

# DRIVERS ROUTE KNOWLEDGE DIAGRAMS

## NORTH SHORE LINE

CENTRAL

TOWN HALL

WYNYARD

MILSONS POINT

NORTH SYDNEY

WAVERTON

WOOLSTONECRAFT

ST LEONARDS

ARTARMON

CHATSWOOD

ROSEVILLE

LINDFIELD

KILLARA

GORDON

PYMBLE

TURRAMURRA

WARRAWEE

WAHROONGA

WAITARA

HORNSBY

**Effective Date:** December 2025

**Version:** 5.70

### Explanatory Notes:

Navigate to your area of interest via the station index or by using links created in Adobe bookmarks.

This document is approved for **route knowledge only**.

**Do not use these diagrams for any safety related purpose** without validating the information against a controlled source or in the field.

Information in these diagrams is uncontrolled.

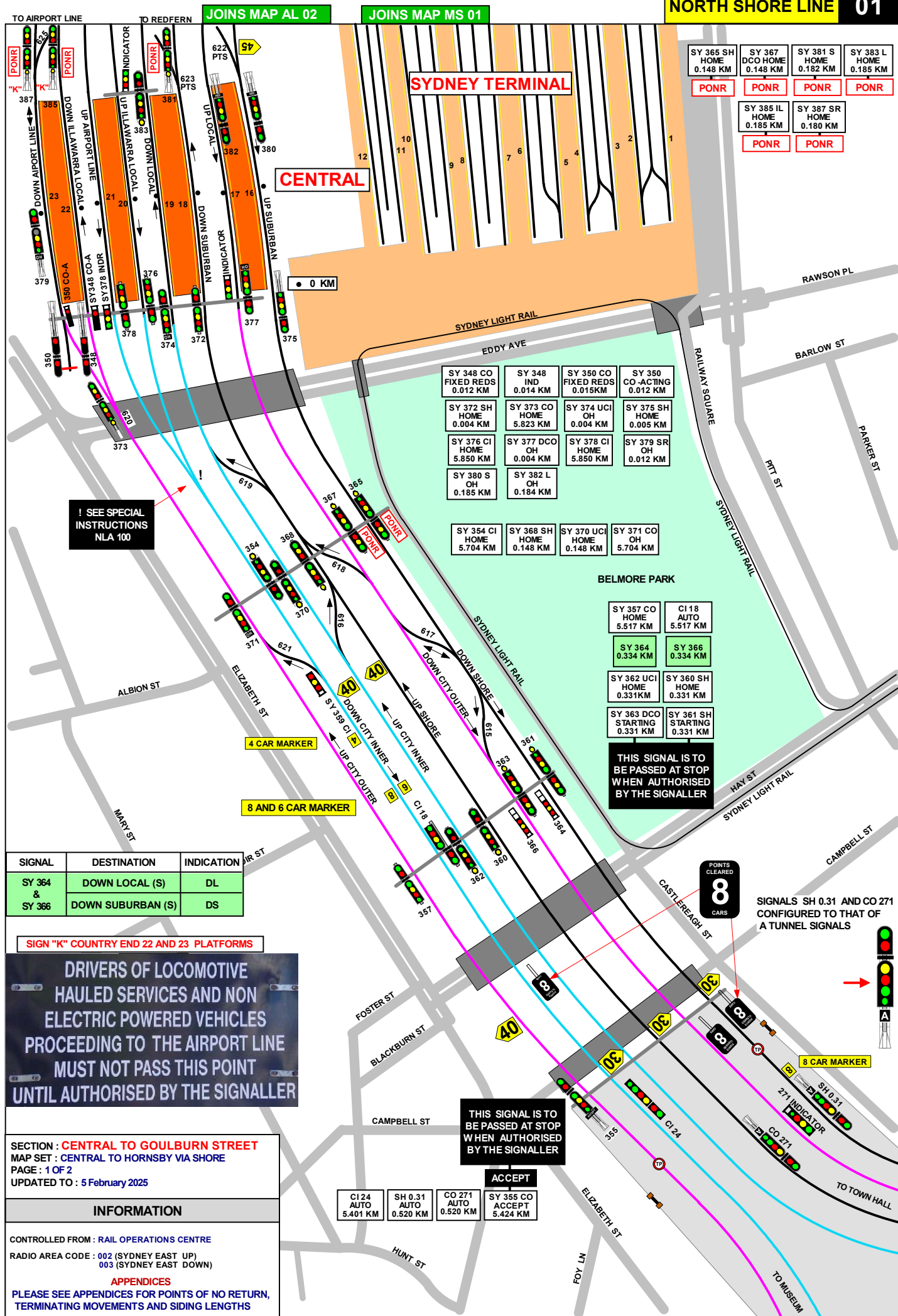
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GRADIENT

LEVEL

1 IN 75

### CENTRAL TURNBACK ARRANGEMENTS

DOWN CITY OUTER AND DOWN SHORE TRAINS MAY PROCEED FORWARD AND RETURN TO CENTRAL VIA No. 617, No. 618 or No. 619 CROSSOVER, PROVIDED THAT NO PORTION OF THE TRAIN HAS PASSED THE RESPECTIVE CAR MARKER RELATING TO THE TRAIN.

- WHEN THIS WORKING IS TO BE ARRANGED, THE SIGNALLER AT SYDNEY SHALL:
- IF THE TRAIN IS NOT TIMETABLED TO PERFORM THIS MOVEMENT, ARRANGE FOR THE CREW OF THE TRAIN TO BE ADVISED OF THE WORKING TO BE ADOPTED.
- THEN SET THE ROUTE FOR THE TRAIN TO PROCEED CLEAR OF SIGNAL No. SY 364 or No. SY 366.
- WHEN THE TRAIN IS CLEAR OF SIGNAL No. SY 364 or No. SY 366, SET THE ROUTE FOR THE TRAIN TO RETURN TO CENTRAL.

DOWN CITY INNER TRAINS MAY PROCEED FORWARD AND RETURN TO CENTRAL VIA No. 621 CROSSOVER, PROVIDED THAT NO PORTION OF THE TRAIN HAS PASSED THE RESPECTIVE CAR MARKER RELATING TO THE TRAIN.

- WHEN THIS WORKING IS TO BE ARRANGED, THE SIGNALLER AT SYDNEY SHALL:
- IF THE TRAIN IS NOT TIMETABLED TO PERFORM THIS MOVEMENT, ARRANGE FOR THE CREW OF THE TRAIN TO BE ADVISED OF THE WORKING TO BE ADOPTED.
- THEN SET THE ROUTE FOR THE TRAIN TO PROCEED CLEAR OF SIGNAL No. SY 359.
- WHEN THE TRAIN IS CLEAR OF SIGNAL No. SY 359, SET THE ROUTE FOR THE TRAIN TO RETURN TO CENTRAL.

### CENTRAL TIMING MARKER SIGNS

FOUR TIMING MARKER SIGNS, EACH WITH A YELLOW REFLECTIVE LETTER ' T ' DISPLAYED ON A BLACK BACKGROUND, ARE PROVIDED IN THE CENTRAL FLYOVER AREA WHERE THE TIMING SECTIONS ARE UNUSUALLY SHORT.

THEY ARE LOCATED AS FOLLOWS:

LINE	MARKER LOCATION
DOWN LOCAL	23 METRES IN APPROACH TO SIGNAL No. SY397L
UP LOCAL	16 METRES IN APPROACH TO SIGNAL No. SY394L
UP ILLAWARRA LOCAL	36 METRES IN APPROACH TO SIGNAL No. SY388IL, AND 16 METRES IN APPROACH TO SIGNAL No. SY396IL

A TRAIN APPROACHING ANY OF THESE SIGNALS AND SHOWING A LOW SPEED OR MEDIUM CAUTION INDICATION SHALL BE DRAWN PAST THE ' T ' MARKER SIGN, OTHERWISE THE TIMING WILL NOT COMMENCE AND THE TRAIN STOP WILL NOT CLEAR.

SECTION : **CENTRAL TO GOULBURN STREET**MAP SET : **CENTRAL TO HORNSBY VIA SHORE**

PAGE : 2 OF 2

UPDATED TO : 6 March 2025

### INFORMATION

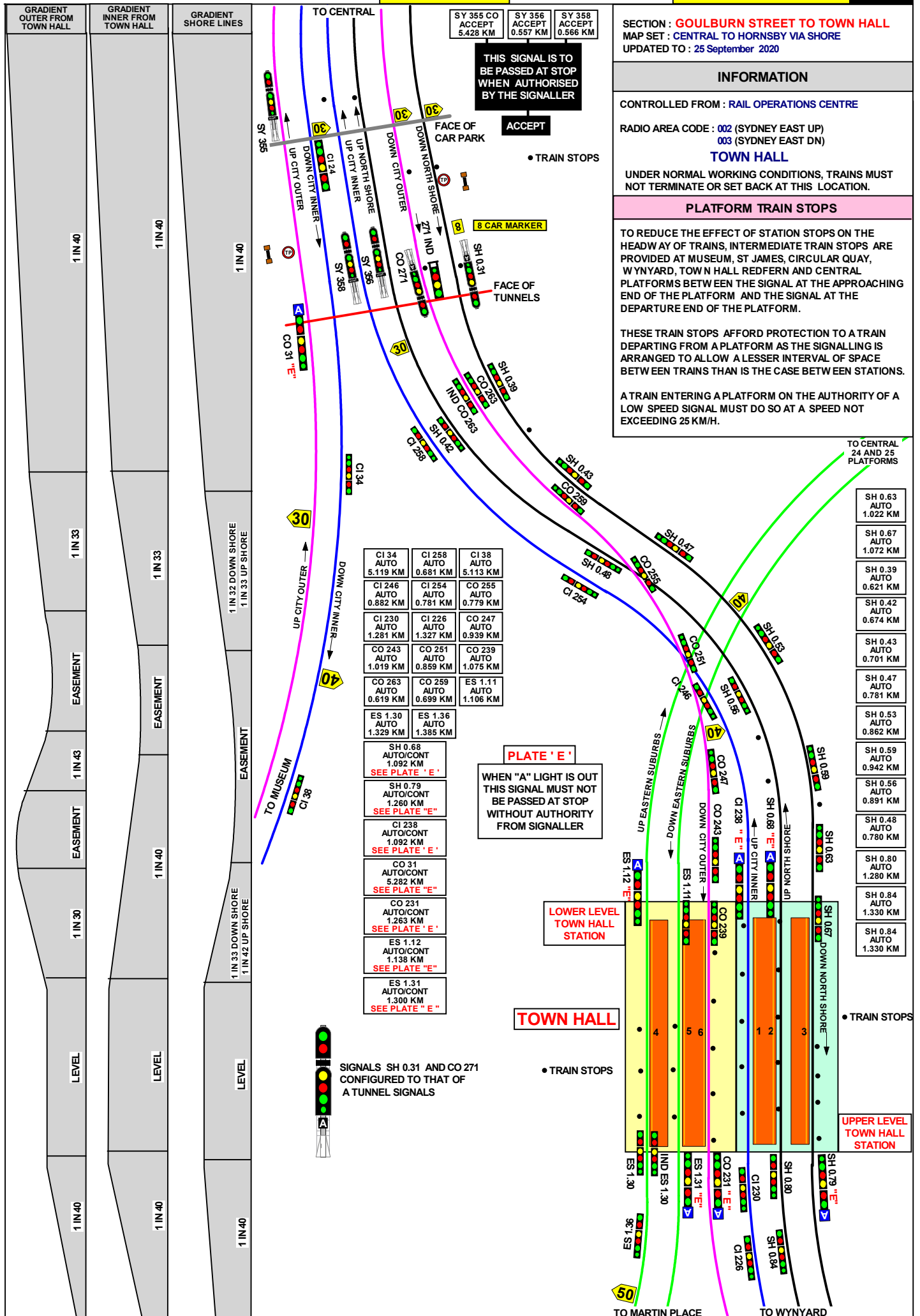
CONTROLLED FROM : **RAIL OPERATIONS CENTRE**

RADIO AREA CODE : **002** (SYDNEY EAST UP)  
**003** (SYDNEY EAST DOWN)

### APPENDICES

PLEASE SEE APPENDICES FOR POINTS OF NO RETURN,  
TERMINATING MOVEMENTS AND SIDING LENGTHS

JOINS MAP NS 01







## PLATE 'E'

WHEN "A" LIGHT IS OUT  
THIS SIGNAL MUST NOT  
BE PASSED AT STOP  
WITHOUT AUTHORITY  
FROM SIGNALLER

CI 194  
AUTO/  
CONT  
1.967 KM  
SEE  
PLATE "E"

CO 187  
AUTO/  
CONT  
2.135KM  
SEE  
PLATE "E"

SY 585 SH  
CONT  
1.942 KM

SY 584 SH  
CONT  
STARTING  
1.964 KM

SY 577 SH  
CONT  
HOME  
2.132 KM

SY 560 SH  
CONT  
2.505 KM

SECTION : **WYNYARD TO SOUTH PYLON**  
MAP SET : **CENTRAL TO HORNSBY VIA SHORE**  
UPDATED TO : 6 March 2025

## INFORMATION

CONTROLLED FROM : **RAIL OPERATIONS CENTRE**

RADIO AREA CODE : **003 (SYDNEY EAST DN)**

## APPENDICES

PLEASE SEE APPENDICES FOR POINTS OF NO RETURN,  
TERMINATING MOVEMENTS AND SIDING LENGTHS

## INTERMEDIATE TRAIN STOPS

INTERMEDIATE TRAIN STOPS ARE LOCATED ALONG THE  
LENGTH OF PLATFORMS Nos. 3, 4, 5 AND 6 AT WYNYARD AS  
WELL AS BETWEEN SIGNALS ON THE UP SHORE LINE AND  
THE CITY INNER.

THESE TRAIN STOPS WILL DEPRESS AUTOMATICALLY WHEN  
A TRAIN APPROACHING ON THE AUTHORITY OF A LOW SPEED  
OR CAUTION SIGNAL INDICATION HAS REDUCED SPEED  
ACCORDING TO THE INDICATION.

IF THE SPEED OF THE TRAIN IS NOT SUFFICIENTLY REDUCED,  
THESE TRAIN STOPS WILL REMAIN IN THE RAISED POSITION.

GRADIENT

LEVEL

E

1 IN 30

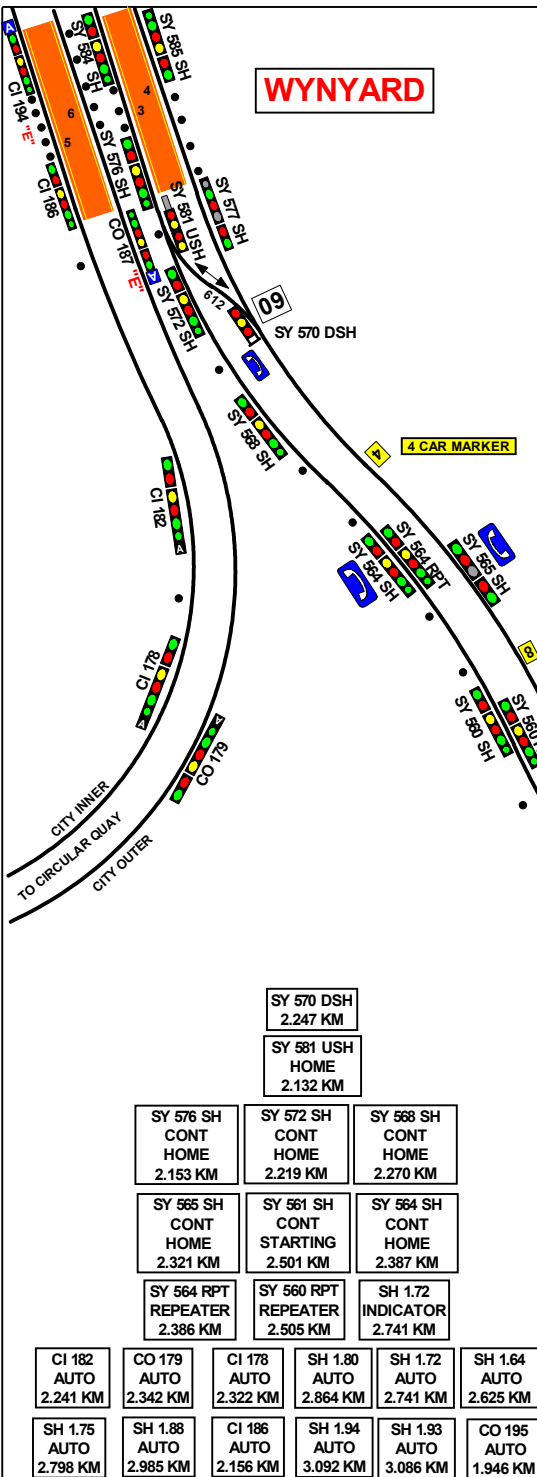
1 IN 32

1 IN 30

1 IN 32

1 IN 30

## WYNYARD



## SYDNEY HARBOUR BRIDGE

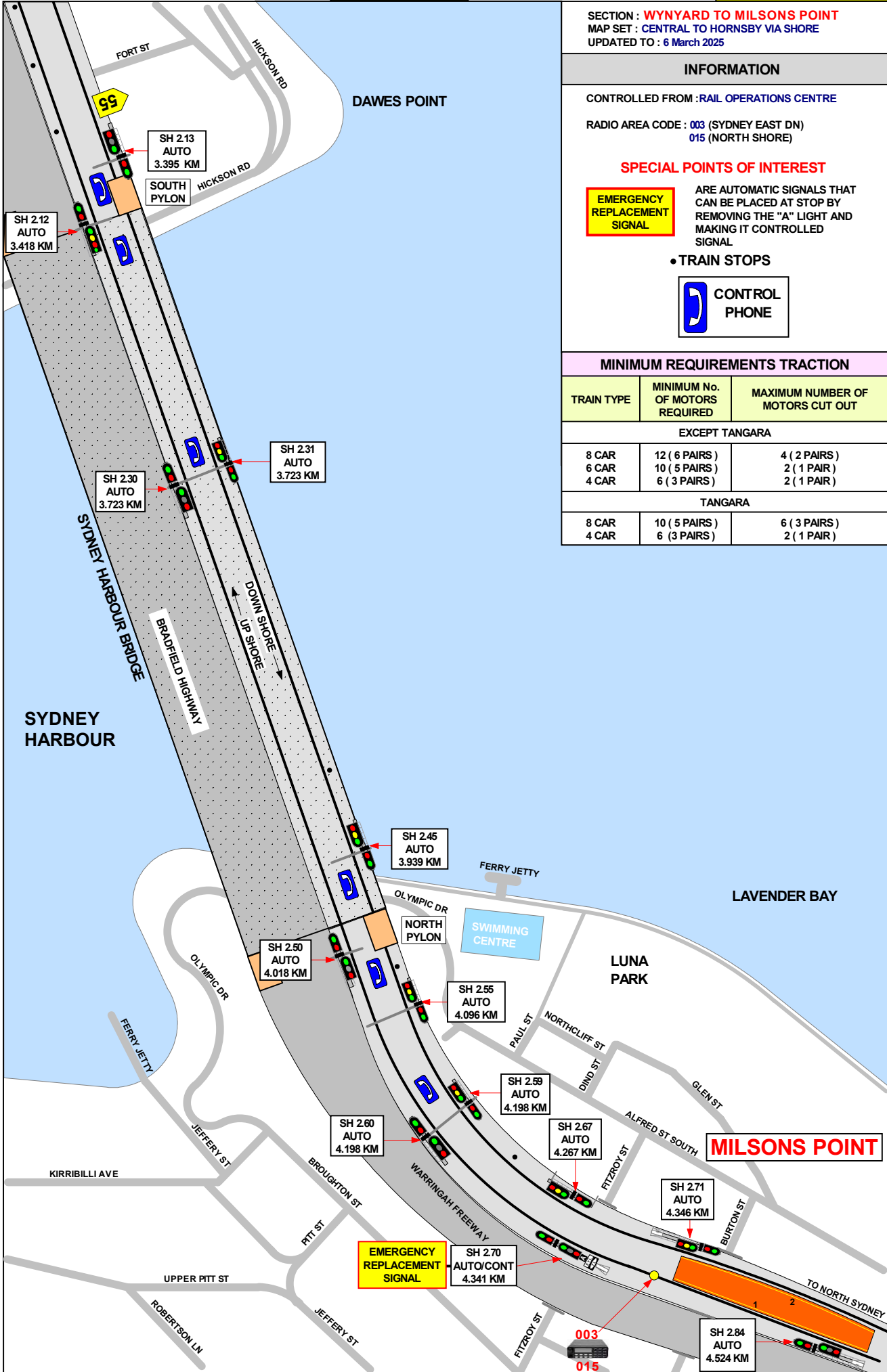
DUE TO THE STEEP GRADES ON THE HARBOUR BRIDGE  
THERE IS A STRICT MINIMUM REQUIREMENT ON THE  
NUMBER OF TRACTION MOTORS THAT MUST BE WORKING  
BEFORE ATTEMPTING THE CROSSING (SEE TABLE BELOW).  
IF THESE MINIMUM REQUIREMENTS ARE NOT MET, THEN IT  
WILL BE NECESSARY TO ARRANGE AN ASSISTING TRAIN,  
OR TERMINATE THE SERVICE AT WYNYARD  
(DOWN SHORE LINE) AND RETURN VIA THE UP SHORE LINE.

MINIMUM TRACTION REQUIREMENTS  
FOR C, K AND T SETS

TRAIN CONSIST	MINIMUM No. OF MOTORS REQUIRED	MAXIMUM NUMBER OF MOTORS CUT OUT
8 CARS	12 ( 6 PAIRS )	4 ( 2 PAIRS )
4 CARS	6 ( 3 PAIRS )	2 ( 1 PAIR )

REFER TO SET SPECIFIC TRAIN OPERATING MANUAL (TOM) FOR  
MINIMUM TRACTION REQUIREMENTS ON 4G TRAINS

TO WYNYARD



SECTION : **WYNYARD TO MILSONS POINT**  
 MAP SET : **CENTRAL TO HORNSBY VIA SHORE**  
 UPDATED TO : 6 March 2025

## INFORMATION

CONTROLLED FROM : **RAIL OPERATIONS CENTRE**

RADIO AREA CODE : **003** (SYDNEY EAST DN)  
**015** (NORTH SHORE)

## SPECIAL POINTS OF INTEREST

**EMERGENCY  
REPLACEMENT  
SIGNAL**

ARE AUTOMATIC SIGNALS THAT  
 CAN BE PLACED AT STOP BY  
 REMOVING THE "A" LIGHT AND  
 MAKING IT CONTROLLED  
 SIGNAL

## • TRAIN STOPS



**CONTROL  
PHONE**

## MINIMUM REQUIREMENTS TRACTION

TRAIN TYPE	MINIMUM No. OF MOTORS REQUIRED	MAXIMUM NUMBER OF MOTORS CUT OUT
EXCEPT TANGARA		
8 CAR	12 ( 6 PAIRS )	4 ( 2 PAIRS )
6 CAR	10 ( 5 PAIRS )	2 ( 1 PAIR )
4 CAR	6 ( 3 PAIRS )	2 ( 1 PAIR )
TANGARA		
8 CAR	10 ( 5 PAIRS )	6 ( 3 PAIRS )
4 CAR	6 ( 3 PAIRS )	2 ( 1 PAIR )

GRADIENT

1 IN 30

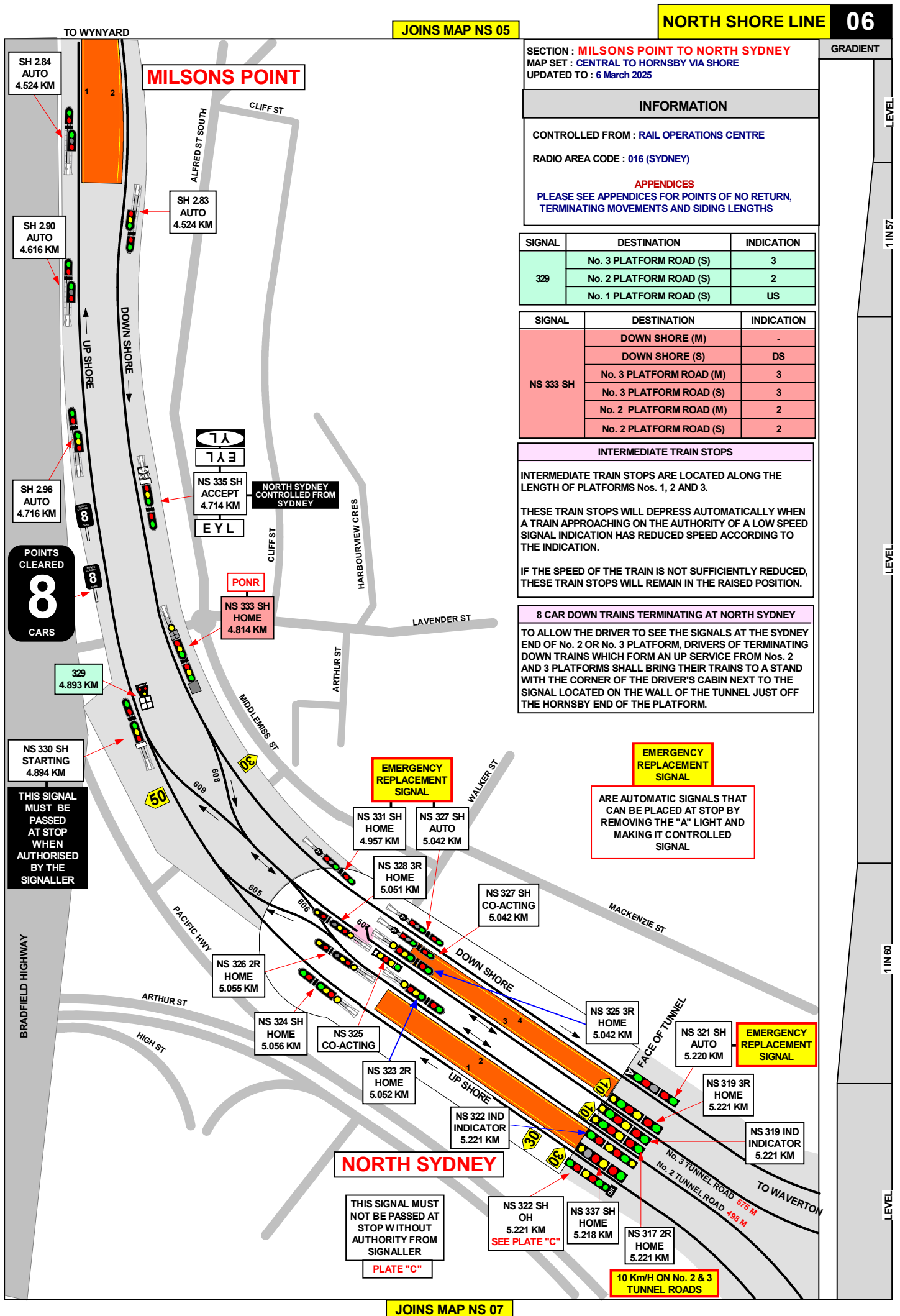
1 IN 40

1 IN 40

1 IN 38

1 IN 40

LEVEL







SECTION : **NORTH SYDNEY TO WAVERTON**  
 MAP SET : **CENTRAL TO HORNSBY VIA SHORE**  
 UPDATED TO : 6 March 2025

CONTROLLED FROM : **RAIL OPERATION CENTRE**

RADIO AREA CODE : **016 (SYDNEY)**

**APPENDICES**  
 PLEASE SEE APPENDICES FOR POINTS OF NO RETURN,  
 TERMINATING MOVEMENTS AND SIDING LENGTHS

## SPECIAL POINTS OF INTEREST

### NORTH SYDNEY

PROPELLING FREIGHT TRAINS TO AND FROM WAVERTON NECK	
UP FREIGHT TRAINS	UP FREIGHT TRAINS TRAVELLING TO NORTH SYDNEY CAR SIDINGS MAY BE PROPELLED ALONG No. 2 PLATFORM ROAD FROM NORTH SYDNEY TO THE SHUNTING NECK AT WAVERTON.
DOWN FREIGHT TRAINS	DOWN FREIGHT TRAINS MAY BE PROPELLED FROM THE SHUNTING NECK TO No. 2 OR No. 3 PLATFORM ROAD ( HORNSBY END ).
<b>NOTE:</b> WHEN PROPELLING, THE SAFEWORKING EMPLOYEE CONTROLLING THE MOVEMENT SHALL CARRY OUT THE INSTRUCTIONS FOR PROPELLING.	

STABLING TRAINS IN Nos. 2 AND 3 TUNNEL ROADS
WHEN TRAINS ARE REQUIRED TO STABLE WITHIN THE TUNNEL, THE STATION MASTER AT NORTH SYDNEY SHALL ARRANGE FOR THE DRIVER OF EACH TRAIN TO BE ADVISED HOW MANY TRAINS HAVE ALREADY STABLED IN THE TUNNEL. THE DRIVER WILL THEN PROCEED TO THE POINT OF STABLING.
WHEN TRAINS ARE STABLED IN THE TUNNEL ROADS, THE DRIVER SHALL ENSURE THAT RED MARKER LIGHTS ARE PLACED ON BOTH ENDS OF THE TRAIN AT ALL TIMES.
<b>NOTE:</b> TRAINS TRAVELLING IN No. 2 OR No. 3 TUNNEL SHALL NOT EXCEED A SPEED OF 10 KM/H.

INTERMEDIATE TRAIN STOPS
INTERMEDIATE TRAIN STOPS ARE LOCATED ALONG THE LENGTH OF PLATFORMS Nos. 1, 2 AND 3.
THESE TRAIN STOPS WILL DEPRESS AUTOMATICALLY WHEN A TRAIN APPROACHING ON THE AUTHORITY OF A LOW SPEED SIGNAL INDICATION HAS REDUCED SPEED ACCORDING TO THE INDICATION.
IF THE SPEED OF THE TRAIN IS NOT SUFFICIENTLY REDUCED, THESE TRAIN STOPS WILL REMAIN IN THE RAISED POSITION.

FIRE PRECAUTIONS
FOUR FIRE ALARM TELEPHONES ARE INSTALLED IN REFUGES IN THE NORTH SYDNEY TUNNELS AND ANOTHER FIRE ALARM TELEPHONE IS IN THE CONTROL ROOM ON Nos. 3 AND 4 PLATFORM AT NORTH SYDNEY.
THE TELEPHONE CASES ARE PAINTED RED WITH "FIRE" AND A NUMBER INSCRIBED ON THE DOOR.
THE POSITIONS OF THE FIRE ALARM TELEPHONES IN THE TUNNELS ARE SHOWN BY A LIGHT IN THE REFUGES.

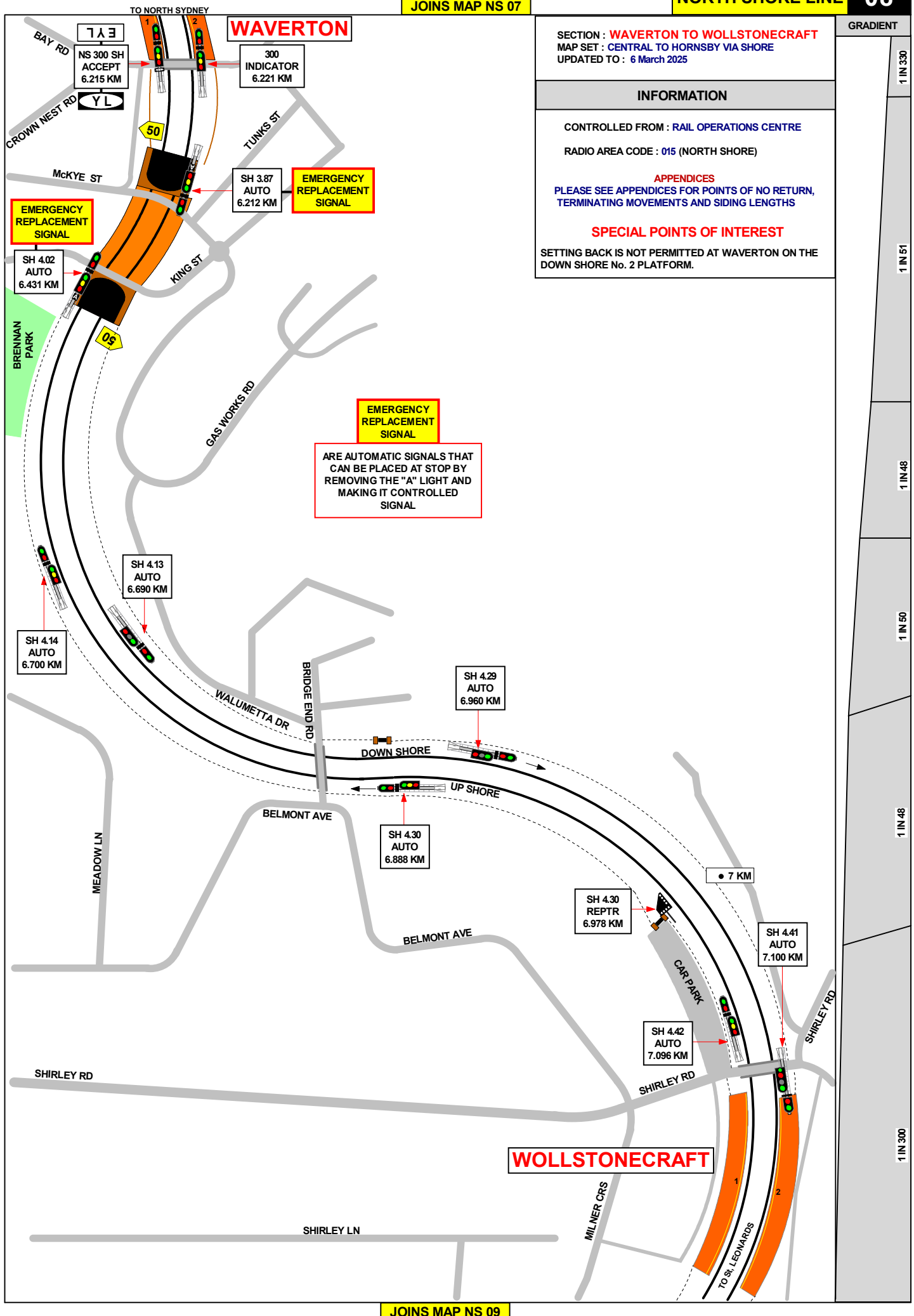
8 CAR DOWN TRAINS TERMINATING AT NORTH SYDNEY
TO ALLOW THE DRIVER TO SEE THE SIGNALS AT THE SYDNEY END OF No. 2 OR No. 3 PLATFORM, DRIVERS OF TERMINATING DOWN TRAINS WHICH FORM AN UP SERVICE FROM Nos. 2 AND 3 PLATFORMS SHALL BRING THEIR TRAINS TO A STAND WITH THE CORNER OF THE DRIVER'S CABIN NEXT TO THE SIGNAL LOCATED ON THE WALL OF THE TUNNEL JUST OFF THE HORNSBY END OF THE PLATFORM.

**EMERGENCY  
REPLACEMENT  
SIGNAL**

ARE AUTOMATIC SIGNALS THAT  
CAN BE PLACED AT STOP BY  
REMOVING THE "A" LIGHT AND  
MAKING IT CONTROLLED  
SIGNAL

### WAVERTON

SETTING BACK IS NOT PERMITTED AT WAVERTON  
ON THE DOWN SHORE No. 2 PLATFORM.



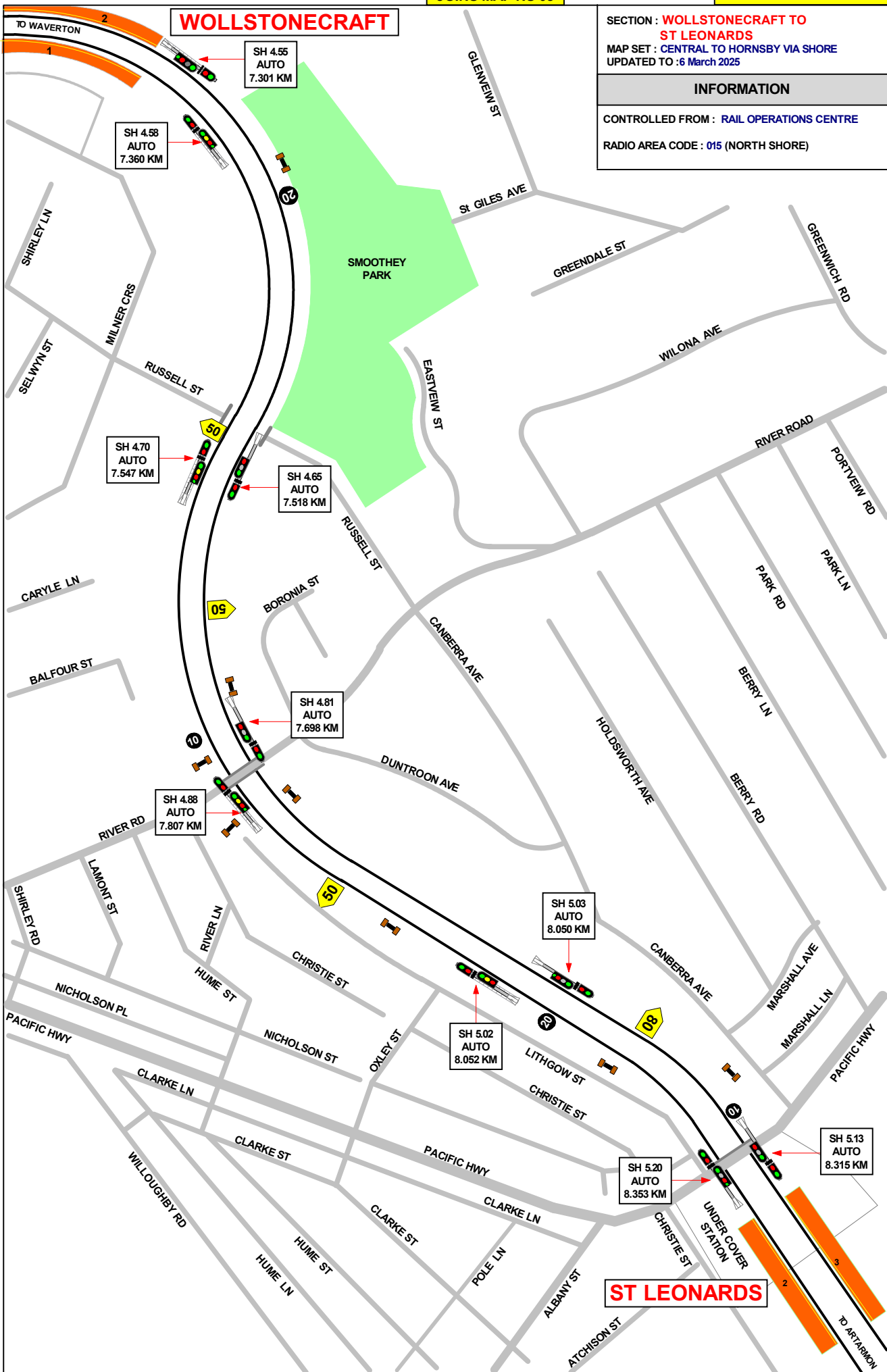
**WOLLSTONECRAFT**

SECTION : **WOLLSTONECRAFT TO ST LEONARDS**  
 MAP SET : **CENTRAL TO HORNSBY VIA SHORE**  
 UPDATED TO : 6 March 2025

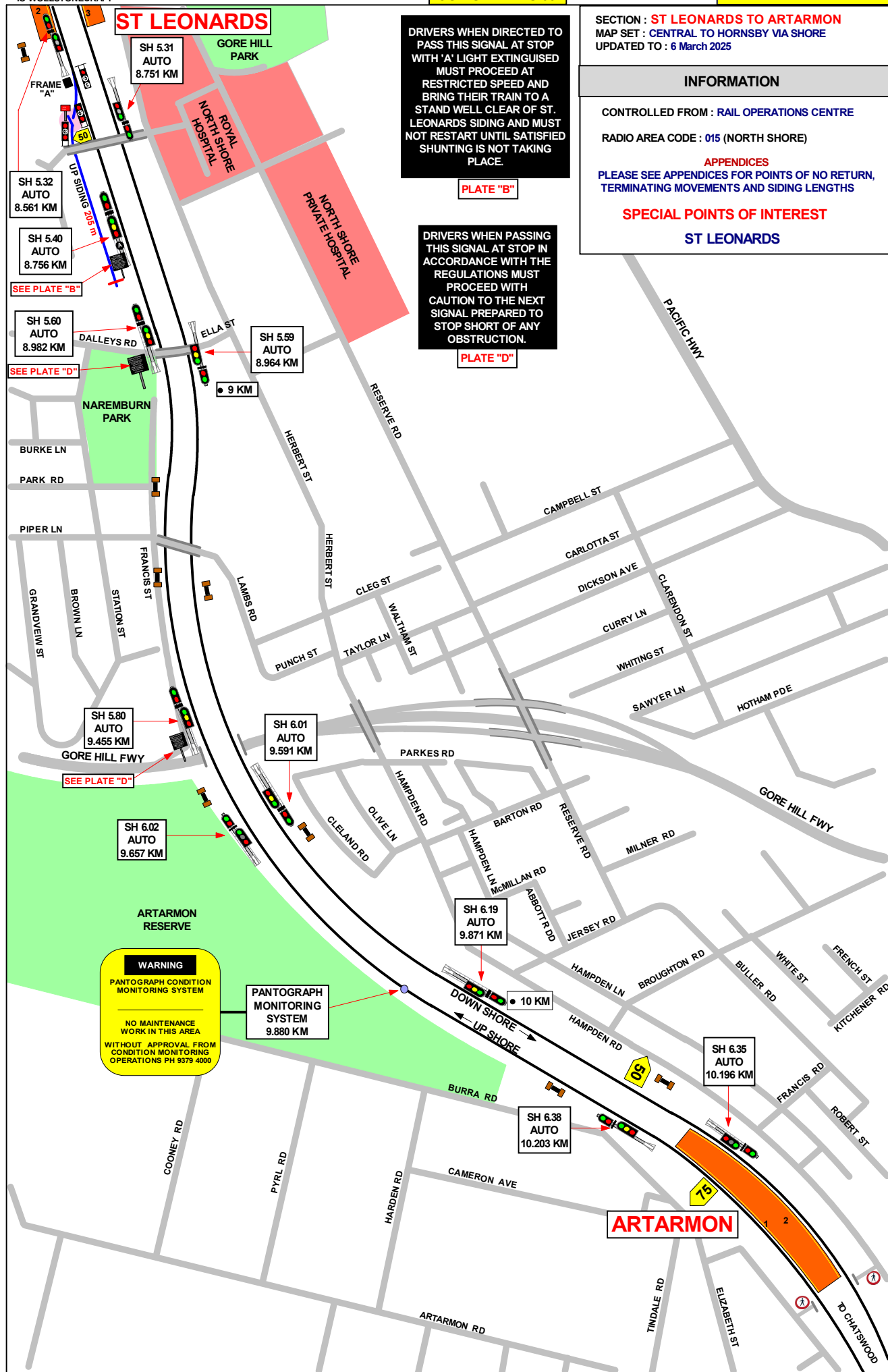
**INFORMATION**

CONTROLLED FROM : **RAIL OPERATIONS CENTRE**  
 RADIO AREA CODE : **015 (NORTH SHORE)**

GRADIENT

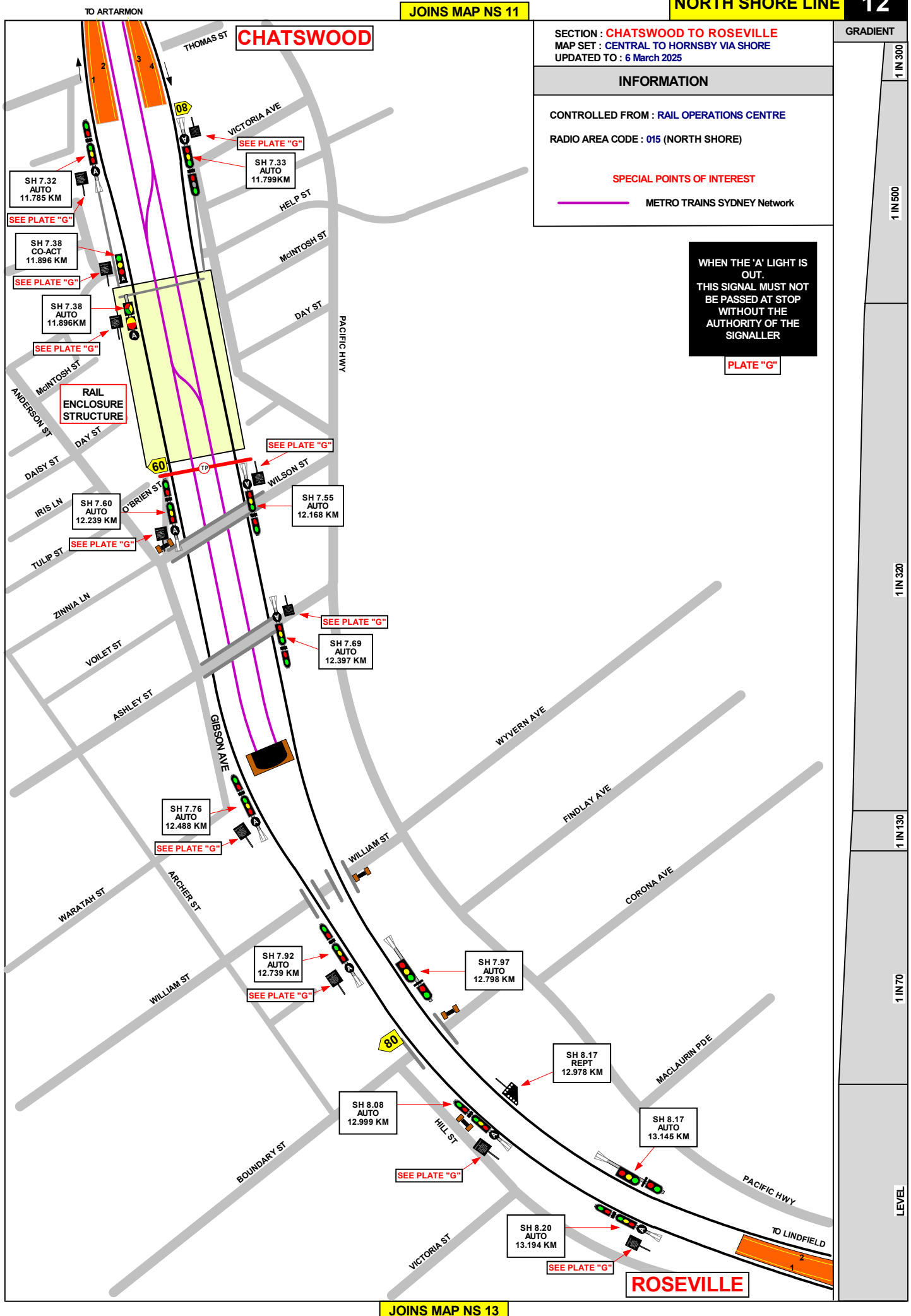


1 IN 300  
 1 IN 56  
 1 IN 50  
 1 IN 48  
 1 IN 181  
 1 IN 395

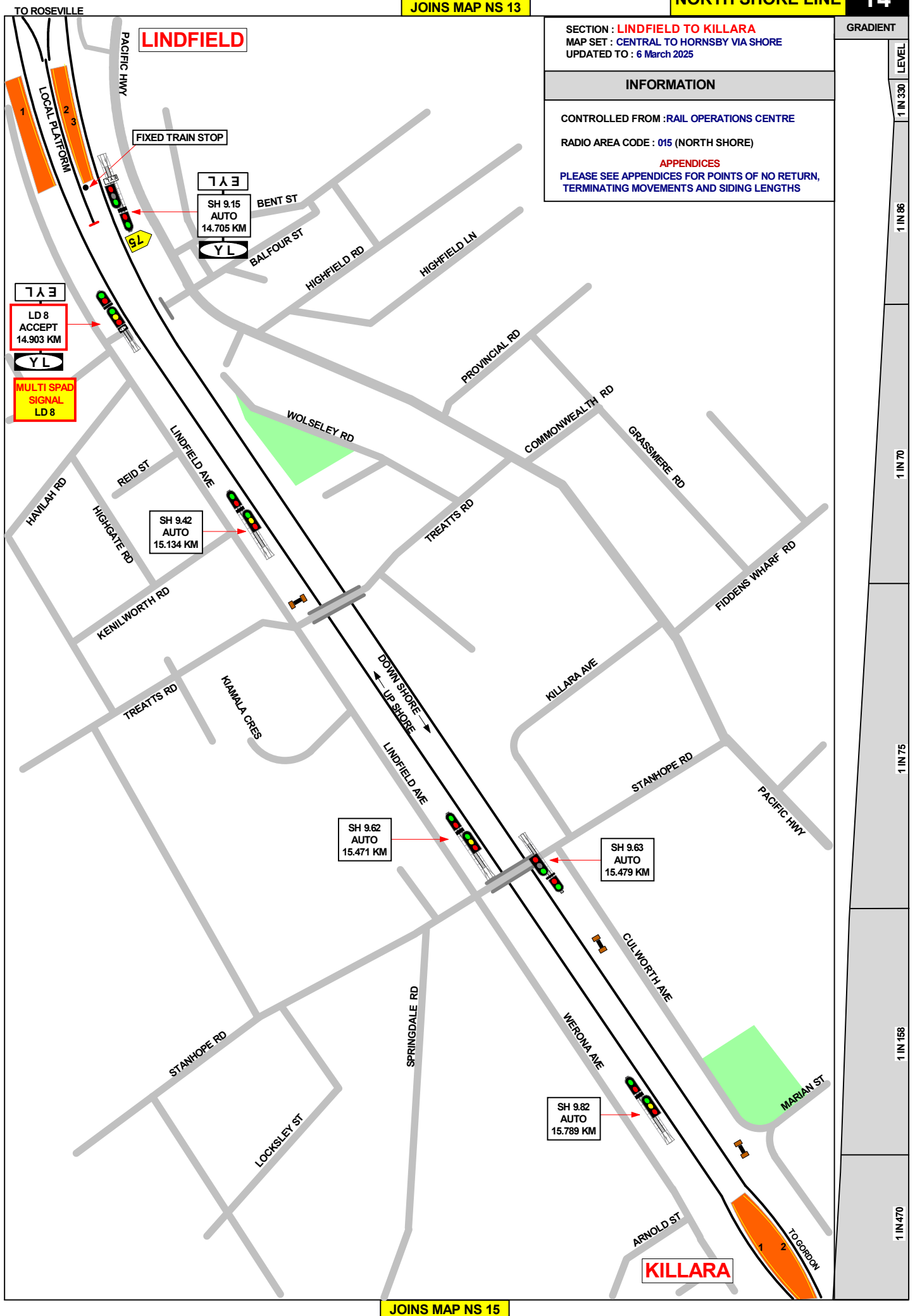


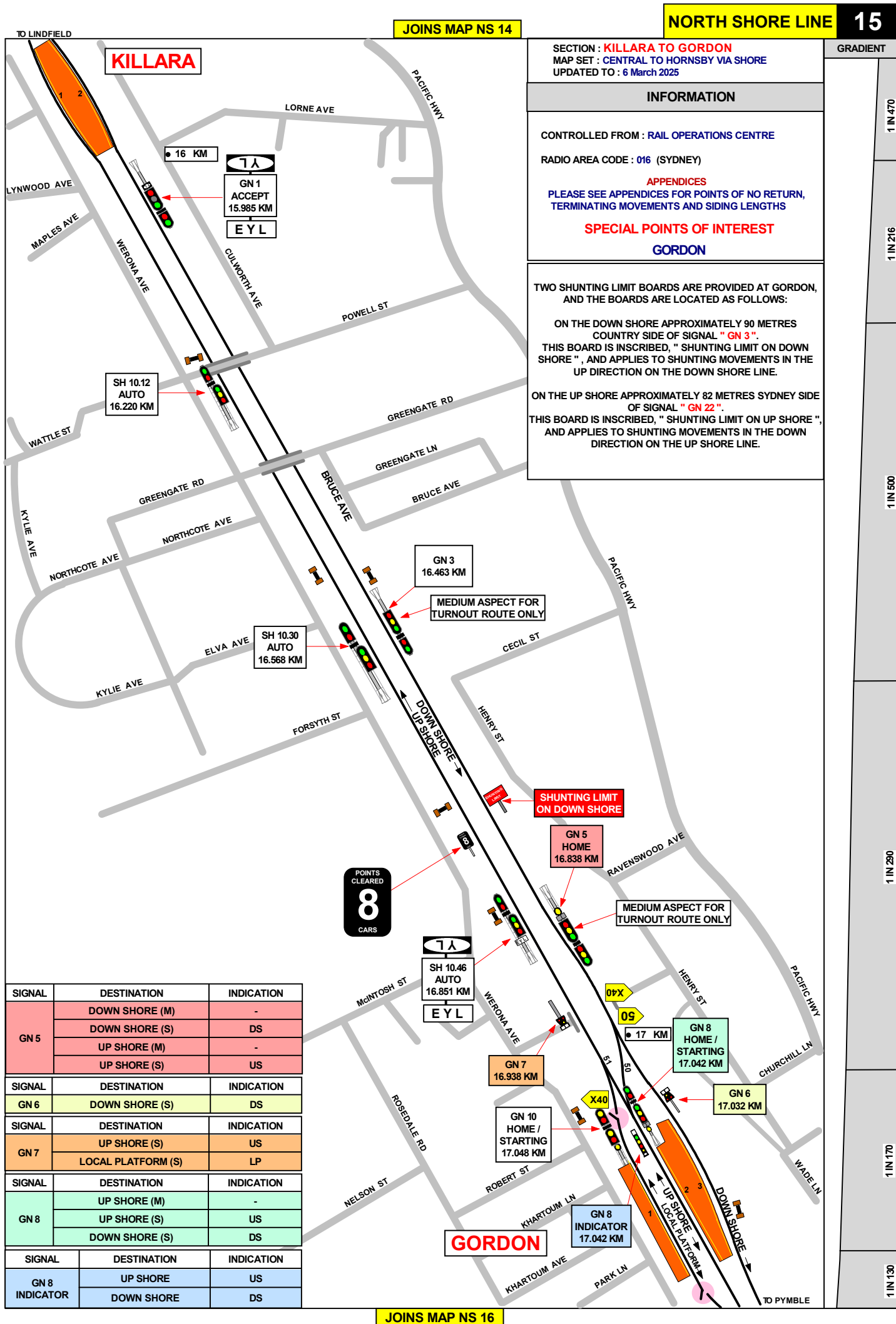




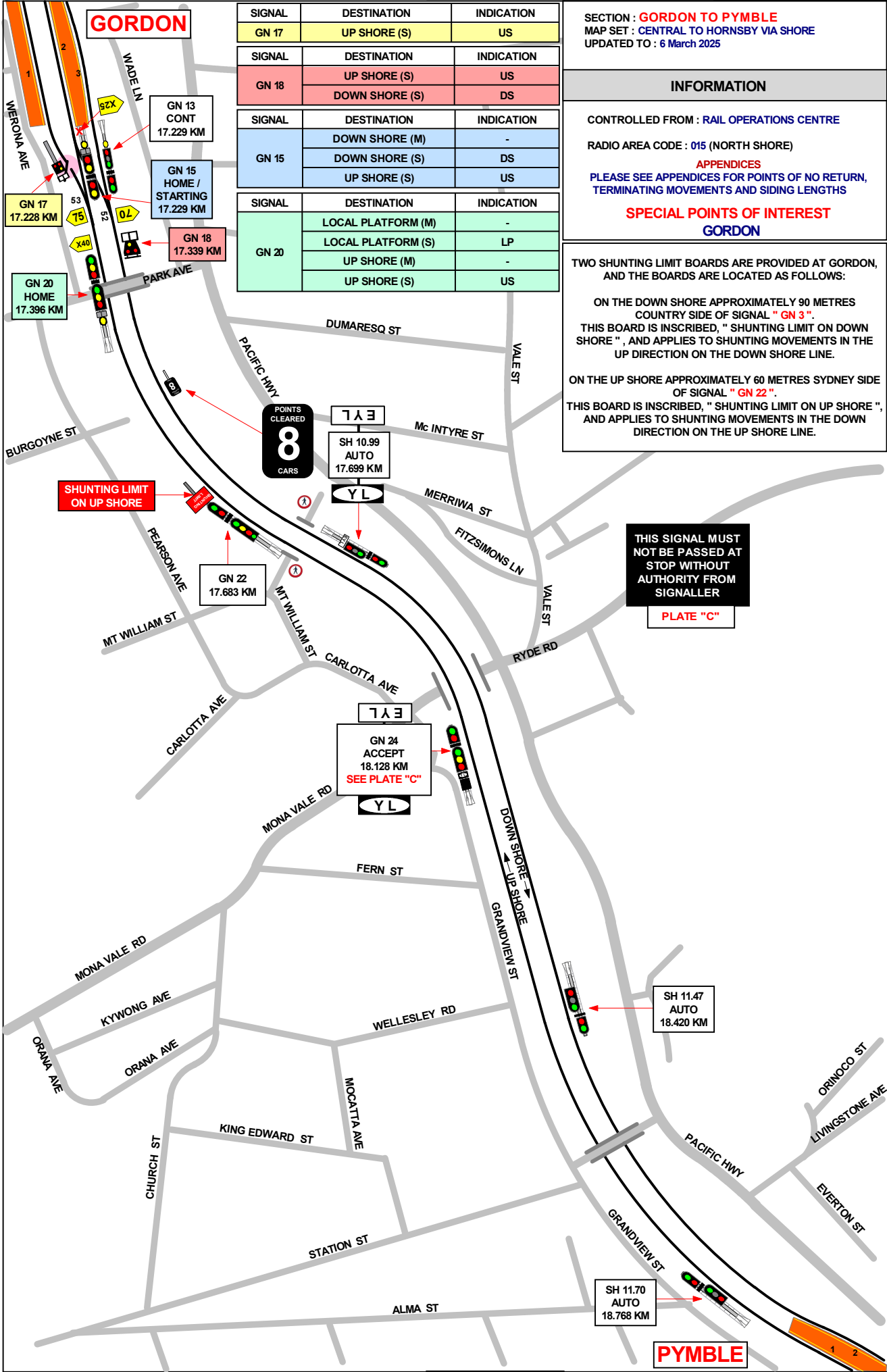












SIGNAL	DESTINATION	INDICATION
GN 17	UP SHORE (S)	US
GN 18	UP SHORE (S)	US
GN 18	DOWN SHORE (S)	DS
GN 15	DOWN SHORE (M)	-
GN 15	DOWN SHORE (S)	DS
GN 15	UP SHORE (S)	US
GN 20	LOCAL PLATFORM (M)	-
GN 20	LOCAL PLATFORM (S)	LP
GN 20	UP SHORE (M)	-
GN 20	UP SHORE (S)	US

SECTION : **GORDON TO PYMBLE**  
MAP SET : **CENTRAL TO HORNSBY VIA SHORE**  
UPDATED TO : 6 March 2025

**INFORMATION**

CONTROLLED FROM : **RAIL OPERATIONS CENTRE**

RADIO AREA CODE : **015 (NORTH SHORE)**

**APPENDICES**  
PLEASE SEE APPENDICES FOR POINTS OF NO RETURN,  
TERMINATING MOVEMENTS AND SIDING LENGTHS

**SPECIAL POINTS OF INTEREST**  
**GORDON**

TWO SHUNTING LIMIT BOARDS ARE PROVIDED AT GORDON,  
AND THE BOARDS ARE LOCATED AS FOLLOWS:

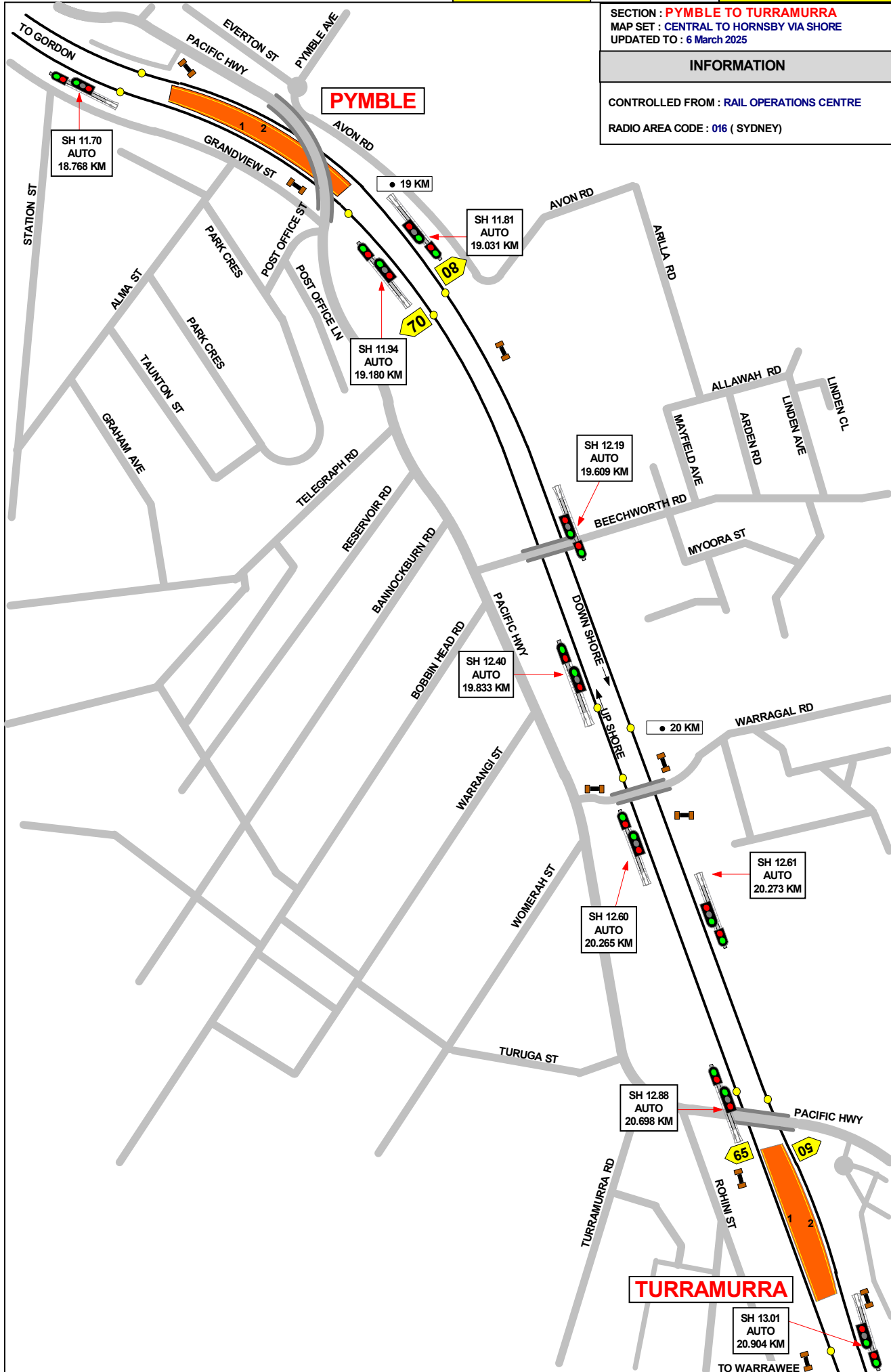
ON THE DOWN SHORE APPROXIMATELY 90 METRES  
COUNTRY SIDE OF SIGNAL "GN 3".  
THIS BOARD IS INSCRIBED, "SHUNTING LIMIT ON DOWN  
SHORE", AND APPLIES TO SHUNTING MOVEMENTS IN THE  
UP DIRECTION ON THE DOWN SHORE LINE.

ON THE UP SHORE APPROXIMATELY 60 METRES SYDNEY SIDE  
OF SIGNAL "GN 22".  
THIS BOARD IS INSCRIBED, "SHUNTING LIMIT ON UP SHORE",  
AND APPLIES TO SHUNTING MOVEMENTS IN THE DOWN  
DIRECTION ON THE UP SHORE LINE.

THIS SIGNAL MUST  
NOT BE PASSED AT  
STOP WITHOUT  
AUTHORITY FROM  
SIGNALLER

**PLATE "C"**

GRADIENT
1 IN 170
1 IN 130
1 IN 175
1 IN 133
1 IN 75
1 IN 58
1 IN 50
1 IN 52
1 IN 82
1 IN 50



TO PYMBLE

JOINS MAP NS 17

NORTH SHORE LINE

18

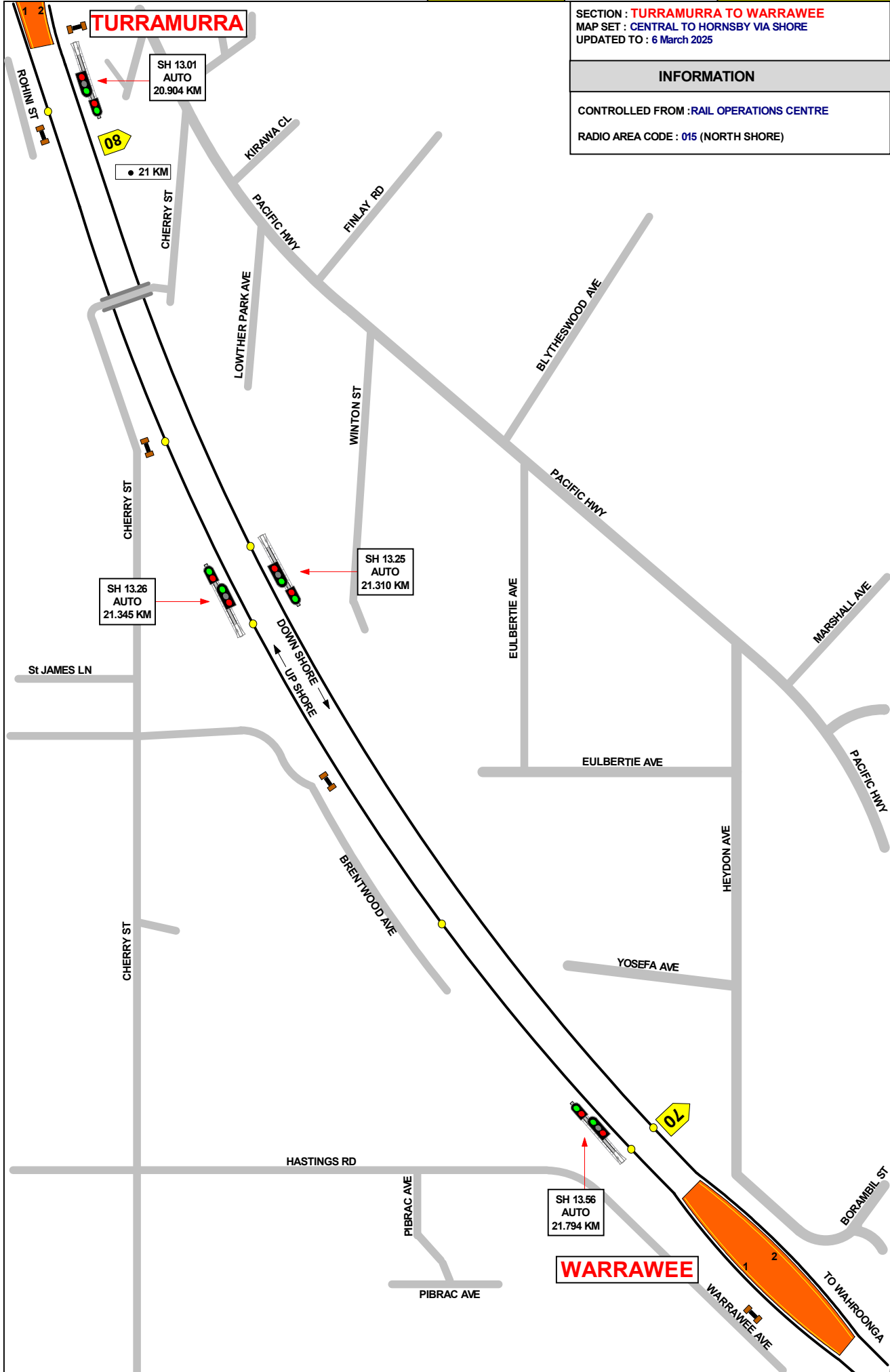
SECTION : **TURRAMURRA TO WARRAWEE**  
MAP SET : **CENTRAL TO HORNSBY VIA SHORE**  
UPDATED TO : 6 March 2025

INFORMATION

CONTROLLED FROM : **RAIL OPERATIONS CENTRE**

RADIO AREA CODE : **015** (NORTH SHORE)

GRADIENT



JOINS MAP NS 19

1 IN 82

1 IN 129

1 IN 116

1 IN 135

1 IN 86

SECTION : **WARRAWEE TO WAHROONGA**  
MAP SET : **CENTRAL TO HORNSBY VIA SHORE**  
UPDATED TO : 6 March 2025

INFORMATION

CONTROLLED FROM : **RAIL OPERATIONS CENTRE**

RADIO AREA CODE : **015 (NORTH SHORE)**

GRADIENT

1 IN 135

1 IN 86

1 IN 66

1 IN 56

1 IN 70

**WARRAWEE**

• 22 KM

SH 13.67  
AUTO  
21.976 KM

KNOX GRAMMAR  
SCHOOL

PACIFIC HWY

MUNDERAH ST

ADA AVE

MILLEWA AVE

UP SHORE

70

SH 13.88  
AUTO  
22.324 KM

WOODVILLE AVE

SH 13.89  
AUTO  
22.351 KM

WARRAWEE AVE

MILLEWA AVE

CLEVELAND ST

ILLOURA LN

REDLEAF AVE

REDLEAF LN

REDLEAF LN

PACIFIC HWY

STATION ST

COONABARRA RD

SH 14.10  
AUTO  
22.681 KM

ILLOURA AVE

MILLEWA AVE

FOOT BRIDGE

**WAHROONGA**

CARPARK

TO WAITARA

SECTION : WAHROONGA TO WAITARA  
MAP SET : CENTRAL TO HORNSBY VIA SHORE  
UPDATED TO : 6 March 2025

## INFORMATION

CONTROLLED FROM : RAIL OPERATIONS CENTRE

RADIO AREA CODE : 015 (NORTH SHORE)  
017 (HORNSBY)

GRADIENT

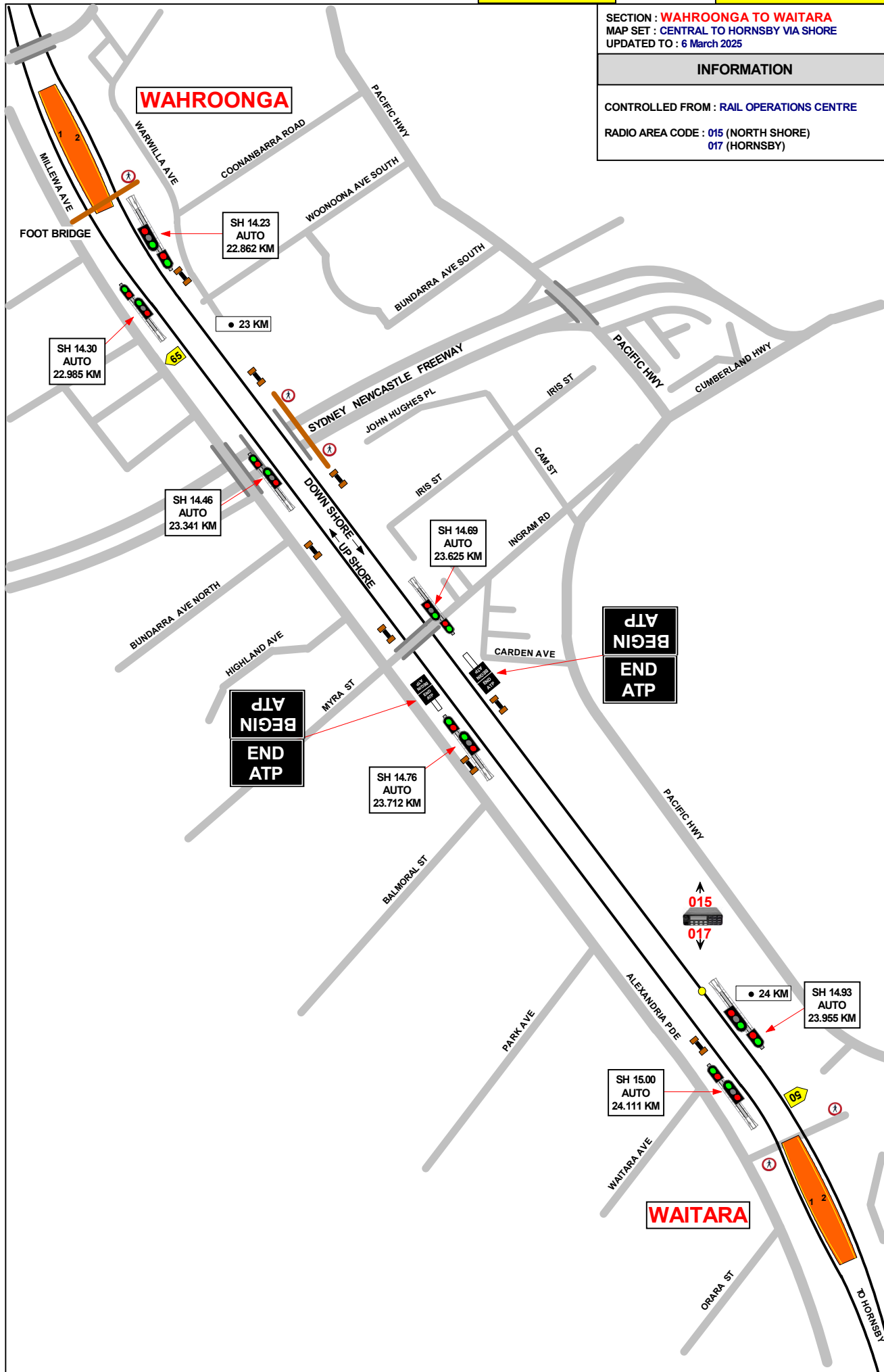
1 IN 70

1 IN 197

1 IN 366

1 IN 560

LEVEL





## NORMANHURST

DRIVERS OF GOODS  
TRAINS WITH 75 %  
OF FULL LOAD  
MUST WAIT HERE  
UNTIL SIGNAL  
SHOWS FULL CLEAR

THIS SIGNAL  
MUST NOT BE  
PASSED AT STOP  
WITHOUT AUTHORITY  
FROM SIGNALLER

SECTION : NORMANHURST TO HORNSBY  
WAITARA TO HORNSBY

MAP SET : CENTRAL TO HORNSBY VIA SHORE  
UPDATED TO : 6 March 2025

## INFORMATION

CONTROLLED FROM : RAIL OPERATIONS CENTRE  
RADIO AREA CODE : 019 (EPPING)  
017 (HORNSBY)

APPENDICES  
PLEASE SEE APPENDICES FOR POINTS OF NO RETURN,  
TERMINATING MOVEMENTS AND SIDING LENGTHS

MULTI SPAD  
SIGNAL  
HY 17

MULTI SPAD  
SIGNAL  
HY 25

MULTI SPAD  
SIGNAL  
HY 31

MULTI SPAD  
SIGNAL  
HY 35

JOINS MAP NS 20

NORTH SHORE GRADIENT

1 IN 604  
1 IN 266  
1 IN 220  
1 IN 327  
1 IN 340  
1 IN 536  
1 IN 413

## WAITARA

## HORNSBY

SECTION : **NORMANHURST TO HORNSBY**  
**WAITARA TO HORNSBY**  
 MAP SET : CENTRAL TO HORNSBY VIA NORTH SHORE  
 UPDATED TO : 6 March 2025

CONTROLLED FROM : RAIL OPERATIONS CENTRE

RADIO AREA CODE : 017 (HORNSBY)

**APPENDICES**  
 PLEASE SEE APPENDICES FOR POINTS OF NO RETURN,  
 TERMINATING MOVEMENTS AND SIDING LENGTHS

### SPECIAL POINTS OF INTEREST

#### HORNSBY YARD

THE HORNSBY INTERLOCKING CONSISTS OF THE AREA BOUNDED BY:  
 DOWN MAIN ACCEPT SIGNAL No. HY 21  
 DOWN SHORE ACCEPT SIGNAL No. HY 31  
 AND UP MAIN ACCEPT SIGNAL No. HY 136

YARD WORKING IS IN OPERATION WITHIN THE HORNSBY  
 INTERLOCKING AND ALL TRAIN MOVEMENTS ARE UNDER  
 THE CONTROL OF THE SIGNALLER AT HORNSBY .

COLOURED LIGHT INDICATOR SIGNALS ARE PROVIDED WHERE  
 VISIBILITY OF RUNNING SIGNALS IS OBSTRUCTED AS FOLLOWS:  
 SIGNAL No. HY 46.

THE INDICATORS ALSO HAS A ROUTE INDICATOR ATTACHED TO IT, A LISTING OF  
 INDICATIONS CAN BE FOUND ON THE TABLE ALONGSIDE.

SIGNAL	DESTINATION	INDICATION
HY 25	DOWN MAIN (M)	-
	DOWN MAIN (S)	4
	UP MAIN (M)	3
	UP MAIN (S)	3
	DOWN SHORE (M)	2
	DOWN SHORE (S)	2
	UP SHORE (M)	1
	UP SHORE (S)	1

SIGNAL	DESTINATION	INDICATION
HY 45	DOWN SHORE (M)	2
	UP SHORE (M)	1

SIGNAL	DESTINATION	INDICATION
HY 27	DOWN MAIN	4
	UP MAIN	3
	DOWN SHORE	2
	UP SHORE	1

SIGNAL	DESTINATION	INDICATION	INDICATOR
HY46 & HY 46 INDICATOR	UP SHORE (M)	S	S
	UP SHORE (S)	US	S
	UP MAIN (M)	M	M
	UP MAIN (S)	UM	M

SIGNAL	DESTINATION	INDICATION
HY 35	DOWN SHORE (M)	-

SIGNAL	DESTINATION	INDICATION	INDICATOR
HY 48	UP SHORE (M)	-	-
	UP SHORE (S)	US	S
	UP MAIN (M)	-	-
	UP MAIN (S)	UM	M

SIGNAL	DESTINATION	INDICATION
HY 43	DOWN SHORE (M)	-
	DOWN SHORE (S)	2
	UP SHORE (M)	-
	UP SHORE (S)	1