the crossing should not accelerate but maintain constant speed after passing a point approximately 500 metres from the crossing. If a movement stops on the approach to the crossing, provided it is not within 15 metres of the crossing, the alarms will cancel. When the movement restarts, the alarms will also restart automatically but the warning time may be reduced. The Operator must observe that the alarms are operating before proceeding over the crossing.

To avoid excessive operation of alarms when shunting, or for non-automatic operation, manual controls consisting of “Start” and “Cancel” buttons are provided as shown herein. Alarms started manually will cancel automatically when the train clears the crossing unless otherwise stated. Once the alarms have been manually cancelled all subsequent operations must be manually operated until the train leaves the area. Under manual control the Operator must check the alarms are operating before proceeding onto the crossing. Where barrier arms are provided the Operator must wait until the barriers are fully down before proceeding onto the crossing.

When manually cancelled or cancelled automatically after the train has passed over the crossing, if the train remains in the track circuit controlled area for a prolonged period the alarms may reactivate and should be manually re-cancelled.

IMPORTANT
Manual controls must not be used to cancel alarms operating due to fault conditions.

2.1.1 Wellington Yard

Km	Features	Crossing	Locations at or between
	B M S	Waterloo Quay (North)	On siding leading to Wellington wharves

2.1.2 North Island Main Trunk

Km	Features	Crossing	Locations at or between
13.05	A B P R S	Tawa Street	Redwood
14.22	G	Tawa Pedestrian	Tawa
14.52	A B P S	McLellan Street	Linden and Tawa
15.09	A B H P R S	Collins Avenue	Linden
22.89	A B G P R S T	Pascoe Avenue	Paremata and Mana
24.16	B G P R S T	Steyne Avenue	Plimmerton
24.38	A G O T	Plimmerton Pedestrian (Up Main)	Plimmerton
24.41	G O T S	Plimmerton Pedestrian (Mainline Steam Siding)	Plimmerton
30.29	E	Pedestrian	Pukerua Bay
31.30	A E	Pedestrian	Pukerua Bay and Paekakariki
38.62	A B R S	Beach Road	Paekakariki
41.79	B S	Whareroa Road	Paekakariki and Paraparaumu
48.38	B S	Kapiti Road	Paraparaumu
51.61	B S	Otaihanga Road	Paraparaumu and Waikanae
55.27	B S	Elizabeth Street	Waikanae
55.56		Waikanae Pedestrian	Waikanae

2.1.3 Johnsonville Line

Km	Features	Crossing	Locations at or between
6.83	A B S	Simla Crescent	Awarua Street and Simla Crescent
7.94	A B P S	Station Road	Khandallah
8.19	A E	Poona Street Pedestrian	Khandallah
8.81	B S	Fraser Avenue	Khandallah and Raroa

2.1.4 Wairarapa Line

Km	Features	Crossing	Locations at or between
5.6	B R S	Te Ara Tupua Construction Crossing	Ngauranga
16.24	G	Epuni Street Pedestrian	Waterloo and Epuni
16.93	G	Naenae Pedestrian	Epuni and Naenae
23.19	B P S	Manor Park Road	Pomare and Manor Park
26.95	G	Whitemans Road Pedestrian	Silverstream
27.29	A E	Stream Grove Pedestrian	Silverstream
28.40	E	Heretaunga Pedestrian	Heretaunga
28.88	A B G P S	Sutherland Avenue	Trentham

Km	Features	Crossing	Locations at or between
31.19	A B G P S	Ward Street	Wallaceville
32.02	A B G P S	Blenheim Street	Upper Hutt
56.24	A	Brandon Street	Maymorn and Featherston
56.46	A B S	Revans Street (SH53)	Maymorn and Featherston
56.53	A B S	Fitzherbert Street (SH2)	Maymorn and Featherston
56.69	A	Fox Street	Maymorn and Featherston
56.92	A	Bell Street	Featherston
65.33		Woodside Road	Woodside and Matarawa
73.62		Dalefield Road	Matarawa and Carterton
74.80		Lincoln Road	Matarawa and Carterton
75.29		Brooklyn Road	Matarawa and Carterton
76.18	D M	Victoria Street	Matarawa and Carterton
76.44	D	Pembroke Street	Carterton and Waingawa
76.77	D	Belvedere Road	Carterton and Waingawa
77.12	M	Rhodes Street	Carterton and Waingawa
77.30		Kent Street	Carterton
79.44		Chester Road	Carterton
84.79	B M S	Norman Avenue	Waingawa
85.42	C M	Norfolk Road	Waingawa
86.90	B D R S	Ngaumutawa Road	JNL Siding and Judds Road
87.85		Judds Road	Judds Road and Solway
88.36	A	Hillcrest Street	Solway and Renall Street
88.93	A	Cornwall Street	Solway and Renall Street
89.49	A D R	Renall Street	Renall Street
91.16	M R	Akura Road	Masterton

2.1.5 Gracefield Branch

Km	Features	Crossing	Locations at or between
1.21		Hutt Workshops	Hutt Workshops

2.2 Alarms with Manual Control

2.2.1 Waterloo Quay, Wellington Yard

Alarms do not start automatically. Manual control is available on either side of the road.

2.2.2 Kings Wharf and Cornwell Street, Wellington Wharves

Alarms do not start or cancel automatically. Manual control is available adjacent to the road.

2.2.3 Victoria Street, Pembroke & Belvedere Road, Carterton

When a train has stopped at the Carterton Station platform for more than two minutes the alarms will cancel automatically. Trains starting from the platform must move cautiously towards the crossing and ensure that the alarms are operating before proceeding on to the crossing (refer also to the paragraph detailing the operation of crossings fitted with crossing predictors at the beginning of section 2).

2.2.4 Rhodes Street, Carterton

When an Up train has stopped at the Carterton Station platform for more than two minutes the alarms will cancel automatically when the alarms at Belvedere Road cancel. The alarms will restart automatically when the alarms at Belvedere Road restart.

2.2.5 Norman Avenue, Waingawa

The level crossing alarms will operate in the following manner for movements on the main line heading north (towards Masterton):

- For main line movements from Wellington the alarms will activate and cancel automatically.
- When the back end of the train has cleared the crossing and is stopping on the main line at Waingawa, the alarms will remain cancelled for a period of 10 minutes; after this time the alarms will re-activate. The operator must either cancel the alarms at the main line level crossing pushbutton (this will give another 10 minutes occupation without alarm activation) or move 1 points to reverse to keep the alarms cancelled.

The level crossing alarms will operate in the following manner for movements on the main line heading south (towards Wellington):

- For movements from Masterton that are required to stop on the main line at Waingawa, the alarms will continue to activate. The Operator can cancel / activate the level crossing alarms at Norman Avenue in the following ways:
  - Once the train has stopped on the main line at Waingawa there may be a short delay before the Operator will be able to operate the ‘cancel’ pushbutton at the main line level crossing pushbutton controls (this will give 10 minutes occupation without alarm activation).
  - If the Operator requires more track occupation (longer than 10 minutes), 1 points must be moved to reverse and the cancel button must still be operated.
  - For main line movements towards the Wellington, the operator must ensure that 1 points are in normal and press the ‘Start’ button on the main line level crossing pushbutton controls to activate the crossing. Before the operator is permitted to proceed over the level crossing, they must ensure that the alarms are operating, and any traffic has acted on the alarms.

The level crossing alarms will operate in the following manner for movements out of the sidings to the main line (heading south towards Wellington):

- For the level crossing to activate for a movement proceeding out of the sidings and over the level crossing, the Operator may press the start button on the main line or proceed towards the crossing to activate the track circuit. Before the operator is permitted to proceed over the level crossing, they must ensure that the alarms are operating, and any traffic has acted on the alarms.

Additional Notes:

- When the crossing alarms have just cancelled, the level crossing will not allow another manual activation of the crossing for another 13 seconds.
- To move the points to reverse, the Operator must insert the TWC key and press the release button to obtain a release of the points; this will allow them to be moved to reverse. Only when the points have been put back to normal can the Operator withdraw the TWC key.
  - Alarms must not be manually operated on the backshunt when a main line train is closely approaching and until it is well clear of the crossing.

2.2.6 Norfolk Road, Waingawa

To avoid excessive operation of the Norfolk Road level crossing alarms when shunting at Waingawa, manual controls consisting of Start and Cancel buttons are provided adjacent to the crossing.

The manual controls should be operated as follows:

- When a train is stopped on the up or down approach to the crossing for an extended period – Operate the Cancel button. After a time-delay of 60 seconds the alarms will cancel.
- **When the train is to enter the siding leaving rail vehicles on the up or down approach to the crossing**
  - If the Cancel button has not been operated previously, after reversing the points operate the Cancel button. Once the train has cleared the crossing track circuit the alarms will cancel.

To restart the alarms either:

- operate the Start button or
- pull slowly forward to a point approximately 15 metres from the crossing at which point the alarms will start.

The Operator must observe that the alarms are operating before proceeding over the crossing.

The crossing track circuit at Norfolk Road extends approximately 15 metres either side of the crossing and the alarms will operate continuously while the train is within this area.

2.2.7 Akura Road, Masterton

Alarms do not start automatically for Up trains on the main. Manual control is available on the station platform. Alarms do not start or cancel automatically for movements on the loop. Manual control is available on the south side of the road and at No.2 Down Home signal. Alarms must not be manually operated on the backshunt when a main line train is closely approaching and until it is well clear of the crossing.

3. Standing Room for Wagons

3.1 North Island Main Trunk

Location	Standing Room Metres	Description of Siding
Porirua	578	Loop
Paekakariki	915	Loop
	413	Siding
Paraparaumu	203	Dock
Waikanae	200	East Turn Back Road
	900	Loop
	200	West Turn Back Road (does not include Stabling area)

3.2 Johnsonville Line

Location	Standing Room for No. of FP and FT Coaches	Description of Siding
Wadestown	6	Up Main
	6	Down Main
Ngaio	6	Up Main
	6	Down Main
Khandallah	6	Up Main
	6	Down Main
Johnsonville	4	Main Line

3.3 Wairarapa Line

Location	Standing Room metres	Description of Siding
Woburn	308	No.1 Road
Taita	345	Storage – holds approximately 10 carriages
Featherston	540	Loop
	188	No.1 Road
Waingawa	203	Siding
Masterton	563	Crossing Loop (450m clear of crossover)

3.4 Gracefield Branch

Location	Standing Room metres	Description of Siding
Gracefield	345	Main Line

4. Clearances

4.1 Sidings and Structures

The following sidings and structures are not to standard height and/or side clearance. Exercise great care when working in these localities. Yard clearances are advised with the Workplace Safety Plan.

WARNING
Rolling stock must not be shunted past or through any structure without first ensuring that clearances are adequate

An asterisk (*) alongside the names of lines or sidings indicates that the distance shown in the column "Side Clearance from Centre Line of Track" is the distance between the centre lines of the two tracks and is substandard.

4.2 North Island Main Trunk

Location	Siding or Line	Height above rail level mm	Side clearance from centre line of track mm	Remarks and rolling stock prohibited from passing structure
Wellington platform	Crossover 51A / 51B points between platform 8 and 9 tracks	..	3545	Due to end throw clearances with the platforms, only DFT, DFB, DSC, DSG and DSJ locomotives are permitted.
Throat	62 points and the following signal locations: • 32 Shunt from R1 • 125 Shunt from R2 • 127 Shunt from V2 • 129 Shunt from S2, S3 and S4 • 131 Shunt from S1 • 133 Shunt from W1	..	..	See separate operating restrictions in Instruction 6.10 Movement Restrictions
Kaiwharawhara	Between Up and Down Mains*	..	3590	
Takapu Road	Between Up and Down Mains*	..	3560	
Paraparaumu	Dock	..	..	DXR

4.3 Wairarapa Line

Location	Siding or Line	Structure	Height above rail level mm	Side clearance from centre line of track mm	Remarks and rolling stock prohibited from passing structure
Woburn	Main	Platform	..	..	FC
Wingate	Up Main	Platform			JT
Taita	Up Main		..	3620	

Location	Siding or Line	Structure	Height above rail level mm	Side clearance from centre line of track mm	Remarks and rolling stock prohibited from passing structure
Wallaceville	Between Main Lines	Fence	..	Between 2350 & 2600	
Upper Hutt	Main Line	Dock	..	..	DL, DXR
	Between Down Main and No.1 Road	Fence	..	1970	
	Nos.2 and 3 Roads*		..	3290	
Featherston	Main and Loop*			3230	Speed of trains when crossing not to exceed 15 km/h
	Loop and No.1 Road			3240	
Carterton Siding	Main and No.1 Road*			3250	Speed of trains when crossing not to exceed 15 km/h
Waingawa	Main and AFFCO Siding*			3640	
Masterton	Main and Loop*				Speed of trains when crossing not to exceed 25 km/h
	Nos.1 and 2 Roads*			3300	

5. Radio Channels

5.1 North Island Main Trunk

From Km / Location	To Km / Location	Channel
0.00 - Wellington Station	2.40 - Wellington Junction	2
2.40 - Wellington Junction (includes tunnels 1 – 7)	70.00 - Otaki	12

5.2 Wairarapa Line

From Km / Location	To Km / Location	Channel
0.00 - Wellington Station	2.40 - Wellington Junction	2
2.40 - Wellington Junction	36.44 - South portal Maoribank Tunnel (T1)	4
36.44 - South portal Maoribank Tunnel (T1)	48.96 - Featherston portal Rimutaka Tunnel (T2)	8
Rimutaka Tunnel, direct link to Train Control		UHF 81
48.96 - Featherston portal Rimutaka Tunnel (T2)	116.48 - Mangamahoe	12

5.3 Johnsonville Line

From Km / Location	To Km / Location	Channel
0.00 - Wellington Station	Johnsonville	14

5.4 Gracefield Branch

From Km / Location	To Km / Location	Channel
0.00 - Woburn	Gracefield	4

5.5 Melling Branch

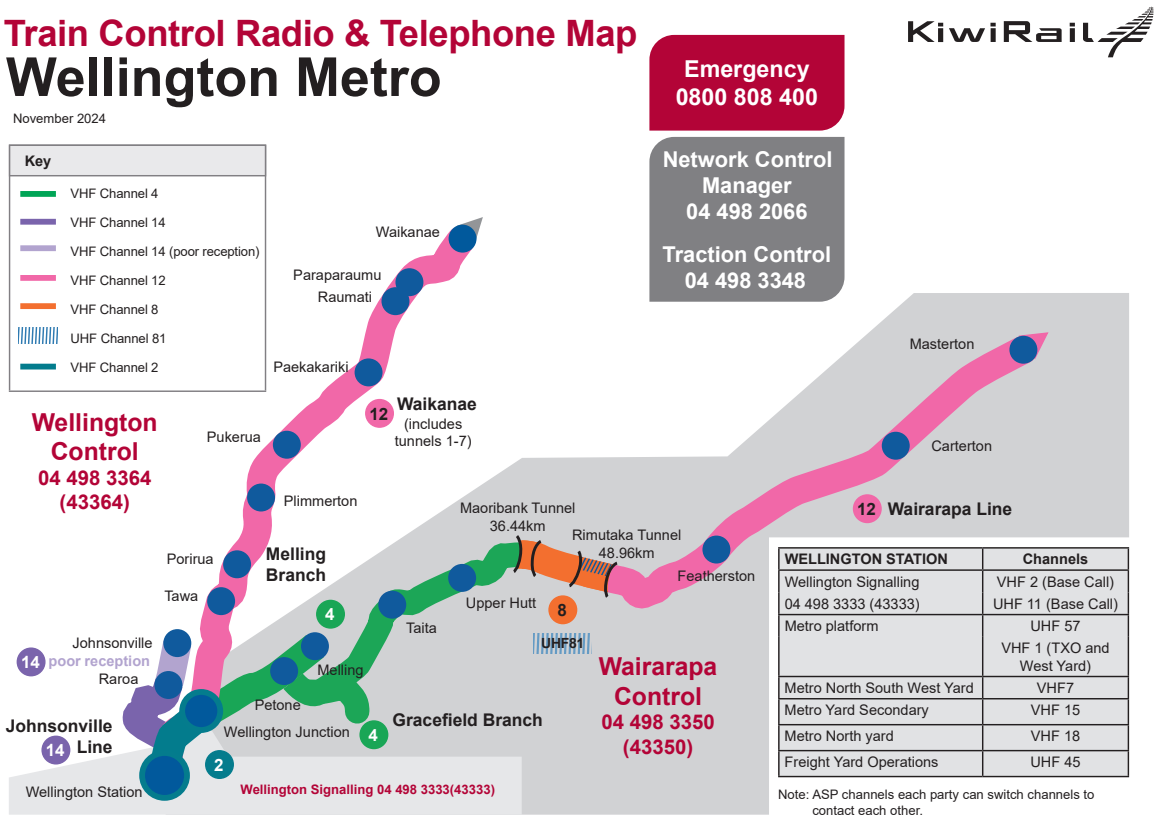
From Km / Location	To Km / Location	Channel
0.00 - Petone	Melling (end of Line)	4

5.6 Wellington Station

5.6.1 Radio Communication Process for Platform Movements

Movement Type	Process
Relay movement from the platform	1. Operator to base call the Signaller when ready to depart 2. When base call answered, identify relay and destination
Relay from the yard to the platform	1. Operator to base call the Signaller when ready to depart 2. When base call answered, identify location you are at and the train number this EMU or locomotive will operate.
Relay from yard to yard	1. Operator to base call the Signaller when ready to depart 2. When base call answered, identify movement and destination, or 3. Rail Operator to use the Shunting Request Panel.

5.7 Snake Diagram



WELLINGTON STATION	Channels
Wellington Signalling 04 498 3333 (43333)	VHF 2 (Base Call) UHF 11 (Base Call)
Metro platform	UHF 57 VHF 1 (TXO and West Yard)
Metro North South West Yard	VHF7
Metro Yard Secondary	VHF 15
Metro North yard	VHF 18
Freight Yard Operations	UHF 45

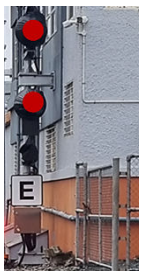
Note: ASP channels each party can switch channels to contact each other.

6. Wellington Station Limits

6.1 Location Names

Name	Location
Distant Junction	North end connection to and from the main line from the: • Loco and Turntable road • Depot Repair road, and • the freight marshalling yard
East Sidings	East of the main lines, access to the non-interlocked south end of the: • Loco and Turntable road • Depot Repair road, and • the freight marshalling yard
EMU Depot	West of the main lines, the EMU repair depot and the automatic carriage wash
North Yard	West of the main lines, the non-interlocked area north of the EMU depot used for EMU storage and the cleaning shelter (a maintenance location) and the passenger underfloor wheel lathe
Platforms	Platforms 1 to 9
South Yard	The roads at the south end of the EMU repair building
Throat	The area north of the platforms where the platform tracks converge and then connect to the main lines
West Yard	Non-interlocked area to the west of the platforms used for EMU storage

6.2 Signal Features

Location	Details
Distant Junction	101ABC Down Outer Home from D5 103ABC Down Outer Home from C5 When the signal ahead is at stop, these signals will normally be approach cleared from stop once the train's speed has been proven under control on approach to the signal
Throat	Mid-throat signals all have large sign boards displaying the Track ID: A, B, C, D or E. These letters correspond to the berth names for the mid-throat signals. Any signals leading up to these signals will display corresponding Track ID letter on their route indicator  *Track ID board*

Signals have Track ID arrows fitted when:

- signals are positioned between tracks
- there is potential for confusion.

Signals that can signal to multiple routes are fitted with route indicators. Two shunt signals are excepted:

- 20 shunt from P9A

- 44 shunt from F1

Track ID arrow and route indicator

6.2.1 Signal Approach Detection from Operator Controlled Territory

A short section of train detection, visible to the Signaller, is provided before the first signal.

- A noticeboard at the start of these track sections is provided, reading: Start Of Train Detection. Operators should pass this board if they want to alert the Signaller that they are waiting at the signal.

6.2.2 Hi-Rail Operation in Axle Counter Areas

The axle counter system will normally not detect the presence of Hi-Rail vehicles.

6.3 Platform 8 and 9 Crossover

- The crossover is not electrified
- Signals 20, 37 and 39 are suspended from the platform canopy
- 39 signal will display an illuminated ‘E’ light to show when the route is set to the end of platform 8 i.e., an electrified route
- Motor points are UniStar type, the crank handle is located between the platform buffer stops in a locked box

6.3.1 Locomotive Cut-off and Run Around Process

NOTE

Restrictions on Motive Power Unit classes using this crossover are identified in Instruction **4.2 North Island Main Trunk**.

1. Stop the train short of 37 or 39 signal
2. Secure the train and uncouple
3. Pull down clear of 20 Shunt from P9A signal when a proceed indication shows on:
   a. 37 Shunt from P9 signal, or
   b. 39 Shunt from P8 signal without an ‘E’ light lit
4. If a setting back movement is needed on Platform 8 or 9 to allow a locomotive to travel via the crossover points:
   a. The Rail Operator must contact the Signaller and obtain permission

NOTE
This action ensures no conflicting movements on these platforms during the setting back movement.

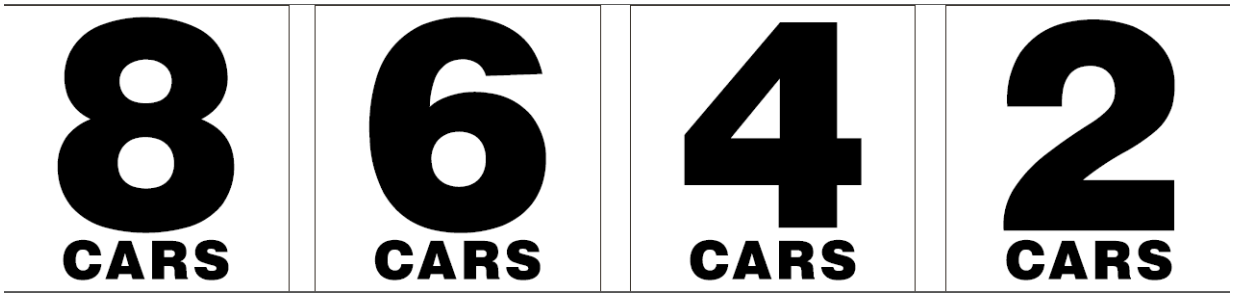
6.4 Wellington Platform Restrictions

Platforms 1-5 should only be used by train stop fitted trains (currently this is only FP class Matangi EMUs).

Other trains may use these platforms during extreme disruption events, but such movements must not form part of a normal berthing plan for temporary operational scenarios and should be limited as far as practical.

6.5 Platform Stopping Boards for EMUs

Set clearance indicators have been fitted to all platforms and indicate to Operators of EMU services a stopping point when all car doors (e.g., eight-car set) are on the level platform.



Set Clearance Indicator at Wellington Platform

When an EMU stops short of a set clearance indicator equal to the number of vehicles on their service, the Operator must prevent the Train Manager from opening the doors (on Matangi units, use the door isolation button).

6.6 Movement from Platforms

No train, locomotive or relay movement is to be started from any platform unless the Up Platform Directing signal for that platform is at proceed.

IMPORTANT
Exception: The Signaller may authorise a movement to proceed from the platform to the respective signal if the signal has failed.

6.7 Train Ready to Start (TRTS) Panels

TRTS panel

TRTS panel label and RFID reader

Train Ready to Start (TRTS) panels are provided at multiple locations along each of Wellington Station's platforms as detailed on the Signalling and Interlocking diagram.

TRTS panels are fitted with a proximity card reader that when activated will provide a Train Waiting (TW) indication on the signal panel.

They are used to advise the Signaller when the train is crewed and ready to depart the platform when the signal clears and departure time is reached (for timetabled services).

NOTE
Relay and Shunt movements are not required to use TRTS. Movements may be requested directly from the Signaller by radio base call.

6.7.1 Operation

When a movement is crewed and ready to depart, and the signal is not at proceed:

1. Activate the TRTS for the applicable platform up to five minutes before scheduled departure time
   a. the RFID tag reader will beep and flash green LED to indicate that TRTS request has been successful, or
   b. if the TRTS request is unsuccessful, the RFID tag reader will not provide a response as described in (a).
      i. Check that the TRTS panel is the correct one for the platform by checking the label
      ii. Retry activating the TRTS
      iii. If still unsuccessful, base call the Signaller by radio
2. The Signal Panel will display a TW indication

IMPORTANT
When a movement is ready to depart and the signal is at proceed, do not activate the TRTS as the Operator can act on the signal indication.

NOTE
Train Crew or authorised platform personnel in consultation with the Train Crew (when required for operational purposes) can operate the TRTS.

NOTE
TRTS cards are issued by the Metro Service Operator.

6.8 Rail Operations Activity at the Platforms

The platform tracks have unique hazards for rail operations tasks. The Metro Service Operator (MSO) has created this safe way of operating to minimise the risks.

- Shunting movements for coupling and uncoupling will be carried out under the authorisation of the:
  - MSO's Rail Operator, or
  - KiwiRail Locomotive Engineer, when the MSO's Rail Operator is not on duty
- Do not cross other tracks at platforms except for the one line on which the Rail Operator is working
- When protection is required for a platform for rail operations tasks, protection must also be applied to any adjacent line i.e., Platform 9-8, Platform 7-6, Platform 5-4, and Platform 3-2.
- When a defective vehicle can be moved, it must be removed to a yard or siding for repairs

Table 1. Wellington Platforms Protection Matrix

Role	Activity	Protection
Rail Operator	Train examination and planned train work.	Induction and Training with Safety Observations.
Hyundai-Rotem Roving Response Engineer (RRE). **NOTE** Rail Vehicle must remain at the platform, if the rail vehicle is still unable to be moved when the RRE attends, arrange Blocking Protection with the Locomotive Engineer Team Leader	When the Minimum Operating Standard is unable to be complied with and it requires RRE to carryout repairs to allow the rail vehicle to move or be moved.	RRE contact the Locomotive Engineer Team Leaders (LETL) to arrange TS06 Blocking protection with the Signaller.
Emergency situation e.g., passenger falls on track	Provide First Aid and assistance.	A Competent Worker calls the Signaller to arrange emergency protection for required platform(s). The Train Controller must appoint a Rail Incident Controller to give clearance.
Cleaners	Rubbish removal in a planned Block of Line.	The Signaller obtains protection from a Competent Worker for the adjacent track either by: • TS06 Blocking, or • TS05 Lockout Zones
	Rubbish removal using pick up pole from platform **NOTE** Pick up pole must not be raised above shoulder height	Two-person activity: 1. one person behind platform edge collecting rubbish 2. observer looking for rail movements This is only to be carried out on empty platforms.

Role	Activity	Protection
KiwiRail carriage maintenance staff	Disconnect shore supply on Saturday, Sunday, and Public Holidays only. Remove shore supply from the train on the train's departure day.	Induction and training connecting supply under direction of Metro Service Operator's Wellington Yard Supervisor.
Heritage Rail Operators	Train examination and planned train work.	A briefing and escorted. Full details on the process are in the Wellington Joint Operating Plan between KiwiRail and Wellington Freight Terminal (KiwiRail Freight), KiwiRail RSAS (Mechanical) and Transdev Wellington).

NOTE
The Metro Service Operator's Locomotive Engineer Team Leaders are certified to provided TS06 Blocking when required.

6.9 Retrieval of Items Dropped 'On Track' at Platforms

Lockout Zone boxes are provided at locations on Wellington platforms as detailed on the Signalling and Interlocking diagram.

Lockout Zone diagrams showing track coverage can be found here (KiwiRail SharePoint site).

Lockout Zone protection must be used to retrieve items dropped on track.

Lockout Zone boxes

Only Competent Workers required to pick up items off the track are authorised to operate Lockout Zone boxes at Wellington platforms.

Refer to **RP05 Using Lockout Zones** for operating instructions and procedures.

WARNING
Rail maintenance tasks must be protected using appropriate protection specified in **TS01 Planning Work in the Railway Corridor, 5. Job Planning.**

6.10 Movement Restrictions

Clearance limitations exist between 62 points and the following signal locations:

- 32 Shunt from R1
- 125 Shunt from R2
- 127 Shunt from V2
- 129 Shunt from S2 / S3 / S4
- 131 Shunt from S1
- 133 Shunt from W1

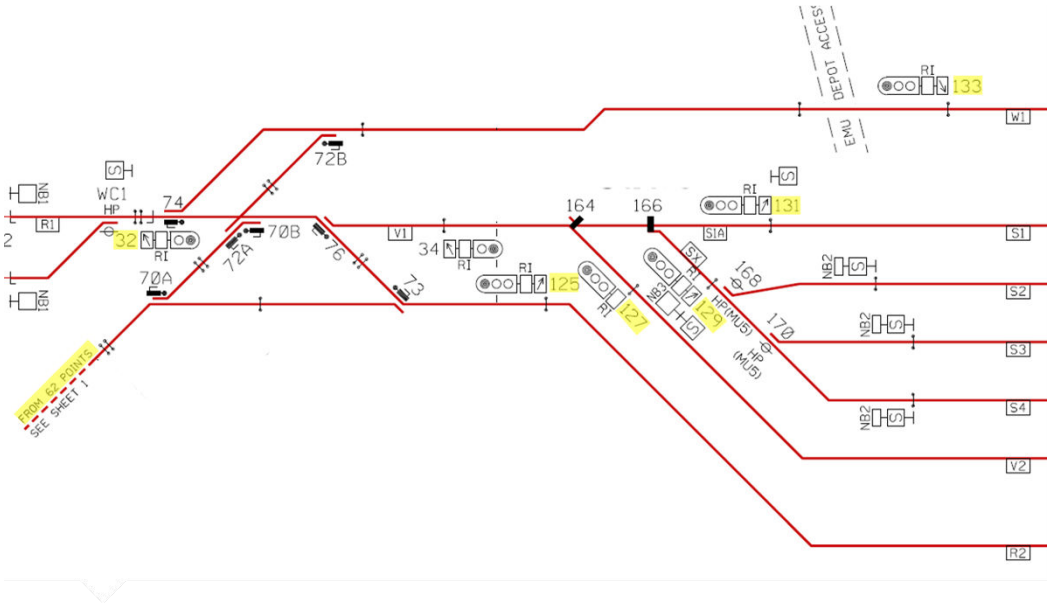


Diagram of restricted area

Rolling Stock Class	Restriction
• FP Matangi EMU • AK and S class carriages and all sub classes • DSC locomotive	Nil
All other classes (restricted rolling stock)	Only single movements permitted between the locations area listed above at any one time.

The Rail Operator must tell the Signaller when they plan to move restricted rolling stock through this area.

When restricted rolling stock classes are signalled through this area, the Signaller must ensure:

- that only the restricted rolling stock is signalled through the area
- no parallel movements are permitted until the restricted rolling stock is clear of this area.

6.11 Brake Testing

Wellington: Locomotive hauled empty carriage services placed or removed from platforms.

After the passenger train locomotive is detached from the service on arrival at Wellington, the rail personnel uncoupling the locomotive must ensure the air brakes are applied on the train. At the cut off point, the brake pipe cock must remain open, or if for operational reasons the brake pipe cock is required to be closed on the standing portion, the air must be fully exhausted before the brake pipe cock is closed.

After the shunt locomotive is attached to the other end of the train, the rail personnel of the movement must not signal the movement to pull away from the platform until he has seen the brakes release on the trailing vehicle in the intended direction of travel. This requirement shows that the shunt locomotive has been correctly coupled to the hauled vehicles.

The Operator must charge the air brake system before moving an empty carriage service from a storage road to a platform. The Operator must also make sure there is sufficient braking capability available for the number of vehicles involved.

This instruction is in addition to **TO02 Train Brakes**, **3. General** and **4. Air Brake Tests.**

Rail Operating Code 5.3 Train Marshalling, Build, and Inspection Procedures, 6.5.1 Terminal Test is modified accordingly.

6.11 EMU Terminal Brake Testing

If the consist is not to be changed before departing Wellington, a terminal brake test on multiple units may be carried out in the multiple unit West Yard before proceeding to their respective platforms.

When the terminal brake test is to be carried out in the West Yard, the Operator will complete a special print brake certificate which is to be left in the north end driving cab of each consist and addressed to the Train Operator.

Rail Operating Code 5.3 Train Marshalling, Build, and Inspection Procedures, 6.5.1 Terminal Test is modified accordingly.

6.13 Securing of Carriage Rolling Stock

NOTE
Applies to platforms, West Yard, MU Depot and North Yard.

Air brakes and hand brakes must be applied when:

- carriage services arrive in the morning and do not remain connected to the locomotive while the shunt arrives
- carriages are connected to a shut down locomotive, the locomotive handbrake must be applied
- the locomotive is running via P8 crossover
- carriages are placed on the platform by the shunt
- individual carriages are stabled in the North Yard

Complete carriage consists in the North Yard which have brakes applied and an air supply connected, do not require handbrakes to be applied. When there is no air supply connected, the north end hand brake must be applied.

Rail Operating Code 5.1 Shunting Procedures, 2.6 Procedures for Securing Rail Vehicles is modified accordingly

6.14 Passenger Yard

The Passenger Yard consists of West Yard, South Yard, EMU depot, exterior Carriage wash, North Yard, Cleaning Shelter and Underfloor wheel lathe.

Live EMU are permitted on all roads in the EMU depot and North Yard except:

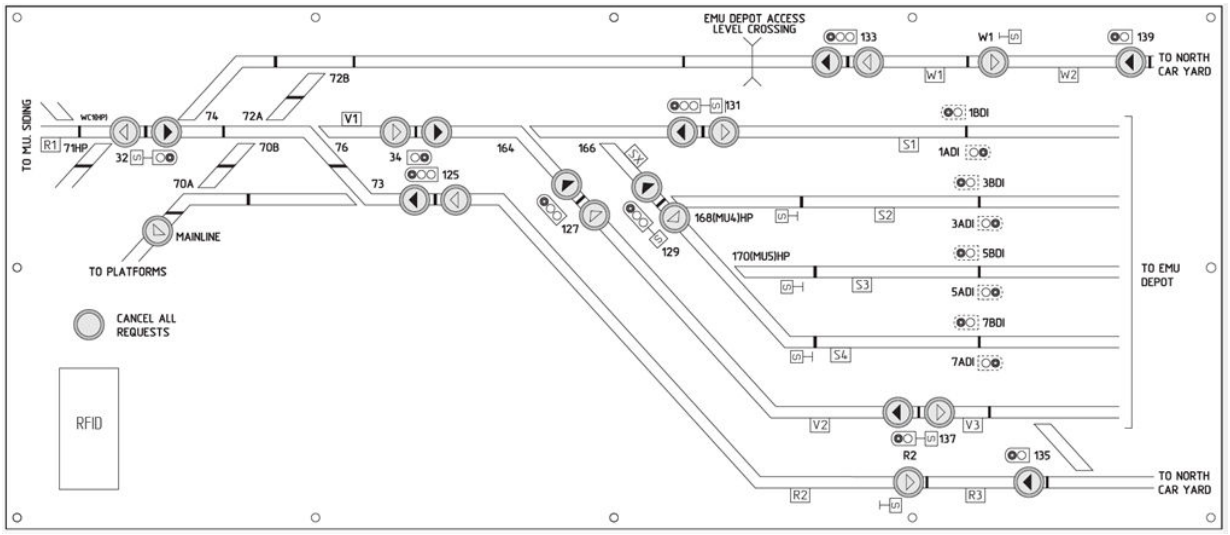
- D1N/D1S road (Road 1 within EMU depot) – no OLE fitted
- The Wheel Lathe building
- The Cleaning Shelter road

Electric Services Limit boards are erected.

6.15 Shunter's Request Panel

There are two Shunter’s Request Panel huts:

- North end of West Yard
- South of the EMU access road level crossing



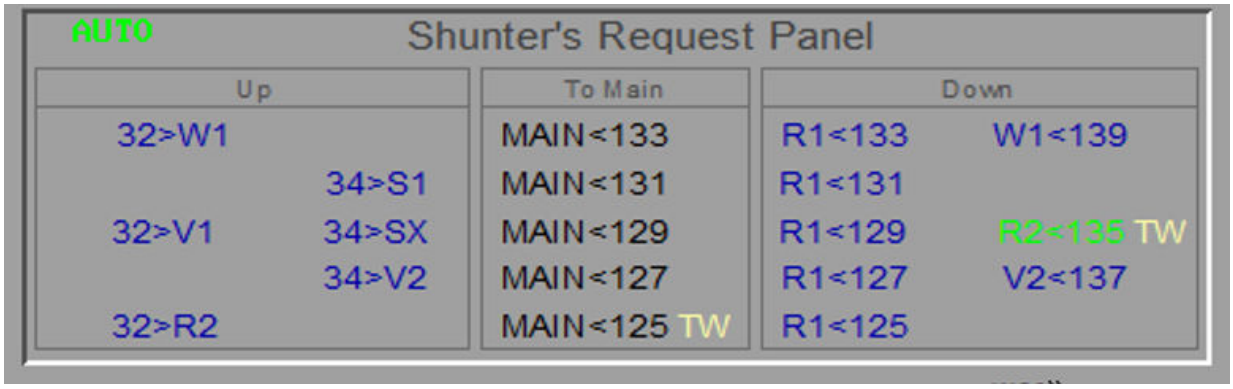
Shunters Request Panel layout

Each location has a:

1. Computer monitor showing a real time display of the signal panel for Wellington Station. The Rail Operator will see:
   a. the occupancy status of all axle counters and track circuits in the sidings covered by the Signal Request panel
   b. the state of any Lockout Zones or Depot Protection Zones that may limit which routes are available
   c. the position of points including three sets of hand points:
      i. WC1 in the West Yard,
      ii. MU4 and MU5 in the South yard
2. Push button panel to ‘request’ routes within sidings or inform the Signaller a specific movement is ready to depart to the platform.

Panel Icon	Use
Solid triangle ▶ or ◀	Route entrance button (triangle shows direction of route)
Empty triangle ▷ or ◁	Route exit button
Cancel all requests button	Cancel all requests sent to the Train Control system.
Mainline Route Exit button ◁	Use when any platform is the desired movement's destination.

The Signaller can set the SRP area to 'Auto' mode. When in this mode a green AUTO will show on the train controller's panel – example below.

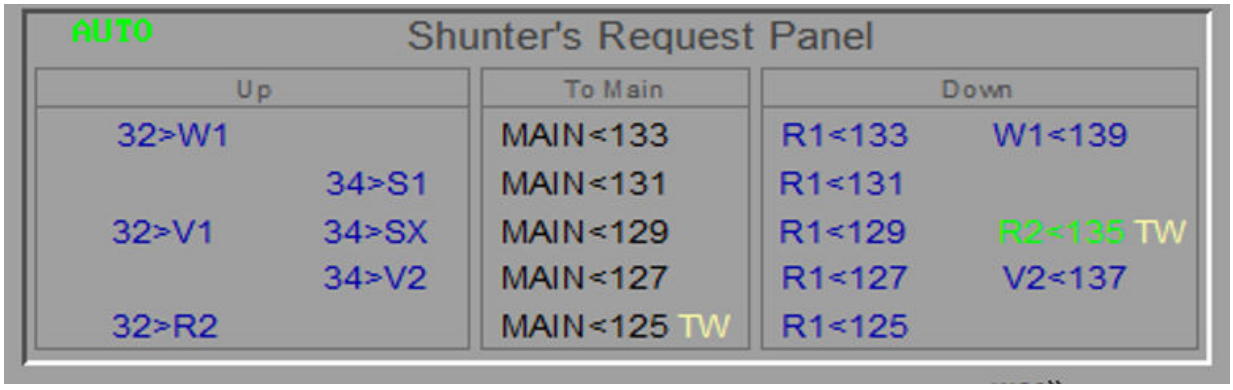


Shunters Request panel set in Auto mode

Panel Setting	Outcome
Not in auto mode	The requested route(s) just show as 'TW' requests on the Signaller's panel
Auto mode	For moves within the yard locations, routes will automatically set, once available, based on the Shunter's Request panel request when the route is available

6.15.1 Operation

1. The Rail Operator activates the panel using their RFID swipe tag. The panel will remain active for 1 minute.
2. To request a route, press the following buttons, at the same time:
   a. An Entrance button at the start of a route
   b. An Exit button at the end of the route
3. When a valid request is accepted this will be displayed on the monitor. Example below with Train Waiting (TW) active requests for:
   a. 135 to R2
   b. 125 to MAINLINE



Shunters Request panel with active Train Waiting requests

4. You can also request ‘long routes’ by selecting:
   a. An Entrance button at start of one route
   b. An Exit button at end of a route further along the track e.g., Entrance at 135 signal and Exit at 32 signal. This will request both routes from 135 to 125 signal and the route from 125 signal to 32 signal at the same time
5. Look at the monitor to see:
   a. Request was received
   b. System auto mode status
   c. Route was set
   d. Setting of hand points, depot protection and lockout zones
6. If a movement is ready to leave the sidings to head to the platforms:
   a. Press the Exit button labelled ‘MAINLINE’. This does not request a specific route, it just informs the Signaller that a movement is ready to depart from a specific berth as soon as it gets a clear signal
   b. A radio basecall may still be required to inform the Signaller of the train number/destination

6.15.2 Shunter's Request Panel Fails

Call the Signaller to advise the details and revert to radio base calls.

6.16 EMU Depot Building Fire Alarm Integration with W1/W2 Signalling

The EMU depot building has six fire exits that open into in a narrow alley between the back of the depot and neighbouring buildings.

W1/W2 road is also in this alleyway.

Some evacuating persons from the depot will need to use the W1/W2 road to move to the muster point.

To prevent conflict between rail movements and evacuating persons, the signalling system detects if the fire alarm is activated in the EMU Depot Building.

Activation of EMU Depot Building fire alarm system will (until reset):

1. Automatically revert the signals below to Stop if a route is signalled toward W1:

Signal Number	Class
22	Up Directing from A0
24	Up Directing from B0
26	Up Directing from C0
28	Up Directing from D0
32	Shunt from R1
139	Shunt from W2

2. Trigger red emergency stop strobe beacons mounted on the rear wall corners of the depot building.
   - Three beacons are mounted such that the Operator of a movement travelling in either direction along W1/W2 can always see one of the beacons from a rail vehicle cab when alongside the depot
   - Beacons emit 360 degrees of light

EMU Depot fire alarm beacon

3. Display a warning message 'EMU Depot Fire Alarm – W1 Emergency Stop Active' on the signal panel.

NOTE
Fire alarms are reset either by FENZ or a callout fire technician.

6.16.1 Actions if the Fire Alarm Activates

Operator / Pilot

IMPORTANT
The EMU access road level crossing is the only access for emergency vehicles to access the EMU depot.

When an Operator or Pilot of a rail movement sees red emergency stop strobe beacons on W1/W2 operating, you must tell the Signaller.

Northbound Movement:

If your movement is passing over, or intending to pass over the EMU access road level crossing, and you deem it **safe** to continue:

1. continue until the rear of the movement is clear of 133 Shunt from W1 signal
2. check with the Signaller that your movement has cleared the crossing and the alarms have cancelled
3. make the movement safe and evacuate if necessary.

If your movement is passing over, or intending to pass over the EMU access road level crossing, and you deem it **unsafe** to continue:

1. stop the movement
2. immediately tell the Signaller and request authority to set back the movement to a position level with 32 Shunt from R1 signal (either into West Yard or the platforms) such that the level crossing alarms will cancel.

Southbound Movements:

If your movement has passed 133 shunt from W1 signal, continue until the movement clears the level crossing.

CAUTION
Stop the movement if any immediate hazards exist.

If your movement has not yet passed 133 Shunt from W1 signal:

1. stop the movement short of the signal
2. tell the Signaller you have stopped short
3. make the movement safe, and evacuate.

NOTE
When the Signaller cancels 133 signal, the alarms will cancel after a short time delay.

Signaller

Should FENZ call you to report:

- the EMU depot level crossing alarms are operating, and
- the level crossing is not physically blocked by a train, and
- the level crossing alarms cannot be cancelled due to a train stopped on the approach

then you must immediately tell an Operations Support Representative to request the attendance of a Signals Maintenance Representative at the level crossing to

1. place the crossing alarms in Local Manual Control, and
2. cancel the alarms when safe, to allow Emergency Services access to the EMU depot.

IMPORTANT
When the you see the fire alarm warning message on the panel, you must tell all movements signalled toward W1 to stop immediately

EMU depot Chief Fire Warden

When the EMU Depot fire alarm activates:

1. EMU depot Chief Fire Warden calls the Signaller when they are in a safe place to provide:
   a. their contact details
   b. a situation update

6.16.2 EMU Depot Fire Alarm Testing Restrictions

Fire alarm systems are tested at regular intervals. To prevent disruptions to train operations the following conditions apply:

1. No testing in timetabled peak hours Monday to Friday:

- 0630 - 0900 hrs
- 1500 - 1830 hrs

2. Before testing starts, the EMU depot Chief Fire Warden must call the Signaller and:
   - agree on the test start time
   - the Signaller must confirm that no trains are in W1/W2, and no signals are cleared into that area
   - confirm how many tests will be completed (as advised by the fire technician)
   - ensure that they will call again when the test(s) are complete and that rail movements can recommence on W1 road

6.17 Automatic Carriage Wash Operating Process

The automatic carriage wash is located on V2/V3 road next to the EMU depot and has two structures:

- a chemical bay
- a wash bay

Multiple serious hazards exist inside the chemical and wash bays. All personnel must be inside a rail vehicle to move through the wash.

6.17.1 Rolling Stock Restrictions

Rolling Stock Class	Operating Restrictions
Self-driven (FP Matangi) EMU	All EMU sets must be fully coupled
Hauled or propelled EMU	When hauled or propelled by a shunt locomotive: • the pantographs must be lowered • the handbrakes must be released
Carriages	Must be hauled through the wash by a shunt locomotive

6.17.2 One Way Process

All wash movements must travel:

- North via V2 road
- South via R2/R3 road

Once a wash movement has been signalled onto V2 road, no subsequent movements can be signalled onto R2 road until washing has ceased as advised to the Signaller by the Rail Operator.

Following wash movements are signalled onto V2 up to the wash facility indicator and All Trains Stop board and wait for:

1. A green wash indicator displays

Green wash indicator and speed radar

2. Rail Operator authorises to pass the All Trains Stop board opposite 137 signal after point 1 is confirmed

6.17.3 Emergency Stop button

Emergency stop wash buttons are located:

- At the south end of the chemical bay
- On the end of each wash building

Automatic Wash Emergency Stop button

The Metro Service Operator has automatic carriage wash and emergency processes in their Local Operating Instructions.

6.18 West Yard Access

Movements from the Controlled Network to Operator Controlled Territory are governed by an All Trains Stop board.

Location	Permission to pass given by:
R1 road south facing opposite the facing end of WC1 hand points	Must be given by the on duty West Yard Rail Operator

6.18.1 West Yard Access When No Rail Operator On Duty

Before passing the All Trains Stop board, the Operator must:

1. Stop before the All Trains Stop board on R1
2. Confirm with the Signaller there are no known conflicting movements
3. Self-authorise to pass the All Trains Stop board, and make a radio call announcing their entry to the West Yard
4. Ensure the route/points are correctly set
5. Ensure the speed of the movement is so regulated that it can be stopped in half the clear distance seen ahead

6.19 South Yard

6.19.1 Shunting Movements Between Roads S1, S2, S3, S4 and V2

The person responsible for shunting movements between these roads must ensure:

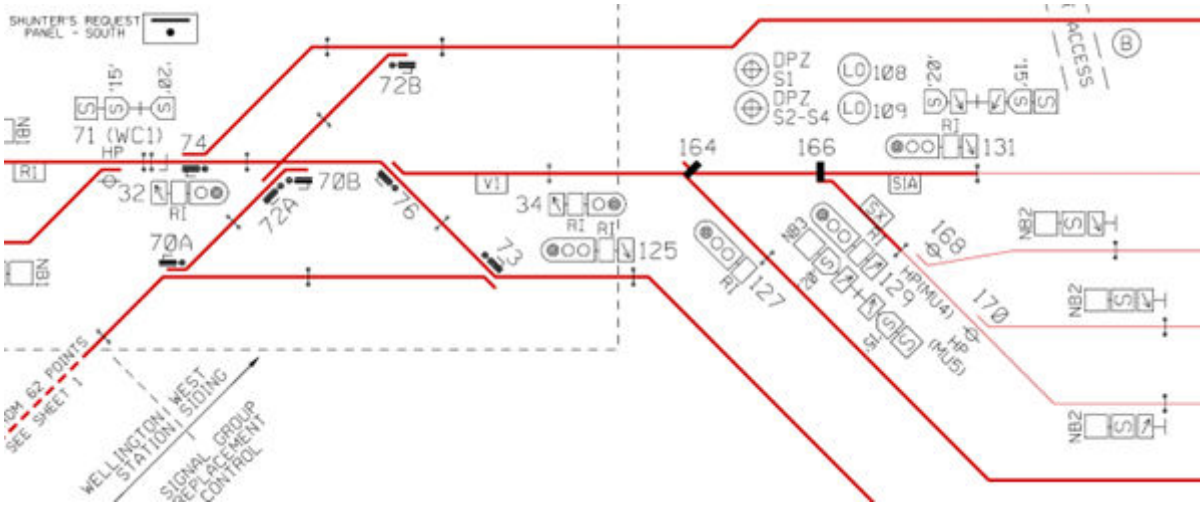
- The whole movement pulls south clear of 34 shunt from V1 signal
- They obtain a proceed indication on 34 shunt from V1 signal before moving north

The interlocking allows movements to be safely split when clear of 34 Shunt from V1 signal when:

- the north EMU of the movement is heading to one road, then
- the south EMU signalled to another road.

The south EMU of a split movement may move north, provided:

- the north portion of the EMU has moved away, and
- the north end of the south remaining EMU is not south of 70A motor points or 32 Shunt from R1 signal



6.19.2 Departing Roads S2, S3 or S4

There is a notice board at the south end fouling point of these roads that reads ***Signal 129 Must Be at Proceed to Pass This Board***.

Operators must not move until 129 shunt from S2/S3/S4 signal is at proceed, otherwise there is a risk of their movement being foul of movements to/from S1 road.

IMPORTANT
If a movement is required to move past these boards when 129 shunt from S2/S3/S4 signal is not showing a proceed aspect, then verbal permission from the Signaller must be obtained.

6.20 EMU Depot Protection Zones S1, S2, S3 and S4 Roads

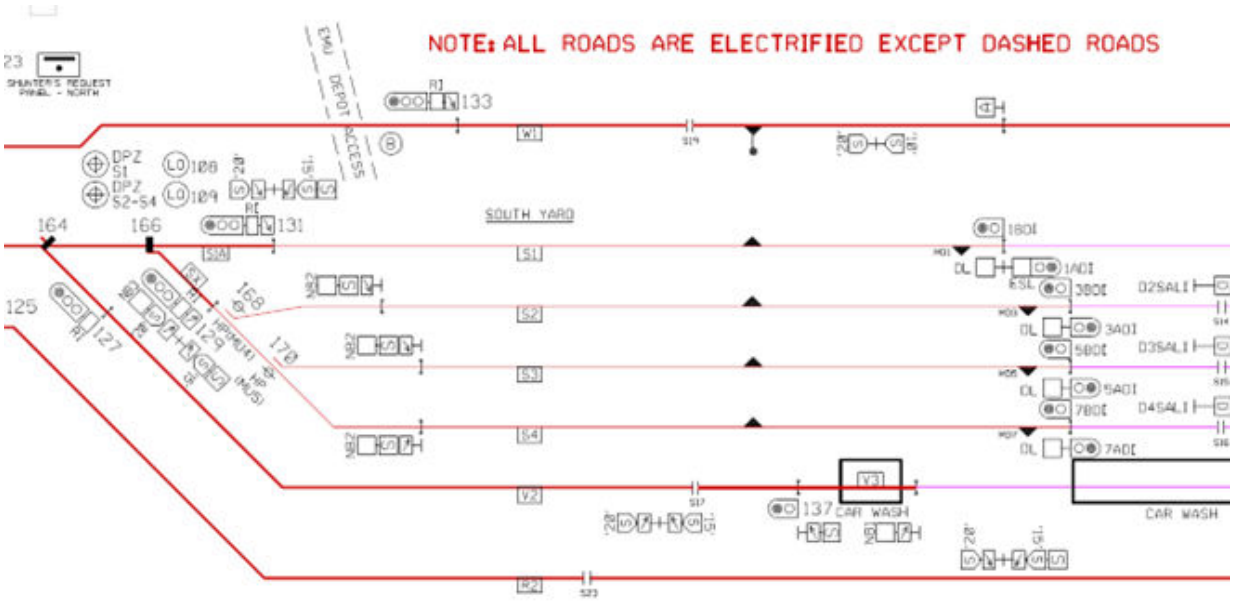
Two Depot Protection Zones are provided in the South Yard for:

- S1 road
- S2, S3, S4 roads

When in Protect mode, the system provides protection against movements from the from the south by locking motor points 164 or 166 in a position to ensure no movement from the south can reach the roads.

WARNING
The Depot Protection Zones do not provide protection against movements from the EMU Depot (i.e., from the north) so the EMU Depot Protection System must also be used to protect against movements from the north.

Depot Protection Zone box switch and lights



S&I diagram extract of location

6.20.1 Depot Protection Zones Use

Depot Zone Protection:

- Must be used to provide safe working for work on or under rolling stock in these roads
- Can be used in lieu of rule TS08 Working within Non-Interlocked Areas protection

IMPORTANT

It is the user of the Depot Protection Zone's responsibility to control any rail movements within the Depot Protection Zone area once in the protected state. There is space for multiple rail vehicles to be located within a single zone.

6.20.2 Control Box Location

Located between W1 and S1A roads south of the EMU depot access level crossing.

6.20.3 Operating Procedure

EMU Depot Staff

NOTE

Rail vehicles cannot be added after protection is active.

1. Confirm the rail vehicles are in clear on the road
2. Unlock the control box door with a 100 key
3. Contact the Signaller and:
   a. state your name, designation and location (EMU depot Wellington South Yard)

   b. request permission to operate the Depot Protection Zone(s) on [name of road] until [time]
   c. confirm with the Signaller that the Protection Zone to be taken will protect the work to be undertaken

Signaller

4. Check the Protection Zone will protect the work and confirm with the EMU Depot staff that they have protection in place to stop movements entering from the north end of the road
5. Key points 164 and/or 166 to the protecting position before the DPZ can be reversed to the 'Protect' state
6. Confirm that routes leading in/out of the protected area are not set before sending a release control for the Protection to occur
7. Confirm the duration of occupancy granted

NOTE
Once in the 'Protect' state, in some scenarios, the interlocking will allow these points to be moved as long as one of them is always left in a position to provide the protection required by the Depot Protection Zone(s).

EMU Depot Staff

8. When the Signaller advises, turn the switch clockwise to the Protection position and confirm that the:
   a. protection indicator flashes red and the normal indicator blacks out
   b. protection indicator turns to a steady red indication

Signaller

9. Confirm that the Protection indication for the required Protection Zone box(es) has changed to a solid purple box on the signal panel

EMU Depot Staff

10. Attach a hasp and a named personal padlock to the Protection switch
11. Close and lock the control box door

When work is complete and protection is no longer required.

EMU Depot Staff

1. Unlock and open the control box door
2. Remove your personal padlock and hasp
3. Turn the switch anticlockwise to the Normal position
4. Call the Signaller and tell them:
   a. that work is completed
   b. the Protection Zone switch is in the normal setting
   c. the Protection Zone normal indicator is showing a steady yellow light

Signaller

5. Send a Normal command
6. Confirm that the signal lockout indication is normal

EMU Depot Staff

7. Close the control box door and secure it with the 100 padlock
8. Confirm you have your personal padlock and key

6.21 North Yard Access

Movements from the Controlled Network to Operator Controlled Territory are governed by two All Train Stop Boards which may only be passed with permission from the on duty North Yard Rail Operator.

All Train Stop Board Locations:

- W1 road North facing placed 50 metres south of 139 shunt from W2 signal
- R2 road North facing placed 50 metres south before 135 shunt from R2 signal

6.21.1 North Yard Access When No Rail Operator On Duty

Before passing an All Trains Stop board, the Operator must:

1. Stop before the All Trains Stop board on W1 or R2
2. Confirm with the Signaller there are no known conflicting movements
3. Self-authorise to pass the All Trains Stop board and make a radio call announcing their entry to the North Yard
4. Ensure the route/points are correctly set
5. Ensure the speed of the movement is so regulated that it can be stopped in half the clear distance seen ahead

NOTE

Operator Controlled Territory areas controlled by the:

- Depot Rail Operator, and
- North Yard Rail Operator

are shown in different colours on the Signalling and Interlocking diagram.

The Metro Service Operator has shunt processes and emergency processes in their Local Operating Instructions.

7. Marshalling Yard and Mechanical Depot

The Marshalling Yard is on the east side of the Mechanical Maintenance depot and includes the Rail Ferry Terminal yard, Container Transfer terminal and the wharf sidings.

7.1 Mechanical Maintenance Depot Limits

Mechanical Maintenance depot limit boards are erected beside:

- E4 road, North end
- F1 and G2 road, South end
- G3 road, North and South end

All movements in this area must be piloted.

7.2 Locomotive and Turntable Road

This provides access to the Mechanical Maintenance depot and turntable and is common territory for all movements.

7.3 Signalling into Arrival / Departure Roads

Before signalling any movements from the main line into H1, J4, K2 and T1 roads, the Signaller must get permission from the Team Leader or their nominee.

7.4 Wellington Terminal (Directing) Signals

The following signals must not be placed at proceed until all movements have stopped short of the signal:

- 126 Shunt and Up Directing signal from E4
- 118 Shunt and Up Directing signal from H1
- 120 Shunt and Up Directing signal from J4
- 122 Shunt and Up Directing signal from K2
- 124 Shunt and Up Directing signal from T1

All movements must move up to the signal and stop short before requesting a proceed aspect on the signal.

Operators must confirm the correct signal is displaying a proceed aspect for the movement before proceeding.

7.5 All Train Stop boards on H1, J4, K2 and T1 Roads

For inward trains and shunting movements from the main line, movements from the Controlled Network to Operator Controlled Territory are governed by All Train Stop boards.

South facing All Train Stop boards are located at:

- end wall at the south end of the Mechanical Maintenance depot alongside H1 road,
- between J4 and K2 roads,
- between K2 and T1 roads,

Permission to pass is given by the Freight Yard Team Leader or their nominee.

NOTICE
Before giving authority for a train to berth on these roads, the Team Leader or their nominee must make sure these roads are clear, and there are no conflicting movements while the train is entering the marshalling yard. When the train is signalled to proceed, it is indicated the intended route has been checked and is correctly set.

7.6 Locomotives from South End of Berthing Roads to Mechanical Maintenance Depot or Station Platforms

Locomotives running from H1A, J4 and K2 roads to the station platforms or returning to the Mechanical Maintenance depot via the south end must not pass the ATS board situated adjacent to H1 road unless authorised to do so by the Team Leader or their nominee.

7.7 All Train Stop board on G1 Road

A north facing All Train Stop board is located on G1 road between 15 signal and the points leading to the marshalling yard.

Permission to pass is given by the Freight Yard Team Leader or their nominee.

7.8 Shunting at Rail Ferry Terminal

Two ATS boards face north and one facing south, approximately 150m apart on the shunting leg at the Rail Ferry Terminal.

All movements on the shunting leg must stop at the ATS board applicable to the direction of travel, and the Shunter in Charge or one of his assistants must walk to a point from where they can see that an opposing movement does not obstruct the route ahead.

The movement must not pass the ATS board until directed by the Shunter in Charge or his assistant.

7.9 Wellington Ferry Rail Yard

To enable work to be undertaken within the Ferry Rail Yard area, the following instruction will apply:

1. When the shunt leaves the Ferry Rail Yard, the points must be secured to prevent rail movements from entering the yard.
2. Once this has been completed, the TAMs must confirm with Rail Operations that no further movements are scheduled and if okay to commence work in the Ferry Rail Yard.
3. When work has been completed and it is safe for the shunt to return, the TAMs must call and advise Rail Operations.
4. The shunt must ensure the points are unsecured and set for the movement before entering the Ferry Rail Yard.

8. Wellington - Waikanae

8.1 Kaiwharawhara

IMPORTANT
Kaiwharawhara platforms are provided for emergency evacuation use only.

The station does not have public access to or from any platforms. In the event passengers must be alighted, train crews must arrange with the Train Controller to protect an evacuation of passengers from the station by crossing the track to the Kaiwharawhara Infrastructure Maintenance depot access gate.

Trains must not be scheduled to stop at Kaiwharawhara to pick up or set down passengers.

8.2 Tunnel No.2 NIMT

8.2.1 Axle Counters

Axle Counters are used to detect the passing of rail vehicles in place of the more common track circuit and are located between:

- 544 and 1000 signals NIMT Up Main Line and
- 977 and 529 signals NIMT Down Main Line

For a variety of reasons axle counters may require a reset to restore them to the unoccupied state.

When a track section is showing ‘occupied’ after the passage of a train:

The Train Controller must:

1. Confirm that the last signalled train movement has left the section complete and intact.
2. Arrange for a Signals Maintenance Representative to reset the axle counter, advising which end the reset is required from.
3. When a Signals Maintenance Representative is on site confirm when dropped track is not occupied by rail vehicle(s).

Reset Control Located at	Axle Counter Area		
Northern Portal	Down Main	977 to 833 signal	833 to 695 signal
	Up Main	832 to 1000 signal	
Southern Portal	Down Main	695 to 529 signal	
	Up Main	544 to 694 signal	694 to 832 signal

Signal Maintenance Representative

For the axle counter track to be reset, you must:

- check that the TR relay is down and the TZR relay is up
- observe the tunnel is clear of trains
- contact the Train Controller to establish that the area concerned is clear of rail vehicles and
- obtain permission from the Train Controller before resetting any axle counter

- operate the key switch Up main or Down main together with the pushbutton for the axle counter track to be reset

Hi-Rail Vehicle Movements

Hi-Rail vehicle movements are only allowed to completely proceed through the axle counter area.

On / off tracking within the axle counter area is prohibited.

NOTE

Hi-Rail Vehicles (less than 2000kg, i.e., LIV's) movements may only occur when Signals personnel are in attendance to reset axle counters.

The Train Controller must confirm a Signals Maintenance Representative is in attendance to reset axle counters before authorising the movement(s).

Reason: Risk of Axle Counter Interference.

NOTE

Track Evaluation Car EM80

The movement of Track Evaluation Car EM80 must only occur when a Signals Maintenance Representative is in attendance to reset axle counters.

Reason: Risk of Axle Counter Interference.

8.2.2 Train Control Telephones

Train Control telephones are situated on the Down main manhole portal adjacent each pair of signals 694 / 695 and 832 / 833):

They are positioned on the portal wall so that the telephone user is facing the normal direction of trains approaching on the Down main, i.e., looking uphill.

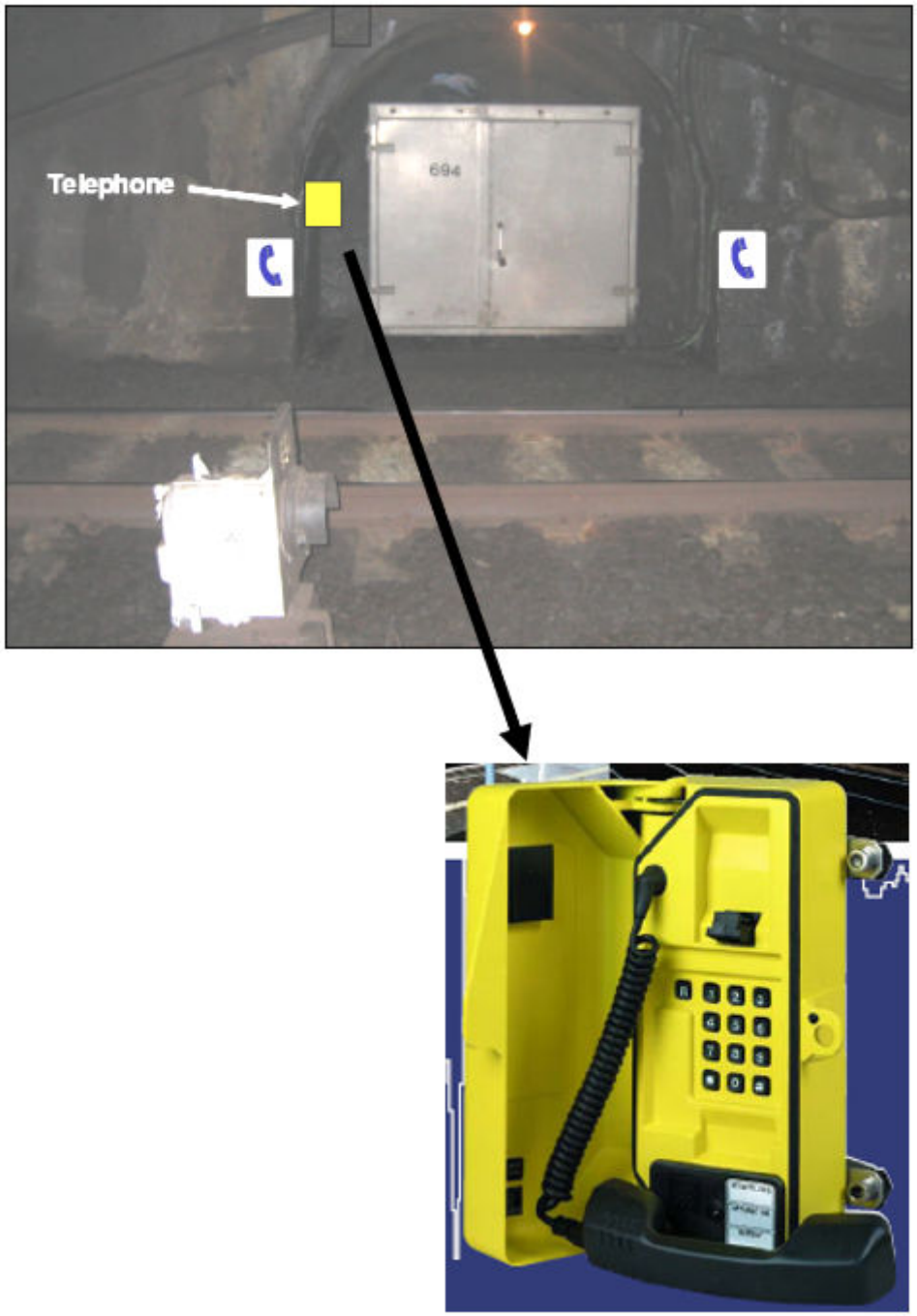
Personnel using the telephones should be aware the telephone cords are only about 30cm long.

Instruction plate above telephones

- Lift handset and dial number required.
- Ensure handset is correctly replaced when finished and door is closed.

Train Control (Wellington Desk): 04 498 3364

Train Control (Emergency): 0800 808 400



8.2.3 Failure of Tunnel Radio System

When absolute intermediate signals 694, 695, 832 and 833 inside NIMT Tunnel No.2 (Tawa) are at stop or imperfectly displayed, the following procedure will apply:

The Operator must contact the Train Controller by:

1. Radio base call
2. Verbal radio call
3. Emergency radio call

If the above methods are unsuccessful and the Train Controller cannot be contacted, the Operator may:

- Pass the absolute Intermediate signal at stop, and proceed at Restricted Speed.

The Operator using this self-authorisation method must travel at Restricted Speed and continue to verbally attempt to contact the Train Controller via radio every 30 seconds stating:

“Train ___ travelling on ___ main, from ___ signal to ___ signal at restricted speed”.

When the Train Controller is aware of the tunnel radio system failure, the following procedure will apply:

- A bulletin must be issued converting absolute Intermediate signals 694, 695, 832 and 833 to permissive signals within NIMT Tunnel No.2 (Tawa)
- Freight trains must not enter the tunnel during a tunnel radio system failure.
  - Exception: Freight trains already in the Metro area approaching Tunnel No.2 may continue to destination

8.3 Testing Tunnel Radio System

The following arrangements will apply to test the tunnel radio systems in No.1 and 2 (between Kaiwharawhara and Takapu Road) and No.3 to 6 linked together (between South and North Junctions).

Shortly after entering tunnels No.1, 2, 3 and 6, the Operator must base call the Train Controller and note that an acknowledge “lock on” is received (indicated by the flashing lamp becoming steady). The Operator should then obtain a verbal acknowledgment from the Train Controller that the base call was received on the tunnel system indication in Train Control.

Tuesday and Friday – tested by No.262, or if it does not run; a train as arranged by the Train Controller

NOTE
When replying, the Train Controller may select the nearest hilltop repeater if it is thought the train has left the tunnel. The “lock on” of a base call is sufficient to confirm that the tunnel radio system is operational.

8.4 Porirua

Reversing of terminating trains on Up Main at Porirua

For all down services ready to depart from the Up main platform, a member of the train crew must operate the Request Signal pushbutton. This will indicate to the Train Controller that the train is ready to proceed.

NOTE
Train Controller authority is not required to operate this button. The button must not be activated more than 1 minute prior to scheduled departure time.

8.5 Paremata

Coupled in Motion Weighbridge (CIMW)

A coupled in motion weighbridge is installed on the Up main at 19.50 km. Fault conditions are alerted to the Train Controller and broadcast locally by radio on Channel 1.

Operators hearing a warning message must:

- obey any message instructions to reduce speed or stop, and
- must immediately contact the Train Controller for further instructions.

8.6 Plimmerton

8.6.1 809 Signal

809 signal is normally at stop to avoid excessive operation of the alarms at Steyne Avenue level crossing and will automatically clear after a Down stopping train has occupied the platform for a short period of time. When a train is not scheduled to stop at the station, the Train Controller can clear 809 signal to proceed in advance of the train's arrival.

8.6.2 Reversing of Terminating Trains on the Up Main

For all Down services ready to depart from the Up main platform, a member of the train crew must operate the Request Signal pushbutton. This will indicate to the Train Controller that the train is ready to proceed.

8.6.3 Mainline Steam Heritage Trust (MSHT)

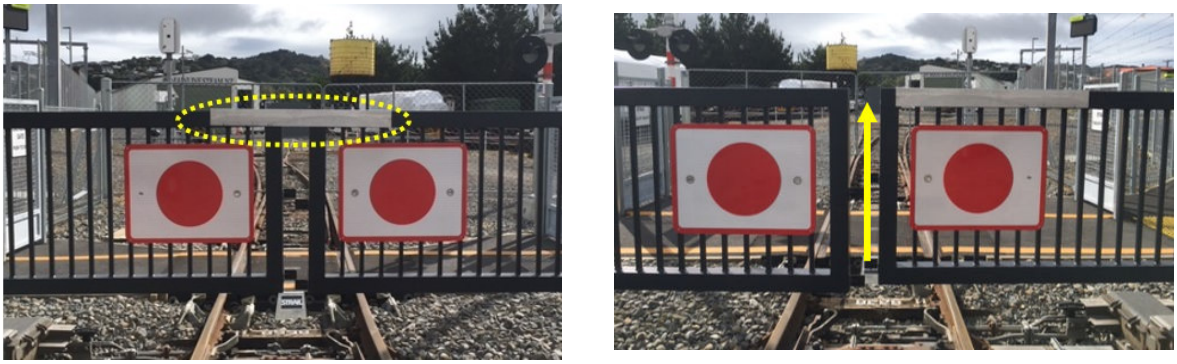
The connection to the Controlled Network is interlocked.

A protected pedestrian crossing gives the public access to and from platform one over the siding between the MSHT Operator Controlled Territory (North and South yards).

NOTE

To prevent the pedestrian crossing automatic gates moving in the wind, they are manually locked in the 'pedestrian access' position.

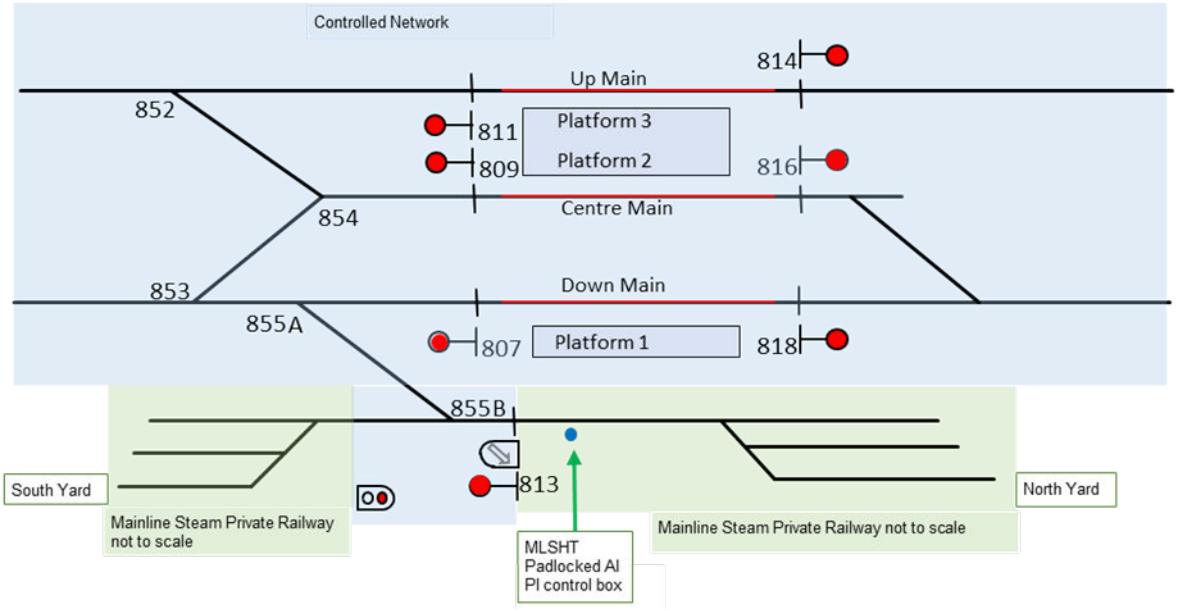
1. Before any rail movement, the gates are unlocked by MSHT personnel.
2. When rail movements are finished, MHST personnel lock the gates.



Gates locked by horizontal bar (L), Gates unlocked (R)

A local control panel locked with a MSHT padlock provides request / cancel control of the AI/PI and pedestrian crossing alarms / gates for shunt movements. When the crossing alarms are activated, the Arrow Indicator and its associated Points Indicator (AI/PI) show proceed indications.

NOTE
The crossing alarm bells only ring while the pedestrian gates close then will remain silent. This is to prevent excessive noise during prolonged shunting operations.



Operating overview

1. MSHT have manual rail security gates immediately north and south of the pedestrian crossing.
2. The MSHT AI/PI request control is always available for use unless:
   a. a movement is signalled into or out of the MSHT, or
   b. the Train Controller has applied blocking to protect rail infrastructure maintenance activities in the area.

The Train Controller cannot directly operate the AI/PI, it must be selected by the local control panel and released by the Train Controller.

3. If a rail vehicle is between the AP/PI, the level crossing controls cannot be cancelled.
4. For signalled movements to and from the Controlled Network the pedestrian crossing alarms start and then stop automatically once the movement clears the track circuit.
5. In an emergency, the Train Controller can cancel the AI/PI, which:
   a. reverts the AI/PI (if cleared) as soon as the crossing is clear of a shunt movement.
   b. cancels the crossing alarms after a time delay.
6. The Train Controller can apply signal blocking to 813 signal and 855 points to protect the Controlled Network.
7. The Train Controller can apply signal blocking to the AI/PI to prevent use when signals maintenance is being performed onsite.

MSHT shunt movement between North yard and South yard or vice versa

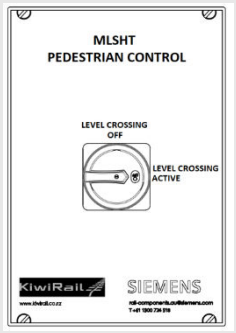
1. MSHT personnel unlocks and opens the manual lock on the pedestrian crossing gates.
2. MSHT personnel opens the ‘MSHT Control Box’ (locked with MSHT padlock)
3. MSHT personnel operates the ‘Local Control’ switch from ‘Level Crossing Off’ to ‘Level Crossing Active’.

a. The pedestrian crossing flashing lights and audible alarms will start and after a 5 second delay the pedestrian gates start to close.
b. When the gates are fully closed:
   i. 813 signal remains at red
   ii. 855 arrow light illuminates
   iii. 855 points indictor changes from red to yellow
   iv. audible alarms stop sounding
   v. pedestrian crossing lights stay flashing.

IMPORTANT

If the pedestrian crossing AI or PI does not operate as above:

1. Call Wellington Train Controller – 04 498 3364
   a. Confirm that the pedestrian crossing gates have been unlocked.
   b. The Train Controller may authorise a movement past the AI/PI if they can confirm the points are correctly set.
2. Train Controller authorisation will be needed for each movement past any signal / indicator at stop.



c. Shunt movement operates across the crossing. The pedestrian crossing alarms will not automatically cancel after a shunt movement.
d. Single or multiple shunt movements may take place over the crossing.

3. If a vehicle is between the AI/PI, then the level crossing controls cannot be cancelled.
4. When shunting has stopped and vehicles are outside the AI/PI, operate the ‘Local Control’ switch from ‘Level Crossing Active’ to ‘Level Crossing Off’.
   a. 855 arrow light extinguishes
      i. 855 points indicator changes from yellow to red
      ii. a 30 second delay occurs before the pedestrian crossing alarms cancels and the pedestrian gates open.
   b. The MSHT team member closes and locks the ‘MSHT Control Box’.

MSHT to / from Controlled Network

For inward movements only:

1. MSHT personnel on site:
   a. The Train Controller must confirm with MSHT personnel that the MSHT north rail security gates are unlocked and open.
   b. The manual gate lock on the pedestrian crossing gates is unlocked.
   c. The Train Controller then can signal the movement into the yard.
2. MSHT personnel not on site nor contactable (the Train Controller cannot signal a movement into the yard):

a. The Train Controller will verbally advise the Operator that the MSHT north rail security gate may be closed.
b. The Train Controller then can signal the movement into the yard.

For all movements:

1. The Train Controller will set the route into or out of MSHT as required:
   a. Pedestrian crossing flashing lights and audible alarms start and after 5 seconds delay the gates will start to close.
   b. Once the gates are fully closed the audible alarms stop and the pedestrian crossing lights will stay flashing
      i. From Controlled Network to MSHT – low speed on 810 signal
      ii. From MSHT to Controlled Network – 813 signal will clear
   c. Pedestrian crossing alarms will automatically cancel after the passage of a movement in either direction.
2. Once the movement has cleared the signals, and the motor points move to normal the 'Local Control' panel is ready for use.

8.6.4 Train Ready to Start (TRTS) Pushbutton

Used for all Down trains originating from Plimmerton and is mounted on a pole outside the station building.

Train crew must operate the TRTS hidden button in the box, 30 seconds before the scheduled departure, or when ready to depart if after the scheduled departure time. This provides a 'Train Waiting" indication to the Train Controller who may then clear the appropriate signal: 807, 809 or 811.

If the signal to depart does not clear within 60 seconds, the train crew must call the Train Controller.

8.7 Slip Warning Systems

Plimmerton and Pukerua Bay

Slip monitoring systems have been installed at the following locations:

- 25.8 km between Plimmerton and Pukerua Bay
- 26.8 km between Plimmerton and Pukerua Bay
- 27.0 km between Plimmerton and Pukerua Bay

Upon receiving activation of slip warning system, the Train Controller must:

- advise Operators of the slip alarm activation and stop all services approaching the slip sites between Plimmerton and Pukerua Bay
- advise Operations Support to arrange for a Track Maintenance Representative to complete a remote or physical inspection
- upon receiving clearance from the Track Maintenance Representative, and the alarm system remains operative in the field, the Train Controller must arrange a reset of the alarm by requesting Operations Support to contact the WSP Team who will reset the alarm remotely
  - the Train Controller must impose a speed restriction of 25 km/h between the 25.5 km – 27.2 km Plimmerton and Pukerua Bay for both mains until the alarm has been reset.
- if the alarm mechanism has been damaged or fails and needs reconfiguration:
  - the Train Controller must impose a speed restriction of 25 km/h between the 25.5 km - 27.2 km Plimmerton and Pukerua Bay for both mains until the Wellington Asset Engineering team arranges for a technician to attend and advise the procedure for running trains.

South Junction and North Junction

Slip monitoring systems have been installed at the following locations:

- 32.5 km between South Junction and North Junction
- 33.7 km between South Junction and North Junction

Upon receiving activation of slip warning system, the Train Controller must:

- advise Operators of the slip alarm activation and stop all services approaching the slip sites between South Junction and North Junction
- advise Operations Support to arrange for a Track Maintenance Representative to complete a remote or physical inspection
- upon receiving clearance from the Track Maintenance Representative, and the alarm system remains operative in the field, the Train Controller must arrange a reset of the alarm by requesting Operations Support to contact the WSP Team who will reset the alarm remotely
  - the Train Controller must impose a speed restriction of 25 km/h between the 32.5 km - 33.7 km South Junction and North Junction until the alarm has been reset
- if the alarm mechanism has been damaged or fails and needs reconfiguration:
  - The Train Controller must impose a speed restriction of 25 km/h between the 32.5 km - 33.7 km South Junction and North Junction until the Wellington Asset Engineering team arranges for a technician to attend and advise the procedure for running trains

South Junction and Paekakariki

Slip detection systems, consisting of cameras, rain gauge, trip wires and tilt sensors are located at:

- 33.440 km (between Tunnel No.4 & 5) at an existing slip, and
- 36.070 km (between North Junction and Paekakariki)

When movement is detected by the trip wire, or the sensor tilts beyond the pre-defined angle, the array will activate one or multiple alarm(s) on the Train Control Realflex signalling screen as follows:

- 33.440 km
  - Upper –TILT 1, TILT 2, TILT 3, TILT 4, FENCE
  - Lower –TILT 1, TILT 2, FENCE
- 36.070 km
  - TILT1, TILT 2, FENCE

The Train Controller upon receiving activation of the slip warning system must:

- advise Operators of the slip alarm activation and reduce passenger services to 10 km/h and freight services to 40 km/h and instruct “Proceed with Caution”
- advise Operations Support to arrange the asset team to undertake a remote or physical inspection
- if a temporary speed restriction is required, the Train Controller will enter details into the Access Provider’s Speed Restriction system and identify any trains to be advised as per **Train Control and Signal Box Manual**, **2.6 Identifying Trains 'still to be advised' of Temporary Speed Restrictions**. When required, the procedure for no speed boards, as stated in **RP15 Implementing Temporary Speed Restrictions**, **3. Unplanned Speed Restrictions**, must be followed.
- Upon receiving clearance from Track Maintenance Representative, and the alarm system remains operative in the field, the Train Controller will arrange a reset of the alarm by requesting Operations Support to contact the Harvest Engineer who will reset the alarm remotely. If the alarm mechanism has been damaged and needs re-configuration, Civil Engineering will arrange for a technician to attend and advise the procedure for running trains.

8.8 North – South Junction

When signals 8RAB or 10L are cleared the associated train stop trip arm will lower before the signal can show proceed.

The train stop associated with signal 3132AB is provided to check that Up trains do not approach South Junction at more than 40 km/h.

A 40 km/h speed board is erected 273 metres south of signal 3132AB and this speed restriction will apply from the speed board to South Junction.

The trip arm of the train stop will lower and signal 3132AB change to proceed as a train approaches provided the speed restriction is observed.

8.9 Paekakariki

8.9.1 Joint Operating Plan

The operators of the Joint Operating Plan are Steam Incorporated (Steam Inc.), KiwiRail Infrastructure and KiwiRail Ltd (Freight).

Speed on Steam Inc. Private Siding Roads and National Rail System Siding No. 1:

- Maximum speed 15 km/h

Siding No. 1

All unattended rail vehicles shall have their handbrakes on, or be otherwise restrained, i.e., coupled to a vehicle(s) that had handbrake(s) applied.

Procedures for KiwiRail Infrastructure and KiwiRail Ltd (Freight)

Prior to the entry of a movement onto Siding No. 1 from the National Rail System, the KiwiRail Infrastructure or KiwiRail Ltd (Freight) Person in Charge (PIC) must visually determine whether Steam Inc. Rail vehicles are occupying the Siding or are about to be moved onto it.

- If Steam Inc. rail vehicles are not occupying the siding (and are not about to), the movement may enter the siding.
- If Steam Inc. rail vehicles are occupying the siding (or are about to), the movement must not enter the siding until suitable liaison has occurred between the parties to establish what movements will take place and under whose control.

Steam Inc. rail vehicles will not occupy the siding unless a Steam Inc. staff member is on duty.

Procedures for Steam Inc.

Prior to the entry of a Steam Inc. movement onto Siding No. 1 the Steam Inc. PIC must visually determine whether KiwiRail Infrastructure or KiwiRail vehicles are occupying the siding or are about to be moved onto it.

- If KiwiRail Infrastructure / KiwiRail vehicles are not occupying the siding (and are not about to), the Steam Inc. movement may enter the siding.
- If KiwiRail Infrastructure / KiwiRail vehicles are occupying the siding (or are about to) and KiwiRail Infrastructure or KiwiRail Ltd (Freight) personnel are present (indicating that operations are in progress), the Steam Inc. movement must not enter the siding until suitable liaison has occurred between the parties to establish what movements will take place and under whose control.
- If KiwiRail Infrastructure / KiwiRail vehicles are occupying the siding, but KiwiRail Infrastructure or KiwiRail Ltd (Freight) personnel are not present, the Steam Inc. movement may enter the siding, but the Steam Inc. PIC must ensure that the KiwiRail Infrastructure / KiwiRail vehicles are clear, or temporarily moved clear of the intended Steam Inc. movements.

Access to Turntable Yard Road 1

Operating procedures are as follows:

- KiwiRail Infrastructure or KiwiRail Ltd (Freight) should advise Steam Inc. of any intended movement at the earliest opportunity.

- Train Control holds contact details for Steam Inc.

The Steam Inc. depot can be unattended for several days on end so it should not be assumed that a fax has been sighted unless a confirming fax or phone call has been received.

- Should contact by either fax or phone not be achieved, the KiwiRail Infrastructure or KiwiRail Ltd (Freight) movement must be stopped on Siding No. 1 (NRS).
- Prior to proceeding onto Yard Road 1, the KiwiRail Infrastructure or KiwiRail Ltd (Freight) PIC must check the Steam Inc. site to confirm that there are no Steam Inc. personnel present, and that no rail vehicle movements are in progress.
- Unless the locomotive crew has a clear view of the road ahead, the movement shall be piloted.
- It is the responsibility of the KiwiRail Infrastructure or KiwiRail Ltd (Freight) crew to ensure that all turnouts are set correctly.
- The turntable is secured by a “100” padlock. KiwiRail Infrastructure and KiwiRail Ltd (Freight) crews shall provide their own key for this padlock. When leaving the turntable, KiwiRail Infrastructure or KiwiRail Ltd (Freight) personnel shall ensure that the turntable is locked after use. KiwiRail Infrastructure or KiwiRail Ltd (Freight) shall ensure that at least two appropriately qualified personnel are present to carry out the turning operation.

Access to other roads

Operating procedures are as follows:

- KiwiRail Infrastructure must advise Steam Inc. of any desired movement at the earliest opportunity.
- Methods of contact (in order of preference) are by phone or by personal visit.
- Should contact not be achieved, the KiwiRail Infrastructure movement must not proceed beyond Siding No. 1 (NRS).
- Unless the KiwiRail Infrastructure crew has a clear view of the road ahead, the movement shall be piloted.
- It is the responsibility of the KiwiRail Infrastructure crew to ensure that all turnouts are set correctly.

8.9.2 Banker Locomotives

Up trains

When banker locomotive(s) are coupled behind the train locomotives, all locomotives may need to run into the loop to uncouple the banker locomotives due to poor underfoot conditions and lighting alongside the Up main.

Down trains

- Not to be signalled through Paekakariki until the Operator of the banker locomotive(s) has a clear understanding of the intended movement.
- When a banker locomotive is to be attached, the Down train is to be stopped before reaching WL1A (south end) switch locked points on the loop.
- The Down train is not to be moved onto the banker locomotive. The banker locomotive must be moved onto the train.
- When banking a train from Paekakariki to Wellington the Operators must arrange with the Train Controller to place the banker locomotive behind the train locomotive if they prefer to drive the train short hood leading.

Banker Locomotive(s)

- When arriving on an Up train the banker Operator is to check with the Train Controller for any conflicting movements before detaching from the train.
- The banker Operator is to have a clear understanding with the Train Controller on the intended movements/berthing arrangements.

- Either berth on the crossing loop between WL1A (south end) switch locked points and No.14L signal or on the backshunt clear of 14R signal.
- The banker locomotive is not to be moved onto the train until it is stationary.

8.9.3 Passenger Tranship

During hours the Metro services operate, the Train Controller must not stop northbound freight trains on the Up main at Paekakariki unnecessarily.

The following arrangements will be necessary at Paekakariki for transfer of passengers between rail services and buses:

- The transfer of passengers between up and down rail services and buses or vice versa should preferably occur only at the north end of the Paekakariki platform where there is a suitably constructed pedestrian crossing between the platform and the adjacent car park where buses can stop close to the station.
- While a terminated service is stopped on the Up main, non-stopping northbound Freight or Long-Distance Passenger services must be signalled via the Down main (if unoccupied) or otherwise the crossing loop.
  - While a terminated service is stopped on the Up main and a following northbound EMU service arrives, then this service can be berthed onto the Down main after the Operator has been advised of the situation by the Train Controller.
  - While a terminated service is stabled on the Down main, non-stopping northbound Freight or Long-Distance Passenger services must be signalled via the crossing loop even if the Up main is unoccupied. The Train Controller must apply blocking commands (with an appropriate message on the PC screen “pop up window”) to the Up main within station limits to prevent conflicting movements.

In all instances, Metro Operators personnel and Train Controllers must come to a clear understanding for the safe transfer of passengers at Paekakariki.

9. Johnsonville Line

9.1 Rolling Stock Running Rights

The following stock is authorised to run on the Johnsonville Line:

- FP and FT Electrical Multiple Units
- DSC, DSG and DC locomotives **#**

 # Traction power on – DSC, DSG and DC locomotives must **not** proceed past the southern portal of Tunnel 6 at 8.4 km.

NOTE
All other vehicles must be authorised by bulletin

DC Locomotive Load schedule

Maximum tonnage (ascending or descending the grade).

- 268 tonnes trailing for one DC loco
- 536 tonnes trailing for two DC locos

NOTE
Tonnage is constrained by adhesion uphill and the ability of a locomotive (or locomotives if working in multiple) to hold a train on the independent brake on the grade.

Train Handling Instructions for Multiple Locomotives

- When work trains have a locomotive at each end, they will be manned and assist with either power or braking.
- The trail DC will be set up to assist and the lead loco set up for lead (Both locomotives are manned and in power.
- The lead loco will always have control of the brake valve.
- When changing ends, the assist Operator must confirm that the assist loco independent brake is applied before the lead loco cuts out that brake valve to prevent a runaway.
- The work train must stop completely before the train brake is released. Both locomotives independent brake valves must be used to assist with recharge of the brake pipe.

IMPORTANT
The movement of any other rolling stock on this line must be authorised by the KiwiRail Infrastructure Engineering and advised by bulletin

Organisation of work trains and the consist is arranged by the KiwiRail Infrastructure Area Manager and Network Access Planning with details advised by Bulletin.

9.2 Slip Warning Systems

Slip detection systems are located at:

- 2.440 km between Tunnel 1 and Tunnel 2 (Rockfall Protection Monitoring)
- 6.380 km between Awarua Street and Simla Cres (Slip Site)
- 7.492 km between Box Hill and Khandallah (Slip Site)

When movement is detected by the trip wire or the sensor tilts beyond the pre-defined angle, the array will activate one or multiple alarm(s) on the Train Control Realflex signalling screen.

The Train Controller, upon receiving activation of the slip warning system must:

- advise Operators of the slip alarm activation and impose the following speed restrictions:
  - 2.440 km Rockfall Protection Monitoring
    - 25 km/h for all trains
  - 6.380 km Slip Site
    - 25 km/h for all trains
  - 7.492 km Slip Site
    - 25 km/h for all trains
- advise Operations Support to arrange for a Track Maintenance Representative to complete a remote or physical inspection
  - the Operator must report to the Train Controller if any obstruction is present
- enter any temporary speed restriction details in OMS and identify any trains to be advised as per **Train Control and Signal Box Manual**, **2.6 Identifying Trains 'still to be advised' of Temporary Speed Restrictions**. When required, the procedure for not having speed boards erected, as stated in **RP15 Implementing Temporary Speed Restrictions**, **3. Unplanned Speed Restrictions**, must be followed.
- Upon receiving clearance from the Track Maintenance Representative, and the alarm system remains operative in the field, the Train Controller must arrange a reset of the alarm by requesting Operations Support to contact the Harvest Engineer who will reset the alarm remotely.
- If the alarm mechanism has been damaged or fails and needs reconfiguration:
  - The Train Controller must impose the above speed restrictions.
  - The Field Asset Engineer must arrange for a technician to attend and advise the procedure for running trains.

9.3 Recovery of EMU Services

When a 4-car service is required to be recovered from Johnsonville platform, the recovery service will be unable to gain a departure signal from Johnsonville for the movement. To be able to travel from Johnsonville to Khandallah, the Train Controller must issue a SWA-02 for the movement.

10. Wellington - Upper Hutt

10.1 Kaiwharawhara

IMPORTANT
Kaiwharawhara platforms are provided for emergency evacuation use only.

The station does not have public access to or from any platforms. In the event passengers must be alighted, train crews must arrange with the Train Controller to protect an evacuation of passengers from the station by crossing the track to the Kaiwharawhara Infrastructure Maintenance depot access gate.

Trains must not be scheduled to stop at Kaiwharawhara to pick up or set down passengers.

10.2 Ngauranga

10.2.1 Axle Counters

The following track sections use axle counters to determine track occupancy between:

- 370 and 564 signals Up main line Ngauranga, and
- 571 and 411 signals Down main line Ngauranga

10.2.2 Te Ara Tupua Construction Crossing

Overlay axle counters are installed between the following signals for the level crossing activation / cancellation:

- 420 and 564 signals on Up main line Ngauranga, and
- 673 and 513 signals on Down main line Ngauranga

10.2.3 Axle Counter Reset Instructions for Te Ara Tupua Construction Crossing

The axle counters installed for Te Ara Tupua construction crossing is an overlay system. Therefore, the axle counters are not indicated on the train control panel. If an axle counter track section still indicates ‘occupied’ after a train has exited the section of track, it will be necessary to undertake an axle counter reset locally.

Local reset process:

1. a Signals Maintenance Representative must be in attendance
2. the Train Controller must confirm that the last signalled train movement has left the section complete and intact
3. the Signals Maintenance Representative operates the blue reset button

10.3 Petone

Request for Signal Pushbutton

When 210 signal is at Caution or Stop, Train Managers of all up stopping trains must operate the Request for Signal pushbutton for the correct train destination when ready to depart Petone platform.

When the Train Manager has requested 214 signal, and signal 210 is at Proceed, the Train Manager should signal the Operator that the train is ready to proceed to 214 signal.

This will indicate to the Train Controller the destination of the train and will enable the operation of any automatic routing at 214 signal.

10.4 Woburn

10.4.1 High Column Switch Stands

1481 and 1488 high column switch stands located at Woburn North Siding are provided with electric locks so that the points can be reversed only after the electric locks have been released.

The electric locks are released from the associated Points Lock control box.

The switch stands are fitted with a national points lever which is locked with an AS padlock.

Woburn North Siding showing location of points lock control boxes adjacent to the Down main.

When a Points Lock control box door is opened all signals protecting the lines affected are held at Stop and the “A” light on signals are extinguished.

This changes the classification of these signals from permissive to absolute.

Once free, the points will remain unlocked so long as either the Points Lock control box door is left open, or either end switch stand points are not fully in normal.

10.4.2 Operation of 1481 Switch Stand Points

Operation of the 1481 points lock control does not affect signals on the Up main.

Operators must:

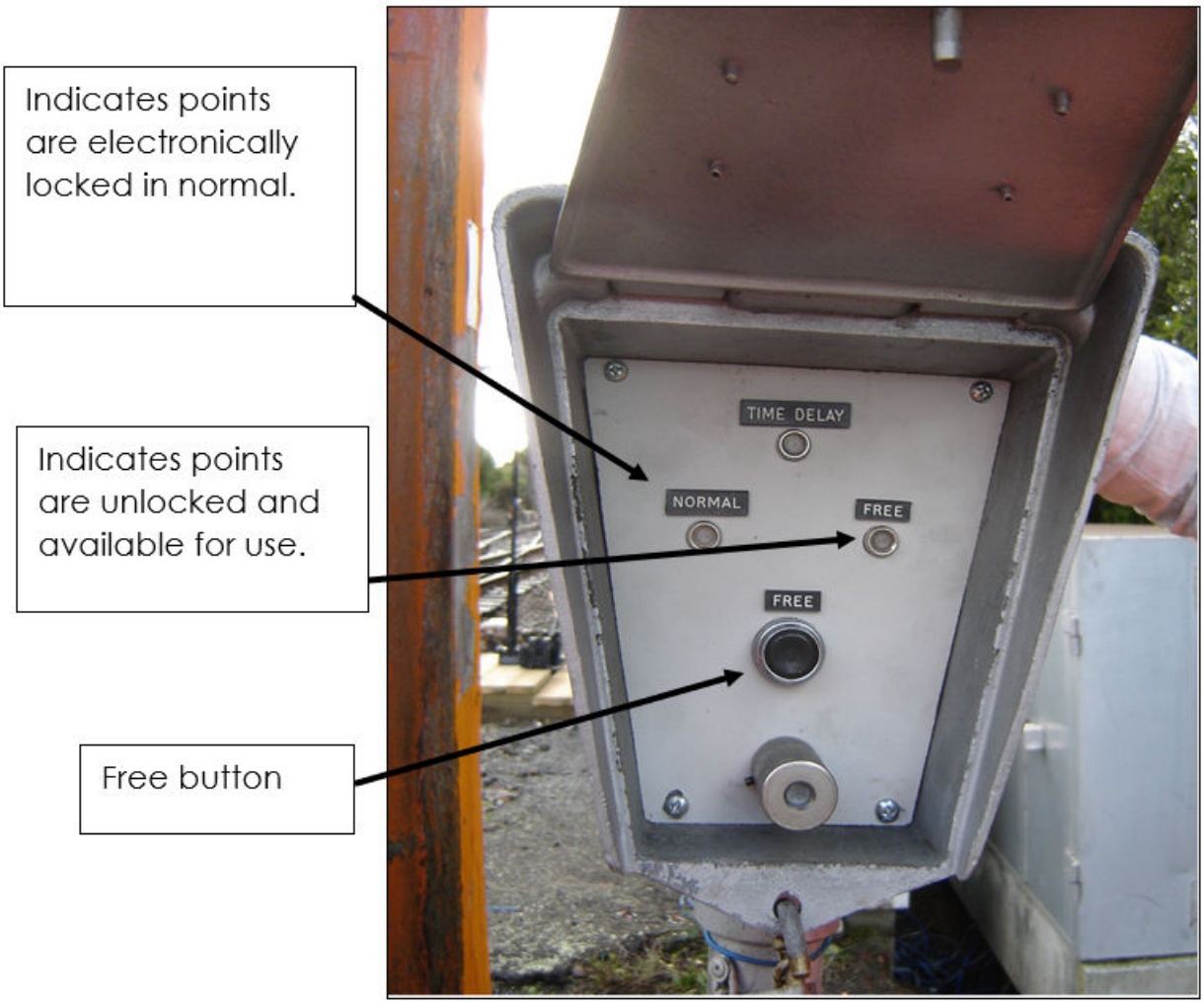
- stop the movement before reaching the points
- obtain permission from the Train Controller to unlock the AS padlock, open the control box door and operate the “free” pushbutton.

A 'time delay' light will illuminate if there is a train approaching. There may be a time delay of up to 3 minutes before the points locks will be released.

After any time delay has run down, the 'free' light will illuminate and the switch stand points will be available for use.

10.4.3 Operation of 1488 Switch Stand Points

- Before opening the 1488 points control box door (see picture 1) communicate with the Train Controller to ensure that a train is not approaching Woburn North siding or signal(s) on the opposite line.
- After obtaining the permission of the Train Controller, unlock the AS padlock, open the control box door and operate the “free” pushbutton.
- A “time delay” light will illuminate if there is a train approaching, there may be a time delay of up to 3 minutes before the points locks will be released.
- After any time delay has run down, the “free” light will illuminate, and the switch stand points will be available for use.



10.4.4 Portion of Train to Remain on the Main Line

- The Points Lock control box door must be left open until shunting is completed and the locomotive has returned to the main line.
- On completion of shunting all switch stand points must be returned to normal.
- Check that the 'normal' indication light is illuminated then close and padlock the Points Lock control box door.

10.4.5 Train to Completely Enter the Siding

Once the train is clear of the main lines and all points:

- Restore all switch stand points to normal
- Check that the 'normal' indication light is illuminated and that all is clear and safe for trains to pass
- Close and lock the Points Lock control box door

10.4.6 Shunt Movement Propelling Towards Waterloo on Down Main

Before opening the 1481 Points Lock control box door:

- Check visually that there are no trains approaching on the Down main.
- Check with the Train Controller to ensure that there is no train closely approaching 1533 signal.
- When authorised by the Train Controller open 1481 Points Lock control box door and operate the pushbutton.

The movement may then propel to the Down main as far as the Shunting Limit board. **SO02 Automatic Signalling Rules**, **5. Setting Back in Block Section Authority** is modified accordingly.

The movement must not pass Shunting Limit board.

There is approximately 278 metres between 1489 signal and the Shunting Limit board. A white marker is placed in the ground along the sidings about 270 metres from 1481 switch stand as a guide for train crews to ascertain the length of the train.

10.4.7 Securing Points

After a train has cleared 1481 and 1488 Siding Points:

- Set all switch stand points to normal
- Check that the 'normal' indication light is illuminated then close and padlock the Points Lock control box door
- The Operator must not proceed until they have received assurance that this has been done
- Advise the Train Controller once the movement has departed from Woburn

10.4.8 Failure of Points Lock to Release

- Rail Personnel must advise the Train Controller
- The Train Controller will verbally advise the Signals Maintenance Representative to release the points lock(s)
- Before this is done the procedures in clauses (10.4.2), (10.4.3), (10.4.4), (10.4.5), 10.4.6) or (10.4.7) must be carried out as appropriate for the intended movement
- The Points Lock control box door must have been opened for a minimum period of 3 minutes before any points lock is released by the Signals Maintenance Representative
- The Signals Maintenance Representative must confirm to the Train Controller that the points are locked

On completion of the movement, the Signals Maintenance Representative must certify to the Train Controller that:

- all switch stand points are in normal
- the Points Lock control box doors are closed and padlocked
- the previously failed points are again electrically locked

The Train Controller must endorse this certificate on the Train Control Diagram.

10.4.9 Signals equipped with ‘A’ Lights

Absolute signals 1384, 1425 and 1489 are equipped with 'A' lights. If detained at one of these signals and the 'A' light is not illuminated:

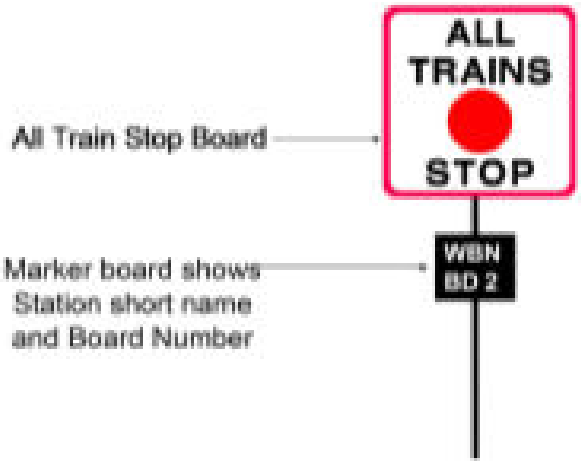
The Operator, after ascertaining that there is no conflicting shunting movement taking place, must:

- observe that the line ahead is clear
- move the train cautiously forward to the switch stand points or motor points and stop before passing over them
- open the switch stand points control box and ensure that the normal light is illuminated
- examine the points to ensure that they are correctly set and secure so that the train may safely pass over them.

10.4.10 Wrong Line Running Limit Boards (WLRB)

Two boards are provided in the Multi Line Automatic Signalling Area between Ava and Waterloo to define a boundary required for setting back or wrong line running are identified on the Ava – Waterloo S&I diagram.

They consist of two boards mounted on one pole.



The top board is a standard All Trains Stop Board.

The bottom board shows the station short name (three letters) and the board number.

The WLRB may only be passed upon verbal authorisation from the Train Controller, which will include the location and board number.

10.4.11 Authority to Enter / Move within Siding

The Train Controller must:

- give authority for all rail vehicle movements to enter Woburn Sidings and move within the yard area
- ensure that any other movement is standing clear and that all rail personnel are aware of what is to take place before authorising any movement to move/enter
- record all train movements inside the Woburn Sidings area as a solid red line with the words “siding” and the train identity

- record the clearance time on the train control diagram when the train movement has either stabled at or departed from Woburn Sidings
- record track occupancy inside the Woburn Sidings area in accordance with **Train Control and Signal Box Manual, 2.5 Identifying Limits of a Track Occupancy or Safe Working Authority**.

All tonnage left on the sidings at Woburn must be adequately secured to prevent movement.

Movements either arriving at Woburn Sidings from Gracefield Branch or departing Woburn Sidings for the Gracefield Branch must not pass the All Trains Stop Board at 0.86 km until authorised by the Train Controller.

10.5 Gracefield

10.5.1 Working on Gracefield Branch

Working on the Gracefield Branch between Woburn and the End of the Line (1.82 km).

IMPORTANT
Only one rail movement is authorised to run on the Gracefield Branch at one time unless authorised by the Officer Controlling Train Running.

All movements running on the Gracefield Branch must be authorised by the Train Controller who will record all movements in red ink on the Train Control diagram.

Maintenance Work / Hi-Rail Movements

Danger Stop boards and portable derailers must be used at the 1.322 km (Hutt Shops north end switch lock) and 0.86 km (All Trains Stop board Woburn Siding) on the Gracefield Branch in conjunction with **TS09 Foul Time**.

When a track occupancy has been authorised by Train Control to work between the 1.322 km and 0.86 km, Danger Stop boards must be erected and portable derailers placed on the line and locked in the derailing position as a secondary protection at the 0.86 km (south-end of Woburn Siding at the ATSB's) and 1.322 km (north of Bridge 1 - where the main line to siding points meet) to prevent entry from Hutt workshops.

Staff must remain clear of the line until the Danger Stop boards and derailers have been fitted.

The Train Controller must be advised when the Danger Stop boards and derailers have been activated.

When calling clear of the track occupancy, the Person in Charge must certify to the Train Controller that the Danger Stop boards and derailers have been removed from the track.

The Train Controller must record both certifications on the Train Control diagram.

NOTE
Work carried out in Woburn Siding is to be completed under **TS08 Working Within Non-Interlocked Areas**

10.5.2 Gracefield Yard
At the Hutt Park Road level crossing, there is a stop signal (disc). Shunting must not pass this point due to poor track conditions.

10.5.3 Workshop Siding
Before opening the main line points each movement must obtain permission from the Train Controller.

When an arriving movement is in clear at Hutt Workshops siding advise the Train Controller that the main line points are restored to normal and locked.

10.5.4 End of the Line
The Gracefield Branch ends at the buffer stop placed across the track, just past the switch lock points (Parkside Road end) before Bridge 3.

A Special bulletin needs to be issued before any train movement passes this location.

10.5.5 Radio Call Signs
These train services operate on the Gracefield Branch from time to time:

Service Name	Call Sign
Rail Shipments	**Q2**
Industrial Shunt	**Q4**
Hutt Workshops Shunt	**Q8**
Woburn Training Centre Shunt	**Q9**

IMPORTANT
The above call signs are to be strictly used in all radio communication.

10.6 Waterloo

10.6.1 Rail to Bus Transfer
When it is necessary to transfer passengers from rail to bus at Waterloo and then route EMU services back to Woburn these arrangements will be advised by a Special or Information Bulletin.

10.6.2 Down EMU Terminating at Waterloo
When down EMU services terminate at Waterloo, the following procedure is to be adopted to enable the EMU to cross over to the Up main at Woburn:

- the EMU service will enter Woburn and stop clear of the south side of 1488 switch stand points
- after reversing 1488b and 1488a switch stand points, move onto the Up main

Securing 1488 points after a train has cleared points:

- set switch stand points to normal
- check that the 'normal' indication light is illuminated then close and padlock the Points Lock control box door
- the Operator must not proceed until they have received assurance that this has been done
- advise the Train Controller once the movement has departed from Woburn.

10.6.3 Up EMU Terminating at Waterloo

Up Main: When up EMU services terminate at Waterloo (on Up main); Wrong Line running Waterloo to Woburn North Sidings via Up main, the following procedure is to be applied:

- All train movements between 1456, Up Intermediate signal and 1558 Up Intermediate signal will be in accordance with **TS03 Mis.60** and must be accompanied by a Pilot
- Down trains will proceed from the Up main to the Down main via 1488 points

Mis.60: A single Mis.60 only will be issued to the Pilot, who must accompany every train and show the particulars of the Mis.60 to each Operator. Separate Mis.60s will therefore not be issued for every train. **SO02 Automatic Signalling Rules, 5. Setting Back in Block Section Authority** is modified accordingly.

Signalling Woburn–Waterloo:

Woburn: 1456 Up Intermediate signal will be fixed at Stop

Waterloo: 1558 Up Intermediate signal will be fixed at Stop

A Danger Stop signal will be erected on the Down main facing south at a point opposite 1558 Up Intermediate signal.

- Up trains must not pass 1456, Up Intermediate signal until authorised by the “Officer in Charge Woburn”.
  SO02 Automatic Signalling Rules, 6. Passing Intermediate Signals at Stop is modified accordingly
- **Down trains** must not depart Waterloo and must not pass “Wrong Line Running No.1 board at Waterloo until authorised by Officer in Charge, Woburn. **Network Signals, Indicators and Boards Manual**, **6.1 Entry Boards** is modified accordingly.
- **An Officer in Charge** must be in attendance at Woburn for the operation of the Mis.60 (or until released by the Train Controller).

The Officer in Charge at Woburn will:

- authorise all movements past 1456 Up Intermediate signal at Woburn
- hand operate 1488 high column switch stands at Woburn to the required position before authorising any movements to pass over them
- authorise trains to depart Waterloo and pass the Wrong Line Running board No.1 at Waterloo

The Pilot will:

- hold a single Mis.60 and must accompany every train and show the particulars of the Mis.60 to each Operator.
  SO02 Automatic Signalling Rules, 5. Setting Back in Block Section Authority is modified accordingly.
- travel between Woburn and Waterloo.

10.7 Trentham

10.7.1 Control of 902 Signal

To avoid excessive operation of the Sutherland Avenue level crossing alarms when an Up train stops at Heretaunga, 902 signal will not clear until the train has been stopped at the station for a short period. When an Up train is not scheduled to stop at Heretaunga 902 signal can be cleared in advance by the Train Controller operating the “NS” clear command.

10.8 Upper Hutt

10.8.1 Request for Pushbutton

When down services are ready to depart, pushbutton control boxes are located on the main station platform and on the suburban platform at Upper Hutt. When either 1009ABC or 1011ABC signals are observed to be at Stop a “Request for Signal” pushbutton may be operated to advise the Train Controller that the train is ready to depart.

10.8.2 Electric Limit Board

Located at the north end of Upper Hutt at 1070A and 1072A points are Electric Limit boards erected as EMU movements are prohibited to go up the North backshunts from the Down main or siding roads.

On the main line, EMU movements are only permitted up to 1016 Up Departure signal.

11.0 Upper Hutt - Masterton

11.1 Rimutaka Tunnel

11.1.1 Train Separation

To minimise exposure of tunnel fumes and gases caused by loaded freight / work trains through the Rimutaka Tunnel, no passenger train is permitted to enter the tunnel unless an interval of least 60 minutes has elapsed.

The Train Controller must positively confirm the last loaded freight / work train has confirmed clear and complete of the Rimutaka Tunnel by either:

- using the CTC panel, visually confirming the movement is clear of the tunnel, or
- receiving verbal confirmation from the Locomotive Engineer that the freight train is clear and complete of the tunnel.

Following this confirmation, a time of at least 60 minutes must have elapsed prior to signalling any passenger train into the Upper Hutt – Featherston block section.

11.1.2 Exhaust Emissions

In an effort to lower emissions, all trains under normal conditions, are to limit their power to notch 6 travelling through the tunnel.

After a train has been standing in the tunnel for five minutes the locomotive(s) must be stopped and must not be restarted until ready to proceed.

11.1.3 Top of Grade Notice Board

'TG' notice boards (Top of Grade) have been installed in the Rimutaka tunnel, one on either side of the tunnel wall at about 43.46 km to indicate the top of the grade.

11.1.4 Passenger Train - Total Numbers

To deal with an emergency situation, emergency services must be aware of the number of people in the tunnel.

Operators must advise the Train Controller of the total number on the train (passengers and all train crew):

- departing Upper Hutt, any change to this count after departing Maymorn (north bound) and
- after departing Featherston (south bound).

The maximum number of people in a DFB locomotive cab is 3, **Rail Operating Code 3.0 General Operating Instructions, 3.4 Restrictions on Issue of Cab Passes** is modified accordingly.

The Train Controller must record these numbers in the right-hand column of the Train Control diagram.

11.1.5 Freight Train / Service Vehicles – Total Numbers

Operators of non-passenger trains with more than two persons on the train, must advise the Train Controller of the total number of persons travelling on the train before entering the Rimutaka tunnel.

The maximum number of people in a DFB locomotive cab is 3, **Rail Operating Code 3.0 General Operating Instructions, 3.4 Restrictions on Issue of Cab Passes** is modified accordingly.

The Train Controller must record the variation in the right-hand column of the Train Control diagram.

11.1.6 Infrastructure Personnel Travelling / Working in Tunnel

Infrastructure personnel travelling / working in the tunnel must advise the Train Controller of the total number of personnel and vehicles entering the tunnel.

The Train Controller must record these numbers in the right-hand column of the Train Control diagram.

During the track occupancy process the Train Controller must enter an agreed time into the Train Control radio system timer.

The Train Controller will confirm this time, and this must be included as part of the Track Occupancy authorisation.

On Mis.71 forms, it must be shown as:

Other Instructions Radio Timer set for xx:xx hrs

This must be confirmed by both parties during the cross-check process.

NOTE

Timer has maximum time of 100 minutes.

If more than 100 minutes is required, a call from within the tunnel may be required to reset timer.

11.1.7 Trolley / Hi-Rail Vehicle Movements / Work

A trolley / Hi-Rail vehicle movement must not follow a train from either portal into the tunnel until the train is known to have cleared the tunnel.

Lights must be operated in accordance with **TS12 Hi-Rail Vehicles**, **5.9 Use of Lights.**

Rail personnel must not commence work on the line in the tunnel or near the tunnel portal areas immediately after a train passes but must wait until it is known to have cleared the tunnel.

11.1.8 Locomotive Hauled Passenger Trains – Radio Requirements

The train locomotive must be equipped with a functional radio which must be tested for voice, base and emergency calls prior to departure from Masterton or Wellington.

If contact cannot be established with the Train Controller over the primary Train Control radio link, then the Operator must inform the Train Controller before departure. A second person will not be provided in these circumstances.

If the locomotive radio is defective and will prevent communication between the Operator and Train Manager a portable radio must be supplied to the Operator.

The Operator must:

- ensure the locomotive vigilance device is switched to one person operation
- sound the locomotive warning device if the train is stopped in the tunnel and radio communication with the Train Manager cannot be established and the Train Manager is not required.

IMPORTANT
If the delay is expected to cause the Tunnel Timer System to activate, make contact with the Train Controller and advise the reason for delay.

11.1.9 Passenger Train Crew Communications

Passenger trains travelling between Wellington and Masterton use UHF Channel 46 for onboard personnel to Operator communications.

Between Upper Hutt and Featherston through the Rimutaka tunnel the following procedures apply:

Communication between onboard personnel and:

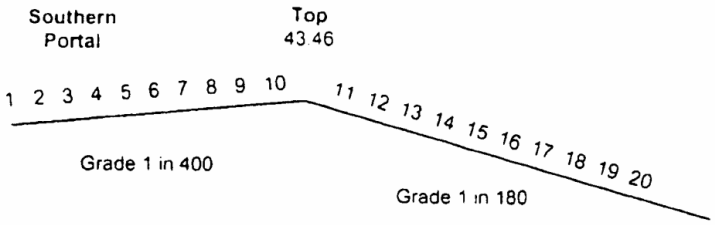
- the Operator is possible up to 7 carriage/coach lengths from the lead locomotive.
- other onboard personnel is possible with 4 carriage/coach separation.

Onboard personnel should position themselves within these ranges of communication while inside the Rimutaka Tunnel.

11.1.10 Tunnel Communications, Signal Panel Timer, and Track Indications

Train Control Telephones

Train Control Telephones in the tunnel are located at the following locations:



Maymorn Side					
1	39.16	**2**	39.66	**3**	40.05
4	40.44	**5**	40.84	**6**	41.16
7	41.63	**8**	42.03	**9**	42.43
10	42.83	**11**	42.92	**12**	43.22
Featherston Side					
13	43.51	**14**	43.83	**15**	44.11
16	44.52	**17**	44.90	**18**	45.30
19	45.70	**20**	46.10	**21**	46.48
22	46.88	**23**	47.27	**24**	47.66
25	48.10				

In an emergency when using the telephones located in the tunnel to communicate with the Train Controller; Rail Personnel should:

- open the door of the cabinet, lift the handset and wait for the phone to be answered.
- state: “**Emergency, Emergency, Emergency**”
- give your:
  - name / identification
  - location at xx: xx km (number, shown on the label inside the cabinet door)

Train Control Emergency Telephones

Inspections

Every 3 months, Telecommunications Representatives will inspect all tunnel telephones physically and electrically; including numbers and lights. The results must be recorded in the code check records database.

Base Radio

A base radio has been placed at the Rimutaka North Point of Supply Building to communicate with the Train Controller.

This radio is in a steel box on the front the point of supply building.

In an emergency, push the red button and wait for response from the Train Controller.

The base radio will be checked by Telecommunications Representatives every three months in conjunction with the tunnel telephones.

Tunnel Timer System

A tunnel timer system has been installed on the Train Control signalling panel in Wellington.

- If a train has been in the tunnel for more than 15 minutes, an alarm message “Train in Tunnel” will flash above the tunnel track indications.

Testing of the system

The system will be tested on Mondays as follows:

- The Train Controller will operate the Tunnel Test command. The command being activated will be indicated by the Test text changing to green.
- Fifteen minutes after the operation of the Test command the Train in Tunnel alarm will operate. The alarm should be cancelled by operating the Tunnel Cancel command.

If the alarm message does not activate after 15 minutes, the Train Controller is to arrange for Operations Support to advise a Signals Maintenance Representative.

Track Indications on Train Control Panel

The signal panel track indications indicate the approximate Train / Hi-Rail locations:

Track Indication	Purpose
A1T and AT2	For train detection purposes
Z1T, Z2T, Z3T and Z4T	For Hi-Rail vehicle detection purposes

11.1.11 Signal Fault

If a signalling block fault should occur and trains are running on a Safe Working Authority the following arrangements will apply:

South Bound Trains:

The Operator must radio call the Train Controller:

- before departing Featherston
- when just beyond the Maymorn portal of the tunnel.

North Bound Trains

The Operator must radio call the Train Controller approaching:

- the old Maymorn yard
- when approximately one kilometre beyond the Featherston portal of the tunnel.

If radio contact cannot be made with the Train Controller, the Operator must stop the train at the nearest telephone:

- South bound at Maymorn
- North bound at Featherston Portal

and arrange for a member of the train crew to call the Train Controller.

11.1.12 Disabled Train

When the Operator of a disabled train in the tunnel is required to complete a SWA-02 for assistance, they must locate the reference number for the nearest telephone. The Operator must tell the Train Controller this information and whether the telephone is north or south of the disabled train for inclusion on the SWA-02 and must then remain in the locomotive.

The placing of detonators 200 metres from the disabled train and piloting the relief locomotive from that point is not required provided that the train signals are displayed.

RP16 Disabled Train Recovery, 2. Securing and Protecting is modified accordingly.

11.1.13 Relief Locomotive

Authority to depart from Featherston or Upper Hutt into the occupied Block Section when recovering a train disabled in the tunnel will be by Special Bulletin. This will authorise the location to which the relief locomotive is to proceed and contain any instructions necessary for safe operation considering other activities within the section.

IMPORTANT

The locomotive must be accompanied by the appropriate Track Maintenance Representative who has operating gas monitor(s) (measuring CO and NO_2) switched on and breathing equipment (mask and two canisters per person).

If gas monitor alarms are activated, breathing equipment must always be worn.

11.1.14 Setting Back Procedure

If a locomotive stalls or fails in the tunnel the following action must be taken by the Operator:

- stop the train with enough brake application to hold it on the grade
- positively establish which grade the train is on by identifying the location of the nearest telephone (See diagram in **Local Network Instruction L4, 11.1.10 Tunnel Communications, Signal Panel Timer, and Track Indications**).
- if the Operator is confident of the reason for locomotive failure and it is safe to do so they may commence the setting back process. If unsure then the operator must:
  - confirm the end of train signal is correctly in place on the rear of the train for:
    - Freight trains - it must be positively established that the TEM light is flashing, or end of train marker is attached
    - Passenger trains - that the built-in or portable end of train signal is operating
- The Train Controller must be advised but if contact cannot be established, then the movement may set back cautiously to clear the tunnel portal only.

TO09 Setting Back and Propelling, **9. Propelling**, **RP16 Disabled Train Recovery**, **2. Securing and Protecting** and **SO02 Automatic Signalling Rules, 5. Setting Back in Block Section Authority** are modified accordingly.

Setting back process

The train may set back using the gradient, provided:

- the locomotive compressors are operational, or
- if MR pressure is greater than 600 kPa, to maintain air to the train braking system

> **CAUTION**
> If main reservoir pressure falls below 600 kPa the train is to be stopped immediately and secured.

- apply full Independent brake on the locomotive(s) and set the Isolation Switch on any defective locomotive to isolate.
- the train can drift at a speed not exceeding 15 km/h with the use of air brakes
  - Monitor train speed, as speed comes between 10-15 km/h make a minimum reduction with the auto brake valve (this brake application should maintain consistent train speed)
- if speed exceeds 15 km/h immediately stop train and start procedure again, being able to stop within half of the clear visible distance.
- the train brakes may only be released with the train at a standstill and if possible, held stationary with the independent brake until the brake pipe has fully recharged.
- the audible warning device signal for a train setting back must be sounded frequently while the movement takes place.

Drift the train to clear the tunnel portal and then secure by:

- making a full independent brake application on the locomotive
- fully applying the train brakes
- cutting out the automatic brake valve
- applying hand brakes as required

The Operator must contact the Train Controller once outside the tunnel.

Up trains on the up gradient towards Featherston (have not passed Top of Grade in tunnel) are authorised to clear the Maymorn tunnel portal only and must not continue setting back towards Upper Hutt until authorised by the Train Controller.

Up trains on the down gradient towards Featherston must not set back towards the Maymorn tunnel portal (Upper Hutt end) unless authorised by the Train Controller.

Before authorising the setting back, the Train Controller must:

- ensure that there is no following movement in the Intermediate section, and
- 1016 Up Departure signal at Upper Hutt has been tagged at stop

11.1.15 Southern Portal

A temporary door has been installed at the southern portal for future works in the tunnel. When in the operating position, a fan can be connected to the door to aid in tunnel gas purging.

Normal (storage) position:

- The door is locked in the storage position, clear of the track.

Operating personnel:

- Only persons trained in the Safe Operating Procedure should attempt to operate the equipment.

Operating position:

- The door is locked into the frame, forming a gate across the portal.

Instructions for deploying the door:

The Protection Person must:

1. Secure a suitable form of protection before unlocking the door from the storage position. This protection must remain in place for the duration for which the door is in use.
2. Advise Train Control that the door's operation is part of the occupancy.
3. Add a visitors padlock to the lock frame and endorse the TS90 when the door is in operation.
4. Release securing ties, then move the door from the storage position to the operating position.
5. Attach the securing ties once in the operating position and secure.

Instructions for securing the door in the storage position:

The Worksite Supervisor or RPO / SP must:

1. Check the door is not obstructed.
2. Release the securing ties on the tunnel and withdraw the door into the storage position.
3. Secure the ties into storage position and secure all equipment as per the SOP document.
4. Remove the visitors padlock from the lock frame and endorse the TS90 when advised that the door is secure.
   IMPORTANT: Only when the door is secure and locked in the storage position and all personnel and equipment are clear of the track, can the protection be removed.

11.1.16 Drain Lids

To facilitate the installation of a new drainage system, the lid coverings on the left-hand side channel (Up direction) will be progressively removed.

WARNING
Staff are warned to exercise caution if on foot in the tunnel due to the trip hazard.

11.1.17 Wellington Metro Upgrade Programme - Safe Working Instructions

Work trains No.68 and No.69 conveying UKK wagons, MFS conveyor wagons and an EP wagon may propel on the main line and within the Rimutaka Tunnel in accordance with **TO09 Setting Back and Propelling, 9. Propelling** and the Rimutaka Tunnel Safe Working Methodology.

UKK8711 with an overhanging twistlock mounted conveyor system has had the following components added to the vehicle:

- twistlock mounted pilot refuge
- brake pipe exhaust valve
- electronic horn
- white marker lamps for propelling movements
- red marker lamps for hauling movements

Temporary Running Rights have been granted for UKK8711 between 1016 Up Departure signal Upper Hutt and A8L Down Outer Home signal Featherston subject to the following conditions:

- must only operate within Line Impassable limits
- must only operate in a work train consist

All work train crew and the pilot must be briefed on the Rimutaka Tunnel Safe Working Methodology prior to commencing duty.

The following Gas TARPs must be used according to role:

- Pilot - Network Services Gas TARP
- LE - Locomotive Engineer Gas TARP

The pilot riding in the pilot refuge is authorised to:

- operate the brake pipe exhaust valve in an emergency
- operate the electronic horn in accordance with **TO04 Motive Power Unit Horn, 3.2 Sounding the Horn.**

Local Network Instruction L4, 9.1.2 Exhaust Emissions and **Rail Operating Code Section 5.1 Authorised Riding Positions**, are modified accordingly.

11.2 Featherston

11.2.1 Down Passenger Trains

The Train Controller may clear the Down Departure signal at Featherston at the schedule time of Metro passenger services unless they have been advised by the Operator/Train Manager that the service will be delayed due to passenger requirements.

11.2.2 A8L Down Outer Home Signal

Approaching Featherston from Carterton, a Station Warning board is located outside A8L Down Outer Home signal. **Network Signals, Indicators and Boards Manual, 3.4.1 Classes of Fixed Signals** is modified accordingly.

After passing the Station Warning board the Operator must be prepared to stop the train at A8L Outer Home signal. This signal will only display a proceed indication when No. 8LABC Down Home signal is displaying a normal speed or medium speed proceed aspect.

11.2.3 Shunt Limit Board

When it is necessary for locomotive or shunting movements to be carried out at the north end of Featherston this may be authorised up to the Shunt Limit board located 150 metres inside A8L Down Outer Home signal provided the Train Controller first ensures there will be no conflicting movements.

11.2.4 Passenger Trains Stabled on the Main Line

To enable track work to be undertaken north of Featherston, the following passenger services may terminate on the main line at Featherston before returning to Wellington.

- 1602 / 1607
- 1604 / 1609

Services must not be left unattended. **TO01 Train Movements**, **10. Securing Motive Power Units** and **TO08 Shunting**, **7.3 Standing at Stations** are modified accordingly.

11.2.5 Rusty Rail Conditions - Loop

The Train Controller after signalling a movement onto / from the loop at Featherston, must not alter the setting of No.1 and / or No.7 points until confirmation has been received that the movement is clear of the points concerned.

11.3 Turnouts / Points awaiting Commissioning

New Turnout Featherston – Woodside

New turnout have been installed at:

- 63.779 km between Featherston and Woodside.

The turnout has been secured with Martinus clamps and PS padlocks for main line running.

If it is necessary to open these points both Signals and Track Maintenance Representatives for the area must be in attendance. A Track Warrant must be obtained from the Train Controller before the points are unlocked.

The Train Controller must be advised when the points are again clamped and padlocked.

11.4 Issuing Track Warrant to Intermediate Boards

A track warrant may be issued for a train to an intermediate board at the following locations:

- Wairarapa up passenger trains to Belvedere Road IB
- Wairarapa down passenger to Carterton IB.

In both cases, the Operator must take a new track warrant when stopped and undertaking passenger work at Carterton platform.

11.5 Wiltons Road

Two VU-Track mirrors have been installed at Wiltons Road level crossing 83.50 km between Clareville and Waingawa Siding. The level crossing which is currently protected by two stop signs has the VU-Track mirrors mounted back-to-back with the stop signs on the existing masts. The mirrors are designed to enhance the field of view for motorists approaching the level crossing.

This will be a trial installation to evaluate the effectiveness of the units in providing an improved view down the track where approach views are obscured.

11.6 Waingawa

11.6.1 Operation of Points

A TW key has been issued to the Operations Manager Masterton to assist in the prompt departure of southbound services from Waingawa.

The following instructions will apply:

- the Operator obtains a Track Warrant from the Train Controller to depart Waingawa
- the Operator may then authorise the Operations Manager Masterton to operate the south end main line points.
- The Operations Manager Masterton advises the Operator when the points are secured in revers
- When the service has departed and cleared the points, the Operations Manager Masterton must:
  - restore the main line points to normal, then
  - advise the Operator that the points have been restored and possession of their TW key has been retained.

IMPORTANT

The Operator must not cancel / call clear of Waingawa siding limits until they have received assurance from the Operations Manager Masterton that the points are restored, and they are in possession of their TW key.

Only the Operations Manager Masterton, or certified relief (with personal issue TW keys) who have been briefed / staff23 on this instruction may operate points as above.

RP02 Using Track Warrant Control, **10. Working Sidings** is modified accordingly.

11.6.2 Waingawa Siding

Only services that are scheduled to shunt / work at Waingawa or have been authorised by bulletin (e.g., Work Trains, MTMV's) are permitted to enter the siding.

All other rail vehicles are prohibited.

11.7 Masterton

11.7.1 Station Limits

Station Limits extend from No. 3 Up Home signal at the south end to the Warrant Begins board at the north end.

A Station Warning board is positioned outside No. 2 Down Home signal.

Network Signals, Indicators and Boards, 3.4.1 Classes of Fixed Signals is modified accordingly.

11.7.2 All Trains Stop Board

An All Trains Stop board is located 350 metres outside No. 2 Down Home signal at the north end of Masterton.

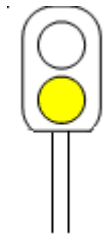
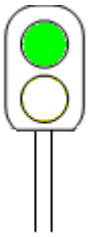
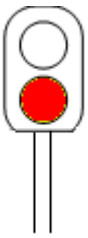
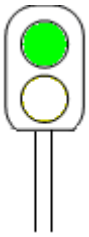
No Down train may pass the All Trains Stop board until authorised by the Officer in Charge who must not clear No.2 Down Home signal until this authority is given otherwise the level crossing alarms will operate unnecessarily.

11.7.3 Signalling of Trains

Masterton is controlled using two-position fixed signals.

Two position signals:

- are not automatic signals
- indicate the route authorised
- do not show the permissible speed or track occupation

Distant Signals		Home Signals	
			
Proceed being prepared to stop at the next signal in advance – should it be at Stop	Clear – Proceed	Danger – Stop	Clear – Proceed

R3 Up Distant signal is placed outside of 3 Up Home signal.

NOTE

The arrangements for berthing incoming trains in the station yard after their arrival on the main line, placing of departing trains to the main line and the turning of locomotives / marshalling arrangements will be advised by Joint Operating Plan and Local Operating Procedures jointly managed by KiwiRail and the Metro Service Operator.

11.7.4 Officer in Charge

The Officer in Charge Masterton is the first Rail Personnel, certified in operating the signal frame, commencing duty.

This may be transferred to other Rail Personnel certified in operating the signal frame when they depart the station.

On commencing duty for the day, the Officer in Charge Masterton is to obtain permission from the Train Controller for movements within station limits.

When leaving Masterton Station, the Officer in Charge will advise the Train Controller that work has been completed and the main line and loop are clear and safe for train movements with all hand points on the main line locked in normal.

This is to be noted on the Train Control diagram.

11.7.5 Woods Points Keys

Woods points keys, when not in use must be kept in the place appointed for their safe custody.

Before using the Woods points key to operate signal levers, the Signaller must ensure that all other points keys are in their appointed place or when any key is in use, that the points to which it applies are correctly set and secured for the passage of trains.

When a Woods points key has been removed from its appointed place the Officer in Charge must see that it is replaced immediately it is no longer required.

11.7.6 Station Attended

Clearing home signals for:

Train not stopping:

- The Officer in Charge must only place the signal at proceed when the line is clear for the movement.
- The Officer in Charge will authorise the movement.

Train required to Stop:

- The Officer in Charge must only place the signal at proceed when line is clear for the movement.
- The train must be brought to a stop, clear within station limits.

The Woods lock keys (A and B) used for operating the signal levers and main line points are held in the signal lever to which they belong and are only to be removed when required to operate the respective main line points. The signal frame levers are enclosed in a special locked cabinet and can only be opened with an AS4 key. The cabinet is to only be unlocked when removing / replacing a Woods lock key or when a signal lever is to be operated.

General:

If after the arrival of an up terminating train it is necessary to set No.3 Up Home signal to proceed for a following train, this must only be done once the main line within station limits is clear, and no further movements will be carried out.

No.3 Up Home signal must not be set to proceed by a Down departing train crew until the Operator has received a track warrant to proceed.

Instruction 11.7.5 is modified accordingly.

Down departing trains must advise the Train Controller after No.3 Up Home signal is set at Proceed.

The Train Controller must note this on the Train Control diagram.

11.7.7 Station Unattended

When an Officer in Charge is not on duty the following arrangements will apply:

Arriving Up trains:

When Up trains arrive, they are to stop at the station and the Operator is to arrange for No.3 Up Home signal to be placed at Stop before clearing the limits of the track warrant.

NOTE
A through train would clear the limits when the train is north of the Track Warrant begins board (Masterton Station limits).

Arriving Down trains:

Down trains must not pass the All Trains Stop board and No.2 Down Home signal at Stop until permission has been obtained from the Train Controller.

Before giving permission, the Train Controller must ensure that the main line is clear for the intended movement.

The speed of a Down train which is authorised to pass No.2 Down Home signal at Stop must not exceed 10 km/h from passing the signal until the train has reached Akura Road level crossing. The alarms for the crossing will start automatically at a point 30 metres beyond the signal. The train must approach the crossing cautiously and the Operator must ensure the alarms are operating before the train proceeds over the crossing.

When a Down train runs late and will conflict with an Up train at Masterton, the Train Controller must not authorise the Down train to pass the All Trains Stop board and No.2 Down Home signal at Stop but must:

- consult with the Train Crew to confirm that they can pilot the Down train through Masterton station limits, or
- call out rail personnel at Masterton who will arrange for the movement of the Down train through Masterton station limits.

Yard to Main Line Movements

Before any infrastructure vehicle enters onto the main line from the station yard, permission must be obtained from the Train Controller.

11.7.8 Carriage Stabling Compound

Carriage Maintenance:

Hyundai Rotem Carriage Depot personnel working in the Carriage Stabling Compound shown on the S&I diagram as “Suburban Storage Siding” area.

1. The Hyundai Rotem Person in Charge must check the Carriage Stabling area has no rail movements.
2. In the station book-on area, lock the Stabling Compound protection sign in the open position and record the Person in Charge and contact number.
3. Travel to the compound by road (to northern gate) or by foot using the crossing point at north end of platform.

4. Apply **TO07 Working on Rail Vehicles**, **6.1 Warning Signs** to all motive power units with the compound.
5. Apply **TS08 Working Within Non-Interlocked Areas** to protect the carriage siding from rail movements entering:
   - Set diverging route
   - lock points
   - erect Danger Stop signals, and
   - lock all gates, including pedestrian gates.
6. Train Managers / TXOs requiring entry to the compound to carry out their duties must come to a Safe Working arrangement with the Person in Charge before being allowed to enter on foot.
7. Train services requiring access must call the Person in Charge to arrange for protection to be removed to allow access.

Cleaning:

Cleaners board service 1606 on the platform and travel to the Carriage Stabling Compound.

On arrival into the compound, cleaners may commence cleaning service 1606 and must stay on the service until advised the compound has been secured.

Train Manager 1608 confirms:

- 1608 and 1610 have been stabled
- yards gates have been closed, and
- the compound has been secured.

On Friday when Train Manager 1612 confirms the service has been berthed and the compound has been secured, cleaners may move to 1612 service to commencing cleaning.

When cleaning is completed, personnel may exit and secure the compound, using the crossing at the north end of the platform to return to the platform.

Refuelling:

Will be carried out using **TO07 Working on Rail Vehicles, 5.3 Protection of Motive Power Unit and Personnel Performing Maintenance** (reverser held by Person in Charge) also shown on Information Bulletin / L4.

12. Melling Branch

12.1 Running Rights

Electric Multiple Units are the only rolling stock authorised to run on the Melling Branch.

The movement of any other rolling stock on this line must be authorised by Network Access and advised by Bulletin.

12.2 Unattended Services

Should it be necessary to leave rail vehicles unattended on the Melling Branch, then this must be authorised by bulletin in accordance with **TO01 Train Movements, 10. Securing Motive Power Units** and **TO08 Shunting**, **7.3 Standing at Stations**

13. Wellington Suburban Area Electric Overhead

DANGER
All parts of the Wellington Suburban electric traction overhead equipment must be treated as live at all times.

Wellington Suburban Electrified Area is:

- NIMT between Wellington–Waikanae
- Wairarapa Line between Wellington–Upper Hutt
- Johnsonville Line
- Melling Line

Emergency Freephone Line:

For all overhead emergencies, contact Train Control Emergency Line: 0800 808 400.

13.1 Damaged Overhead

Any rail personnel observing any damage to the overhead or bonding must tell the Train Controller.

Trains should be stopped if they will be affected by the damage, or further damaged will be caused to the electrified area by allowing train movements.

13.2 Cut Off of Overhead Power

The cut off of overhead power is arranged by the Traction and Systems Controller.

Before power is cut off, the Traction and Systems Controller. must obtain permission from the Train Controller before carrying out isolation of specified areas of the electric overhead, except:

- in non-interlocked,
- freight yard
- or locomotive depot areas

where the Traction and Systems Controller must liaise with the person in charge or the Signaller for the area concerned.

13.3 Planned Work

Usually for planned work on the main line(s), crossing loop or interlocked area, the area affected by the power cut will be advised on an Information or Special Bulletin. In instances where short notice is given of a power cut, and it is not practical to issue a Bulletin then the cut off can be authorised on an EF16 form with the forms being completed by the Traction and Systems Controller and the Train Controller. The Signaller must also be advised where a signal box is affected .

In non-interlocked, freight yard and locomotive depot areas, the EF16 authority will be used and issued to the Person in Charge or Signaller for the area, who will also be responsible for advising those concerned.

13.4 Unplanned / Emergency Work

When the overhead power is required to be cut-off in unplanned / emergency situations this will be covered on an EF16 depending on the area affected.

13.5 Special Instructions

All messages on the EF16 form must be repeated back to the sender.

All overhead power cut offs in a Train Control area must be drawn on the Train Control diagram. When a signal box is affected, a note must be made in the train register; in a yard / depot situation a note must be displayed where it can be read by personnel.

The Traction and Systems Controller must advise the Train Controller (Signaller or Person in Charge, where applicable) when the overhead power has been restored.

On the bulletin the overhead power cut off will be shown as follows (example only):

Cut Off of Overhead Power In connection with the work (work details will state the hours) the overhead will be cut off:

From:	Isolator 123	Just north of Petone	(Up Line only)
To:	Isolator 456	Just south of Woburn	(Up Line only)

CAUTION

During the period the overhead power is cut off between the points specified on the Bulletin or EF16, the movement of electric services with pantographs raised from the “live” area to the “dead” area is prohibited.

13.6 Passenger Services

After loss of power, auxiliary battery power for air conditioning, lighting and communications systems on electric passenger units will last no longer than 90 minutes. The Train Controller must make arrangements so that within 90 minutes from power loss, all affected trains are either:

- recovered to platforms, or
- have power restored, or
- have passengers evacuated / moved to alternate transport

13.7 Advice of Power Failure

When the power fails, the Traction and Systems Controller will advise the Train Controller as soon as possible of the extent and duration of the failure; the Train Controller will inform the Operators of affected trains.

When it is necessary to isolate power, The Traction and Systems Controller must advise the Train Controller who will inform the Operators affected that there will be a momentary loss of power while switching procedures are carried out.

13.8 Emergency Stop Button

An emergency stop button is installed in Train Control and Traction Control to cut off all power to the traction overhead in the Wellington Suburban Electrified Area.

The emergency stop button will typically take 30 seconds to take the power off. The red light will change to green after up to two minutes when the operation is successful. If the light stays red after being pushed, the operation is unsuccessful because not all sections of the overhead system have the power off.

14. Signalling and Interlocking

14.1 North Island Main Trunk

Waikanae

Current S&I Diagram No.3155

Paekakariki–Paraparaumu

Current S&I Diagram No.3154

Amendments:

- Crossovers (1A/1B and 3A/3B) at Paraparaumu should be shown as red lines, as routes are available for electric trains.
- Rename Mckays Crossing at 41.79 km to Whareroa Road

South Junction–North Junction

Current S&I Diagram No.3058

Amendments:

- Add “Exp F Only 25 km/h” board at 30.553 km LH side on Up main
- Change 3132 Up Intermediate signal between Muri and South Junction from a Searchlight to a Multi Aspect signal

Porirua–Plimmerton

The current S&I Diagram is No.3409

Tawa

Current S&I Diagram No.3130

Amendments:

- Insert 'No.4' to Block Entry board.
- Change No.1523 Down Intermediate signal at Linden from a Searchlight to Multi Aspect signal
- Change 11 points at Tawa to in-sleeper points machine (CTS-2)

Wellington

Current S&I Diagram No.3291

14.2 Wairarapa Line

Ngauranga

Current S&I Diagram No.3397

Petone–Melling

Current S&I Diagram No.3232

Amendments:

- 273B points machine has been relocated to the opposite side of the track.

Ava–Waterloo–Gracefield

Current S&I Diagram No.3186

Amendments:

- Woburn - there is currently no overhead wire from the Down main along the loop road (1481A points – loop)

Taita

Current S&I Diagram No.3297

Trentham – Featherston

Current S&I Diagram No.3383

Carterton - Waingawa

Current S&I Diagram No.3339

Masterton

Current S&I Diagram No.3163

Amendments:

- A6A and A6B turnouts have been removed and replaced with straight rail
- Delete Siding 1 - siding has been removed

14.3 Johnsonville Line

Wadestown–Johnsonville

Current S&I Diagram is No.3470

15. Signalling and Interlocking Out of Use

Points at the following stations or sidings are bolted in normal and secured with a PS padlock pending removal.

If it is necessary to shunt any of these sidings the KiwiRail Infrastructure Manager for the area, or their deputy, must be in attendance. Unless otherwise stated the permission of the Train Controller must be obtained and if in a Track Warrant area, a Track Warrant must be issued before the points are unlocked. The Officer from whom permission to unlock the points was obtained must be advised when the points are again padlocked.

Paekakariki

13C points on Loco Back Shunt are defective and not available for use. A danger stop board has been erected between 13C and 13B points.

WL1B switch lock secured and clamped in normal pending repair and is unavailable for use.

Taita

75A and 75B points have been secured and clamped in normal due to worksite requirements and are unavailable for use.

Masterton

Due to track defect and pending repairs, No.11 points are secured in normal and are unavailable for use.

