KiwiRail

Local Network Instructions:

L7 Main South Line and Branches

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1. General Instructions

Heat Sheets

The Daily Heat Sheet for the MSL and Branches can be found here.

1.1 Bulletins

Terminal	All Bulletins affecting
Christchurch	• Main North Line • Christchurch – Dunedin • Midland Line
Timaru	• Christchurch – Dunedin
Dunedin	• Main South Line • Taieri Branch • Port Chalmers Branches
Invercargill	• Dunedin – Invercargill • Bluff Branch • Ohai Line

1.2 Automatic Signalling

Automatic Signalling operates between:

- Lyttelton to Oamaru and
- Sawyers Bay to Mosgiel (including Taieri Branch).

Trains between Islington and Oamaru and Sawyers Bay and Wingatui (including Taieri Branch) are signalled by the Train Controller.

Christchurch, Addington and Middleton Yards, Lyttelton and Invercargill are interlocked stations remotely controlled by the Train Controller.

Switch lock siding locations:

- Ferrymead Private Siding
- Islington
- Woolston
- Synlait Siding
- Pareora

1.2.1 Signalling Christchurch

Christchurch station limits extend from No 212AC Up Home signal (Middleton) to 30LAB Down Outer Home signal (Waltham). All areas are under the control of the Train Controller.

Addington Local Signal Box is a switch in / switch out Signal Box to control access to the east end of Addington Wagon Depot.

When the Signal Box is switched out, the Train Controller has indications of all points and signals and will authorise track occupancies and / or passing of any signals at stop.

1.3 Track Warrant Control

1.3.1 Main South Line

The Track Warrant Control system covers :

- Oamaru to Sawyers Bay
- Mosgiel to Invercargill
- Bluff Branch
- Ohai Line

Oamaru – Sawyers Bay:	
Interlocked stations	• Herbert • Merton • Waitati
Warrant stations	• Hillgrove • Bushey
Intermediate boards	• Deborah • Whitecraig • Katiki • Shag Point • Wairunga • Goodwood • Seacliff • The Gums • Purakanui
TW Lever Locked sidings	• Palmerston Siding

Mosgiel – Invercargill:	
Interlocked stations	• Clinton
Warrant stations	• Milton • Balclutha • Waipahi • Mataura • Edendale
Intermediate boards	• Allanton • Benhar • Kakapuaka • Warepa • Kuriwao • East Gore • Charlton • Kamahi • Morton Mains • Woodlands • One Tree Point
TW Lever Locked sidings	• Henley • Gore Siding • Southland Tanneries • Alliance Siding • Rayonier Siding • North Edendale Siding

Local Shunt Working between Balclutha and Finegand

When the local shunt is to depart from Balclutha for Finegand:

- The loop to siding points must be locked in normal and the TW key removed.
- The points indicator control switch must be operated to hold 3TIA / 3TIB at proceed with No.3 points locked in normal.
  This will enable the returning shunt to proceed onto the loop without stopping to reset the points indicator and obtain authority from the Train Controller.
  The Train Controller must not authorise other movements on the loop until the shunt has returned from Finegand and is clear of the loop.
  SO08 Track Warrant Control, 9. Fouling the Loop in TWC Territory is modified accordingly.

1.3.2 Bluff Branch

Bluff Branch:	
Intermediate boards	• Clifton • Awarua
TW Lever Locked sidings	• Wool Dumpers Siding • Southland Phosphate Siding

1.3.3 Ohai Line

Ohai Line:	
Intermediate boards	• Oreti • Oporo • Waianiwa • Wrights Bush • Thornbury • Ringway • Waikouro
TW Lever Locked sidings	• Lorneville Siding • Makarewa Siding • Otautau Siding • Wairio
Weighted Frame Lever Points locked with AS Locks	• Crawfords

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. They may also run as directed by the Train Controller.

1.4.2 Propelling

- Wagons may be propelled between Addington and the north end of Middleton during daylight.
  - Before passing over Whiteleigh Ave and Matipo Street, the Rail Operator piloting the movement must ensure the alarms are operating.
- Wagons may be propelled between Port Chalmers and Sawyers Bay during daylight. **TO09 Setting Back and Propelling** is modified accordingly.
- Wagons may be propelled between Southland Tanneries and Rayonier Siding.

1.4.3 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.

1.5 Axle Counters: Dunedin – Wingatui Block Section

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 rail movement has exited the section, it will be necessary to undertake an axle counter reset.

The following process must be followed to undertake an axle counter reset:

1.5.1 Reset Requirements

When a track section is showing occupied after the passage of a rail movement, the Train Controller must:

- confirm that the last signalled rail movement has left the section complete and intact
- confirm that the track indicates as occupied and displays Red on the panel
- initiate a reset in accordance with Local Signalling Instructions
- conduct the sweep process.

1.5.2 Sweep Process

The Train Controller must:

1. Contact the Locomotive Engineer of the next movement and instruct that a ‘sweep’ is to take place.
2. Set the route and authorise the movement with a Safe Working Authority.

The Locomotive Engineer must:

3. Proceed at Restricted Speed.
4. Once clear of the section to which the signal applies, confirm with the Train Controller that the rail movement has left the section and is complete.

This action will normally restore the axle counter to the unoccupied state.

1.5.3 Failure of Normal Axle Counter Reset Process

If the initial remote reset by the Train Controller fails to reset the track section to the unoccupied state:

- A Signals Maintenance Representative must be in attendance.
- The Train Controller must confirm that the last signalled rail 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 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.

The Train Controller must then conduct the sweep process with the next rail movement.

1.5.4 Hi-Rail Vehicle Movements

HRVs may only on / off track at road level crossings clear of the axle counter heads. On / off tracking at other locations within axle counter areas is prohibited.

NOTE

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

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

Reason: Risk of Axle Counter Interference.

The Train Controller will follow the procedures in the Local Signalling Instructions for application of protection / blocking.

1.5.5 Track Evaluation Car EM80 or NDT Test Car (Speno)

The recording movements of the track evaluation car EM80 or NDT Test Car (when testing) must only occur when Signals Maintenance Representatives are in attendance, or arrangements have been made for Infrastructure personnel to reset the axle counters.

Reason: Risk of Axle Counter interference from recording wheels.

1.6 Maximum Speeds

1.6.1 Maximum Speed of Motive Power Units and Rolling Stock

MPU Classes	Maximum Speed
DC, DFT, DX and DXR Locomotives	100 km/h
DSG Locomotives - All yards and Invercargill– Ohai	15 km/h

1.6.2 Main South Line

Portion of Line	Kilometres per hour		
	Exp P	Exp F	F
Lyttelton	25	25	25
Through Tunnel No.1	40	40	40
EXCEPT			
For Ballast Cleaner, MCW and FC wagons	..	25	25
For TRA containers on UK type wagons	..	25	25
Lyttelton Tunnel –Scruttons Road (5.2 km)	**40**	**40**	**40**
EXCEPT			
Down trains through turnout from single to double line in Heathcote	..	30	30
Scruttons Road (5.2 km) – Whiteleigh Ave (13.47 km)	**50**	**50**	**50**
EXCEPT			
Through 1 turnout from West Main and Down Main at Waltham	40	40	40
CET (with doors open) and FC wagons	25	25	25
Bridge 13 on Shunt Road at 10.86 km Christchurch Freight Centre for DL locomotives	25	25	25
Whiteleigh Ave (13.47 km) – Middleton (Annex Road)	**70**	**70**	**55**
EXCEPT			
Through 107 turnout between Up and Down mains at Addington	50	50	50
Middleton (Annex Road) – Oamaru	**100**	**80**	**55**
EXCEPT			
Up trains from 1712 Intermediate Signal to Middleton	80	..	..
When 212AC signal is at Stop – SLOW 65 km/h applies			
Past Hornby platform for FC wagons	..	25	25
Down trains through turnout from double line to single line at Islington	60	60	..
CIMW Site between 28.20 km and 28.40 km A **Constant Speed** is required over the site	..	70	..
Through 7A / 7B points between main and West Main at Rolleston	40	40	40
Through 1A / 1B points between East Main and Midland Line at Rolleston	40	40	40
Between 168.85 km and 171.25 km	50	50	50
Down and Up trains over Seadown Road level crossing at 163.75 km. Down boards at 163.11 km Up boards at 164.37 km. Restriction applies until train reaches level crossing	85	..	..

Portion of Line	Kilometres per hour		
Past Oamaru Platform for JT wagons	..	25	25
Oamaru – Palmerston	**80**	**80**	**55**
EXCEPT			
Between 254.34 km and 257.29 km	50	50	50
Down trains between 262.19km and 262.31 km (including Fortification Road level crossing). Restriction applies until locomotive reaches crossing	50	50	50
Palmerston – Merton	**70**	**70**	**50**
DXR locomotives over Bridge 194 (321.28 km to 321.34 km)	30	30	30
Merton – 349.00 km (between Seacliff and Waitati)	**50**	**50**	**50**
EXCEPT			
Between 337.80 km and 345.50 km	30	30	30
349.00 km (between Seacliff and Waitati) – Waitati	**70**	**70**	**50**
Waitati – Sawyers Bay	**50**	**50**	**50**
EXCEPT			
Through Tunnel No.4 (Cliffs) for USL, MDD 2.8 and 2.9m containers on I class wagons	..	15	15
Through Tunnel No.4 (Cliffs) for FIH wagons	..	25	25
Through Tunnel No.5 (Mihiwaka)	25	25	25
For TR, DSC, DSG and DSJ locos	10	10	10
Through Tunnel No.7 (Mansfield) for CC wagons, loaded 2.9m containers on UDA, UDK, UK type, HKK, and PK type wagons and TRA containers on UK type wagons	..	25	25
Sawyers Bay – Mosgiel	80	70	50
EXCEPT			
Through Tunnel No.8 (Blanket Bay) - **Main Line:** TSD/TSH Containers on I class, HKK, PK type, UK type, USK and USQ wagons	..	25	25
Through Tunnel No.8 (Blanket Bay) - **Loop:** TSD/TSH Containers on I class, HKK, PK type and UK type wagons (TSD/TSH containers prohibited on USK and USQ wagons)	..	15	15
Between 371.58 km and 377.75 km	75	..	..
Between 377.75 km and 379.65 km	50	50	..
Past Dunedin station veranda for containers on I class wagons	..	25	25
Past Dunedin platform for ZK wagons and 2.9m containers loaded on USQ wagons and TSD/TSH containers	..	25	25
Under Overbridge No. 231 (at 381.46 km) for Ballast Cleaner	..	..	25
Through No. 7 points at Wingatui from Taieri branch	25	25	25
Mosgiel – Invercargill	**80**	**80**	**55**
EXCEPT			
Past Mosgiel platform for RM31	25	..	..
Past Balclutha platform for DXR locomotives and RM31	25	25	25
Between 461.43km – 461.635km (over Bridge No.298)	40	40	40
Between 598.93 km (Lindisfarne Street level crossing) and 600.80 km	50	50	50
Between 600.80 km and Invercargill	30	30	30
Past Invercargill platform for ZK wagons and for 2.9m containers loaded on USQ wagons	..	25	25

1.6.3 Hornby Branch

Portion of Line	Kilometres per hour F
Hornby – End of Line	**25**
EXCEPT	
Between 0.28 km and 0.69 km (over SH1 and Aymes Road level crossings)	15
Between 1.67 km and 1.87 km (over Halswell Junction Road level crossing)	15

1.6.4 Port Chalmers Branch

Portion of Line	Kilometres per hour	
	P	F
Sawyers Bay – Port Chalmers	**25**	**25**
EXCEPT		
TSD/TSH Containers on I class, HKK, PK type, UK type, USK and USQ wagons	..	10
From Wickliffe Terrace (including the level crossing) to the Wharf	10	10

1.6.5 Taieri Branch

Portion of Line	Kilometres per hour	
	P	F
Wingatui – End of Branch (3.50 km)	**40**	**40**

1.6.6 Bluff Branch

Portion of Line	Kilometres per hour	
	P	F
Invercargill – Bluff	**40**	**40**
EXCEPT		
Invercargill – Wool Dumpers Siding between 0.00 km and 0.75 km	25	25
2.28 km and 4.5 km	25	25
6.15 km and 6.84 km	25	25
10.675 km and 14.0 km	25	25
Bluff – Through frame lever points at 25.98 km (connection to Bluff Town) to All Trains Stop board at 26.49 km on Island Harbour	15	15

1.6.7 Ohai Line

Portion of Line	Kilometres per hour F
Invercargill – Wairio	**40**
EXCEPT	
Between 0.00 km – 0.90 km	25
Between 2.31km – 2.46km (over Bridge No.1)	10
Between 5.24km – 5.39km (over Bridge No.2)	25
Between 11.74km – 11.95km (over Bridge No.6)	25
Between 15.85 km – 16.20 km (over Bridge No.9)	10
Between 18.25 km – 18.29 km (over Bridge No.11)	10
Between 24.84 km – 24.91 km (over Bridge No.18)	25
Between 34.23 km – 34.44 km (over Bridge No.22)	10
Between 35.21 km – 35.22 km (over Bridge No.23)	10
Between 49.58 km – 49.72 km (over Bridge No.36)	25
Between 53.44 km – 53.48 km (over Bridge No.37)	10
Between 67.87 km – 67.90 km (over Bridge No.39)	10
Between 65.80 km (Wairio) – Ohai (end of line)	25

1.6.8 Finegand Branch

Portion of Line	Kilometres per hour F
Balclutha – Finegand	**25**
EXCEPT	
Between 1.625 km (No.1 points Silver Fern Farms Siding) to end of line	15

1.7 Whistle Boards

For Down trains km	For Up Trains km	Locations at or Between	Warning for
Track Meterage		**Ohai Line**	
49.75	50.10	Otautau Siding – Wairio	School children crossing track

2. Level Crossings

2.1 Automatic Warning Devices

Except where the name of the crossing is prefixed by a symbol, the standard equipment consisting of flashing lights and bells is installed at level crossings listed in this instruction.

Letter	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	Signs worded “TRAIN COMING” operates when a train is approachingFitted with Level Crossing Predictor
F	Flashing signs worded “SECOND TRAIN COMING” operates when a second train is approaching
G	Pedestrian automatic gates also provided
J	Bell signals only
L	Flashing lights only
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 Locomotive Engineer should approach the crossing with caution, even if the alarms are operating.
R	Remote manual control of warning devices, for insulated vehicles
S	Fitted with special level crossing control panel
T	Fitted with remote manual control and barrier raise from Train Control
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 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 Locomotive Engineer 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 stated otherwise. Once the alarms have been manually cancelled all subsequent operations must be manually operated until the train leaves

the area. Under manual control the Locomotive Engineer must check the alarms are operating before proceeding onto the crossing. Where barrier arms are provided the Locomotive Engineer 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.

2.2 Main South Line

km	Features	Crossing	Locations at or between
..	D M	Gladstone Quay	Lyttelton
0.19	D M	Car Terminal	Lyttelton
5.20	F P	Scruttons Road	Heathcote and Woolston
5.93	F P M	Chapmans Road	Heathcote and Woolston
6.75	F P M	Curries Road	Woolston
7.41	B P S	Garlands Road (SH74A)	Woolston and Christchurch
8.66	B P S T	Ensors Road	Christchurch
9.28	B P S T	Wilsons Road	Christchurch
10.38	B P S	Gasson Street	Christchurch
11.36	B P S	Montreal Street	Christchurch and Addington
11.58	B P S	Antigua Street	Christchurch and Addington
12.07	B P S T	Selwyn Street	Addington
12.38	B P S T	Grove Road	Addington
12.53	B P S T	Lincoln Road	Addington
13.47	B P S	Whiteleigh Avenue	Addington
14.07	B P S	Matipo Street	Addington
15.57	B P S T	Annex Road	Middleton
19.75	B M P S	Carmen Road (SH1)	Hornby and Islington
20.69	B P S	Parker Street	Hornby and Islington
21.27	B M P S	Halswell Junction Road	Hornby and Islington
22.84	BS	Pound Road	Islington and Rolleston
24.36	B S	Kirk Road	Islington and Rolleston
25.85	B S	Dawsons Road	Islington and Rolleston
27.17	B S	Curraghs Road	Islington and Rolleston
30.33	B S	Weedons Ross Road	Islington and Rolleston
32.43	P B M	Hoskyns Road	Rolleston
..	B S	Jones Road	LPC Siding Rolleston
35.54		Walkers Road	Rolleston and Bankside
38.92	B M	Aylesbury Road	Rolleston and Bankside
45.11		Telegraph Road	Rolleston and Bankside
47.02	B S	SH1 (Selwyn)	Rolleston and Bankside
48.85		Boundary Creek Road	Rolleston and Bankside
49.97		Browns Road	Rolleston and Bankside

km	Features	Crossing	Locations at or between
57.09	B S	Heslerton Rd	Bankside and Chertsey
67.57	B S	Elizabeth Avenue	Bankside and Chertsey
67.98	B S	South Town Belt	Bankside and Chertsey
68.32		Thompsons Track	Bankside and Chertsey
74.74	B S	SH1 (Chertsey)	Bankside and Chertsey
76.32	B P S	Chertsey Kyle Road	Chertsey
84.70		Stanley Road	Chertsey and Ashburton
88.58	B S	Fairfield Road	Ashburton (Fairton)
89.65	M	Works Road	Ashburton (Fairton)
91.40	B M S	Northpark Road	Ashburton
93.28	B S	East Street	Ashburton
94.23	B P A S	Walnut Avenue	Ashburton
95.08	B P S	Havelock Street	Ashburton
95.45	B S	Moore Street	Ashburton
95.57	B S	Kermode Street (SH1)	Ashburton
97.54		Compton Street	Ashburton (Tinwald)
97.94	B G M R	Lagmhor Road	Ashburton (Tinwald)
98.92	B S	Maronan Road	Ashburton (Tinwald)
104.17		Winslow Westerfield Road	Ashburton and Hinds
110.97		Swamp Road	Ashburton and Hinds
113.08		Delmaine Street	Hinds
126.25		Withells Road	Hinds and Rangitata
130.87	B S	SH79	Hinds and Rangitata
138.11	B S	Arundel – Belfield Road	Rangitata and Temuka
140.85	B P S	Orari Station Road	Rangitata and Temuka
144.48		SH1 (Winchester)	Rangitata and Temuka
147.08	M	Rise Road	Rangitata and Temuka
150.50		Springfield Road	Rangitata and Temuka
152.20		Richard Pearse Drive	Temuka
152.97	G	Commerce Street Ped	Temuka
153.16		Domain Avenue	Temuka
156.35		Arowhenua Station Road	Temuka and Timaru
158.91	M	Dominion Road	Temuka and Timaru
163.75	B S	Seadown Road	Timaru (Washdyke)
165.75	B M S	Meadows Road	Timaru (Washdyke)
171.36	B S	Heaton Street (Main Line)	Timaru (Washdyke)
..		Heaton Street (Freight Yard)	Timaru (Washdyke)
..	M	Port Loop Road (on Wharf)	Timaru (Washdyke)
..	M	Ritchie Street (on Wharf)	Timaru (Washdyke)
182.32	B M S	Pareora Avenue	Timaru and Pareora
187.25		Braddon Street (North)	St Andrews
210.29	B P S	Foley's Road	Studholme
214.79		Lucks Road	Studholme and Glenavy
218.52		Horsenells Road	Studholme and Glenavy
220.74		Morven Beach Road	Studholme and Glenavy
221.78		Crowes Road	Studholme and Glenavy
230.85		Morven Glenavy Road	Glenavy
238.13		Robertson Road	Glenavy and Oamaru
243.46		Richmond Road	Glenavy and Oamaru
245.73	B P S	Works Road	Oamaru (Pukeuri)

km	Features	Crossing	Locations at or between
250.52		Redcastle Road	Oamaru (Pukeuri)
251.22		Waitaki Avenue	Oamaru (Pukeuri)
251.53	B A S	Regina Lane	Oamaru (Pukeuri)
252.01		Caledonian Road	Oamaru (Pukeuri)
252.73		Weaver Street	Oamaru (Pukeuri)
252.80		Orwell Street	Oamaru (Pukeuri)
254.05	B P S	Coquet Street	Oamaru (Pukeuri)
254.62		Thames Street	Oamaru (Pukeuri)
255.00	B S	Severn Street (SH1)	Oamaru and Herbert
256.40		Solway Street	Oamaru and Herbert
259.63		Thousand Acre Road	Oamaru and Herbert
267.81		SH1	Oamaru and Herbert
276.08	B S	Ross Road	Herbert
277.35		Glencoe Road	Herbert and Hillgrove
281.33	D	Waianakarua Road	Herbert- Hillgrove
292.65		Moeraki Boulders Road	Herbert and Hillgrove
293.83		Moeraki Road	Herbert and Hillgrove
314.27	D	Stour Street	Merton - Bushey
315.39	M	Goodwood Road	Palmerston and Merton
328.75		Glasgow Street	Palmerston and Merton
329.49		Inverary Street	Palmerston and Merton
330.42		Beach Street	Palmerston and Merton
333.10		Coast Road	Merton
337.90		Coast Road (Puketeraki)	Merton and Seacliff
342.64	B M S	Coast Road (Seacliff)	Seacliff
344.23		Coast Road (Omimi)	Seacliff and Waitati
345.49		Coast Road	Seacliff and Waitati
346.51		Coast Road	Seacliff and Waitati
347.12		Couper Street	Seacliff and Waitati
347.37		Coast Road	Seacliff and Waitati
354.17		Doctors Point Road	Waitati and Sawyers Bay
366.10		Coombe Hay Terrace	Waitati and Sawyers Bay
376.94	D	Neptune Street	Dunedin
378.34	B S	St Andrews Street	Dunedin
..	M	Wharf Street (on Siding)	Dunedin
393.39	B S	Gordon Road (SH87)	Mosgiel
395.22		Riccarton Road West	Mosgiel and Henley Siding
397.03		Gladfield Road	Mosgiel and Henley Siding
412.13	M	Henley-Berwick Road	Henley Siding
419.61		Waihola Place	Henley Siding and Milton
434.48		Cross Street	Milton
454.70		Benhar Road	Benhar and Balclutha
458.43	M	Baker Street	Benhar and Balclutha
461.63		Glasgow Street	Balclutha
462.53	M	High Street	Balclutha
466.51	D	Kakapuaka Road	Kakapuaka and Warepa
486.04		Waiwera Station Road	Balclutha and Clinton
495.72	B A S	Main Road (SH1)	Clinton
511.64	P	West Otago Road	Waipahi
537.00		Ontario Street	Waipahi and Gore Siding

km	Features	Crossing	Locations at or between
537.29	M	River Street	Waipahi and Gore Siding
537.58	M	Mersey Street	Waipahi and Gore Siding
538.13	BMS	Hyde Street	Gore Siding and Southland Tanneries Siding
538.62	M	Bury Street	Gore Siding and Southland Tanneries Siding
539.23		Salford Street	Gore Siding and Southland Tanneries Siding
548.00		Selbourne Street	Southland Tanneries Siding and Mataura
549.66	M A P	Bridge Street (SH93)	Mataura
550.23	M A	Albion Street	Mataura
553.82	C D	Rayonier Crossing	Mataura and Edendale
..	M	Pioneer Highway (SH1) (on Siding)	Edendale
564.36	P	Ferry Road	Edendale
575.48		Dacre–Morton Mains Road	Edendale and Invercargill
583.23		Flemington Road	Edendale and Invercargill
587.82		Longbush South Road	Edendale and Invercargill
592.60		Rimu Road	Edendale and Invercargill
594.96	D	Mill Road South	One Tree Point and Invercargill
598.13		Inglewood Road	Edendale and Invercargill
598.93	B S	Lindisfarne Street	Edendale and Invercargill
599.81	B S	Elles Road	Edendale and Invercargill
600.16	B S	Ythan Street	Edendale and Invercargill
600.40		Conon Street	Edendale and Invercargill
600.64		Nith Street	Edendale and Invercargill
600.88	B S	Clyde Street (SH1)	Invercargill
601.04	B S	Liddel Street	Invercargill

2.3 Hornby Branch

km	features	Crossing	Locations at or between
0.38	B P S	Main South Road (SH73)	Hornby
0.59	BS	Amyes Road	Hornby and end of line
1.77	X M	Halswell Junction Road	Hornby and end of line

2.4 Port Chalmers Branch

km	Features	Crossing	Locations at or between
1.29	B M	Wickliffe Terrace	Port Chalmers
1.74	M	Beach Street (SH88)	Port Chalmers (Wharf Sidings)
	M	Repair Road	Port Chalmers (Container Terminal)

2.5 Taieri Branch

km	Features	Crossing	Locations at or between
0.11		Gladstone Road North	Wingatui
1.50		Factory Road	Wingatui and Taieri Sidings
		Stedman Road (South) (on siding)	Taieri Sidings
		Stedman Road (North) (on siding)	Taieri Sidings

km	Features	Crossing	Locations at or between
2.92	X	Dukes Road North	Taieri Sidings and end of line

2.6 Bluff Branch

km	Features	Crossing	Locations at or between
0.77		Ettrick Street	Invercargill
1.02		Crinnan Street	Invercargill
1.38		Bond Street	Bluff Branch
	L	SH1 (on Siding)	Southland Phosphate Siding

2.7 Ohai Line

km	Features	Crossing	Locations at or between
0.24	B S	Spey Street	Invercargill
0.70	B S	Victoria Avenue	Invercargill
1.15		Fox Street	Invercargill
2.58	B S	Bay Road	Invercargill and Lorneville Siding
3.15		Heywood Street	Invercargill and Lorneville Siding
3.80		Renfrew Street	Invercargill and Lorneville Siding
4.08		Durham Street	Invercargill and Lorneville Siding
4.76		West Plains Road	Invercargill and Lorneville Siding
5.98		Moore Road	Invercargill and Lorneville Siding
25.67	X	Thornbury Waimatuku Road	Oreti and Otautau Siding
48.66	X	Main Street	Oreti and Otautau Siding
50.25	X	George Street	Otautau Siding and Wairio

2.8 Alarms with Manual Control

2.8.1 Gladstone Quay, Lyttelton

The alarms do not have an extended approach warning for up movements from the yard. Movements from the yard should cautiously enter the main line and before the movement proceeds over the level crossing, the Locomotive Engineer must ascertain that the alarms are operating and that the level crossing is clear of road traffic.

2.8.2 Car Terminal Lyttelton

On the yard siding the alarms are activated 20 metres from the crossing at positions marked by white posts. Movement on the siding should cautiously pass the white marker posts and the Locomotive Engineer must wait until the alarms are operating before proceeding onto the crossing.

If road vehicles are observed to be stopped at the crossing for the passage of a train on the main line, it is possible that a movement on the siding may obstruct the view of the main line train. In this case the siding movement should be kept well clear of the crossing until the main line train has cleared the crossing.

2.8.3 Chapman Road, Woolston

Alarms do not start automatically for movements over the crossing on the shunting leg. Manual Start buttons are located either side of the road and a Cancel button is located on the Signals Relay Box.

2.8.4 Curries Road, Woolston

Alarms do not start automatically for movements to and from the siding via No.688 switch lock and for shunt back movements up the Down main. Manual control is available adjacent No.688 switch lock and in the sidings when No.688 switch lock is reversed, or a train is in the vicinity of No.688 switch lock.

2.8.5 Halswell Junction Road, Hornby Branch

Manual control is available for Up trains adjacent to Spunlight Poles and Caxton Siding points.

2.8.6 Carmen Road, Hornby

As No.1911 switch lock is within the down approach warning distance for Carmen Road the points should be reversed promptly for shunting movement wishing to proceed into Hornby sidings.

As these alarms do not have an extended approach warning on the siding road shunting movements proceeding along this road should cautiously pass the white marker post located 30 metres before the level crossing as this is where the alarms are activated. Before the shunting movement proceeds over the level crossing the Locomotive Engineer must ascertain that the alarms are operating with the half arm barriers fully down and the level crossing is clear of road traffic.

2.8.7 Halswell Junction Road

Equipped with Half Arm Barriers and Bells, these level crossing alarms work automatically in conjunction with signals. Push buttons are provided for the operation of No.2125 and 2128 signals. Releasing No.2176 or 2133 switch locks will put No.2128 and 2090 signals to stop and after a time delay the alarms will cease to operate. Control of No.2125 and 2128 signals is then available by pushbutton. Delays to road traffic by clearing of these signals must be kept to a minimum. When operating the barriers with the manual control, allow the barriers to come down fully before switching to Raise.

2.8.8 Hoskyns Road, Rolleston

Manual control is available for Up trains on platform. There may be a short time delay in the alarms cancelling when the Cancel button is first pressed.

2.8.9 Works Road, Ashburton (Fairton)

Manual control is available for Down trains adjacent to WL4B switch lock. There may be a short delay before manual control is available. Operating the manual Cancel will shorten the down approach to the Alarms Start Here board located between WL4B and Works Road.

2.8.10 Dominion Road: Temuka–Timaru

Manual control is available for Up trains adjacent to No.15894 switch lock. There may be a short delay before manual control is available.

2.8.11 Meadows Road, Washdyke

Manual control is available for Down trains adjacent to WL4C and WL4D switch locks. There may be a short time delay before manual control is available.

On the siding track the alarms are activated 20 metres from the crossing at positions marked by white posts. Shunting movements on the siding should cautiously pass the white marker post and the Locomotive Engineer must wait until the barriers are fully down before proceeding onto the crossing. If the barriers are already down for a main line train any shunting movement on the siding must still approach the level crossing cautiously.

2.8.12 Port Loop Road (North Mole), Timaru Wharf

Alarms do not start automatically. Manual controls are available either side of the road and 50 metres north and 70 metres south of the crossing when a train is in the area.

2.8.13 Richie Street, Timaru Wharf

Alarms do not start automatically. Manual controls are available both side of the road and 80 metres north and south of the crossing.

2.8.14 Pareora Avenue, Pareora

Manual control is available for Up trains adjacent to No.18235 switch lock. There may be a short delay before manual control is available.

2.8.15 Goodwood Road, Palmerston

If No.1 main line points have been reversed, the Down approach warning to Goodwood Road is shortened to the Alarms Start Here board located between No.1 points and Goodwood Road.

2.8.16 Wickliffe Terrace, Port Chalmers

The crossing is equipped with half-barrier arms and level crossing indicators interlocked with the adjacent traffic signals.

For movements to the Port: Occupying the track circuit beyond the white peg will activate the alarms. The red light will flash to acknowledge receipt. When the barriers are detected down the flashing red light will extinguish, and ‘T’ Light will illuminate.

For movements from the Port: The crossing will activate automatically. When the approach track is occupied the red light will flash to acknowledge receipt. When the barriers are detected down the, flashing red light will extinguish, and ‘T’ Light will illuminate.

The crossing will cancel automatically for all movements.

2.8.17 Beach Street (SH 88), Port Chalmers

For movements from the Back Beach Siding the alarms are activated 20 metres from the crossing at a position marked by a white post.

Movements in this direction should cautiously pass the white marker post and the Locomotive Engineer must wait until the alarms are operating and the level crossing is clear of road traffic before proceeding onto the crossing.

2.8.18 Repair Road, Port Chalmers

Alarms do not start automatically for trains going towards the container terminal. Manual control is available at the crossing and at the first set of points in the container yard. Wagons must not be left standing on the Port Chalmers Station side of the Repair Road.

2.8.19 Magnet Street, Dunedin

On the Industrial Siding the alarms are activated 20 metres from the crossing at positions marked by white posts. Movements on the siding should cautiously pass the white marker post and the Locomotive Engineer must wait until the alarms are operating before proceeding onto the crossing.

If road vehicles are observed to be stopped at the crossing for the passage of a train on the main line, it is possible that a movement on the siding may obstruct the view of the main line train. In this case the siding movement should be kept well clear of the crossing until the main line train has cleared the crossing.

2.8.20 Henley Crossing, Henley

Manual control is available for Down main line trains adjacent to No.1 main line points and on the station platform. There may be a short delay in the alarms cancelling when the Cancel button is first pressed.

For movements on the loop the alarms do not start automatically.

Manual controls are available adjacent No.1 and No.9 main line points, just north of the crossing and in the sidings. The alarms must be manually started for Up trains to the loop, via No.1 main line points even if the alarms are already operating.

Trains on the loop should stand well clear of Henley Crossing if possible. Alarms must not be manually operated on the loop when a main line train is closely approaching and until it is well clear of the crossing.

2.8.21 High Street, Balclutha

Alarms Start Here boards indicate where alarms start for the main and the loop. Trains should not enter beyond these unnecessarily. If it is necessary to stand a train in this area but clear of the crossing, the alarms should be manually cancelled.

Manual controls are available either side of the crossing and in the south end of the sidings. The main or loop buttons should be used as appropriate. There may be a short delay in the alarms cancelling when the Cancel button is first pressed. Alarms must not be operated on the loop when a main line train is closely approaching and until it is well clear of the crossing.

2.8.22 River Road, Gore Siding

If Mersey Street alarms are manually controlled or No.9 main line points have been reversed, the Up approach warning to River Road is shortened to the Alarms Start Here board located between Mersey Street and River Road.

2.8.23 Mersey Street, Gore Siding

For main line movements, manual control is available for Up trains adjacent to No.9 main line points, at the first set of points into the yard and on the station building. There may be a short delay in the alarms cancelling when the Cancel button is first pressed. When trains make a prolonged stop at Gore platform the alarms must be cancelled.

For movements along the north back shunt, alarms do not start automatically.

Manual controls are provided either side of the crossing adjacent to the backs hunt. The alarms do not start automatically for an Up train departing from the siding. Alarms must not be manually operated on the back shunt when a main line train is closely approaching and until it is well clear of the crossing.

2.8.24 Hyde Street, Gore Siding

For main line movements, manual control is available for Down trains adjacent to No.1 main line points at the first set of points into the yard and on the station building. There may be a short delay in the alarms cancelling when the Cancel button is first pressed. When trains make a prolonged stop at Gore platform the alarms must be cancelled. For movements along the siding, alarms do not start automatically.

Manual controls are provided either side of the crossing adjacent to the siding. The alarms do not start automatically for a Down train departing from the siding. Alarms must not be manually operated on the siding when a main line train is closely approaching and until it is well clear of the crossing.

2.8.25 Bury Street, Gore Siding

If Hyde Street alarms are manually controlled or No.1 main line points have been reversed the down approach warning to Bury Street is shortened to the Alarms Start Here board located between Hyde Street and Bury Street.

2.8.26 Bridge Street (SH93), Mataura

For movements along the private siding, alarms do not start automatically.

Manual controls are provided either side of the crossing adjacent to the siding and adjacent to the loop Alarms Start Here board. Alarms must not be manually operated on the siding when a main line train is closely approaching and until it is well clear of the crossing.

2.8.27 Albion Street, Mataura

Alarms Start Here boards indicate where alarms start for the loop. Trains should not enter beyond these unnecessarily. If it is necessary to stand a train in this area or on the main line between the indicators, but clear of the crossing, the alarms should be manually cancelled.

Manual controls are available either side of the crossing and in the south end of the sidings.

The main or loop buttons should be used as appropriate. There may be a short delay in the alarms cancelling when the Cancel button is first pressed. Alarms must not be operated on the loop when a main line train is closely approaching and until it is well clear of the crossing.

2.8.28 SH1 (Southland Dairy Co), Edendale

Alarms do not start automatically. Manual controls are available either side of the road.

3. Standing Room for Wagons

3.1 Main South Line

Locations	Standing Room metres	Description of Siding
Lyttelton	383	Main Line
Woolston	428	Siding (345m clear of crossing)
Addington	210	North Main
	323	South Main
	255	No.1 Road
Middleton	262	No.1 Arrival
	278	No.2 Arrival
	345	No.3 Arrival
	703	No.1 Departure
	703	No.2 Departure
	703	No.3 Departure
Sockburn	375	Siding
	248	Siding
Hornby	600	Down Main
	263	Down Siding
	600	Up Main
	555	Up Siding
Islington	330	Siding
Rolleston	1114	Loop West Main
Bankside	995	Loop
Chertsey	900	Loop
Ashburton	945	Loop (825m clear of crossing)
	548	No.1 Road
Hinds	900	Loop
Rangitata	938	Loop
Temuka	930	Loop
Washdyke	735	Loop
Smithfield	225	Siding
Timaru	900	Loop
	900	No.1 Road
Pareora	180	Loop
St Andrews	900	Loop
Studholme	900	East Loop
	488	No.1 Road
Glenavy	975	Loop
	150	No.1 Road
Pukeuri	233	Loop
Oamaru	758	Loop
	608	No.1 Road
Herbert	893	Loop
Hillgrove	1050	Loop
Bushey	1050	Loop
Palmerston Siding	233	Siding

Locations	Standing Room metres	Description of Siding
Merton	788	Loop
Waitati	788	Loop
Sawyers Bay	893	Loop
	308	Container Siding
Dunedin	863	Loop
	563	No.1 Road
	518	No.2 Road
Mosgiel	1275	Loop
Henley Siding	645	Siding 1
	165	Siding 2
Milton	878	Loop
	435	No.1 Road
Balclutha	578	Loop
	1118	Loop extension
	428	No.1 Road
Clinton	1245	Loop
	450	No.1 Road
Waipahi	960	Loop
	165	No.1 Road
Gore Siding	225	Loop
Southland Tanneries Siding	345	Siding
Mataura	983	Loop
	203	No.1 Road
Rayonier Siding	1090	Siding
Edendale North Siding	385	East Siding
	380	West Siding
	360	Middle Siding
Edendale	795	Loop
	188	No.1 Road
Invercargill	780	Main

3.2 Port Chalmers Branch

Locations	Standing Room metres	Description of Siding
Port Chalmers	360	Main Line (clear of level crossing)
	293	Loop Arrival Road
	225	Loop No.1 Siding

3.3 Taieri Branch

Locations	Standing Room metres	Description of Siding
Taieri Sidings	390	Arrival road **Note:** Additional roads within Fonterra Sidings

3.4 Bluff Branch

Locations	Standing Room metres	Description of Siding
Wool Dumpers Siding	270	Siding

Locations	Standing Room metres	Description of Siding
Southland Phosphate Siding	460	Siding
Bluff	510	Loop

3.5 Ohai Line

Locations	Standing Room metres	Description of Siding
Lorneville Siding	330	Siding
Makarewa Sidings	315	Loop
	255	Works Siding
Otautau Siding	285	Loop
Wairio	240	Loop
Crawfords	380	Siding
Ohai	155	New Railhead

4. Clearances

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

CAUTION
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.

4.1 Main South 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
Lyttelton	Main Line and adjacent road *		..	3260	
Heathcote	Main Line	Platform	575	1335	
Woolston	Up Main	Platform	580	1335	Ballast Cleaner
	Down Main	Platform	690	1435	
	Up Main & Loading Siding*		..	3640	
Waltham	2 and 3*		..	3270	
Hornby	Down Main	Platform	390	1320	
Islington	No.'s 1 & 2 Roads*		..	..	
Rolleston	Main Line	Platform	460	1305	
Ashburton	Canterbury Malt Siding		..	..	No main line locomotive past limit board
Timaru	Main Line	Platform	565	1340	Ballast Cleaner
Studholme	Main and Loop*		..	3325	Speed of trains when crossing must not exceed 25 km/h
Mosgiel	Main Line	Platform	..	..	Ballast Cleaner ETM404
Balclutha	Main Line and Loop*			3650 to 3400	Between 461.955 km (north of platform) to 463.70 km (south end of main line 3A points)
Mataura	Loop and No. 1 Siding			3220	
Edendale	Fonterra Drystore Loadout 1	Column Foundation	..	1850	

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
Invercargill	Main and Loop*		..	3450	

4.2 Ohai Line

4.2.1 Otautau Siding

The Central Grain Company building located alongside the back road has inadequate clearances. Locomotives are prohibited from passing through / under this structure.

5. Radio Channels

5.1 Main South Line

From Km / location	To Km / location	Channel
0.00 - Lyttelton	3.40 - Tunnel #1 (West end)	3
3.40 - Tunnel #1 (West end)	8.53 - Ensors Road	10
8.53 - Ensors Road	15.87 - Annex Road	7
15.87 - Annex Road	33.50 - Rolleston	10
33.50 - Rolleston	58.00 - Bankside	4
58.00 - Bankside	137.00 - Rangitata	13
137.00 - Rangitata	208.50 - Studholme	2
208.50 - Studholme	231.04 - Glenavy	4
231.04 - Glenavy	291.00 - Hillgrove	10
291.00 - Hillgrove	297.00 - Katiki	7
297.00 - Katiki	321.70 - Goodwood	12
321.70 - Goodwood	368.00 - Sawyers Bay	8
368.00 - Sawyers Bay	387.00 - Abbotsford	11- South 6 - North
387.0 - Abbotsford	456.0 - Benhar	3
456.0 - Benhar	513.0 - Waipahi	7
513.00 - Waipahi	595.40 - One Tree Point	4
595.40 - One Tree Point	601.00 - Invercargill (Includes Loops and Sidings)	8

5.2 Christchurch

Christchurch Station Limits Radio Communication Plan

For use between Annex and Ensors Roads (MSL) and Fendalton Road (MNL) inclusive.

User	Channels
Christchurch Control	UHF **ASP 11**
	E Band 7
Addington Box when switched in	**E Band 1**

5.3 Branch Lines

From Km / location	To Km / location	Channel
Hornby Branch		
0.00 - Hornby	(End of Line)	2
Port Chalmers Branch		
0.00 – Sawyers Bay	Port Chalmers	2
Taieri Branch		
0.00 - Wingatui	3.50 (end of Line)	3
Ohai Line		
0.00 - Invercargill	Ohai (end of Line)	4
Bluff Line		
0.00 - Invercargill	Bluff (end of Line)	4

5.4 Snake Diagram

6. Lyttelton – Oamaru (Inclusive)

6.1 Lyttelton

6.1.1 Rockfall Hazard

A rockfall hazard exists within station limits at Lyttelton. Rail Personnel operating between Gladstone Quay level crossing and the Valley Grid are warned to be vigilant for falling rocks obstructing the permanent way or footpaths.

6.1.2 Speed

Speed over the level crossing which leads to No.7 Wharf and Tank Sidings must not exceed 10 km/h.

6.1.3 Arriving Trains

The main line ends at the ATS board 70m on the west side of No.10L Shunt and Down Directing signal.

All trains arriving at Lyttelton must stop at, or opposite this board unless hand signalled to proceed. The board has double painted arrows underneath the wording.

Any train signalled to proceed past the board must be prepared to stop clear of any obstruction.

The Train Controller must not signal a train to enter the yard via No.7 points reversed until authorised by Yard Personnel.

6.1.4 Shunting Operations Lyttelton Yard

The container terminal and coal discharge at Lyttelton allow shunting operations to occur simultaneously. To protect against conflicting movements in the non-interlocked area between Lyttelton and the coal discharge, the following instructions will always operate:

- All movements in the non-interlocked area must always be piloted.
- Communication with trains / shunts will be between the Persons in Charge of trains / shunts via radio or cellphone.
- Should a train or shunt be required to proceed from the main line or yard to the coal discharge, container terminal or valley, the person in charge of the movement must ascertain whether any other trains / shunts are operating in the area. If so, they must communicate and come to a clear understanding as to what the arrangements will be before proceeding.
- Should a train or shunt be required to proceed from the coal discharge, container terminal or valley to the main line or yard at Lyttelton, the person in charge of the movement must ascertain whether other trains / shunts have arrived at Lyttelton or are currently operating in the area. If so, they must communicate and come to a clear understanding as to what the arrangements will be before proceeding.
- Should a train / shunt arrive at Lyttelton, and there are no other trains / shunts present and the Person in Charge is unable to ascertain if any other trains / shunts are operating, the Person in Charge must communicate with the Train Controller to confirm if any trains / shunts are operating at Lyttelton.

6.2 Lyttelton Tunnel

6.2.1 Clearing Signals

To avoid locomotives being held in the tunnel, the Train Controller is to ensure that for:

- Up movements – 8RABC Up Home signal is cleared before 4R Up Outer Home signal is cleared.
- Down movements – 4LABC Down Starting signal is cleared before 8L Down Directing signal is cleared.

6.2.2 Surveillance Cameras

As part of the Lyttelton Port Company (LPC) security system the Lyttelton tunnel is under security camera surveillance and the tunnel has been equipped with sensors to detect the presence of unauthorised personnel. The camera and sensors are constantly monitored by the Lyttelton Port Security Control Centre.

In addition to the requirements outlined in Track Safety rules the following will also apply to KiwiRail Personnel and any other contractor. Before any type of track occupancy is undertaken in the Lyttelton tunnel, the Track Maintenance Representative must contact the Train Controller and provide details of the proposed occupation.

6.2.3 Security Gates

The security gate has been installed at 0.72 km MSL (Lyttelton end of tunnel eastern portal). In normal circumstances the gate will be locked in the open position except when the security of the port is under threat. The gate open lock is fitted with detection so that the Lyttelton Port Security Control Centre is alerted if the lock is accidentally or deliberately opened.

In the event of a Level 2 or greater security alert the gate will be locked shut across the tunnel portal by the Lyttelton Port Security Control Centre and rail access to the Port will be under the control of the LPC.

Before locking the gate shut across the tunnel portal the following procedure will be followed by the Lyttelton Port Security Control Centre.

The Lyttelton Port Security Control centre is to ring the Main South Line Train Controller on 0800 808 400 and advise of the need to stop all train movements through the Lyttelton Tunnel. If unable to contact the Train Controller, the Lyttelton Port Security Control centre will advise the Network Control Manager on 021 440 112.

The Train Controller will then check the location of all trains or rail vehicles at Lyttelton, on the Main South Line either in the Lyttelton Tunnel or heading towards it and will arrange for those trains and / or rail vehicles to be brought to a stop clear of the tunnel. The Train Controller will then apply signal blocking to prevent any rail movements from entering the tunnel.

The Train Controller will then advise the Lyttelton Port Security Control Centre on 03 328 7917 that the gate can be shut, and the Lyttelton Port Security Control Centre will then lock the gate shut across the tunnel portal.

The Lyttelton Port Security Control Centre will advise the Train Controller whether any rail access to the port will be possible during the security alert and how that will be controlled.

If no rail access is possible then the Train Controller, in conjunction with the Lyttelton Port Security Control Centre will arrange transport of Track Maintenance Representatives back to their depot.

Once the security alert has been lifted, the Lyttelton Port Security Control centre will open the gate, lock it in the open position and advise the Train Controller that the tunnel is clear. Only once the clearance is given may the applied signal blocking be lifted, and rail movements allowed to enter the tunnel.

If unauthorised personnel are detected or observed in the tunnel in the absence of a security alert, the Lyttelton Port Security Control Centre must advise Train Control immediately.

Refer **Emergency Response Manual, 11. Trespass Response**.

6.2.4 Testing Tunnel Radio System

Personnel who have received training will test the tunnel radio systems in a Hi-Rail vehicle as follows:

Tunnel	Test Frequency	Normal Test Day

Lyttelton	Weekly	Wednesday

When the HRV is in the appropriate tunnel and positioned correctly:

1. Select the correct Train Control radio channel.
2. Press the * button to send call (where appropriate).

The Train Controller will hear this, but nothing will be displayed on the MSP Radio computer screen.

A reply will be sent automatically to the HRV with 2 selcall tones.

Once 2 selcall tones close together have been heard then the system is operating correctly.

The HRV driver must advise the Train Controller of the test results.

This information must be noted on the train control diagram and Operations Support contacted for any reported faults.

If the HRV cannot perform these tests during any given week, the Train Controller must be advised and arrange for a locomotive to perform the test.

In this case the test will be performed by sending a Base Call in the appropriate tunnel and the Locomotive Engineer confirming that the call has locked on.

The Train Controller will confirm that the Base Call was received.

6.2.5 Radio Communications

Once permission has been given for Rail Personnel to use the Lyttelton and Tunnel radio frequency (Channel 3), the Train Controller should not permit or carry out any transmissions on the Lyttelton and Tunnel radio repeater system.

6.2.6 VHF Portable

A spare VHF portable is held at Middleton for emergency purposes.

6.2.7 ATC Instructions

Locomotive Engineer to Train Control Radio System

The VHF radio coverage is continuous from the radio channel change board at Heathcote to Lyttelton (including the Lyttelton Tunnel) for ATC on Channel 3 (see note herein). This includes:

- transmissions from locomotive to Train Controller
- from VHF portable to Train Controller
- between a person using a portable entering the tunnel to provide assistance, and
- Locomotive Engineer (on either loco or portable radio).

The coverage on Channel 1 between two VHF radios will only extend for about 100 metres. Therefore, when using Channel 3 for communication between two persons in the tunnel, the Train Controller’s permission will need to be obtained as the transmissions will be heard over the Lyttelton and Tunnel repeater system. The locomotive UHF portable radio will not work in the tunnel.

NOTE
Communication near the Channel Change board (Heathcote side).

If the Train Controller is having difficulty understanding transmissions on channel 2 then channel 3 may be used.

When working with the VHF Portable, the following procedure must be followed by both the Locomotive Engineer and Train Controller:

1. Train stops with any portion of the train or locomotive in the tunnel and the Locomotive Engineer is required to leave the cab.
2. Before leaving the cab, the Locomotive Engineer will place a base call to the Train Controller on the portable, identify the train he is on and advise that he wishes to leave the cab with the VHF portable.
3. The Train Controller will acknowledge the call and then agree with the Locomotive Engineer on the length of time required (with a maximum of 7 minutes) before the next call will be made by the Locomotive Engineer.
4. Once the time is agreed, the Train Controller will activate the Call Timer function on the radio computer system with the curser on the base call from the portable and enter the agreed time, then confirm that the agreed time has been entered with the Locomotive Engineer who may then leave the cab.
5. Should more time (in excess of 7 minutes) be required by the Locomotive Engineer after leaving the cab, then a base call from the portable must be sent and this will reset the original agreed time.
6. Resetting of the timer in Train Control will be accompanied by an audible bleep and the timer indication flashing several times to alert the Train Controller that the time on the active call window alongside the VHF portable call has been updated.
7. During the period the timer is activated, and the Locomotive Engineer wishes to contact the Train Controller, a voice call must be made.
8. If the timer is allowed to run the full cycle and activate, the timer indication on the workstation screen changes colour and flashes in quick succession approximately every 4 seconds with an audible alarm sounding.
9. If the Locomotive Engineer does not make contact at the prearranged time, the Train Controller is to call immediately and to continue to call frequently for the next two minutes. If no response is received within two minutes, the Train Controller is to arrange for a person to proceed to the train and advise the reason for the Locomotive Engineer not responding.

6.2.8 Radio Failure

When there is a failure of the tunnel radio system, the radio link or radio computer system, personnel must not enter the tunnel unless they are carrying out repairs to the radio system.

When there is a failure of a locomotive radio, this locomotive must not be in the lead position when travelling through the tunnel.

6.2.9 Train Control Telephones

Train Control Telephones are placed in the tunnel as follows:

Meterage	Location
0.600 km	8LA Signal
1.590 km	Tunnel
2.880 km	Tunnel
3.300 km	4L Signal
3.468 km	4R Signal

6.2.10 Setting Back Procedures

Before the setting back movement commences, the Train Controller must be advised.

When assistance is required and the Train Controller comes to an understanding with the Locomotive Engineer that the train will not move in either direction, as assistance may enter the tunnel from either Heathcote or Lyttelton end.

IMPORTANT
In the event of an ATC Radio Alarm being activated by a locomotive, the locomotive must not be moved until permission is received from the Train Controller as assistance may approach from either end of the tunnel.

Locomotive Engineers setting back are not required to stop at Up Intermediate 150AB or down intermediate 265AB signals.

SO01 Responding to Signals, 3.1 Rail Vehicle Movements and **SO02 Automatic Signalling Rules, 6. Passing Intermediate Signals at Stop** are modified accordingly.

Down Trains

When a locomotive stalls or fails in the tunnel, the Locomotive Engineer may set the train back to the Lyttelton end provided the locomotive compressors are operational to maintain air supply to the train braking system.

If no contact can be made with the Train Controller, the train may be set back cautiously past No.8RABC Up Home signal at Stop. The setting back horn signal must be sounded frequently while setting back. However, the train must be stopped once the locomotives have cleared the portal of the tunnel and the train must wait there for assistance.

TO09 Setting Back and Propelling, 5. Pilot Not Required and **9. Propelling** and **SO02 Automatic Signalling Rules, 8. Interlocked Stations** are modified accordingly.

The main line west of the All Trains Stop board at the east end of the main line at Lyttelton must be kept clear and shunting must not be permitted on that part of the main line until any train travelling from Lyttelton has arrived at Heathcote.

If a train is seen backing out of the tunnel, the Train Controller must stop all shunting movements on the main line extension east of the All Trains Stop board.

IMPORTANT
No.7 points at Lyttelton must always be set for the main line when not in use.

Up Trains

When an obstruction or event prevents an up train from exiting the Lyttelton end of the tunnel, the Locomotive Engineer may set back the train towards the Heathcote end.

Two Setback Distance signs have been erected at 1200m and 850m from 4LABC signal facing the up direction.

If no contact can be made with the Train Controller, the train may be set back cautiously until the 850m Setback Distance sign is visible from the locomotive cab window at which point the train must be brought to a stop.

TO09 Setting Back and Propelling, 5. Pilot Not Required and **SO02 Automatic Signalling Rules, 8. Interlocked Stations** are modified accordingly.

The train crew must then exit the tunnel in accordance with **TARP 3 Freight Train Stopped/Disabled/ Parted/Overdue In Tunnel**.

Setback Distance signs located 1200m and 850m from 4LABC signal

6.2.11 Hi-Rail Vehicle - Christchurch

During the hours that Infrastructure personnel are on duty, access to Hi-Rail vehicles can be obtained on phone 38939 or 03 372 8939. Train Control on 43368 or 04 498 3368 is in Selcall radio contact with these vehicles.

Should it be necessary for the HRV driver to leave the vehicle in the tunnel in an emergency situation without a VHF portable radio, then Train Control must activate the radio computer “Timer” function on the call indication with the agreed time for the next call.

A VHF portable radio is available in Train Control and at Lyttelton.

6.2.12 Track Work

Rail Personnel must not commence work on the line immediately after a train passes proceeding from Lyttelton to Heathcote but must wait until the train arrives at Heathcote.

6.2.13 Trolley / Hi-Rail Vehicle Movements

All movements in Lyttelton Tunnel must be in accordance with **TS12 Hi-Rail Vehicles, 4. Protection Requirements** and **5. HRV Operations** except that a trolley / Hi-Rail vehicle movement must not follow a train from Lyttelton but wait until the train arrives at Heathcote.

6.2.14 Train Control Timer

A tunnel timer is installed on the signalling system and will activate after the track circuit in the tunnel has been occupied for greater than 9 minutes. If the timer alarm activates, the Train Controller must attempt to contact the train and then institute an emergency response if contract is not made within 2 minutes.

NOTE

The timer does not operate if a train passes a signal at Stop, or if the track is dropped due to maintenance.

6.2.15 Signalling of Trains

Due to ongoing problems with signalling track circuits in the Lyttleton tunnel, track occupancy detection has been removed from a section of track between 150 Up Intermediate signal and 8RABC Up Home signal Lyttelton. To allow trains to continue to be signalled through this section of track, a modification of the signalling system has been carried out as follows:

Referring to the Train Control signalling screen.

Up Movements:

1. Clearing 4R Up Outer Home signal will lock all opposing movements and prevent 8LA Down Directing signal and 8LB Down Directing from Loop signal from being cleared to the section of track from 8LA / 8LB signals to 4LABC Down Advanced Starting signal. Signal blocking for the tracks will be applied automatically and indicated as pending.
2. Once the train has passed 4R signal (occupying C track) the locking on 4R signal will be activated preventing 4R signal from being re-cleared for a following movement. At this point the signal blocking will automatically appear as a solid red line.
3. The signal locking and CTC signal blocking on 4R signal, 8LA signal and 8LB signal will remain in place until the train has reached the Lyttelton end of the tunnel and is clear of F track. The signal blocking will automatically be lifted, and the red line will be extinguished.

Down Movements:

1. Clearing 8LA Down Directing signal or 8LB Down Directing from Loop signal will lock all opposing movements and prevent 4R Up Outer Home signal from being cleared to the section of track from 4R signal to 8RABC Up Home signal. Signal blocking for the tracks will be applied automatically and indicated as pending.
2. Once the train has passed either 8LA or 8LB signal (occupying F track) the locking on 8LA / 8LB signal will be activated preventing 8LA/8LB signal from being re-cleared for a following movement. At this point the signal blocking will automatically appear as a solid red line.
3. The signal locking and CTC signal blocking on 4R signal, 8LA signal and 8LB signal will remain in place until the train has reached the Woolston end of the tunnel and is clear of C track. The signal blocking will automatically be lifted, and the red line will be extinguished.

The track indication E track will show occupied at all times.

When automatic signal blocking is applied after a signal into the section has been cleared a red TRAIN indication will be displayed to distinguish the automatic signal blocking from normal signal blocking.

1. On the completion of each movement the Train Controller must confirm that the entire train has cleared the section of track between 3 points and 8L signal before another movement in either the up or down direction is signalled into the tunnel.

IMPORTANT
Locomotive Engineers and Operators of all trains must call the Train Controller when their train has cleared the Lyttelton Tunnel completely clear of 3pts or 8LA/8LB

2. Reversing movements from the Up main to Down main at Heathcote and shunting movements from yard to main (and vice versa) via 7 points at Lyttelton are prohibited. Should a train movement be required to reverse direction to exit the tunnel Train Control may have to verbally authorise the next movement to reset the system.
3. If it is necessary to authorise movements past signals 8LA, 8LB or 4R at stop and auto signal blocking is not already in place, normal signal blocking must be applied.
4. If the locking of movements or the automatic signal blocking does not release after a train has completed its movement through the section any subsequent movement will not be able to be signalled and will need to be given verbal authority to enter the section. If after the second movement the signals locking, or the automatic signal blocking is not released the Train Controller must advise the on-call Signals Maintenance Representative for the area.

6.3 Ferrymead Siding

KiwiRail locomotives are not allowed past the trap points located just inside the siding due to poor track conditions. Consequently, when placing/lifting wagons to Ferrymead siding, the local shunting service must propel the wagons on the Up main line between Woolston, Ferrymead siding and Lyttelton as required in **TO09 Setting Back and Propelling.**

6.4 Woolston

The Train Controller's permission is required before switch locks are released.

Switch lock	Opening switch lock door
628 and 658	Cancels: • 'A' lights and reverts signals 673 to stop • Level crossing alarms at Curries Road
688	Cancels: • 'A' lights and reverts signals 739 and 718 to stop • Level crossing alarms at Garlands Road
629	After the switch lock handle moved to reverse • reverts 592 signal to stop and • cancels alarms on Chapmans Road

Switch Lock Door open and control of signals

Signals buttons at switch lock	Control
628 and 658	673 signal and the level crossing alarms at Curries Road
688	739 signal and the level crossing alarms at Garlands Road
629	After passing NB1 at max speed of 10 km/h 592 signal will clear and activate alarms on Chapmans Road

Shunting movements

For shunting purposes on the Up Main line and setting back between:

- No.592 signal and Shunt Limit board (near Curries Road)

NOTE
Switch lock No.629 door must be open during the setting back movement.

While switch lock No.629 is released, the speed of the shunting service working the siding when moving on the main line and approaching Chapmans Road level crossing must not exceed 10 km/h due to delayed operation of level crossing alarms.

- Switch lock No.496 (Ferrymead siding) and Signal No.519

SO02 Automatic Signalling Rules, 5. Setting Back in Block Section Authority is modified accordingly.

NOTE
When the 'A' light on No.718 signal is not illuminated, rail vehicle movements on the Up main must stop short of No.718 signal and call the Train Controller to establish if the route is clear ahead.

For shunting purposes on the Down Main Line and setting back between:

- No.739 signal and Shunt Limit board (near No.611 signal)

SO02 Automatic Signalling Rules, 5. Setting Back in Block Section Authority is modified accordingly.

Pushbuttons are provided in switch lock No.688 and 693 to release switch lock No.628 and 658 when shunting from the yard.

A train entering switch lock No.688 must pull forward to occupy the track circuit just beyond the switch lock.

If there is no Up train approaching Woolston, the switch lock release will be given immediately.

If there is an Up train approaching the points will not be released until a 90-second time delay has run or the approaching train has passed and cleared the area.

RP14 Operating Switch Lock Sidings is modified accordingly.

6.4.1 Chapmans Road Level Crossing

Due to rusty rail conditions, the speed of all movements on the shunting leg leading over Chapmans Road level crossing must not exceed 10 km/h. The alarms must be operating before the movement proceeds over the level crossing.

6.4.2 Departing Services

The Train Controller's permission is required before switch locks are released.

To establish running order and to ensure correct signalling / berthing is provided for Down trains or at Lyttelton, Operators of all service must call the Train Controller before departing Woolston.

Permission to depart Woolston may be granted prior to the anticipated departure time, such as before exiting a Woolston siding to double-up or when certifying clear of the Lyttelton tunnel.

6.5 Woolston to Middleton Area Shunting Services

6.5.1 End of Train Signal

Shunting services working on the main line between Linwood locomotive servicing depot and Middleton may run without an end of train signal. The appropriate brake test must be carried out in accordance with **Rail Operating Code Section 5.3, 6.5.1 Terminal Test**.

TO04 Train Lights, **6. End of Train Signal** is modified accordingly.

6.6 Waltham Yard

6.6.1 Waltham Mechanical Hub

Waltham Mechanical Hub (WMH) comprises all non-interlocked roads at Waltham, between ZL Shunt Signal Shunt Road, 32RA Shunt Signal Passenger Yard Straight and 32RB Shunt Signal from Siding.

Protection of Waltham Mechanical Hub:

The Train Controller must always activate the CYS Automatic (signal) Blocking Command to prevent movements entering the WMH.

This command will block 3, 13 and 27 points at normal preventing the clearing of 12RAC Up Directing, 26LD Shunt from Up Main and 28LABC Down Home signals from being cleared to enter the WMH.

The CYS Auto Command has an added prompt ‘Call 027 272 4176’ to the Lift (signal) Blocking function.

Entry to Waltham Mechanical Hub from Interlocked Areas:

All movements must request permission to enter the WMH from the Train Controller.

The Train Controller only, must obtain authority for movements to enter the WMH from the Person in Charge (PIC) or their delegate on 027 272 4176.

When authority to enter has been obtained from the PIC or delegate, the Train Controller will set the route and place the appropriate signals to proceed for the movement to enter the WMH. When the requested signal has gone to proceed, the Train Controller will immediately re-activate the CYS Auto Command.

When the authorised movement has cleared into the non-interlocked area, the points will return to normal and the CYS (signal) Blocking will be completely applied.

Exit from the Waltham Mechanical Hub:

The Train Controller may clear 14L signal (Auto Command) for down movements, or 32RA / 32RB signals for up movements when requested by the Operator of the movement.

Radio Communications:

All shunting movements must use ASP Radio Channel 1.

6.6.2 Rusty Rail Conditions and Signalling Alterations East End Waltham

The Passenger Yard Straight at Waltham has been removed.

No.29 points cannot be secured to prevent movements to the Passenger Yard Straight without loss of detection.

Incorrect entry to the Passenger Yard Straight from the east will be protected as follows:

- 32L (Shunt from East Back Shunt) to Passenger Yard Straight is fixed at Stop.

- 26LD (Shunt from Up Main) will not show a Proceed when the route is set towards the Passenger Yard Straight.
- 28LC (Down Home) will not show a Low Speed when the route is set towards the Passenger Yard Straight.
- The Train Controller must ensure that the route is set towards the sidings before verbal authorisation (if required) is given to pass 26LD and 28L when No.27 points are in reverse.

Due to rusty rail conditions, Arrow Indicators 27AIA / 27AIB will not illuminate when requested. No.27 and 29 points must be control tagged for the route before verbal authority is given.

Depot staff must call the Train Controller when the route is no longer required at which time the control tags can be removed.

6.7 Addington

6.7.1 Rusty Rail Conditions

Due to rusty rail conditions, No.18 and No.20 points at Addington have been isolated in normal. If required, points may be hand operated to the required position for the intended movement.

The Train Controller must be advised when the points are altered and must record the position of the points on the train control diagram.

6.7.2 Shunting Repair Depot

The repair depot shunt locomotive has the right of road over all sidings in the repair depot. When the Middleton yard shunt locomotive enters the repair depot yard, it must be protected by the Shunter in Charge and kept clear of the repair depot locomotive.

6.7.3 Stop Board

Down trains detained at No.3 or 7 Down Directing signals must stop at the Stop board 6 metres east of the crossing until signalled to proceed. Trains must not foul Grove Road.

6.7.4 Level Crossings

The Train Controller should not signal any Down train (except shunting

services) past 110L or 114L signals at Addington until the train has permission to enter the yard to avoid blocking Whiteleigh Ave and / or Matipo St.

6.7.5 Wagon Depot

Attended:

The Train Controller will clear 103AI/PI, to allow wagon depot movements and protection for the depot.

A prompt Call 38826 will be added to the cancel function of 103AI/PI.

103AI/PI must not be cancelled until permission has been granted from depot personnel for shunts to enter the depot.

Unattended:

Depot personnel will contact the Train Controller when:

- booking on at the depot in the morning, and
- leaving the depot in the evening (applies every day of the week).

Book on / off times will be endorsed in the margin of the train control diagram and must be carried over to the next day’s diagram when the depot is unattended.

103AI/PI may be cancelled when the depot is unattended.

When the depot is required to be shunted, The Train Controller must check the train control diagram to confirm the depot is unattended, before signalling shunts into the depot (without obtaining permission from depot personnel).

6.7.6 Shunt Movements to / from Wagon Depot (East End)

Due to rusty rail conditions, the following signals at Addington have been fixed at Stop:

- 7ABC Down Directing & Shunt from Up Main (when set for the Wagon Depot)
- 3AB Down Directing from Down Main (when set for the Wagon Depot)
- 25A & B Shunt from East Back shunt
- 52 Shunt & Up Directing from Wagon Depot

The speed of all movements over Lincoln Road and Grove Road Level Crossings must not exceed 10 km/h as the alarms may not operate due to track circuits not working correctly.

NOTE
This only applies to movements to / from the East End Wagon Depot.

6.8 Middleton

6.8.1 Trains Arriving / Departing General Instructions

Trains / shunting services enter Middleton yard as directed by the Team Leader. The Train Controller will advise the order of all trains / shunting services.

Authority to depart only when the yard is attended; the Person in Control of the train shunting service must tell the Train Controller.

Before a train / shunting service departs the south end via the departure road south, the Locomotive Engineer must ensure that C points are correctly set for the intended movement.

South end trains departing from arrival road south, north back shunt, arrivals / departure extension:

- Trains / shunting services dispatched via these roads must not foul the entrance to any other road unless authorised by the Team Leader. The authority must not be given until arrangements have been made to prevent any conflicting movements from fouling any entrances to the arrival roads.

Berthing arrangements:

- The low-speed signal authorising a train / shunting service to enter the yard should not be illuminated unless the Train Controller has been advised by the Person in Control of the train / shunting service that the train has permission to enter the yard.

IMPORTANT
The Train Controller should not signal any Down train (except shunting services) past 110L or 114L signals at Addington until the train has permission to enter the yard to avoid blocking Whiteleigh Ave and / or Matipo Street.

The Locomotive Engineer must ensure the route is correctly set for the intended movement of trains arriving. Once the Train Controller has signalled the movement on shunting services, the second person must pilot the movement from / to the main line. If the road is not clear, the train / shunting service must be piloted to a point where the road is occupied.

If trains / shunting services are to arrive / depart Middleton when the yard is unattended, the Team Leader must tell the Signaller about the berthing arrangements for the trains / shunting services concerned before completing work before the unattended period.

CAUTION
If these points need to be hand-operated, a firm handhold of the selector (motor / manual) lever must be taken as this lever is tensioned and will spring with some force if not held firmly.

6.8.2 North End to Matipo Street Level Crossing

To ensure no unnecessary delay to road traffic at the Matipo Street level crossing, 222RA Shunt and Up Directing from H3 and 222RB Shunt and Up Directing from M3 signals should not be cleared until the train / shunting service is ready to depart.

6.8.3 Trains Stopped on Up Main for Shunting Purposes

Shunting movements may be made for Up trains standing on the Up main at 212 Up Home signal, provided a portion of the train is always occupying the track circuit starting 50 metres before 212 signal indicated by a white marker board. When this circuit is occupied and a time delay has run down, 202 or 203 signals can be set to proceed to the Up main as required.

Before shunting commences, the train must be secured in accordance with the provisions of **TO01 Train Movements, 10. Securing Motive Power Units** and **TO08 Shunting, 7.3 Standing at Stations**.

If the consist is uncoupled and left short of the 50 metres track circuit and 202 or 203 signals cannot be cleared. The Train Controller may verbally authorise 202 or 203 to be passed at stop provided the same train crew perform the entire shunting activity.

SO01 Responding to Signals, 4.3 Authorising Passing of Signals at Stop and **SO02 Automatic Signalling Rules, 5. Setting Back in Block Section Authority** are modified accordingly.

6.8.4 Trains Stopped on Down Main for Shunting Purposes

Down trains passing through Middleton that are required to stop for locomotive / shunting purposes must be berthed on the loop or yard roads whenever possible. When a train is required to be stopped on the Down main at 201AC Down Starting and Shunt signal for locomotive / shunting purposes, before uncoupling the locomotive, the train must be secured in accordance with the provisions of **TO01 Train Movements, 10. Securing Motive Power Units** and **TO08 Shunting, 7.3 Standing at Stations.**

6.8.5 Local Signal Request Push Buttons

As shown on the S & I diagram, signal request pushbuttons are installed at Middleton to allow Yard Personnel to apply for signal sequences as described below.

Pushing a local request button for five seconds will illuminate a yellow request description on the Train Control signal panel.

When the Train Controller has the automatic commands for Middleton South set to auto, the command will execute immediately provided the interlocking is free (e.g., no conflicting movements or signal

blocking). The Train Controller must manually signal the movement or click on the corresponding automatic command and turn it on to execute if the auto is off.

After operating a request button and the desired signal does not clear after one minute (and the train is standing on the approach circuit to 202 or 203 signals), contact the Train Controller. This should be done by radio to request the movement as there may be other movements occurring or requested.

Button and Command Index

Button description	Description and function when on
DTA	Signal request from Departures clear of 209 and signal back into Arrivals
DT3	Signal request from Departures to Third Road (use this for out short moves)
DT4	Signal request from Departures to Fourth Road
ATD	Signal request from Arrivals clear of 209 and signal back into Departures
AT3	Signal request from Arrivals to Third Road (use this for out short moves)
AT4	Signal request from Arrivals to Fourth Road
3TD	Signal request from Third Road to Departures
3TA	Signal request from Third Road to Arrivals
4TD	Signal request from Fourth Road to Departures
4TA	Signal request from Fourth Road to Arrivals

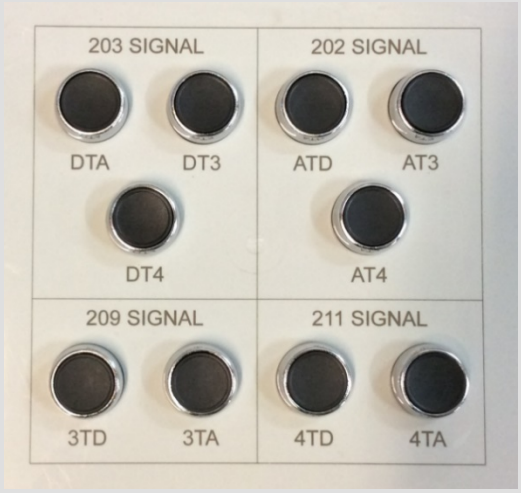


Illustration of Terminal Office Push Buttons

Illustration of train control signal panel Indications (AT4 Operated)

6.9 Middleton – Sockburn (Third Road)

Only one train at a time may operate on the Third Road south of the ATS board unless the Team Leader Middleton gives authority. If a second movement is required to enter or foul the Third Road, the Team Leader must clearly understand what both shunt services are doing. When this is communicated, and all parties are aware of the movements, permission may be given for the second movement to operate. All facing points on the Third Road must be examined before any train passes over them.

6.10 Middleton – Sockburn (Fourth Road)

Only the shunting service with the Fourth Road work area defined in the Local Terminal Operating Instructions is permitted to enter or foul the Fourth Road from Middleton, Sockburn Industrial Yard, or Hornby unless the Team Leader Middleton gives authority. All facing points on the Fourth Road must be examined before any train passes over them.

If a second movement is required to enter or foul the Fourth Road, the Team Leader Middleton must clearly understand what both shunt services are doing. When this is communicated, and all parties are

aware of the movements, then the second movement may request access to the Fourth Road from the Train Controller.

6.11 Hornby

6.11.1 Hornby Branch

The branch is closed between the All Trains Stop board at the 0.070km (between Hornby and Hornby Industrial Sidings) and the end of line to all normal train services.

Only Infrastructure and approved contractor vehicles are authorised in this area for asset inspection and maintenance activities.

The Infrastructure Asset Engineer must confirm that the line between the All Trains Stop board at the 0.070 km and the end of line has been inspected and is ready for use prior to any train service on this portion of line.

Any such authority must be issued by bulletin.

6.12 Islington

6.12.1 Run Around Movement Down to Up Main

When interchanging locomotives or other movements from the Down to the Up main at Islington the following arrangement will apply to ensure Pound Road level crossings alarms do not operate unnecessarily.

The Down Departure signal at Islington for the interchange movement should only be cleared when the movement arrives at the signal and the Locomotive Engineer calls. This will allow the movement to be signalled back inside the Up Home signal off the level crossing alarm approach circuit in a minimum of time.

6.12.2 Crossover / Siding Points

The switch locks at Islington have been replaced with motor points. The motor points have been bolted, secured with a PS padlock, and detected for main line running pending commissioning.

If it is necessary to open these points, both Signals and Track Maintenance Representatives for the area must be in attendance. Permission of the Train Controller must be obtained before the points are unlocked. The Train Controller must be advised when the points are again padlocked.

6.12.3 Coupled in Motion Weighbridge (CIMW)

A coupled in motion weighbridge is installed at 28.30 km MSL, on both mains. Fault conditions are alerted to the Train Controller and broadcast locally by radio on Channel 1.

Locomotive Engineers hearing a warning message must:

- obey any message instructions to reduced speed or stop
- immediately contact the Train Controller for further instructions.

6.12.4 New Turnout Islington - Rolleston

A new turnout has been installed at 22.80 km between Islington and Rolleston. The new turnout has been bolted, secured with a PS padlock, and detected 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. Permission of the Train Controller must be obtained before the points are unlocked. The Train Controller must be advised when the points are again padlocked.

6.13 Rolleston

6.13.1 LPC Siding

LPC Siding is located on the west main at Rolleston at the 32.20 km (between 12L and 8L signals) and includes Jones Road Level Crossing.

Operation of WL2 switch stand points

Up and Down Trains:

1. Stop the movement before reaching the points.
2. Contact the Train Controller and request a release on WL2.

NOTE

For Up trains, a release from the Train Controller will not be available until the rear of the train has cleared the track section south of 12L signal. There may be a short time delay after the track section is cleared before a release from the Train Controller is available.

After a release from the Train Controller has been given:

3. Unlock the AS padlock and open the control box door.
4. When the Free light is illuminated the switch stand points will be available for use

Securing of points at completion of shunting:

5. After the train has cleared the LPC siding points
6. Set the switch stand points to normal.
7. Check that the Normal indication light is illuminated, then close and padlock the points control box door.
8. The Operator must not proceed until they have received assurance that this has been done.

6.13.2 Berthing Passenger Trains

All passenger trains must be berthed on the East main at Rolleston to facilitate passenger pickup and set down.

NOTE

The West main may be used to berth passenger trains only when the East main is obstructed (e.g., disabled train, track fault) and authorised by the Network Control Manager.

Train crews are to be consulted on any West main berthing.

6.14 Synlait Siding

When a Down train is to shunt Synlait Siding and return to Bankside, the following arrangements will apply:

- After the service departs Bankside, the Train Controller will activate the Synlait switch lock (LWL) release on the signalling panel.
- The switch lock will remain released while the siding is shunted.
- Once the service has returned to the main line at Synlait and the switch lock has been locked, the Train Controller must be advised to enable the Bankside – Chertsey block section signalling to be returned to normal operation.
- If the Train Controller needs to change this arrangement and requires the service to lock-in at the siding and hand the release back to the Train Controller, then the service must be advised prior to departing Bankside.

RP14 Operating Switch Lock Sidings, 2.2 Completely Enter Siding is modified accordingly.

6.15 Ashburton

6.15.1 Level Crossings

When movements are required to pass the signal on either side of Walnut Avenue, Havelock Street, Moore Street and Kermode Road level crossings at Stop the movement must be stopped and wait until the barriers are down before proceeding over the crossing.

These barriers work in conjunction with traffic lights.

6.16 Rangitata River - Bridge 57 (Hazard Warning)

A section of the walkway on Bridge 57 (Rangitata River North) between Hinds and Rangitata is missing following repairs to pier 8.

All Rail Personnel are to exercise extreme care on this bridge.

6.17 Timaru

Speed over running roads and sidings in Fraser Street must not exceed 10 km/h.

Rusty Rail conditions South End Loop and No.1 Road Timaru

Due to rusty rail conditions, before all movements proceed between 14R signal and 14LA Shunt signals the Locomotive Engineer must contact the Train Controller and ensure that No.1 and 11 points are control tagged normal until the movement has been completed and the Locomotive Engineer called clear of 14R/14LA signals.

Similarly, before all movements proceed between 14R signal and 14LB Shunt signals the Locomotive Engineer must contact the Train Controller and ensure that No.1, 11 and 3 points are control tagged in the correct position until the movement has been completed and the Locomotive Engineer called clear of 14R/14LB signals.

The Locomotive Engineer must ensure the alarms are operating before proceeding across Heaton Street level crossing.

North End Extension

The North End extension to No.1 Road at Timaru has insufficient sleepers and is unsafe for rail vehicles.

5AI Arrow Indicator is fixed at Stop.

Rail vehicles must not be authorised to enter the North End extension to No.1 Road at Timaru.

6.18 Pareora

When it is necessary for the Timaru Shunting Service to shunt Pareora switch locked siding, the following arrangements will apply:

After the shunting service departs Timaru, the Train Controller will activate the Pareora switch lock release on the signalling panel. The switch lock will remain released while the siding is shunted. Once the shunting service has returned to the main line at Pareora and the switch lock has been locked, the Train Controller must be advised to enable the Timaru – St Andrews block section signalling to be returned to normal operation.

If the Train Controller needs to change this arrangement and requires the shunting service to lock-in at the siding and hand the release back to the Train Controller, then the shunting service must be advised prior to departing Timaru.

RP14 Operating Switch Lock Sidings is modified accordingly.

6.19 St Andrews

To minimise locomotive idling noise for residents at the north end of St Andrews, when northbound trains stop at St Andrews for train crossings or other purposes, locomotives are to be stopped adjacent to the white peg (banded with reflectorised tape) which is located alongside the main line opposite to the north end switch lock at 187.46 km.

6.20 Oamaru

6.20.1 Down Trains

An Alarms Start Here board has been erected for Down trains at 249.88 km approaching Redcastle Road. Down trains which are to be signal checked before entering Oamaru station limits should be instructed by the Train Controller to stop prior to the board so as not to stop on the approaching level crossing alarm circuits unnecessarily.

6.20.2 CT Site

Oamaru is a CT site only where minimal shunting is carried out.

6.20.3 Shunting between Station Yard and Old Freight Yard

A buffer stop has been placed over the line on the north side of the bridge at the entrance to the old freight yard now under the control of the Oamaru Steam and Rail Preservation Society. Should access be required to the old freight yard then permission must be obtained from the Traffic Manager Oamaru Steam and Rail Preservation Society.

6.20.4 Locomotives Stabled on the Loop

Locomotives are authorised to remain stabled on the loop at Oamaru, provided the vehicles are secured in accordance with the regulations applicable. **TO01 Train Movements, 10. Securing Motive Power Units** and **TO08 Shunting, 7.3 Standing at Stations** are modified accordingly.

7. Oamaru – Dunedin

7.1 Train Failure

7.1.1 When Stopped on an Uphill 1 in 50 Gradient

1. Advise the Train Controller of the circumstances.
2. Stop the train with a minimum brake pipe reduction (70 kPa).
3. At the point of stopping apply the Independent brake fully on the locomotives.
4. If able to restart the train again:
   - advance throttle to notch 2
   - release train brake
   - advance throttle to notch 4 to hold train while a recharge of train brakes is obtained
   - slowly release the Independent brake and advance throttle to notch 5 to start the train.
5. If not able to start the train again, then the setting back procedures for a 1 in 50 gradient will apply.

7.1.2 When Setting Back Down a 1 in 50 Gradient

When Dynamic brake is operational

The train brakes may only be released with the train stopped.

1. Advise the Train Controller of the circumstances.
2. Stop train with a minimum brake pipe reduction (70 kPa).
3. At the point of stopping apply Independent brake fully on the locomotives.
4. Increase the brake pipe reduction to 80 kPa.
5. Set the isolation switch on any defective locomotive to Isolate.
6. Place the reverser to reverse and select Dynamic brake.
7. Move the Dynamic brake handle around to the Full Amps position.
8. Wait 50 seconds.
9. Slowly release the Independent brake – the train should begin to set back.
10. Regulate the Dynamic brake to hold the train speed at a maximum of 15 km/h. Dynamic brake handle position 5 to 6 is all that should be required to balance the speed with the brake pipe reduction once the train has settled.
11. If train speed exceeds 15 km/h with full Dynamic brake effort, then increase the brake pipe reduction to regulate the speed as circumstances require.

The Train brakes may only be released with the train stopped.

1. Stop the train.
2. Place the reverser to Forward.
3. Release the train brakes and advance the throttle to notch 4 (this will hold the train until the brake pipe is fully recharged when another reduction of the train brakes can be made again to continue with the setting back of the train).

When Dynamic brake is not operational

1. Advise the Train Controller of the circumstances.
2. Stop the train with a minimum brake pipe reduction (70 kPa).
3. At the point of stopping apply the Independent brake on the locomotives fully.
4. Increase the brake pipe reduction to 80 kPa.
5. Set the isolation switch on any defective locomotive to Isolate.
6. Place the reverser handle to Reverse.

7. Slowly release the Independent brake on the locomotive until the train starts to set back.
8. Once the train starts setting back use the Independent brake on the locomotive to control the train speed at a maximum of 10 km/h by maintaining brake cylinder pressure at 80 to 100 kPa.
9. If train speed exceeds 10 km/h with a maximum of 100 kPa brake cylinder pressure on the locomotive, increase the brake pipe reduction on the train brake to regulate the speed as circumstances require.

7.1.3 Burst Hose Procedure

1. Advise the Train Controller.
2. Apply power and sand until the train pulls to a stop. This conditions the rail for maximum adhesion.
3. Apply the locomotive Independent brakes fully. Proceed back along train applying handbrakes on the first 5 wagons.
4. At the point of the burst hose mark the point.
5. Return to the front of the locomotive, hold the brake pipe hose firmly and fully open the brake pipe cock.
6. Leave the brake pipe cock open.
7. In the cab of the lead locomotive, place the Automatic Brake Valve Cut Out to Cut Out position.
8. Proceed back to the burst hose and replace it.
9. Recouple the brake pipe hoses on the wagon and open the air cocks.
10. Continue to the rear of the train checking for any possible derailment. If the rear of the train is inaccessible, tell the Train Controller.
11. Return to the front of the locomotive and close the brake pipe cock fully.
12. In the cab of the lead locomotive place the Brake Valve Cut Out to the Cut In position.
13. The train brakes will now recharge and once fully recharged, make a brake pipe reduction of 100 kPa.
14. Proceed back along the train releasing handbrakes on the wagons.
15. Return to locomotive cab, release train brakes, and continue journey.

7.1.4 Vigilance System Reset Procedure

1. Advise the Train Controller of the circumstances.
2. Move Automatic Brake Valve handle to Handle Off position.
3. Wait 50 seconds and operate the vigilance penalty brake reset switch.
4. Once reset, move the Automatic Brake Valve handle to release and recharge the air brake system.
5. **On an up gradient**, if required begin throttling up to notch 4 to hold the train while a full recharge is obtained. Ensure that the PCS light goes out before advancing the throttle.
6. **On a down gradient**, if required, set up for full Dynamic brake prior to resetting the vigilance penalty brake reset switch. Ensure the PCS light goes out before selecting dynamic brake.

7.2 Tunnels between Oamaru and Dunedin

7.2.1 Testing of Tunnel Radio System

Track Maintenance Representatives who have received training will test the tunnel radio systems in a Hi-Rail vehicle as follows:

Tunnel	Test Frequency	Normal Test Day
• Otepopo	Weekly	Monday
• Cliffs • Mihiwaka • Mansford • Sawyers Bay	Twice weekly	Monday and Thursday

When the Hi-Rail vehicle is in the appropriate tunnel and positioned correctly:

1. Select the correct Train Control radio channel.
2. Press the * button to send call (where appropriate).
3. The Train Controller will hear this, but nothing will be displayed on the MSP Radio computer screen.
4. A reply will be sent automatically to the Hi-Rail vehicle with 2 selcall tones.

NOTE
Once 2 selcall tones close together have been heard then the system is operating correctly.

The Hi-Rail driver must advise the Train Controller of the test results.

This information must be noted on the train control diagram and Operations Support contacted for any reported faults.

If the Hi-Rail vehicle cannot perform these tests during any given week:

- The Train Controller must be advised and arrange for a locomotive to perform the test.
- In this case the test will be performed by sending a base call in the appropriate tunnel and the Locomotive Engineer confirming that the call has locked on.
- The Train Controller will confirm that the base call was received.

7.2.2 Road Access to Tunnels

Tunnel access points when required to respond to a train failure in a tunnel:

Tunnel		Access Point
T2 Otepopo	North end	Glencoe Road level crossing
	South end	4WD via Forestry track off SH1 0.5 km south of Herbert township
T4 Cliffs	North end	1.5 km walk from Whites Road level crossing
	South end	Foot track from Purakaunui Beach
T5 Mihiwaka	North end	End of Mihiwaka Station Road
	South end	1.5 km trackside from end of Lewis Road Deborah Bay
T7 Mansford	North end	Coombe Hay Terrace level crossing Careys Bay.
	South end	0.5 km from Church Street level crossing Port Chalmers
T8 Sawyers Bay	North end	From Sawyers Bay yard
	South end	From access track off District Road
T9 Caversham	North end	Trackside off South Road at Hudson Street Overbridge
	South end	From Burnside yard off Kaikorai Valley Road adjacent to Eclipse Rd
T10 Wingatui	North end	From end of Flower Street through paddocks then trackside for 1 km
	South end	From Wingatui Yard
T1 Port Chalmers	North end	Beach Street level crossing
	South end	Wickliffe Terrace level crossing

7.2.3 Timing of Passenger Train Movements through Mihiwaka Tunnel

- Up train Locomotive Engineers departing Sawyers Bay must call the Train Controller to start a 10-minute radio timer.
- Down train Locomotive Engineers departing Waitati must call the Train Controller to start a 14-minute radio timer.

Locomotive Engineers must call the Train Controller clear of the Mihiwaka Tunnel.

IMPORTANT
If the timer alarm activates, the Train Controller must attempt to contact the Locomotive Engineer and institute an emergency response if contact is not made within 2 minutes as per **Emergency Procedures Manual, 7.7 Overdue Train or HRV.**

7.2.4 Setting Back Procedure Mihiwaka Tunnel

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

1. Stop the train with enough brake application to hold on the grade.
2. Positively identify the location of the train
3. If the Locomotive Engineer is confident of the reason for the locomotive failure and it is safe to do so, they may commence the setting back process.
   - If the Locomotive Engineer is unsure of the reason, then the Locomotive Engineer must confirm the end of train signal is correctly in place on the rear of the train, or:
     - Freight trains – it must be positively established that the TEM or end of train marker is attached. If unable to establish, setting back cannot be authorised until the rear of the train is confirmed.
     - Passenger trains – that the built-in or portable end of train signal is operating.
4. The Train Controller must be advised, but if contact cannot be established, then the movement may set back cautiously to clear the tunnel portal.

NOTE
Setting back can be verbally authorised, and the track warrant reissued at the portal.

TO09 Setting Back and Propelling, 9. Propelling, **RP16 Disabled Train Recovery, 2. Securing and Protecting** and **SO08 Track Warrant Control, 4. Issuing a Track Warrant** are modified accordingly.

Setting Back procedure:

1. 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.
2. If MR pressure falls below 600 kPa, the train must be stopped immediately and secured.
3. Apply full Independent brake on the locomotive(s) and set the Isolation Switch on any defective locomotive to Isolate.
4. The train can drift at a speed not exceeding 15 km/h with the use of air brakes.
5. Monitor train speed, as speed comes between 10 – 15 km/h, make a minimum reduction with the Automatic Brake Valve. (This brake application should maintain consistent train speed)
6. If speed exceeds 15 km/h, immediately stop the train and start the procedure again until clear of the tunnel portal.
7. 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 is fully recharged.
8. The train horn must be sounded frequently while the movement takes place.

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

1. Making a full Independent brake application to the locomotive
2. Full application of train brakes
3. Cutting out Automatic Brake Valve
4. Applying hand brakes as required

Contact the Train Controller once outside the tunnel.

IMPORTANT
The Train Controller must not allow any track occupancies between Sawyers Bay and Purakanui until the Up train has cleared Purakanui.

WARNING
Hazard Trains proceeding from Sawyers Bay towards Waitati

Rail Personnel must only commence work / travel on the line after it has been confirmed that the train or all parts of the train has cleared Purakanui. Trains may set back at any time.

7.3 Bridge 202 Pier Alarm

An Extensometer alarm (Harvest) has been attached to Pier 3 on Bridge No.202 at 333 km between Merton and Goodwood.

Should the Extensometer detect movement from Pier 3, the Harvest alarm system attached to the Extensometer will then:

- send an alarm to the Train Control signalling screen, and
- send an email to Operations Support and the Network Control Manager.

Upon receiving activation of the Pier 3 warning system, the Train Controller must:

- advise Operators of the alarm activation, and stop all rail vehicles clear of Bridge No.202
- advise Operations Support to arrange Structures personnel to undertake an inspection.

Structures personnel will advise the Train Controller if it is suitable to run rail vehicles over Bridge No.202, and if a temporary speed restriction is required.

If a temporary speed restriction is required, the Train Controller must enter details into the Access Provider’s Speed Restriction system and advise any trains that are already running.

Upon receiving clearance from Structures personnel to run trains, the Train Controller must not allow any train to traverse Bridge No.202 until the Pier 3 warning system has been reset, or Structures personnel are on-site to pilot trains over Bridge No.202.

Operations Support will work with Harvest to reset the alarm.

7.4 Sawyers Bay

7.4.1 Wagons on Loop Sawyers Bay

Wagons for Port Chalmers may be reduced from through trains at Sawyers Bay and left secured on the loop for up to two hours, until lifted by a local Port Chalmers shunt. The wagons must be secured on the loop in accordance with:

- **TO02 Train Brakes 3.2 Detaching Motive Power Units and Rail Vehicles,** and
- **Rail Operating Code Section 5.1**, **3.2.6 Securing of Rail Vehicles**.

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

7.4.2 Operating Requirements

All movements between the container terminal, Back Beach siding and Mussel Bay yard must run locomotive first and be piloted by a Shunter or Train Crew except when there is radio contact between Operator and Shunter.

When wagons are being propelled, a Rail Operator must pilot the shunting service.

The air brake must operate throughout shunting services running between Back Beach siding, Mussel Bay yard and the container terminal. The points at the container terminal end of the tunnel must be checked before the movement is signalled to proceed.

7.4.3 Authority to Proceed to Port Chalmers

Port Chalmers station limits is the portion of line which extends from No.14L Directing signal and WL1 switch lock to the Port Chalmers Container Terminal. The Shunter in Charge / Pilot of the first service in the Port Chalmers area will be in charge of all movements within Port Chalmers station limits.

The authority of the Train Controller must be obtained before a train / shunting movement proceeds from Sawyers Bay to Port Chalmers. Before giving that authority, the Train Controller must ensure there are no other train / shunting movements in the Port Chalmers area.

If it is necessary for another train / shunting movement to proceed from Sawyers Bay to Port Chalmers area, the Train Controller must contact the Shunter in Charge / Pilot at Port Chalmers who in turn will then communicate with the Shunter in Charge / Pilot at Sawyers Bay on the ASP radio (Port Chalmers channel) and each person must come to an understanding as to the other's movements. The Train Controller will then be advised by the Shunter in Charge / Pilot at Port Chalmers that permission has been given for the movement to proceed from Sawyers Bay.

When wagons are being propelled, a member of the shunting gang must pilot the Shunting Service.

The air brake must be in operation throughout shunting services running between the station yard and Container Terminal. The points at the Container Terminal end of the tunnel must be checked before the movement is signalled to proceed.

When propelling, the Shunter in Charge / Pilot must be positioned in the leading vehicle and must have a clear view of the line ahead and always be in radio contact with the Locomotive Engineer.

The Shunter in Charge / Pilot must ensure the route to the wharf is correctly set for the intended movement and must ensure all level crossings are clear before passing over them.

7.4.4 Security Fence Port Chalmers Container Terminal

Access gates for rail movements through the security fence around the Port Chalmers container terminal are on the north side of Beach Street (SH 88) level crossing at the following positions:

- Gate 2 at the set of points giving entry to George Street Wharf.

- Gate 3 near the gatehouse on a line leading to the rail transfer pad.

Port Otago Harbour Control controls the gates, and gates 2 and 3 will be opened for rail movements 24/7.

Gate 2 will only be opened when wagons are placed at George Street Wharf. Port Otago Personnel will decide with Siding Site Controller Port Chalmers when this is necessary.

7.4.5 Shunting Port Chalmers Container Terminal

All movements to, from, and within the container terminal must be piloted. Before shunting the rail transfer pad, the Shunter in Charge must obtain an assurance from the Port Otago Shift Manager that it is safe for the siding to be shunted. If Port Otago personnel are not working, the Shunter in Charge must ensure it is safe for the intended movement.

Before proceeding onto level crossings equipped with alarms, the Shunter in Charge must ensure they are working.

A member of the shunting gang must protect the level crossings within the terminal for all shunting movements. The speed of shunting movements in the container terminal must not exceed 10 km/h.

7.4.6 Shunting George Street Wharf, Port Chalmers

The rail turnout to George Street Wharf siding is set and locked for the rail transfer pad. The turnout has a Wynn Williams lever, secured with a pin through the points switch and locked with a Yale lock. The key to the lock is held by the Port Otago Harbour control centre gatehouse.

Port Otago Personnel will unlock the points and make sure that any movements made by the container cranes do not foul the railway running line while shunting in this area.

When shunting has been completed, the points must be set and locked for the rail transfer pad by the Port Otago Harbour control centre gatehouse.

7.5 Dunedin

7.5.1 No.13 Points Industrial Sidings - Rusty Rail Conditions

Due to rusty rail the Train Controller must ensure that movements over No.13 points in reverse into or out of the industrial sidings are clear before restoring the points to normal.

7.5.2 No.17 Points Ravensbourne – Rusty Rail Conditions

Due to rusty rail the Train Controller must ensure that movements over No.17 motor points into or out of the Ravensbourne siding are clear of Nos. 17AI or 17PI signals before operating No.17 points.

7.5.3 Ravensbourne Back shunt

The back shunt from 17PI at Ravensbourne is closed to all traffic pending track repairs.

7.5.4 Movement of Repair Wagons

Repair wagons in the Dunedin area awaiting transfer to Hillside workshops are usually only moved on instructions from the Shunt Controller, Hillside workshop to the Team Leader Dunedin yard.

Shunting personnel must take extreme care when working with these wagons and observe **Rail Operating Code Section 5.1, 3.1 Personal Safety** and **9.0 Identifying Hazards on Defective Vehicles**. If the wagon defect cannot be determined, it should not be moved until a Rolling Stock Representative has advised what the defect is.

7.5.5 Trains / Shuns Entering and Leaving Marshalling Yard

The Team Leader or their nominee is responsible for the safety of trains arriving in or departing from the marshalling yard. Shunters must tell the Train Controller when the train or shunting movement leaves

the marshalling yard, its nature and destination. On returning to the marshalling yard, the Shunter in Charge will berth the shunting service after ensuring the berthing road is clear of other movements.

7.5.6 Trains / Shunts Arriving from the North

If incoming shunting services need to use the Shunt Road, the Shunter must first get permission from the Team Leader or their nominee before calling the Train Controller. The Train Controller will set the route and clear the required signals.

When a Down freight train approaches, the Train Controller must first get permission from the Team Leader or his nominee before clearing 12L signal.

7.5.7 Trains / Shunts Arriving from the South

Up trains / shunts that are to berth into Dunedin yard via the South Connection must stop at 4RAC Up Directing from Main signal which will be held at Stop.

When stopped, the Operator must obtain berthing instructions to enter Dunedin Yard from the Team Leader or his nominee.

The Operator will then request a proceed indication on 4RAC signal to enter Dunedin yard.

NOTE
The Train Controller may clear 4RAC signal when requested for shunt services departing Hillside.

7.5.8 Berthing Trains when Rail Personnel Not on Duty

Before finishing duty, the Team Leader or nominee must tell the Train Controller that the siding has been set for the train to berth.

When Rail Personnel are not on duty, the Train Controller will authorise trains to berth in the marshalling yard. This will be done by either placing 12L signal at Proceed or for services arriving via the South Road Connection will place 4R signal at proceed.

Before passing over points, Operators must ensure that they are correctly set for the movement.

When starting duty for the day, the Team Leader or nominee must call the Train Controller before authorising shunting operations.

7.5.9 Marshalling Yard Arrival and Departure of Trains

A pilot under the direction of the Team Leader will assist with the arrival and dispatch of trains.

7.5.10 Road Alongside the Main Line at 12R

Must not be used for brake testing and examining trains.

7.5.11 Locomotive To / From Depot

When rail movements are via Strathallan Street, all locomotives from the shunting yard to the locomotive depot via Strathallan Street or vice versa must be piloted.

7.5.12 Shunting Hillside Workshop

The Team Leader or nominee will coordinate all shunting movements between Hillside and the Dunedin yard. The Shunter will stop the shunt at the bottom of the grade into Hillside yard. After ensuring the TR tractor is stabled, the Shunter will authorise the shunt to enter Hillside yard. All movements entering Hillside yard must be piloted into the yard by the Shunter / Pilot in charge of the movement.

When rail vehicles are left standing on the incline from the main line to Hillside yard, the Shunter in Charge of the movement must ensure that the rail vehicles are secured before the locomotive is detached.

7.6 Taieri Gorge Railway Services

Taieri Gorge Railway (TGR) trades as Dunedin Railways.

Taieri Gorge Railway trains operate:

- between Port Chalmers and the old Mosgiel station (between Mosgiel and Henley Siding)
- between Port Chalmers and Oamaru
- on the Taieri Branch

Taieri Gorge Railway passenger services may run ahead of time after consultation with the Train Controller.

The Train Controller must inform Operators of the excursion train and freight train of the intended crossing / passing so speed of the moving train can be reduced accordingly. (Reason: wooden carriages).

7.6.1 Crewing

Taieri Gorge Railway are authorised to operate passenger trains manned by their own personnel on KiwiRail Network lines between Port Chalmers and old Mosgiel Station (between Mosgiel and Henley Siding, between Sawyers Bay and Oamaru and Wingatui station limits and the commencement of the Taieri Gorge Railway.

A “dead” TGR locomotive may be attached to the rear of TGR services running between Port Chalmers and old Mosgiel Station (between Mosgiel and Henley Siding) and Taieri Branch provided the locomotive is set up for dead haulage with the dead locomotive device activated, the brake pipe connected, and the train is restricted to 16 loaded passenger cars.

KiwiRail Network Rail Standards Unit will be responsible for ensuring correctly certified TGR Locomotive crews and Guards work these trains. **Train Running and Timetabling Manual, 4.4 Private Rolling Stock** and **12. Privately Owned Rail Vehicles** are modified accordingly.

When KiwiRail locomotive crews are required to operate a train on the Taieri Gorge Railway they must be accompanied by correctly certified TGR locomotive personnel.

KiwiRail Network Rail Standards Unit will be responsible for ensuring that only TGR rolling stock with current fitness certificates are permitted to operate on the Controlled Network. They will hold a list of rolling stock which has a current fitness certificate.

ZP14502 used as a generator wagon will travel with the doors secured open at one end. **TO08 Shunting, 7.8 Fastening Wagon / Carriage Doors** is modified accordingly.

The DE locomotive may run attached to passenger trains behind the train locomotive over the area between Port Chalmers and the End of Taieri Line. On these occasions the speed of the train must not exceed 50 km/h.

Should the DE run light or is hauling wagons, then this must be included in a bulletin. The locomotive must be manned by two correctly certified personnel and the speed must not exceed 50 km/h.

DE504 is authorised to run between Bushey / Port Chalmers and End of Taieri Branch in accordance with the speeds shown in the table below.

The locomotive radio must be tested with the Train Controller before entering the Controlled Network.

7.6.2 Speed

TGR passenger trains may travel at the authorised line speed for the area concerned with a maximum speed of 70 km/h.

When these trains are also conveying wagons as well as passenger train vehicles the speed must not exceed that of a freight train.

Locomotive Combination:	Maximum Speed
DJ loco(s)	70 km/h
DJ leading, DE trailing	70 km/h
DE leading (long hood leading), DJ trailing	70 km/h
DE loco only – long hood leading	50 km/h
DE leading (cab end leading), DJ trailing	Refer table below
DE loco only – cab end leading	Refer table below

Schedule of speeds for DE locomotives when running cab end leading:
Maximum speed 50 km/h Exceptions: • On straights and curves where authorised speeds are 60 km/h and over – maximum speed 30 km/h. • On curves where authorised speeds are under 60 km/h - maximum speed 25 km/h • Over level crossings – maximum speed 15 km/h

7.6.3 Shunting Dunedin Station

Taieri Gorge Railway operations at Dunedin may allow staff / contractors to be on board passenger carriages (including power vans and buffet cars) while the trains are being shunted.

Rail Operating Code Section 5.1, 4.2.5 Shunting Sidings is modified accordingly.

Taieri Gorge Railway may shunt their own rolling stock on the:

- Main line between 2L Down Departure signal to clear of 14LAC Down Directing from Main signal.
- South Dock off the main line.

7.6.4 Locomotive Trial Runs

Locomotive trial runs may operate between Dunedin and Sawyers Bay as arranged by the Operations Manager, Taieri Gorge Railway and as directed by the Train Controller.

7.6.5 Services left Unattended at Dunedin Station

Passenger train service(s) with locomotives attached may be left on the main line at Dunedin station after the Rail Operator obtains permission from the Train Controller who must endorse the train control diagram accordingly. The vehicles must be locked while unattended and adequately secured to prevent them moving.

TO01 Train Movements, 10. Securing Motive Power Units and **TO08 Shunting, 7.3 Standing at Stations** are modified accordingly.

7.6.6 Total Number of Passengers / Train Crew

Locomotive Engineers must advise the Train Controller of the total number passengers and train crew on the train:

- Before entering Wingatui Tunnel (northbound) and
- Before entering Caversham Tunnel (southbound).
  - The passenger manifest may be used but must be updated with the actual count when available.

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

8. Dunedin - Invercargill

8.1 Tunnels between Dunedin and Mosgiel

8.1.1 Testing of Tunnel System

Track Maintenance Representatives who have received training will test the tunnel radio systems in a Hi-Rail vehicle as follows:

Tunnel	Test Frequency	Normal Test Day
Caversham and Wingatui	Twice weekly	Monday and Thursday

When the Hi-Rail is in the appropriate tunnel and positioned correctly:

1. Select the correct Train Control radio channel.
5. Press the * button to send call (where appropriate).
6. The Train Controller will hear this, but nothing will be displayed on the MSP Radio computer screen.
7. A reply will be sent automatically to the Hi-Rail vehicle with 2 selcall tones.

NOTE
Once 2 selcall tones close together have been heard then the system is operating correctly.

The Hi-Rail driver must advise the Train Controller of the test results.

This information must be noted on the train control diagram and Operations Support contacted for any reported faults.

If the Hi-Rail vehicle cannot perform these tests during any given week:

- The Train Controller must be advised and arrange for a locomotive to perform the test.
- In this case the test will be performed by sending a base call in the appropriate tunnel and the Locomotive Engineer confirming that the call has locked on.
- The Train Controller will confirm that the base call was received.

8.2 Taieri Branch

8.2.1 From / To Taieri Gorge Railway

Up trains can proceed up to 2R signal (without authority having to be received to pass NB1) if the signal is at Stop.

Down trains may pass the All Trains Stop Board located 150 metres in the rear of 2R signal upon receiving authority to occupy the Taieri Gorge Railway in accordance with Taieri Gorge Railway procedures.

Trains are not required to stop if authority to enter the Taieri Gorge Railway is held prior to arrival at the boards.

8.2.2 Propelling Movements from Main South Line

Edendale to Taieri siding

Pilot 1 and Pilot 2 (normally 1 Locomotive Engineer & 1 Rail Operator) will depart Dunedin by road vehicle.

Pilot 1 will:

1. convey Pilot 2 to Factory Road level crossing.
2. proceed to Wingatui and call the North Bound train when clear of 10/6L signal Wingatui.
3. protect Gladstone Road level crossing.
4. call indications on 6L signal to Locomotive Engineer of train
5. hand over control to Pilot 2 when the train is on Gladstone Road level crossing.
6. then proceed by road vehicle to the Taieri Siding points.
7. receive handover from Pilot 2 (at Factory Road) then call the indications on 4LAC signal to Locomotive Engineer of the train and continue to pilot train into Taieri Siding.

Pilot 2 will:

1. wait at Factory Road, from where they have line of sight to 6RB signal.
2. receive handover from Pilot 1
3. protect Factory Road level crossing and pilot the train from Gladstone Road to clear of Factory Road
4. when the train is clear of Factory Road, handover to Pilot 1 and board locomotive.

8.3 Henley Siding

When stabling Rail Vehicles at Henley Siding they must be left in Siding 2.

8.4 Balclutha

8.4.1 Flood Protection

To prevent flooding of Balclutha Station yard and the adjoining area, stop logs can be placed across the main line at 461.74 km.

When water is expected to rise to levels which could cause flooding, the Otago Regional Council will warn the Ganger, Balclutha who must advise the Train Controller.

When flood waters reach a level at which flooding could be imminent the council will advise the Ganger, Balclutha.

After obtaining permission and the necessary track warrant from the Train Controller, the Ganger, Balclutha will issue the key to the box at 461.78 km to the Regional Council and the stop logs must be put in place.

If the flood water is below track level, the stop logs may be removed temporarily to allow trains to pass.

The stop logs must be replaced immediately after the passage of the train, the necessary Track Warrants cancelled and issued as requested.

When flood waters have fallen sufficiently, the Otago Regional Council will remove the stop logs and lock them in the box. The box key will be returned to the Ganger, Balclutha and the respective track warrants cancelled.

8.5 Shunting between Balclutha and Finegand

- Finegand is within Balclutha station limits.

- Only one shunting service is allowed between Balclutha and Finegand at a time.

All movements between Balclutha and Finegand are controlled by certified staff / shunt crew at Balclutha, who must make sure that no conflicting movements are authorised.

8.5.1 Speed

Speed between Balclutha and the first set of points at Finegand must not exceed 25 km/h. On the Finegand side of these points, speed must not exceed 15 km/h.

The locomotive horn must be sounded approaching the private siding at Finegand. A sharp lookout must be kept for the Freezing Company's road shunting tractor working near the running line.

A DSC locomotive must be used between Balclutha and Finegand with the air brake in operation. The maximum load for a DSC is 250 tonnes.

8.5.2 Finegand Security Fence

A security fence with gates across the tracks at the Freezing Works siding will control all rail vehicle access.

If it is necessary to close the gates, the Freezing Company should get approval from the shunt crew Balclutha. If the gates are closed before approval from the shunt crew, the Freezing Company will station a person 200 metres outside the gates to stop all trains until approval has been received.

When the gates are closed, shunting Finegand Freezing Works siding is suspended.

8.6 Shunting Balclutha and Mataura

When a southbound train is required to shunt at either Balclutha or Mataura and has a track warrant to enter either the main line or loop and the shunt movement is required to be carried out through No.7 points (north end) while an opposing train has authority to also enter the station, then the following arrangement will apply:

- The movement cannot take place until the other train has arrived and berthed.
- The Officer in Charge is to ensure that the Locomotive Engineers of both trains are aware of what is to take place before the shunt movement proceeds and will be responsible for ensuring the provisions of **TO08 Shunting, 7.3 Standing at Stations** for securing the portion of the train left on the main line are complied with.

SO08 Track Warrant Control, 9. Fouling the Loop in TWC Territory is modified accordingly.

8.7 Clinton

8.7.1 Crossing Trains

Up trains must be berthed on the main at Clinton when crossing Down trains.

It is essential that Down trains are given priority to berth when trains approach Clinton in close sequence. This is to facilitate the berthing on the uphill gradient at the north end of Clinton, and to minimise the operation of the level crossing warning devices over Main Road (SH1) at the north end of Clinton.

NOTE

Exception: Light locomotives, EM80, MTMV's travelling as a train, and Work Trains may be berthed on the loop when travelling in the Up direction.

8.8 Mataura

At the north end of Mataura, Up movements must not proceed beyond the fouling board unless a purple aspect is shown on the appropriate trailing points indicator.

At the Alliance siding, instead of full turnout protection off the main line, trap points have been installed with a derailer fitted in front of the trap points as the trap points are bolted for the main line. The derailer is locked with an AS padlock and must always remain locked unless KiwiRail are shunting the siding.

NOTE
Whenever possible, the Freezing Works pedestrian crossing at Mataura is not to be blocked.

8.9 Edendale

When access to 9 points at North Edendale siding is required, the TW key is placed into the WF releasing box located on a post nearby and turned. This action locks the TW key into the housing and releases the two WF keys, one being used for each switch stand.

Inserting the WF key into the lock on the switch stand, turning the WF key and pulling the shaft below the lock out as far as possible allows the points to be reversed. This also impounds the WF, which can only be removed when the points are returned to normal. The TW key can be recovered only when both WF keys are returned to the WF key releasing box.

Network Signals, Indicators and Boards Manual, 7.5 High Column Switch Stands and **Glossary**, Sidings Points are modified accordingly.

8.10 Invercargill

8.10.1 Signalling

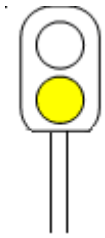
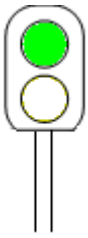
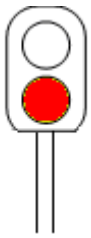
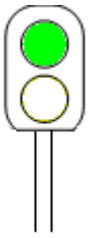
The Invercargill signal panel is under the control of the Train Controller.

Invercargill is controlled using two-position fixed Signals (Bluff Branch) and three-position fixed signals.

Signalling of trains

Two-position signals:

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

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

Normal Aspects of Two-position signals

Outer Home / Home and Starting Signals is at Stop.

Distant signal is at Caution.

Two-position Colour Light Signals at Invercargill

Distant Signal

R12L Distant signal is placed outside of the Outer Home signal at Invercargill.

Outer Home signal

12LC Outer Home signal is a fixed signal located outside a Home signal and between the Home signal and the Distant.

Home signals

12LAB Home signal is provided to authorise entry into Invercargill station. The Home signal is equipped to display a Low-speed indication.

Starting signals

12R Starting signal controls the entrance of trains to the Bluff Branch from Invercargill.

Use of 12R Starting Signal when Shunting

When 12R is used for a shunting movement, this movement must not enter TWC territory unless in possession of a track warrant for the movement.

8.10.2 Control of Movements

Movements are controlled by the Yard Team Leader or deputy:

- between 8LD signal and 12R signal (South Yard), and
- within the Arrival and Departure road and Sidings road.

The Locomotive Engineer / Shunter in charge must first obtain permission of the Yard Team Leader before movements from the Invercargill Yard through the detected hand points on the Sidings road and through the padlocked G and H points on the Bluff Branch.

G and H points must be returned to normal and padlocked after the movement has passed through them.

Permission to pass the following All Trains Stop boards on the Bluff Branch must be obtained from the Yard Team Leader, who must ensure the route is clear for the intended movement.

Board No.2 for movements from Locomotive and Repair Depot

After the movement has proceeded over ‘E’ points, they must be left in normal.

Board No.3 just south of the E points

Board No.4 movements towards H and G points

Track occupancy between 8LD signal and 12R signal, Bluff Branch must contact Yard Team Leader.

Contact details ext. 30816 or 021 248 6801.

When track occupancies clear the area, they must advise the Yard Team Leader.

When ceasing duty, the Yard Team Leader, or deputy, must provide the Train Controller a security certificate advising if and where trains may be berthed.

This information must be recorded on the train control diagram.

The Train Controller may then:

- signal trains into the yard area in accordance with this certificate
- control all movements between 8LD signal and 12R signal, Bluff Branch (includes authorising movements past All Trains Stop Boards Nos. 2, 3 and 4),

When starting duty, the Yard Team Leader, or deputy, must be advised by the Train Controller of all currently authorised movements:

- between 8LD signal and 12R signal, Bluff Branch
- within the Arrival and Departure Road

8.10.3 Ohai Line

All Trains Stop board No.1, situated 680 metres north of 4RAC Up Home from Ohai Line signal:

- All trains must stop before the All Trains Stop board before contacting the Train Controller to seek permission to pass.
- Operators must not seek permission to pass the All Trains Stop board until their train is stationary. **Network Signals, Indicators, and Boards Manual, 6.2 All Trains Stop Boards** is modified accordingly.

8.10.4 Spey Street Level Crossing

On the siding track the alarms are activated 20 metres from the crossing at positions marked by white posts. Movements on the sidings must cautiously pass the white marker post and the Locomotive Engineer must wait until the barriers are down before proceeding onto the crossing.

If barriers are already down for a main line movement, any shunting movement on the siding must still approach the crossing cautiously.

To avoid possible barrier damage, movements on the siding must wait for any road vehicles previously stopped at the crossing to clear before passing the white post to restart the alarms.

8.10.5 Platform Road – Rusty Rail

Due to the build-up of rust, because of the infrequent use of No.7 points and WL2A switch lock, the following safeguard procedures will apply:

- No.7 points must be hand wound and isolated in reverse, as reverse detection is not available.
- WL2A can be used, but reverse detection is not available.

- Before any movement is authorised into or out of the Platform Road, it must be ensured there are no conflicting movements.

9. Ohai Line

The line is currently closed between Oreti IB and the end of line to all normal train services including EM80.

A Stop board has been placed at the 14.58km (Oreti IB).

Only Infrastructure and approved contractor vehicles are authorised in this area for asset inspection and maintenance activities.

The Infrastructure Asset Engineer must confirm that the line between Oreti IB and the end of line has been inspected and is ready for any train service on that portion of line.

Any such activity must be issued by bulletin.

9.1 Bridge No.9 Oreti River

The Ganger of Gang MS 9 Invercargill will advise the Train Controller when high river flows at Bridge No.9 Oreti River at 15.93 km are likely and will instruct the Train Controller to close the line when the water level exceeds the critical ‘water line marks’ on the bridge piles. The line will remain closed until water levels fall below the critical level, as advised by the Ganger.

9.2 Wairio All Trains Stop Board – Down Trains

No Down train may pass the All Trains Stop board 80 metres south of the TW lever locked points at Wairio without authority from the Train Controller.

The main line within the station yard must not be occupied without permission from the Train Controller.

9.3 Ohai All Trains Stop Board

On arrival at the All Trains Stop board, a member of the train crew must examine the main line points to ensure they are correctly set for the running road and then check that Coal Corp personnel are not operating within the yard area before the train proceeds.

9.4 Speed Restriction

Speeds must not exceed 10 km/h in any siding.

9.5 Track Occupancy

Track occupancy must only be authorised when there are no trains operating between Wairio and Ohai.

When there is a requirement for a track occupancy to work in conjunction with a train or locomotive within station limits Wairio, a special bulletin must be issued stating the protection requirements and responsibilities of authorised staff.

The special bulletin must only be issued by an Officer Controlling Train Running.

Track occupancies including Hi-Rail Vehicles working within station limits Wairio may use **TS09 Foul Time.**

9.6 Rail Movements within Station Limits Wairio

The Locomotive Engineer of the first train operating in the Wairio Station Limits will be designated Officer in Charge of all rail movements within Wairio station limits.

The authority of the Train Controller must be obtained before a movement proceeds into Wairio station limits. Before giving that authority, the Train Controller must ensure there are no other rail movements within Wairio station limits.

If it is necessary for a subsequent rail movement to move within Wairio station limits, the Train Controller must contact the Locomotive Engineer of the first train who in turn will then communicate with the Locomotive Engineer of the second train and each party must come to a clear understanding as to the other's rail movements.

The Locomotive Engineer of the first train must then advise the Train Controller that permission can be given for the second train to move within Wairio station limits.

The Train Controller will then authorise the second train to enter Wairio station limits.

985/986 cell phone number 021 240 7985

Local Network Instructions L7 Main South Line, **9. Ohai Line** is modified accordingly.

10. Bluff Line

Station limits for the Bluff Port area comprise all lines and sidings east of the TWC ENDS board at Bluff.

10.1 All Trains Stop Boards

There are ATS boards:

- 50 metres outside the TWC ENDS board.
- On the Island Harbour side facing the access bridge.

The first train to arrive at Bluff may pass the ATS board after the Locomotive Engineer has made sure that all points are correctly set.

The Person in Charge of shunting this movement then becomes the Officer in Charge at Bluff, and any other rail movements that need to pass the ATS boards must obtain their permission.

10.2 Speed Restrictions

All trains over level crossings and wharves must not exceed 10 km/h.

When vehicles are propelled over road crossings and on wharves, the Shunter in Charge must walk in front of the vehicles and make sure the road is clear.

11. Signalling and Interlocking

11.1 Main South Line

Woolston–Lyttelton

Current S&I Diagram No.3084

Amendments:

- Change 'Car Terminal' to 'Log Crossing' at Lyttelton

Christchurch

Current S&I Diagram No.3417

Islington

Current S&I Diagram No.3258

Rolleston

Current S&I Diagram No.3201

Amendments:

- Change 7A and 7B points machines to CTS2 points machines

Chertsey–Bankside

Current S&I Diagram No.3260

Ashburton

Current S&I Diagram No.3081

Amendments:

- Insert Northpark Road at 91.40 km and place B above line and left of crossing.
- Ashburton Cold Storage siding – WL4A switch lock has been removed and replaced with straight rail.
- Tinwald Industrial siding - WL3 switch lock has been removed and replaced with straight rail.

Hinds

Current S&I Diagram No.3106

Rangitata

Current S&I Diagram No.3141

Amendments:

- Amend SH79, insert B above line and left of crossing.
- Add new level crossing, Arundel Belfield Road at 138.11km, and insert B below line and right of crossing.

Temuka

Current S&I Diagram No.3031

Timaru–Washdyke

Current S&I Diagram No.3023

Studholme–St Andrews

Current S&I Diagram No.3129

Glenavy

Current S&I Diagram No.3140

Oamaru

Current S&I Diagram No.3303

Herbert

Current S&I Diagram No.3412

Bushey–Hillgrove

Current S&I Diagram No.2949

Waitati–Merton

Current S&I Diagram No.3408

Sawyers Bay–Port Chalmers

Current S&I Diagram No.3453

Dunedin

Current S&I Diagram No.3073

Amendments:

- Remove All Train Stop board on South Road Connection

Mosgiel–Wingatui

Current S&I Diagram No.3179

Milton–Henley

Current S&I Diagram No.3472

Balclutha

Current S&I Diagram No.2937

Waipahi–Clinton

Current S&I Diagram No.3175

Amendments:

- Change dimensions from Station Warning board at Waipahi towards Mataura from 19509 to 21409
- WL1A loop to siding switch lock points at Clinton have been removed and replaced with straight rail

Mataura

Current S&I Diagram No.3420

Edendale

Current S&I Diagram No.3168

Invercargill

Current S&I Diagram No.3200

11.2 Bluff Branch

Current S&I Diagram No.3004

11.3 Ohai Line

Current S&I Diagram No.2968

Amendments:

- No.1 points at Wairio have been relocated 64 metres towards Crawfords, the new meterage is 66.565 km.
- The distance from the 67 km peg to No.1 points is now 435 and the new distance between No.1 & No.9 points is 509.
- Delete the All Trains Stop board for movements departing Ohai towards Wairio.
- Amend ‘Ohai – Wairio Section’ to read ‘Station Limits Wairio’.
- Insert All Trains Stop board above and below line at 71.41 km (Note only Infrastructure vehicles are authorised to operate between 71.41 km and end of line).

12. 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 both the Area Manager for the area, or their deputies, must be in attendance. Unless otherwise stated the permission of Train Control 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.

Christchurch

- A points Christchurch (sheet 1) are secured in normal.
- C points Christchurch (sheet 1) are secured in reverse.
- 56AB Up Directing from Down Main signal at Addington (sheet 2) has been fixed at stop.
- No.3 points Waltham (sheet 3) have been secured in normal due to rusty rail.

Islington

- 4271A/B and 4272A/B points at Islington have been secured in normal pending commissioning.

Ashburton

- WL4A switch lock at Ashburton Cold Storage Siding has been secured in normal pending removal and is not available for use.
- Fairton Siding – WL4B switch lock has been secured in normal and is not available for use.

Temuka

Switch lock WL1B has been secured in normal.

Studholme

Pending repairs, WL1A and WL1B switch locks have been secured in normal and are not to be operated.

Glenavy

Switch locks WL1A and WL1B have been secured in normal.

Milton

The turnouts leading off the siding road have been clamped in normal.

Otautau Siding

Pending repairs, No. 9 points at have been secured in normal.

Wairio

Pending repairs, No.1 and 9 points have been secured in normal.

