KiwiRail

Local Network Instructions:

L1.3 North of Waitākere

Publication date 09 Dec, 2024

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1. General Instructions

Heat Sheets

The Daily Heat Sheets for Te Rapa to Whangārei can be found here.

1.1 Bulletins

Terminals must be supplied with **all** bulletins for the areas shown:

Terminal	All Bulletins affecting
Westfield	• Westfield - Waitākere • Te Rapa - Auckland (both routes) • ECMT • Kinleith • Manukau Branch • Mission Bush Branch • Onehunga Branch
Whangārei	North Auckland Line

1.2 Track Warrant Control

Helensville - Otiria	
Warrant Stations	• Helensville • Kaipara Flats • Wellsford • Maungaturoto • Waiotira • Portland*
Intermediate Boards	• Tahekeroa • Te Hana • Taipuha • Mangapai • Oakleigh • Otaika • Kamo • Hikurangi • Whakapara • Maromaku
TW Lever Locked Sidings	• Kaiwaka Siding • Port Whangarei Industrial Siding (in Whangarei station limits) • Kauri Siding • Dairy Siding

* At Portland the main line points are equipped with high lever switch stands

1.3 Shunting Trains and Light Locomotives

1.3.1 Arrangements

The area, hours, and work of shunting trains will be arranged and advised by the Operations Manager or his designated person. Work required by the Access Provider is authorised by the Team Leader, in conjunction with the Train Controller. Shunting trains and light locomotives may run as arranged by each Team Leader within their respective area and directed by the Train Controller.

1.3.2 Crewing

When shunting trains and light locomotives are running under ATC conditions, the Train Controller must be advised.

The Train Controller must endorse the Train Control diagram alongside the plot line for the intended movement.

1.4 General Operating Instructions

1.4.1 Locomotive Radio Tests

The leading locomotive on each train departing Whangārei that runs under ATC conditions south of Helensville must have an ATC radio test carried out at Whangārei.

1.5 Axle Loads

Maximum Axle Load	Loops / Sidings
16.3 tonne	Kaipara Flats, Kaiwaka Siding, Maungaturoto, Waiotira, Portland, Kauri Siding, and Dairy Siding **NOTE** DL locomotives are not permitted
18 tonne	Helensville and Wellsford

NOTE
Roads within Whangārei terminal certified for 18 tonne axle load will be published in the Terminal Local Instructions.

All other roads and sidings between Helensville and Dairy Siding are restricted to 16.3 tonne axle load.

1.6 Maximum Speeds

1.6.1 Maximum Speed of Motive Power Units and Rolling Stock

Motive Power Type	Speed km/h
DC, DFT, DH, DXB and DXC	100
DL	80

Passenger trains

On the North Auckland Line between Whangārei and Otiria on all curves without curve boards the speed must **not** exceed 40 km/h

In addition, on this line the speed of Express passenger trains must not exceed that of passenger trains.

1.6.2 North Auckland Line

Portion of Line	Kilometres per hour	
	Exp F	F
Waitākere-Helensville	**40**	**40**
Helensville–Whangārei	**25**	**25**

Portion of Line	Kilometres per hour	
EXCEPT		
Through Tunnel No.2 (between 79.78 km and 80.36 km)	25	25
Through Tunnel No.2 for DL locomotives - mirrors must be folded (between 79.78 km and 80.36 km)	15	15
Between 202.55 km and 204.10 km (includes Portland Station limits)	25	25
Whangārei–Kauri #	**25**	**25**
Kauri-Otiria	**40**	**40**

Temporary reduction on line speed until tamping complete.

1.6.3 Port Whangārei Branch

Portion of Line	Kilometres per hour
	F
Between 9a pts (0.00km) – 2.106km	15

1.7 Whistle Boards

Track Meterage			
For "Down" trains km	**For "Up" trains km**	**Locations at or Between**	**Warning for**
### 50.10	### 46.30	Huapai and Helensville	Contractors working close to rail corridor
53.33	52.70	Waimauku and Helensville	Increasing use of level crossing from local development
# 65.70	# 64.95	Waimauku and Helensville	Protection for public using walkway and pedestrian crossings
93.55	93.22	Tahekeroa IB and Kaipara Flats	Private level crossing
135.38	134.94	Te Hana IB and Kaiwaka Sdg	Level crossing
..	186.83	Waiotira and Mangapai IB	Private level crossing
188.50	..	Waiotira and Mangapai IB	Private level crossing
..	202.70	Oakleigh IB and Portland	Private level crossing
210.68	..	Otaika IB and Whangārei	Private level crossing
214.85	..	Whangārei and Kamo IB	Cycleway worksite
221.70	221.33	Kamo IB and Kauri Sdg	Private level crossing
236.25	..	Hikurangi and Whakapara IBs	Private level crossing
252.60	..	Whakapara and Maromaku IBs	Private level crossing
..	255.84	Whakapara and Maromaku IBs	Private level crossing
..	256.40	Whakapara and Maromaku IBs	Private level crossing
261.45	..	Maromaku IB and Otiria	Private level crossing
## 272.30	271.25	Maromaku and Otiria	Bridge No 228 renewal

Operates daylight hours, daily.

Operates between 0600 and 1800 hours, Monday to Friday

Operates between 0700 and 1730 hours Monday to Friday, 1900 and 0400 hours daily and 0700 and 1600 hours weekends

2. Level Crossings

2.1 Automatic Alarms at Level Crossings

Standard flashing lights and bells are installed except where indicated.

Symbol	Meaning
A	Bell signals operate during restricted hours
B	Barrier arms also provided
C	Fitted with strobe lights
D	Fitted with Level Crossing Predictor
E	Bell signals and signs worded “TRAIN COMING” operates when a train is approaching
F	Flashing signs worded “**Second Train Coming**” operate when a second train is approaching.
G	Pedestrian automatic gates also provided
M	Manual Control instructions on following pages.
O	Equipped with control panel to switch alarms off
P	When a power failure occurs and Points Indicators have been illuminated or 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
X	Enlarged white side lights.

Unless otherwise stated, level crossing alarms will start and cancel automatically for the passage of trains.

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.

At TWC Indicator loops the alarms will operate in conjunction with the indicators leading over them. “Alarms Start Here” boards may be provided to indicate where the alarms start. If it is necessary to pass these boards, but not the indicator, the indicator should be cancelled. If a train is required to pass an indicator at “Stop” the alarms may not operate correctly.

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 a 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 below. 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.

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

2.2 North Auckland Line

Km	Features	Crossing	Locations at or between
39.43		Taupaki Road	Waitākere and Waimauku
44.50	B S	Access Road	Waitākere and Waimauku
49.54	B R S	Joyce Adams Place	Huapai and Waimauku
50.77	D	Waimauku Station Road	Waimauku and Helensville
74.63	B	SH16	Helensville and Tahekeroa
77.69		Kanohi Road	Helensville and Tahekeroa
99.40	B S	West Coast Road	Tahekeroa and Kaipara Flats
124.67		Silverhill Road	Wellsford and Te Hana
131.58		Oruawharo Road	Te Hana IB and Kaiwaka Sdg
138.86		Oneriri Road	Te Hana IB and Kaiwaka Sdg
149.93	M P	Whakapirau Road	Maungaturoto
187.41		Tauraroa Road	Waiotira and Mangapai
211.75	M	Kioreroa Road	Port Whangārei Industrial Siding and Whangarei
214.36	G O	Vinery Lane (pedestrian)	Whangārei and Kamo IB
214.85	G O	Whangārei Primary School (pedestrian / cycleway)	Whangārei and Kamo IB
215.09	B G	Manse Street	Whangārei and Kamo IB
215.78	B	Kensington Avenue	Whangārei and Kamo IB
216.37	B	Kamo Road	Whangārei and Kamo IB
217.47	B D S	SH1 (Kamo)	Whangārei and Kamo IB
219.24	G R	Wilkinson Avenue (pedestrian)	Whangārei and Kamo IB
226.03	D	Saleyards Road	Kauri Sdg and Dairy Sdg
232.10		Valley Road	Hikurangi and Maromaku IBs
243.21		SH1 (Waiotu)	Hikurangi and Maromaku IBs
251.89		SH1 (Towai)	Hikurangi and Maromaku IBs

2.2.1 Automatic Alarms not Operational

This temporary instruction will apply until the work has been completed and crossings have been commissioned.

Upgrade work is currently being undertaken at the following crossings, all rail vehicle movements over these crossings must stop at the All Train Stop boards and may only proceed when the Signal Maintenance Representative has activated the alarms using the manual control switch.

Whangārei Operations to arrange / advise the Signal Maintenance Representative for train movements over these crossings.

Infrastructure personnel to arrange / advise the Signal Maintenance Representative for rail vehicle movements over these crossings.

- Kioreroa Road at 211.75 km between Port Whangārei Industrial Siding and Whangārei
- SH1 (Kamo) at 217.47 km between Whangārei and Kamo IB

2.3 Alarms with Manual Control

2.3.1 Whakapirau Road, Maungaturoto

Alarms do not start automatically for movements to and from the back shunt. Manual control is available adjacent to 3TIB control box. Alarms must not be manually operated 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 Auckland Line

Locations	Standing Room metres	Description of Siding
Helensville	1016	Loop
Kaipara Flats	675	Loop
Wellsford	651	Loop
Kaiwaka Sdg	300	Siding
Maungaturoto	850	Loop
Waiotira	285	Loop
Portland	466	Loop
Port Whangārei Sdg	195	Northland Fert
	158	Cool Stores
	233	Cool Stores (Wharf Sdg)
Kauri Sdg	143	Siding
Otiria	443	Loop

4. Clearances

4.1 Sidings and Structures

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

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

An asterisk (*) alongside the name of the line or siding 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 Auckland Line

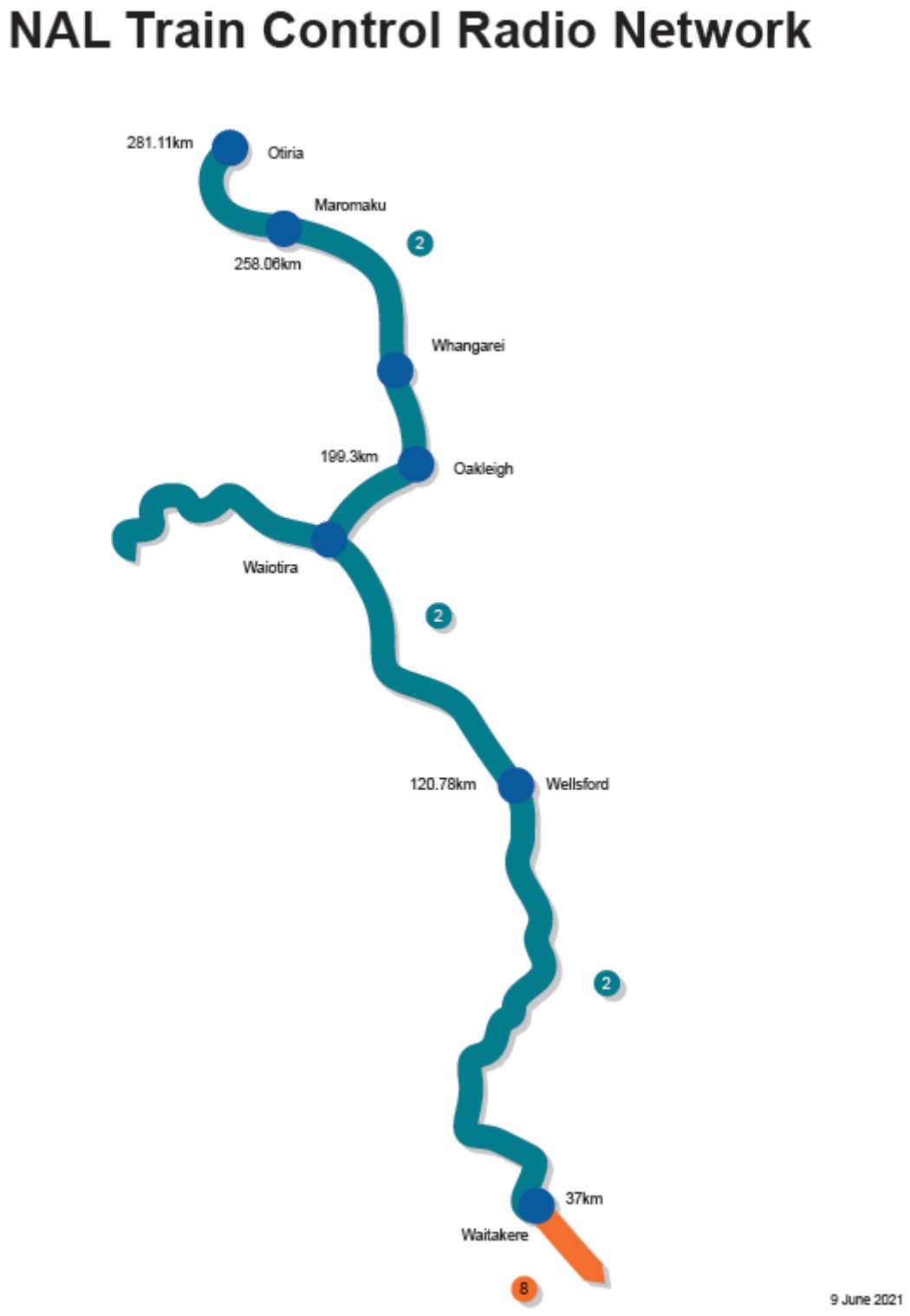
Location	Siding or Line	Structure	Height above rail level mm	Side clearance from centre line of track mm	Remarks and rolling stock prohibited from passing structure
Helensville	Main and Loop*		..	3660	
Kaipara Flats	Main and Loop*		..	3700	
Wellsford	Main and Loop*		..	3750	
Maungaturoto	Main and Loop*		..	3670	
Waiotira	Main and Loop*		..	3650	
Whangārei	Main and Loop*		..	3710	
Otiria	Main and Loop*		..	3640	

5. Radio Channels

5.1 North of Waitākere

From Km / location	To Km / location	Channel
37.00 - Waitākere Station	281.11 - Otiria	2

5.2 Snake Diagram



6. Waitākere - Whangārei

6.1 Derusting Loops

At Helensville, Wellsford and Maungaturoto a train must be routed via the loop each Monday and Thursday when main line points are operational, to stop the build-up of rust.

6.2 Helensville

6.2.1 Crossing Loop Closed

The Helensville Loop is accessible to rail vehicles through No.7 points only.

A physical barrier has been placed across the tracks and a stop disc has been erected to prevent movements onto Bridge 85.

No.3 points remain secured in normal.

6.3 Kaipara Flats

6.3.1 Crossing of Trains

When crossing trains at Kaipara Flats, when possible the down trains must take the loop.

Reason: Restricted access over the bridge at the north end of the yard.

6.4 Maungaturoto

6.4.1 Track Warrant Limits

No.3 points must not be used as a Track Warrant limit until further advised.

3A points have been replaced with straight rail with 3B points secured in normal.

6.5 Portland

The Signalling and Interlocking Diagram includes in the Portland layout.

- Up Station Limit Board
- Down Shunting Limit Board
- Up Shunting Limit Board
- Down Station Limit Board

6.5.1 Yard Operation

Outside the hours of 0730 to 1730, Monday to Friday, shunting movements on these roads can only be carried out after first checking with the Train Controller.

6.5.2 Empty Log Wagons

Empty log wagons must not be dispatched from Portland with pieces of logs on the wagon decks. Any debris must be removed before departing.

6.5.3 Station Limit Boards

The station limit boards would be identified as such in reflectorised black lettering on a white background. A name plate further identifying the boards (for track warrant control purposes) are attached underneath each board with reflectorised lettering front and back stating either Up or Down SLB Portland. These boards will be identified on the track warrant as Up SLB Portland or Down (Dn)

SLB Portland. These boards define station limits for the purposes of **SO08 Track Warrant Control, 7.1 Authority of a Track Warrant**.

SO08 Track Warrant Control, 7. Limits of a Track Warrant is modified accordingly.

6.5.4 Speed Restrictions

Due to points damage, the speed of all movements over No.9 High Column Switch Stand points entering or exiting the Portland loop must not exceed 10 km/h.

6.5.5 Shunting Limit Boards

A shunting limit board has been erected at each end of Portland 300 metres for north end and 350 metres for south end beyond the main line points with a station limit board erected a further 150 metres in each direction beyond the shunting limit board.

The shunting limit boards indicate the limits for shunting movements on the main line and have been erected at such distance out from the main line points to allow sufficient headroom for routine shunting movements. Also refer to the second bullet point in the note below.

NOTES:

The following is a general explanation of what can be expected with track warrants incorporating Portland:

- When the track warrant has a terminating limit of Portland and no berthing instructions then the movement must not pass the station limit board approaching the station until another track warrant has been obtained.
- When the track warrant has a terminating limit of the station limit board at the opposing end of Portland then the movement must not pass the facing shunting limit board.
- When the track warrant includes entering on the main line at Portland, (but no reference to station limit boards), the authority will only extend to the main line to loop points leaving Portland.
- For a movement to enter the loop and a through track warrant for movements beyond Portland there are no changes to the current requirements.

6.6 Whangārei

6.6.1 Main Line

A rake of wagons may be left unattended on the main line at Whangārei. The wagons must be properly secured in accordance with **Rail Operating Code Section 5.1**, **3.2.6 Securing of Rail Vehicles**.

TO08 Shunting, **7.3 Standing at Stations** is modified accordingly.

6.6.2 All Trains Stop Boards

ATS boards are at 1083 metres south and 377 metres north of the respective main line points at Whangārei. This placement defines station limits at Whangārei. Trains must not pass these boards unless authorised.

6.6.3 Movement of Trains

When personnel are on duty, the Operations Desk will authorise the departure of trains from the yard and the movement of trains past the ATS board, directing on which siding the train is to berth. Before passing over points, Locomotive Engineers must ensure that they are correctly set for the movement.

When Rail Personnel are not on duty, the Train Controller will authorise the movement of trains past the ATS board and direct on which siding the train is to berth. Before passing over points, Locomotive Engineers must ensure that they are correctly set for the movement.

When starting duty for the day, the operations desk must call the Train Controller before authorising any shunting operations.

6.6.4 Empty Log Wagons

Empty log wagons must not be dispatched from Whangārei with pieces of logs on the wagon decks. Any debris must be removed before departing.

6.6.5 Yard and Track Clearances

Clearances within portions of the yard are substandard and care must be taken while operating in the yard.

7. Port Whangārei Branch

No.9 points which lead to the Port Whangārei Branch are secured in normal with a Signals 41 padlock.

The branch is closed between No.9 points and end of line for all train movements.

Only track vehicles and approved contractor vehicles are authorised to operate in this area for asset inspections and maintenance activities. Permission must be obtained from the Operations desk at Whangārei before the points are reversed and must be advised when the points have been returned to normal and locked for the main line.

8. Dargaville Branch

The Dargaville Branch Line is leased to Port Dargaville Rail & River Limited (PDR&R) as described below:

8.1 Extent of Lease

The lease of PDR&R extends from 0.20 km to 48.20 km (near Edward Street, Dargaville).

All rail vehicle movements and maintenance requirements are the responsibility of PDR&R.

8.2 Demarcation between PDR&R and KiwiRail territory

A buffer stop and an All Trains Stop Board are placed across the line at Waiotira on the Dargaville Branch.

A sleeper and an All Trains Stop Board are placed across the line at 48.20 km Dargaville.

9. Whangārei - Otiria

9.1 Train Control Calls

Locomotive Engineers on all trains must call the Train Controller at Dairy Siding and the Maromaku Intermediate Board.

9.2 Shunting Dairy Siding

L22 Whangarei – Otiria Shunting Service on occasions will run with L1 Whangārei Shunt attached from Whangārei to the Dairy Siding. L1 locomotive and freight will be marshalled directly behind the L22 train locomotives. The Train Controller must be advised of this by the L22 Operator before departing Whangārei.

Operator

When L1 is berthed in the Dairy Siding:

- Advise the Train Controller that L1 is berthed in the siding and the main line points are secured normal.

You must not, until authorised by subsequent track warrant:

- again operate main line points
- foul the main line.

9.3 Log Wagons

All trains entering Whangārei from the north must have the load on all loaded log wagons checked before crossing the town bridges.

The Shunter can do this check at Kauri before departure. If there is no shunt at Kauri this check must be done before the train passes the Old Town Hall station. No train may pass the Old Town Hall station until this check is done (about 300 metres outside station limits at Whangarei).

If a member of the Whangārei yard team is unavailable, the Locomotive Engineer is to secure his train and complete the check.

9.4 Rusty Rail Conditions

Following reduced rail operations, rusty rail conditions will apply on the following level crossings:

- Valley Road – 232.11 km
- SH1 (Waiotu) – 243.21 km
- SH1 (Towai) – 251.89 km

The speed of all trains over level crossings fitted with level crossing alarms must not exceed 10 km/h. Once on the level crossing a train can resume normal line speed.

Speed Boards have not been erected.

RP15 Implementing Temporary Speed Restrictions is modified accordingly.

9.5 Line Closures

Due to the condition of the bridges and track on the NAL north of Dairy Siding Points the line is closed to all Rail Vehicles from the 226.500 km (between Dairy Sdg and Hikurangi IB) and Otiria

TWACS blocking has been applied between 226.500 km (between Dairy Sdg and Hikurangi IB) and Otiria

NOTE
Blocking may be removed for Maintenance activity only

9.5.1 Construction Zone

Track Closure:

Between 228.200 km and 228.750 km (between Dairy Siding and Hikurangi IB)

- closed to all rail movements
- A danger stop signal and derailer will be installed at the 228.150 km (between Dairy Siding and Hikurangi IB)
- A danger stop signal and derailer will be installed at the 228.800 km (between Dairy Siding and Hikurangi IB)
- Use of **TS02 Protected Work Area, 5. Worksite Register and Locking On/Off** within the construction zone is suspended. Personnel onsite will be managed by the contractor.

Track Warrant Control:

- The Train Controller must maintain TWACS blocking covering the affected area.

9.6 Otiria

9.6.1 Station Limits

Station limits at Otiria are defined by ATS boards at:

- 280.36 km - 187 metres south of TW lever locked points at Otiria.
- 283.93 km - north end of Moerewa siding.

No Up train may pass the ATS board at 280.36 km unless authorised. This authority will be given by the Shunter, Otiria, when in attendance. The Shunter at Otiria must tell the Train Controller when starting and after finishing duty each day.

The main line within Otiria yard must not be occupied without authority from the Train Controller. When Rail Personnel are in attendance, this authority may cover the whole of the working day.

Properly secured wagons may be left unattended on the main line at Otiria when authorised by the Train Controller, who must endorse the train control diagram.

Before finishing duty for the day, Rail Personnel must ensure that the frame lever points are locked in normal.

9.6.2 Frame Lever Points

A set of frame lever trap points have been installed on the main line just beyond Otiria (about 5 metres), leading towards Moerewa. These points must be locked with an AS padlock in the derailing setting. Before any movement passes over these points, they must be correctly set for the intended movement.

9.6.3 Security Gates

To prevent unauthorised motor vehicle access into Otiria yard, security gates have been erected at the following locations:

- Wahamiti Lane – Double gates on either side of the road crossing (over main line and log yard road)
- Kingi Road – Single gate on yard side of road crossing.

Gates have reflectorised All Trains Stop boards attached and are secured with 100 padlocks.

All rail vehicles must stop and open and close gates before proceeding into or exiting Otiria station limits.

9.6.4 Construction Zone

To enable contractors to remove and replace all existing rail and construct a Container Transfer Site, all lines within the station limits including the log yard have been designated a ‘Construction Zone’.

Protection of Construction Zone:

The security gate on the west side of Wahimiti Lane will be secured with a personnel padlock with the key held at the Northland Coordination Centre (NCC).

A derailer and stop board will also be erected.

Rail Vehicles:

All rail vehicles are prohibited from operating (on-tracking) within the Construction Zone.

10. Signalling and Interlocking

10.1 North Auckland Line

Helensville

Current S&I Diagram No.3316

Kaipara Flats–Wellsford

Current S&I Diagram No.2792

Amendments:

- add new crossing on Helensville side of Kaipara Flats (before station warning board) at the 99.398km – West Coast Road
- add B above line on right hand side of the crossing.

Maungaturoto

Current S&I Diagram No.3172

Amendments:

- No.3A points have been replaced with straight rail.

Waiotira

Current S&I Diagram No.3390

Whangārei

Current S&I Diagram No.3231

Otiria

Current S&I Diagram No.3162

Amendments:

- Kauri Siding - No.5 points (Mill Siding) have been removed and replaced with straight rail.
- Kauri Siding - No.1 and 9 points have been changed to High Column Switch Stands.
- Dairy Siding - No.1 points have been changed to a High Column Switch Stand.

11. 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 Area Manager, 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 Train Controller from whom permission to unlock the points was obtained must be advised when the points are again padlocked.

Helensville

Both loop to siding points have been secured in normal due to siding track being out of code for 18 tonne axle loads

No.3 points have been secured in normal to prevent movements via the loop onto Bridge 85.

Wellsford

Both loop to siding points have been secured in normal due to siding track being out of code for 18 tonne axle loads

Maungaturoto

No.3B points have been secured in normal.

Waiotira

No.1 points have been secured in normal pending repairs.

Portland

At Portland on the crossing loop near the north end a turnout has been installed which is bolted and PS padlocked. If it is necessary to open this turnout, a Signals Maintenance Representative must be in attendance and permission must be obtained from the Train Controller. The person from whom permission to unlock the turnout was obtained must advise the Train Controller when the turnout is again padlocked.

Both sets of points from the loop to the Chip Road have been secured in normal.

Dairy Siding

No.1 points have been clamped and secured in reverse.

