



**Public Transport  
Authority**

# Manual Rail Access

<b>Current</b>	8800-400-001	Rev 28.00	<b>UNCONTROLLED IF PRINTED</b>
Date Approved: 23/09/2022	© PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA 2022		

## Document History and Governance

### Document Governance

	Role
Document Owner	Asset Management & Infrastructure Operations Manager

### Document Authorisation and History

Rev	Date Approved	Prepared by	Reviewed by	Authorised by	Comments
8.5	01/09/2015	B Buckless	B Buckless	-	Addition of train Speeds. Changes to Joondalup Line hatch areas.
8.6	19/02/2016	B Buckless	C Hugo – A/Track Infrastructure Maintenance Manager	B Buckless – A/Manager Track & Structures	Include City to Claisebrook. Amended terminology to Controlled Absolute Signal. Esplanade Station changed to Elizabeth Quay where possible.
9.0	13/06/2017	M Keller	T Morse - Asset Information Manager	B McKenry - Planning & Infrastructure Performance Manager	Update document format, review asset locations.
9.01	14/06/2017	M Keller	T Morse - Asset Information Manager	B McKenry - Planning & Infrastructure Performance Manager	Update Perth Precinct and precaution warnings.
10.0	24/11/2017	M Keller	T Morse - Asset Information Manager	B McKenry - Planning & Infrastructure Performance Manager	Major amendments to contents.
10.01	14/12/2017	M Keller	T Morse - Asset Information Manager	B McKenry - Planning & Infrastructure Performance Manager	Minor change to Joondalup Line page no's 9, 12, 13, 18 and 21.

<b>Current</b>	8800-400-001	Rev 28.00	<b>UNCONTROLLED IF PRINTED</b>
Date Approved: 23/09/2022	© PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA 2022		

10.02	03/07/2018	W Hampton, Spatial Data Manager	T Morse - Asset Information Manager	B McKenry - Planning & Infrastructure Performance Manager	Minor & minor changes to page's 8, 9, 14, 15, 23, 45, 47-51, 53-56, 70-75, 80, 81, 87, 89, 96
11.00	01/11/2018	W Hampton, Spatial Data Manager	T Morse - Asset Information Manager	B McKenry - Planning & Infrastructure Performance Manager	Major Changes to all pages for Bi- Directional to Station Limits. Minor edits for most pages.
12.00	10/01/2019	W Hampton, Spatial Data Manager	T Morse - Asset Information Manager	K Irvine - Planning & Infrastructure Performance Manager	Minor changes to page no's 8,13,14, 21,23,34,45,47,54-59,61,63,68,74,75,80,73,91,92
13.00	27/06/2019	W Hampton, Spatial Data Manager	T Morse - Asset Information Manager	N. Gravett - Asset Management & Infrastructure Operations Manager	Changes to page no's 6, 8-21, 23, 24, 26-28, 30, 33-42, 44, 45, 47-51, 53, 55, 58-61, 63, 64, 68, 70, 72-76, 78-81, 87-92, 96-102, 105-113, 116
14.00	09/08/2019	Joseph Poh, Ellipse Configuration Coordinator	Troy Morse, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	Updates to 19 pages, ie: 30 45 49 51 55 59 70 71 74 76 80 81 82 83 84 85 87 90 97
14.01	13/08/2019	Joseph Poh, Ellipse Configuration Coordinator	Troy Morse, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	Updates to pages 83-86
15.00	08/11/2019	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Graphical Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	Updated Traction Power Supply System: P105 Updated Bridge: P74 Updated PYE 834 Points: P51,73 Added 8110-100-015 to Table 1: Related Documents: P5 Added Access Gates: P36,109 Added Track Trolley Locations: P9,24,48,74,75 Added Track Trolley Symbol: P98
16.00	12/12/2019	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Infrastructure Performance & Reliability Engineer	Nigel Gravett, Asset Management & Infrastructure Operations Manager	Realign 03KM Peg: P55 Added/Updated Mint Street Isolators: P57,58 Added Ped Subway to Stirling Underpass: P78

16.01	23/03/2020	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Graphical Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	100 Speedboard KM updated: P38 Mint Street Isolators KM updated: P56, 57, 58
17.00	27/08/2020	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	Minor Correction (Up/Down Main): P40 Removed Moore Street Boom Gates: P52, 53, 74 Updated Symbols Legends: P98 Updated Crash Barriers: P118-120 Updated network boundary: P70, P87 Added Track Trolleys: P45, 47, 60, 76
18.00	9/11/2020	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	Added Theatre Route Indicator to Signal 268: P51,52,74 Added new Signal 294: P11,50,51,75 Updated Signal 291 KM: P11,50,51,75
19.00	29/03/2021	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	Edit Sutherland St Rd Bridge: P75, Signal 225 KM Typo: P53, Catch Point 1063: P20 Removed Speed Signal 20: P94
20.00	05/05/2021	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	<u>FAL Stage 6A Shutdown Project</u> Added PED Gates 5.140KM & 5.886KM, Vehicle Gate 4.910KM, Future FAL Main Lines, Dive, Overbridge (Up Main 5.664KM), Temporary On-Tracking Facility 4.835KM, 2 Clipped Points (Down Main 5.122KM & Up Main 5.127KM, Not Operational): P93, 109 Updated No Place Of Safety KM, PED & Vehicle Gate Locations: P93, 118-119 Removed Vehicle Gates 5.250KM & 5.255KM: P93  <u>Claremont Project</u> Added Siding 11.801KM (Claremont) & Siding 12.255KM (Swanbourne): P10, 73, 81 Added Signals 308, 312 (Fixed At Red), 336, 337 (Dwarf), 339 (Dwarf) & 341, Speed Boards 55, 65, 75,

					<p>85 &amp; 90, Points 868A, 868AF, 868B, 869A, 869AF, 869B, 869BF, 870, 870F, 871A, 871AF, 871B, 871BF &amp; 872, LOS Board 12.026KM, PED Underpass 11.752KM: P80-81</p> <p>Updated Signals 300, 309 &amp; 311 KM, Points 863B &amp; 863BF, Station Limits (Up/Down Main): P80-81</p> <p>Removed Signals U115 &amp; D122, Speed Boards 50, 80, 85 &amp; 90, PED Mazeway (Claremont Stn 11.587KM): P80-81, 109</p> <p><u>Denny Ave Project</u></p> <p>Added Signals U242, U248 &amp; D253, On-Tracing Facility 23.525KM, Davis Road 24.970KM including Rail Over Road Underpass &amp; No Place Of Safety: P65-66, 109</p> <p>Updated Speed Board 90 (24.732KM) to 100: P65</p> <p>Removed Signals U244 &amp; U249, Denny Ave including both Level Crossings &amp; PED Mazeways: P66, 109</p> <p><u>Other Amendments</u></p> <p>Updated typo error: P102</p> <p>Updated Line footers where required (Display full wordings)</p>
21.00	5/08/2021	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	<p>Updated Unwired Track (Wheel Lathe Building, Nowergup): P23</p> <p>Updated Sig 220 KM: P55</p> <p>Updated Bayswater Station No Place Of Safety &amp; Project Site Indicated: P92, 93</p> <p>Updated Hamilton St and Queens Park KM: P109</p> <p>Updated document title from Guideline to Manual and revised terminology in Section 2 accordingly: P9</p>

22.00	30/8/2021	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	<p><u>Abernethy Road Project</u> Updated Level and PED Crossings: P70 Updated PED Crossings: P109</p> <p><u>Nowergup Upgrade Project Stage 1</u> Added Refurbishment Maintenance Shed (Track 19) and Unwired Road: P23</p> <p><u>TCL Bi-Directional Project</u> Updated Rail and Signals Bi-Directional: P35 to P42 Added Signal Symbol: P101 Updated Vehicle Gate Location: P112</p>
23.00	25/11/2021	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	<p>Updated Clarkson Speedboards: P21 Updated Cockburn Central On-Track KM, Isolators 811/3 &amp; 812/4: P34 Added Thornlie Cockburn Link (TCL) Project Site: P34 Added Lakelands Station Project Site: P47 Updated Shenton Road Vehicle Gate KM Typo: P80 Updated Midland Access Gates Removal: P93, 118 Updated Canning Bridge KM Typo: P120</p>
24.00	17/12/2021	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	<p>Added New On-Tracking Facilities: P33, 34 Removed On-Tracking Facility: P34</p>
25.00	28/01/2022	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	<p>Relocated Signal D183: P34 Added On-Tracking Facility at 20.714KM &amp; removed On-Tracking Facility at 20.182km: P35 Removed Isolators 811/2, 812/2, 812/3 &amp; relocated Isolators 811/3, 812/4: P35 Removed Points 1110A, 1110AF, 1110B, 1110BF, 1111A, 1111AF, 1111B, 1111BF: P35</p>

<b>Current</b>	8800-400-001	Rev 28.00	<b>UNCONTROLLED IF PRINTED</b>
Date Approved: 23/09/2022	© PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA 2022		

					<p>Removed Signal 623 &amp; relocated Signals 324, 621: P35 Added Track 19: P98</p>
26.00	20/05/2022	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	<p><u>FAL Project</u> Added New Airport Line: P11, P91, P98 - P103, P116 Added New Station Limits, Signals 101, 108 &amp; 165: P94 Removed Signals D53 &amp; D56, Updated Notes: P94 Added New Symbol: P108 Updated PTA System Maps: P114 - P115 Added New Vehicle Gate: P127</p> <p><u>Other Changes</u> Typo correction in Instructions: P87 Added New Vehicle Gate: P93, P125</p>
27.00	19/08/2022	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	<p><u>Caledonian Avenue Level Crossing Removal Project</u> Added On-Tracking Facility (2.680km): P94, P117 Updated Vehicle Gate (2.714km to 2.680km) &amp; PTA System Map: Key Electrical Infrastructure: P94, P115, P126 Removed Caledonian Avenue, Level Crossings &amp; Ped Maze (2.680km): P94, P117</p> <p><u>Moore Street Level Crossing Removal Project</u> Added On-Tracking Facility &amp; Vehicle Gates (C/F1.573km): P56, P57, P77, P78, P117, P124, P125 Updated Moore St (Midland End) to Mclver Stn (Perth End): P56, P57, P77, P78 Removed Moore Street &amp; Ped Maze (1.573km): P56, P57, P77, P78</p>

					<p><u>Murdoch Isolators</u> Added Isolators (13.6km), 701/2 &amp; 702/2: P28, P34 Updated Isolators 701/2 to 701/3 &amp; 702/2 to 702/3: P14, P29, P53</p> <p><u>Points 780 &amp; 781</u> Removed Clipped and Un-Operational Points 780 (Down Main at 5.122km) &amp; 781 (Up Main at 5.127km): P95</p> <p><u>TCL Glenn Iris to Cockburn Project</u> Updated Job Site Area: P35, P36</p> <p><u>Other Changes</u> Added Cottesloe On-Tracking Facility: P84, P117 Updated Glenn Iris On-Tracking Facility: P35, P117 Updated Rockingham Limits: P43, P44 Updated Vehicle Gate (42.560Km) to Ped Gate (42.440Km): P43, P120, P121 Updated Designated Walking Route: P68 Updated Bayswater Portal at 8.280km to High Wycombe Portal: P104 Updated Nowergup Depot Detail Page Numbers: P105</p>
28.00	23/09/2022	Joseph Poh, Ellipse Configuration Coordinator	Paul Morris, Asset Information Manager	Nigel Gravett, Asset Management & Infrastructure Operations Manager	<p><u>Major Changes</u> Relocated Signal 514 from outside of the track to inside: P18 Updated OTF at 17.570km to Construction OTF only (See Notes): P36, P118 Removed Armadale Station Platform 3: P70 Updated SER Location from 29.190km to 29.260km: P70</p>

**Current**

8800-400-001

Rev 28.00

**UNCONTROLLED IF PRINTED**

Date Approved: 23/09/2022

© PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA 2022



					<p>Updated PED Gate at 29.260km from Down Main to Up Main: P70, P125</p> <p><u>Minor Changes</u></p> <p>Corrected Signal 512 KM typo in Notes: P18</p> <p>Updated Glen Iris SFS &amp; Isolators Alignments: P36</p> <p>Updated PED Mazes KM &amp; Alignments (Solent Rd, Church Ave, Forrest Rd, Armadale Rd): P118</p> <p>Updated PTA Gates Locations &amp; Crash Barriers to new format: P119-P132, P134-P136</p> <p>Updated Joondalup Line PED Gate (Diagram to Table format): P120</p>
--	--	--	--	--	--

**Current**

8800-400-001

Rev 28.00

**UNCONTROLLED IF PRINTED**

Date Approved: 23/09/2022

© PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA 2022

## Table of Contents

1. DISCLAIMER .....	12
2. DOCUMENT PURPOSE .....	12
3. AUDIENCE.....	12
4. PTA NETWORK MAP .....	13
5. JOONDALUP LINE.....	14
6. MANDURAH LINE .....	29
7. CITY PRECINCT .....	53
8. ARMADALE LINE.....	59
9. FREMANTLE LINE .....	76
10. MIDLAND LINE.....	93
11. AIRPORT LINE .....	100
12. DEPOTS .....	106
13. SYMBOL LEGEND .....	109
14. PHOTOS .....	111
15. PTA SYSTEM MAP: KEY ELECTRICAL INFRASTRUCTURE .....	116
16. PTA SYSTEM MAP: TRACTION POWER SUPPLY SYSTEM .....	117
17. PTA LEVEL CROSSINGS, PED MAZES & ON-TRACKINGS / NETWORK ACCESS .....	118
18. PTA GATES LOCATIONS: JOONDALUP LINE.....	119
19. PTA GATES LOCATIONS: MANDURAH LINE .....	121
20. PTA GATES LOCATIONS: ARMADALE LINE.....	123
21. PTA GATES LOCATIONS: THORNLIE LINE.....	126
22. PTA GATES LOCATIONS: FREMANTLE LINE .....	127
23. PTA GATES LOCATIONS: CITY PRECINCT .....	129
24. PTA GATES LOCATIONS: MIDLAND LINE.....	130
25. PTA GATES LOCATION: AIRPORT LINE .....	132
26. CRASH BARRIERS .....	133

<b>Current</b>	8800-400-001	Rev 28.00	<b>UNCONTROLLED IF PRINTED</b>
Date Approved: 23/09/2022	© PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA 2022		

## Related Documents

**Table 1: Related Documents**

Document Number	Name
8110-400-029	Applying for Access to the PTA Operating Railway Reserve
8110-100-015	Procedure Logging On and Off the Rail Reserve
9100-000-007	Public Transport Authority Safeworking Rules and Procedures
8103-400-004	Working in and Around the Railway Reserve

For more information on safeworking within the PTA railway reserve, please visit:

<http://www.pta.wa.gov.au/about-us/working-with-the-pta/safety-resources>

<b>Current</b>	8800-400-001	Rev 28.00	<b>UNCONTROLLED IF PRINTED</b>
Date Approved: 23/09/2022	© PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA 2022		

## 1. DISCLAIMER

While the information provided is believed to be accurate, it may include errors, omissions or inaccuracies. This document is only a guide and a site specific safety assessment is still required to determine if a safe place exists and whether access and egress to these locations can be performed safely. The site specific safety assessment will determine what safeworking is required in accordance with **9100-000-007 – Public Transport Authority Safe Working Rules and Procedures**.

## 2. DOCUMENT PURPOSE

The purpose of this document is to provide internal and external personnel general and indicative information relating to the location and layout of assets required for accessing and working safely in the PTA railway reserve.

It is **mandatory** that any person wishing to enter the PTA railway reserve must have the appropriate level of rail safeworking accreditation for the work they are wishing to perform.

The procedure for applying to access the PTA railway reserve is covered by **8110-400-029 – Applying for Access to the PTA Operating Railway Reserve**.

## 3. AUDIENCE

This document is intended for use by internal and external personnel who plan, manage and coordinate work within the PTA railway reserve.

**Table 2: Audience**

Audience
Individual Access Accredited Personnel
Infrastructure Control Officers
Maintenance Planners
Possession Protection Officers
Project Managers
Project Planners
Protection Officers
Rail Infrastructure Access Planners
Supervised Workers
Train Control
Work Supervisors

**Current**

8800-400-001

Rev 28.00

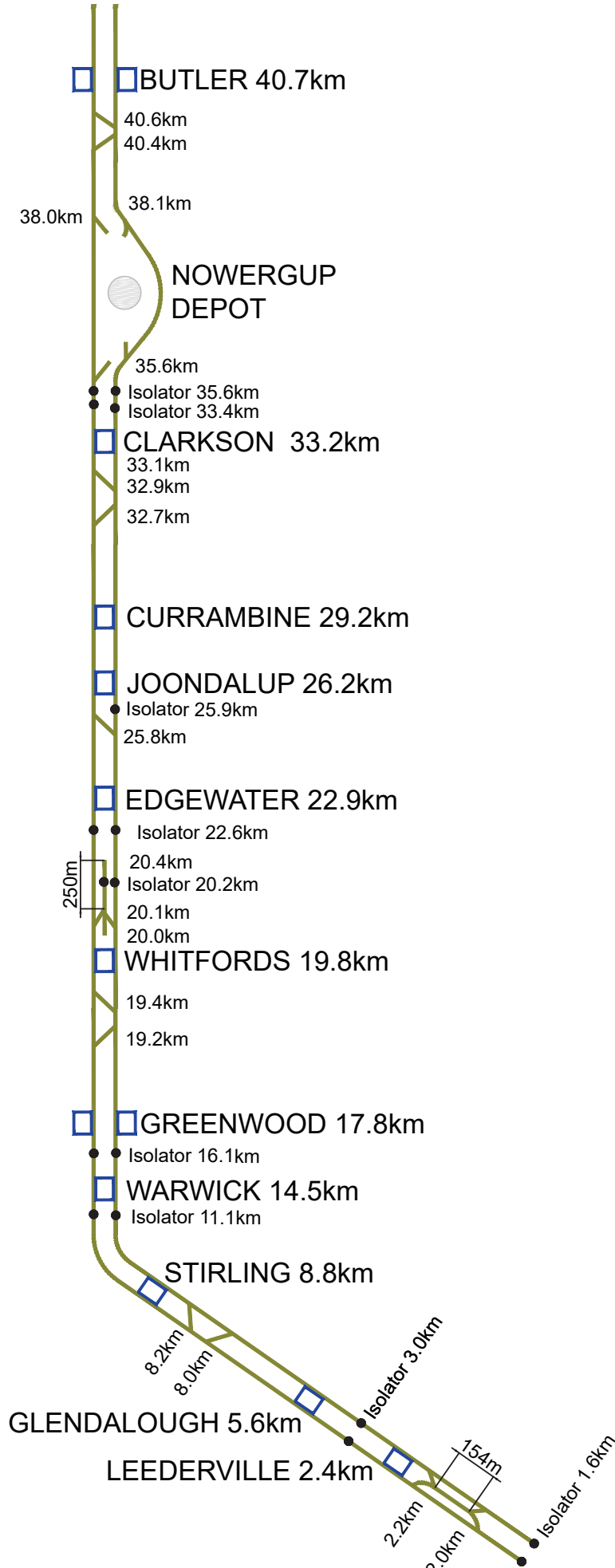
**UNCONTROLLED IF PRINTED**

Date Approved: 23/09/2022

© PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA 2022



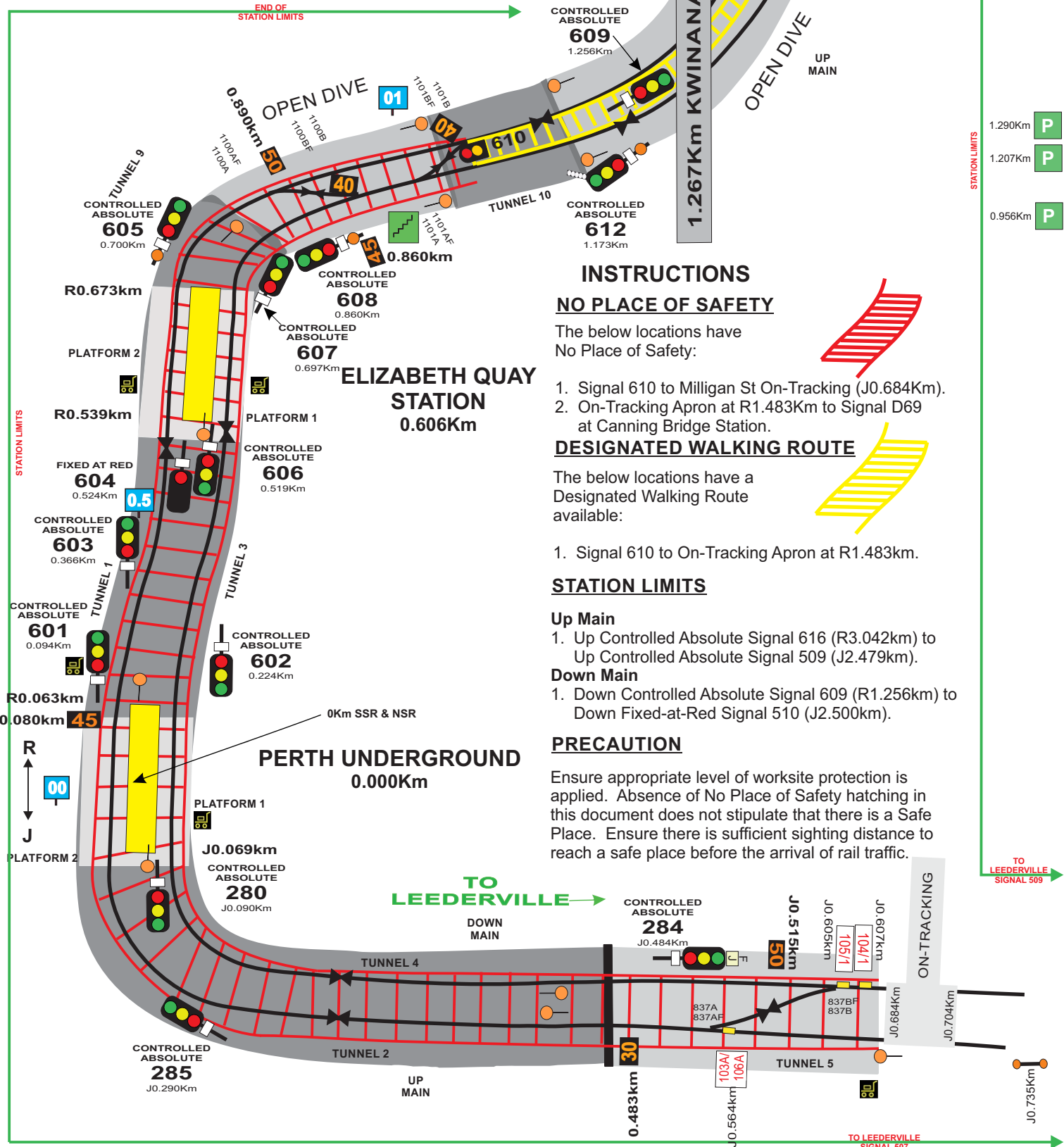
# JOONDALUP LINE



**NOTES**

- Contact ICO to activate/deactivate Flashing Man and Tunnel Lighting in Tunnel 1, 2, 3, 4, 5, 9 and 10.
- Track Trolley Locations:
  - Tunnel 1 - Down Main at R0.545Km and R0.075Km
  - Tunnel 3 - Up Main at R0.545Km
  - Tunnel 4 - Down Main at J0.075Km
  - Tunnel 5 - Up Main at J0.669Km

Note:  
A -48m adjustment exists at 1.376Km  
i.e 1.376 = 1.328



**INSTRUCTIONS**

**NO PLACE OF SAFETY**

The below locations have No Place of Safety:

- Signal 610 to Milligan St On-Tracking (J0.684Km).
- On-Tracking Apron at R1.483Km to Signal D69 at Canning Bridge Station.

**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available:

- Signal 610 to On-Tracking Apron at R1.483km.

**STATION LIMITS**

**Up Main**

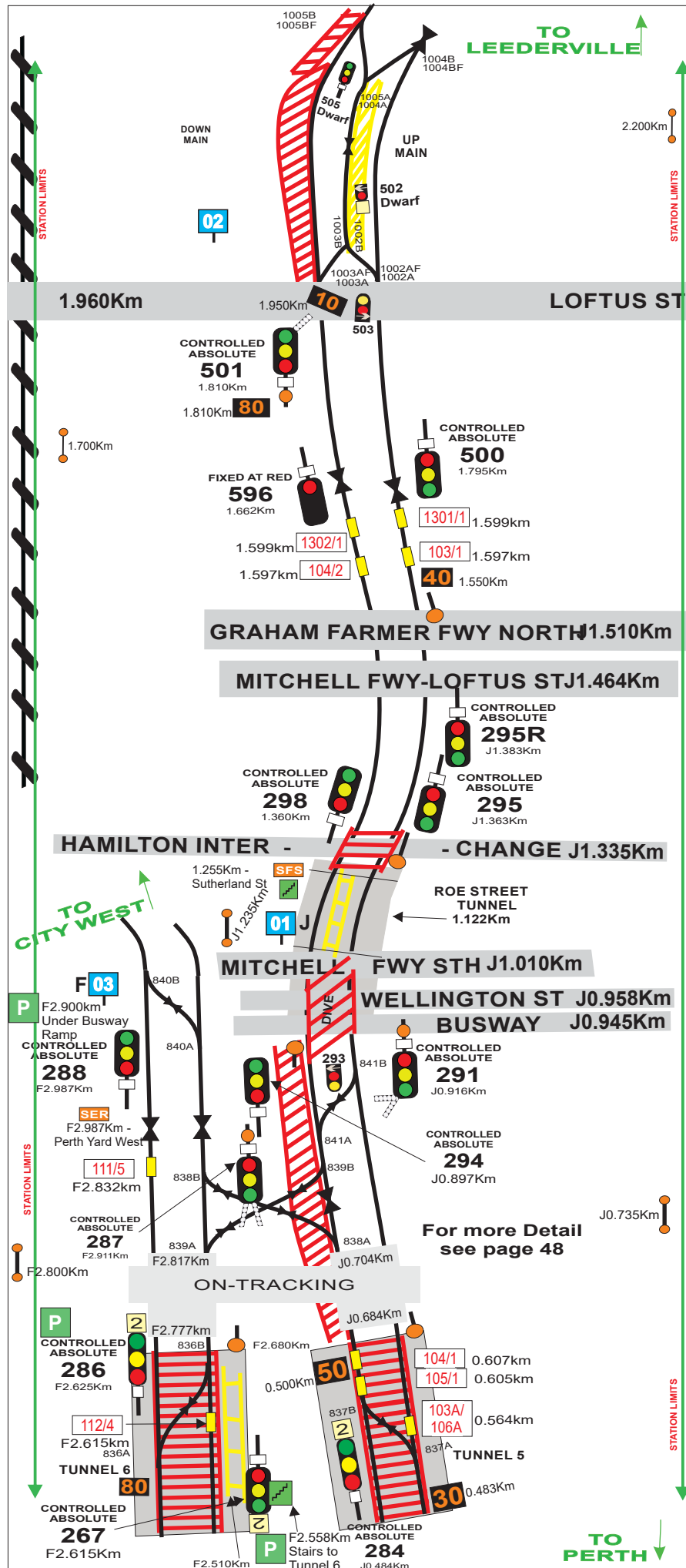
- Up Controlled Absolute Signal 616 (R3.042km) to Up Controlled Absolute Signal 509 (J2.479km).

**Down Main**

- Down Controlled Absolute Signal 609 (R1.256km) to Down Fixed-at-Red Signal 510 (J2.500km).

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:



1. Down Main Loftus Street to Signal 506.
2. Hamilton Interchange Bridge Tunnel.
3. Leederville End of Tunnel 5 Down Main to Perth End of Roe Street Tunnel, including dives.
4. Tunnel 5.
5. Tunnel 6.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.



1. Leederville Siding, Up Main.
2. Refer to page 48 for DWR in Tunnel 6

### STATION LIMITS

1. All areas.

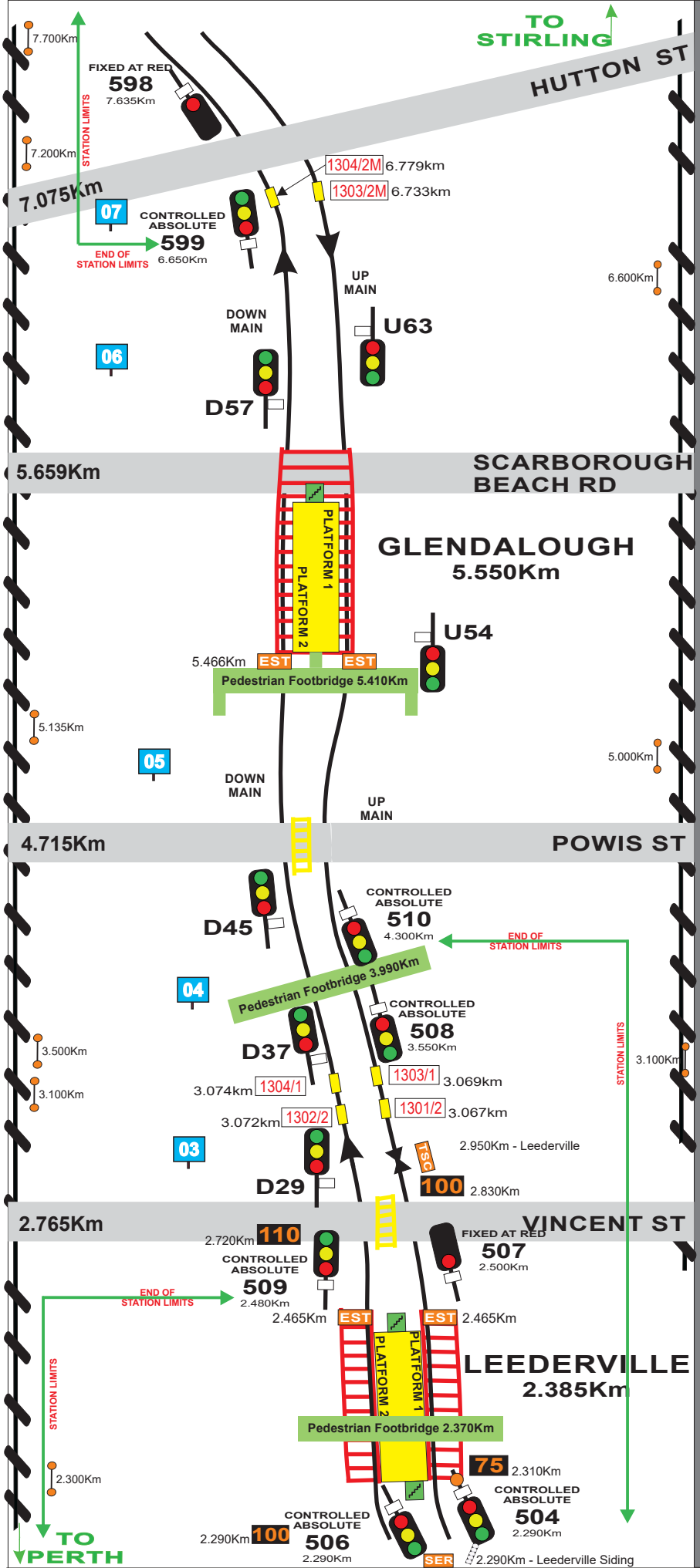
### NOTES

1. Contact ICO to activate/deactivate Flashing Man and Tunnel Lighting in Tunnel 5 and Tunnel 6.
2. Roe St Tunnel Flashing Man and Tunnel Lighting is Manually Operated ONLY.
3. Rule 3011 must be used for accessing and egressing Roe St Tunnel while trains are running.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.





## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:



1. Scarborough Beach Road Bridge to Glendalough Station, Up and Down Main.
2. Leederville Station, Up and Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.



1. Powis Street Bridge.
2. Vincent Street Bridge.

### STATION LIMITS

**Leederville:**

**Down Main**

1. Perth to Down Controlled Absolute Signal 509 (J2.480km).

**Up Main**

1. Up Fixed-at-Red Signal 510 (J4.300km) to Perth.

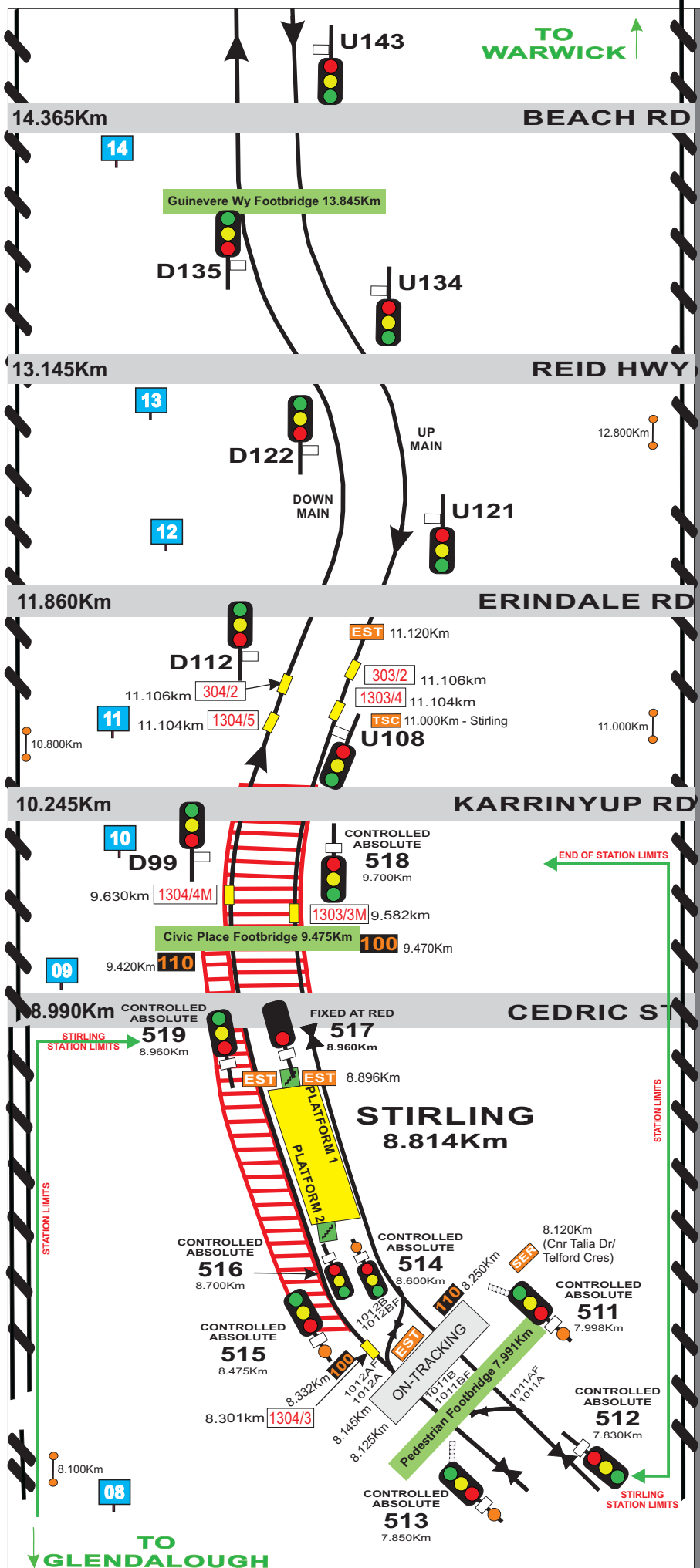
**Stirling:**

**Down Main**

1. Down Controlled Absolute Signal 599 (J6.650km) to Down Controlled Absolute Signal 519 (J8.960km).

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



**INSTRUCTIONS**

**NO PLACE OF SAFETY**

The below locations have No Place of Safety:



1. Karrinyup Road to Cedric Street, Up and Down Main.
2. 515 Signal to Civic Place Bridge, Down Main.

**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available.



1. Nil.

**STATION LIMITS**

**Down Main**

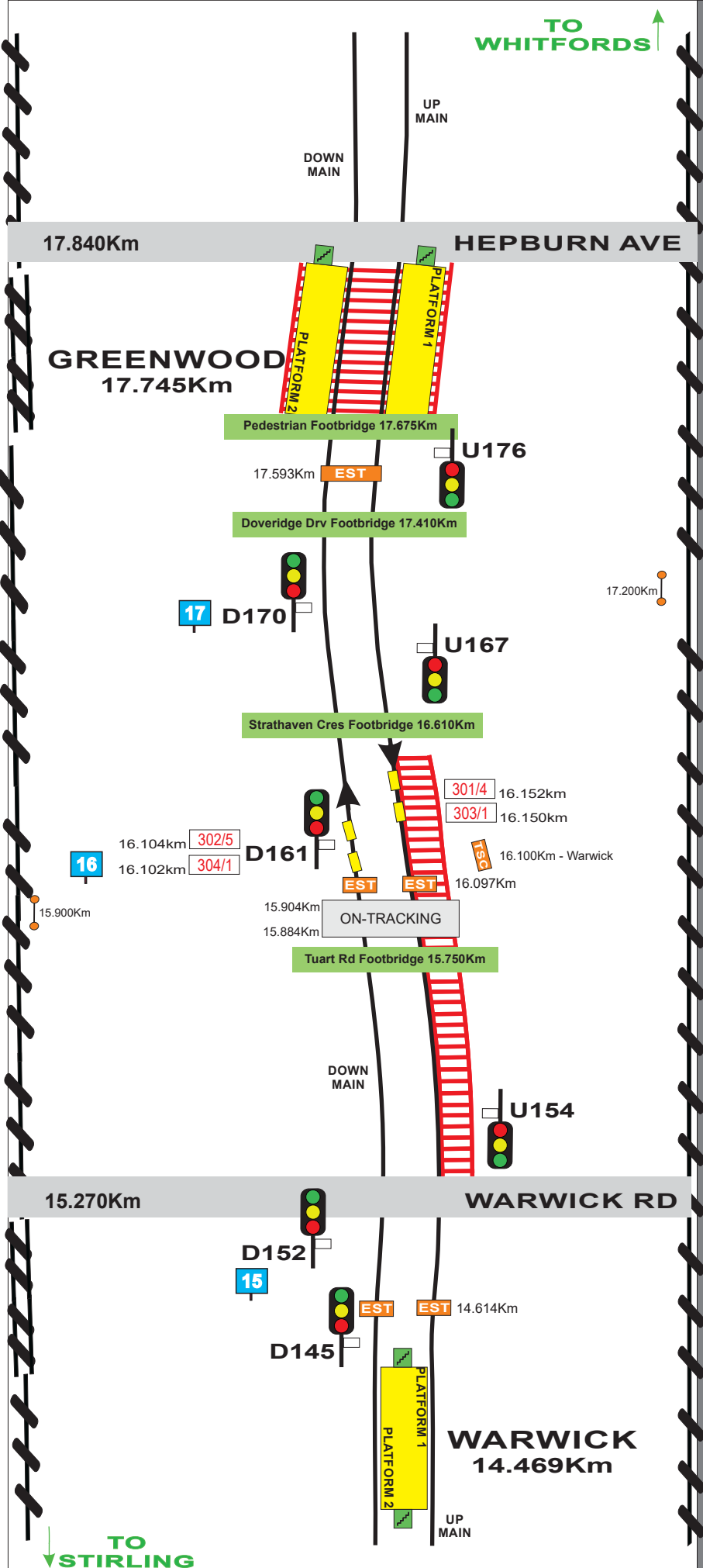
1. Down Controlled Absolute Signal 599 (6.650km) to Down Controlled Absolute Signal 519 (8.960km).

**Up Main**

1. Up Controlled absolute Signal 518 (9.700km) to Up Controlled Absolute Signal 512 (7.830km).

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



**INSTRUCTIONS**

**NO PLACE OF SAFETY**

The below locations have No Place of Safety:

1. Greenwood Station, Up & Down Main.
2. Signal U167 to U154.



**DESIGNATED WALKING ROUTE**

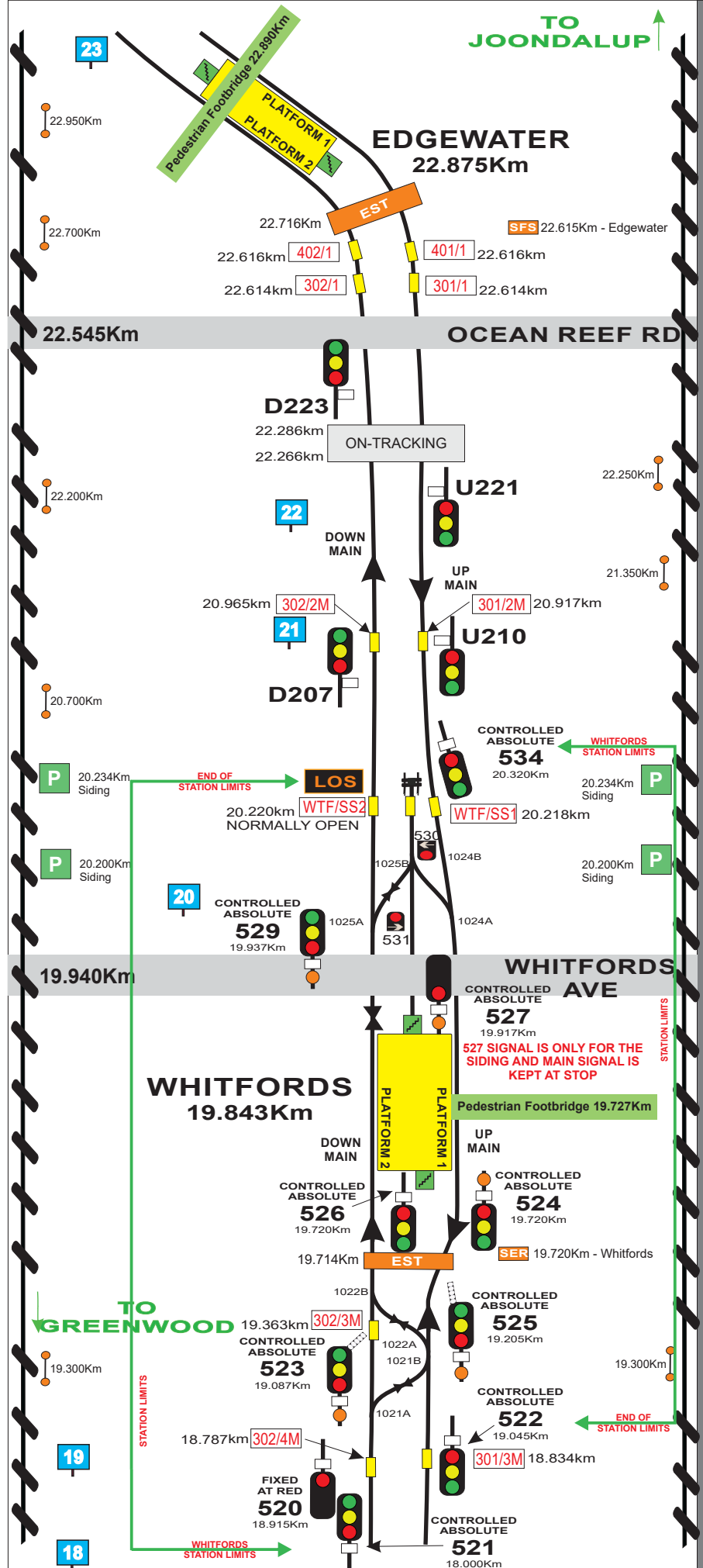
The below locations have a Designated Walking Route available.

1. Nil.



**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Nil.



### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.



1. Nil.

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 521 (18.000km) and LOS Board (20.263km) approx. 160m Clarkson side of 1025A Points Track Circuit.

#### Up Main

1. Up Controlled Absolute Signal 534 (20.320km) and Up Controlled Absolute Signal 522 (19.045km).

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

TO JOONDALUP ↑

P 25.398Km

25.380Km

HODGES DRV

STATION LIMITS ↑

25



CONTROLLED ABSOLUTE  
542  
24.830Km

END OF STATION LIMITS ←

25.308Km

P

25.300Km

24.600Km

MITCHELL FWY TUNNEL SOUTH

D243



24.174Km

EDDYSTONE O/PASS

24.021Km

402/2M

401/2M

24.069Km

24.100Km

24

23.610km

23.590km

ON-TRACKING

23.450Km

U233



D231



DOWN MAIN

UP MAIN

TO EDGEWATER ↓

**INSTRUCTIONS**

**NO PLACE OF SAFETY**

The below locations have No Place of Safety:

1. Hodges Drive Tunnel.



**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available.

1. Mitchell Freeway Tunnel.



**STATION LIMITS**

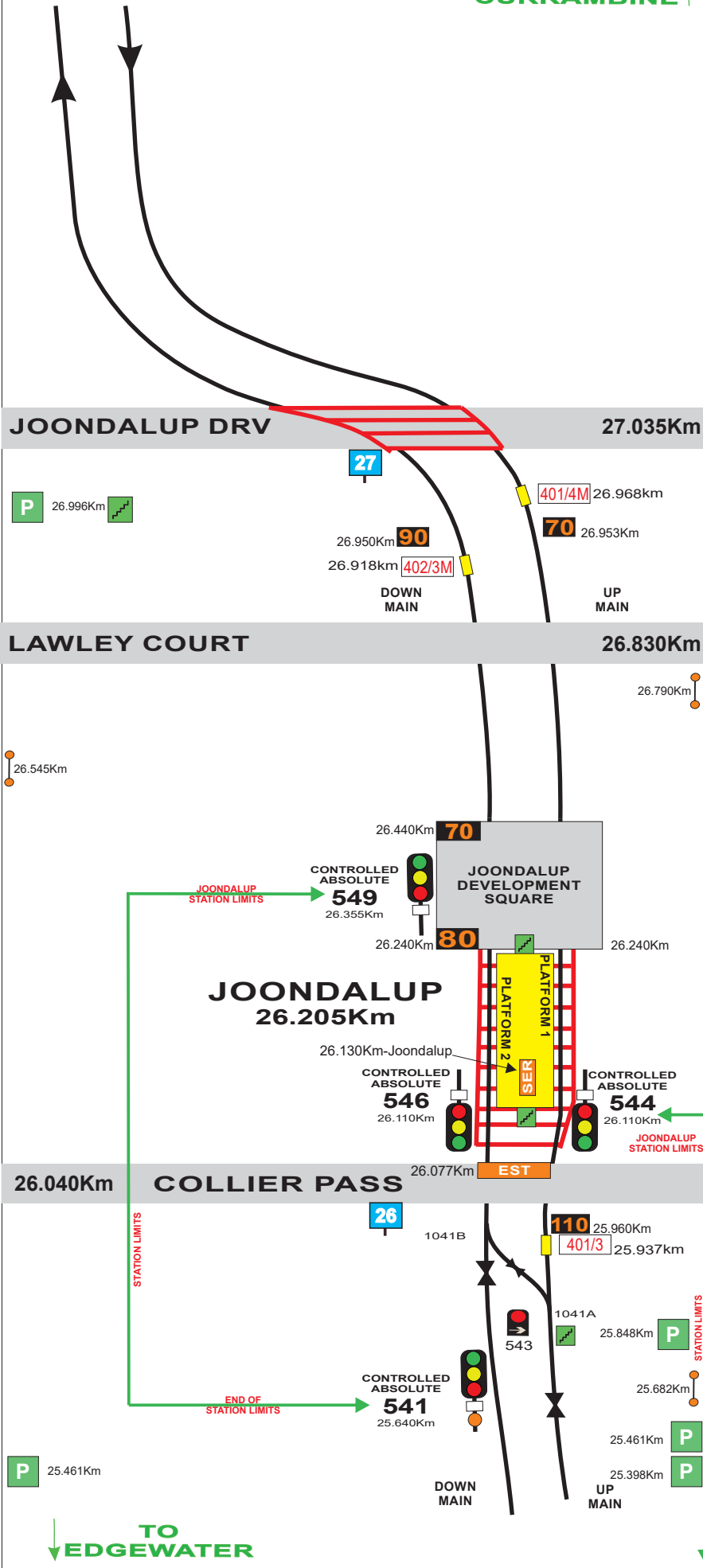
**Up Main**

1. Up Controlled Absolute Signal 542 (24.830km) and Up Controlled Absolute Signal 544 (26.110km).

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

TO CURRAMBINE ↑



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:



1. Joondalup Drive Tunnel.
2. Joondalup Station Up and Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.



1. Nil.

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 541 (25.640km) and Down Controlled Absolute Signal 549 (26.355km).

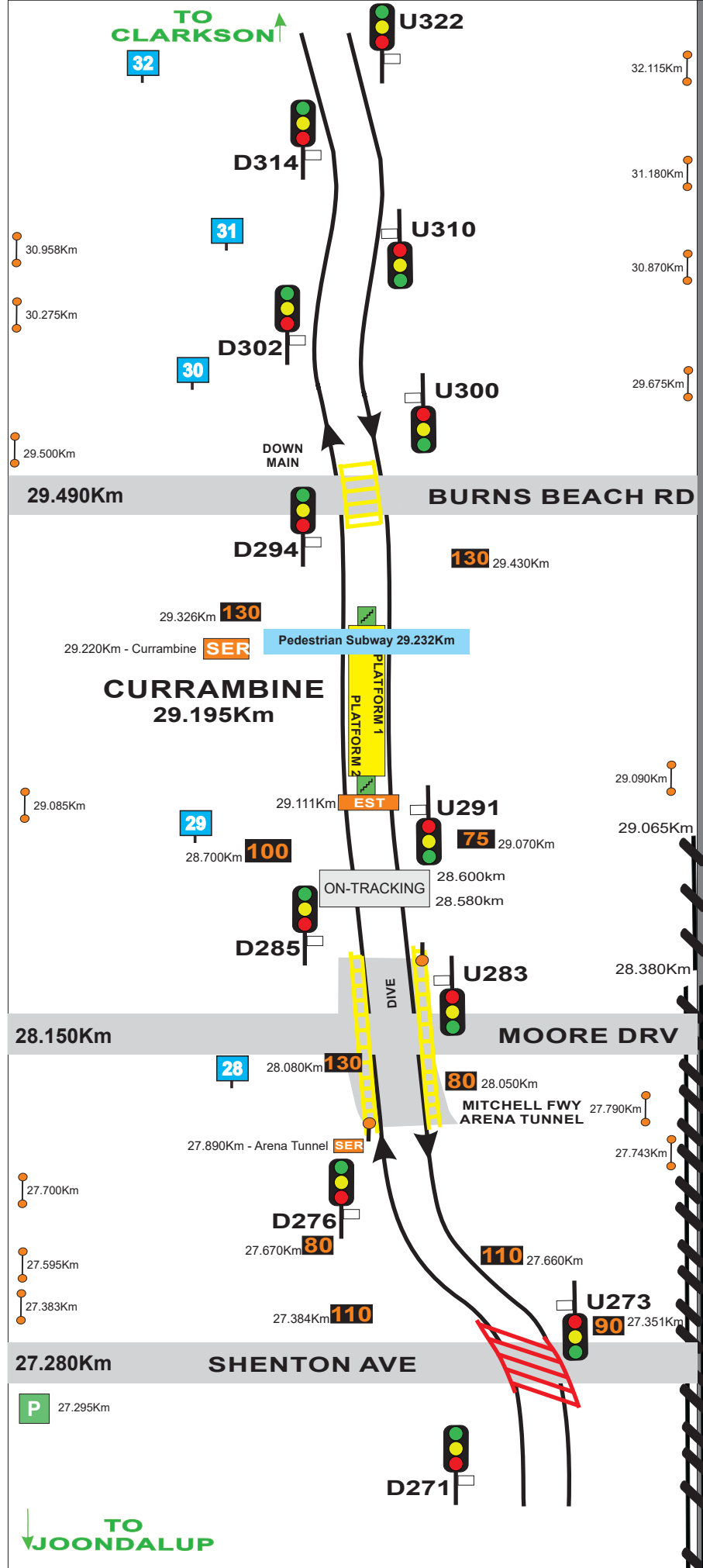
#### Up Main

1. Up Controlled Absolute Signal 542 (24.830km) and Up Controlled Absolute Signal 544 (26.110km).

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

TO CLARKSON ↑



### INSTRUCTIONS

#### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Shenton Avenue Tunnel.



#### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.

1. Burns Beach Road Tunnel.
2. Mitchell Freeway Arena Tunnel Joondalup to Signal U283.



### NOTES

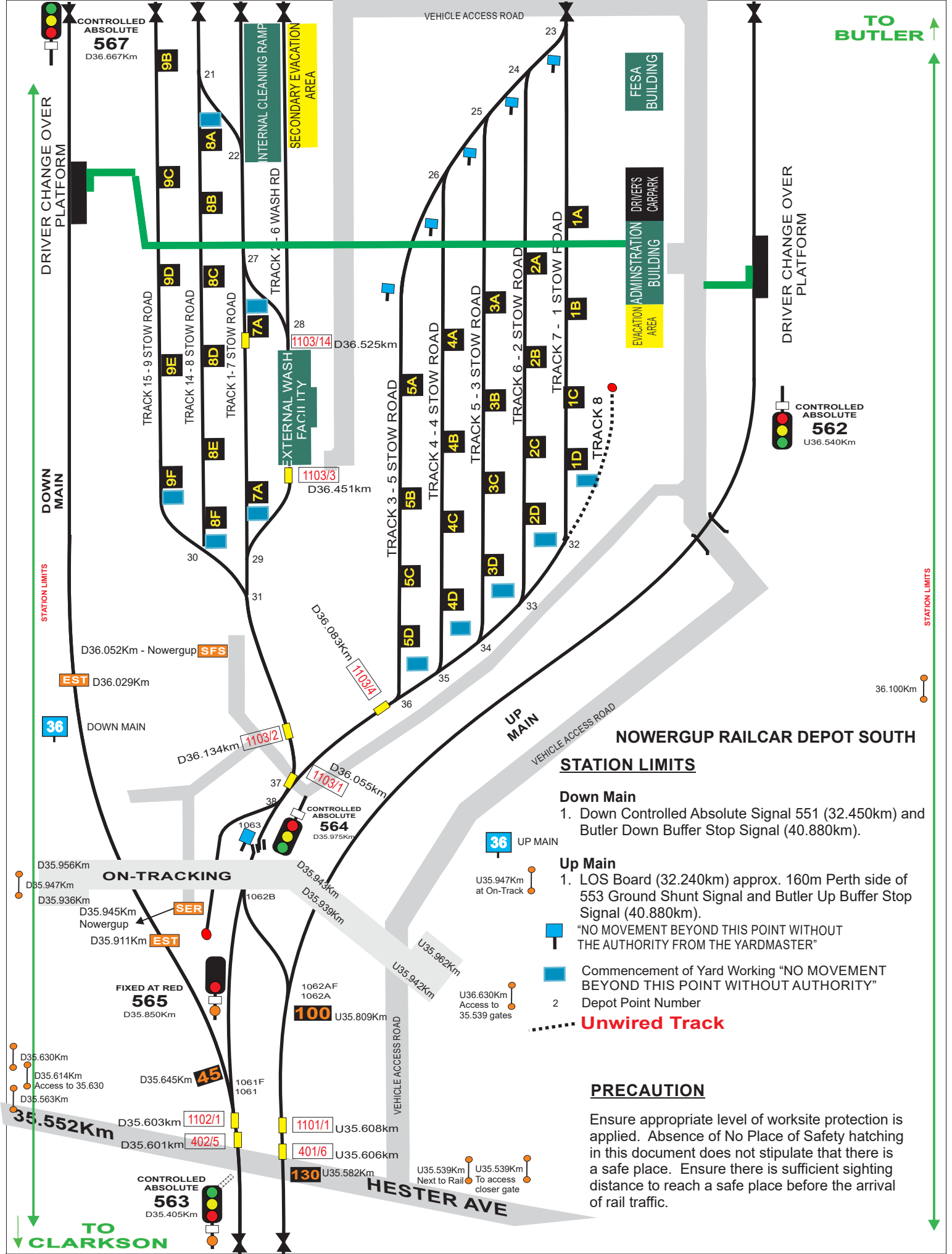
1. Contact ECO to activate/deactivate Flashing Man and Tunnel Lighting in Arena Tunnel.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.







**NOWERGUP RAILCAR DEPOT SOUTH  
STATION LIMITS**

**Down Main**  
1. Down Controlled Absolute Signal 551 (32.450km) and Butler Down Buffer Stop Signal (40.880km).

**Up Main**  
1. LOS Board (32.240km) approx. 160m Perth side of 553 Ground Shunt Signal and Butler Up Buffer Stop Signal (40.880km).

- "NO MOVEMENT BEYOND THIS POINT WITHOUT THE AUTHORITY FROM THE YARDMASTER"
- Commencement of Yard Working "NO MOVEMENT BEYOND THIS POINT WITHOUT AUTHORITY"
- 2 Depot Point Number
- Unwired Track**

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

TO BUTLER ↑

**NOWERGUP RAILCAR DEPOT NORTH**

**STATION LIMITS**

**Down Main**

- 1. Down Controlled Absolute Signal 551 (32.450km) and Butler Down Buffer Stop Signal (40.880km).

**Up Main**

- 1. LOS Board (32.240km) approx. 160m Perth side of 553 Ground Shunt Signal and Butler Up Buffer Stop Signal (40.880km).

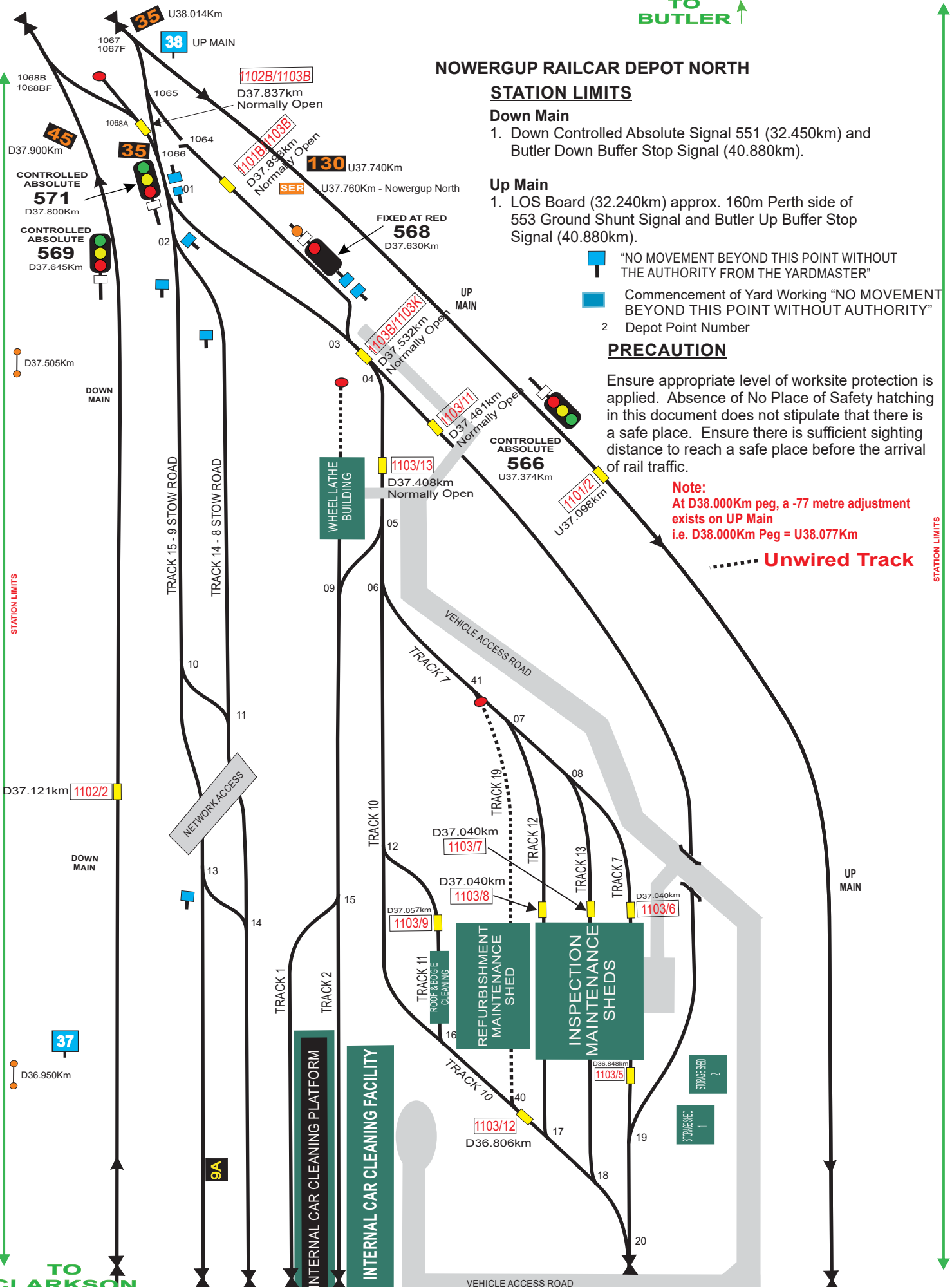
- 1 "NO MOVEMENT BEYOND THIS POINT WITHOUT THE AUTHORITY FROM THE YARDMASTER"
- 2 Commencement of Yard Working "NO MOVEMENT BEYOND THIS POINT WITHOUT AUTHORITY"
- 2 Depot Point Number

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

**Note:**  
At D38.000Km peg, a -77 metre adjustment exists on UP Main  
i.e. D38.000Km Peg = U38.077Km

**Unwired Track**



DOWN MAIN

UP MAIN

## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:



- 39.200Km to 39.600Km, Up & Down Main.

### STATION LIMITS

#### Down Main

- Down Controlled Absolute Signal 551 (32.450km) and Butler Down Buffer Stop Signal (40.880km).

#### Up Main

- LOS Board (32.240km) approx. 160m Perth side of 553 Ground Shunt Signal and Butler Up Buffer Stop Signal (40.880km).

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

#### Note:

At D38.000Km peg, a -77 metre adjustment exists on UP Main  
i.e. D38.000Km Peg = U38.077Km

STATION LIMITS

39.800Km

39.700Km

39.700Km

38.945Km

CONTROLLED ABSOLUTE  
**579**  
39.715Km

**39.5**

39.450Km

39.600Km

LANDBEACH BLVD

CONTROLLED ABSOLUTE  
**574**  
39.075Km

**39**

DOWN MAIN

CONTROLLED ABSOLUTE  
**577**  
38.600Km

38.530Km **100**

**115** 38.530Km

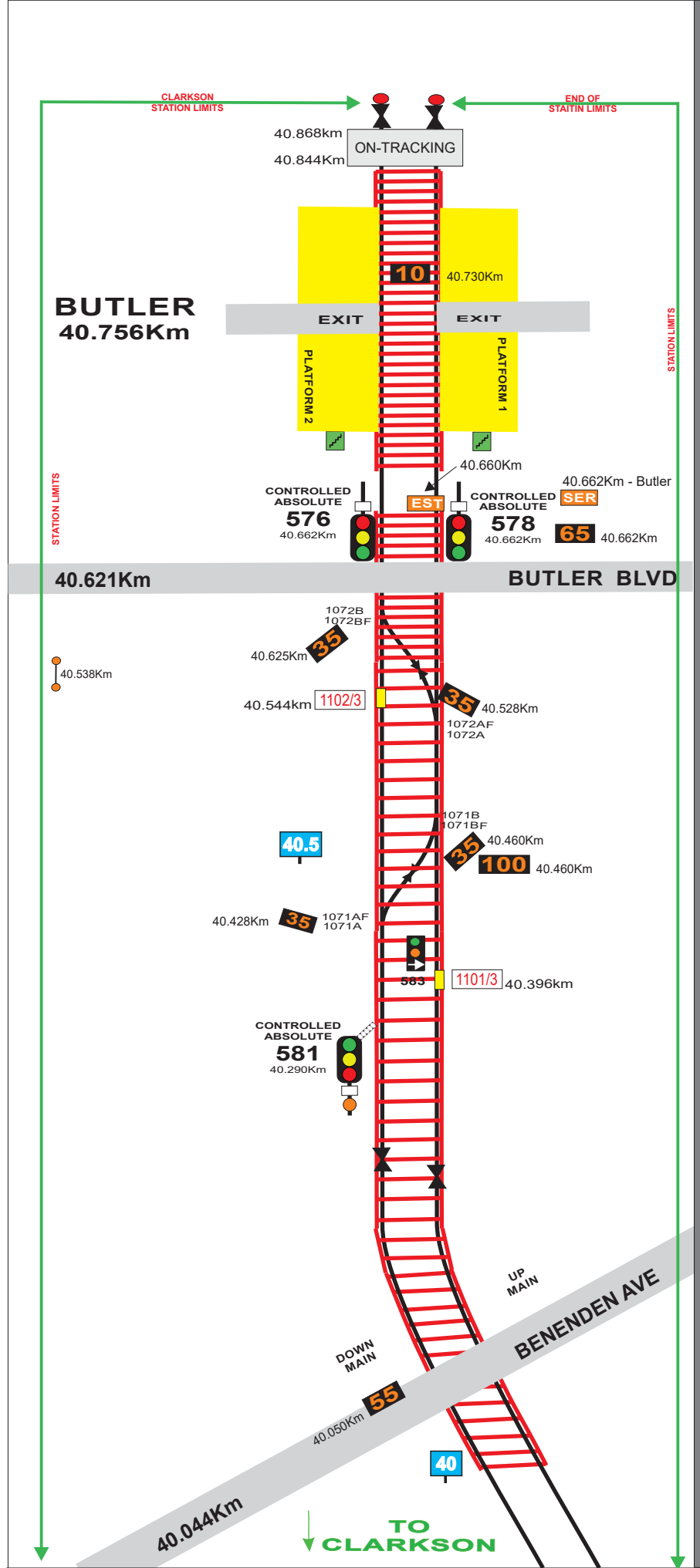
CONTROLLED ABSOLUTE  
**570**  
D38.150Km  
(U38.227Km)

DOWN MAIN **38**

39.200Km

38.945Km

STATION LIMITS



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:



1. Butler Station, Up & Down Main.
2. Turnout near Points 1072B/1072BF to Signals 576/578.
3. 40Km Peg to just after Benenden Avenue.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.



1. Nil.

### STATION LIMITS

#### **Down Main**

1. Down Controlled Absolute Signal 551 (32.450km) and Butler Down Buffer Stop Signal (40.880km).

#### **Up Main**

1. LOS Board (32.240km) approx. 160m Perth side of 553 Ground Shunt Signal and Butler Up Buffer Stop Signal (40.880km).

### PRECAUTION

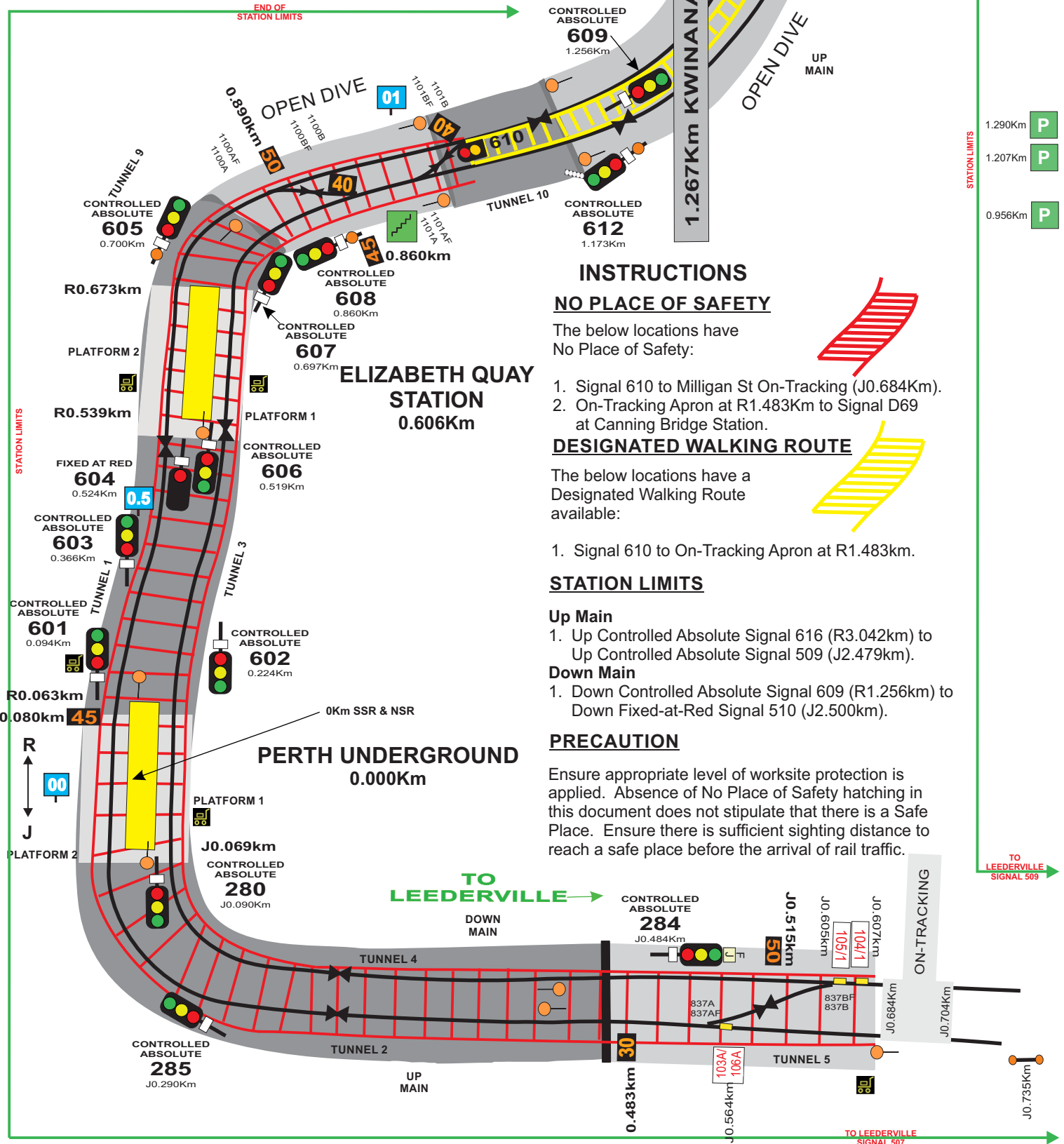
Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



**NOTES**

- Contact ICO to activate/deactivate Flashing Man and Tunnel Lighting in Tunnel 1, 2, 3, 4, 5, 9 and 10.
- Track Trolley Locations:
  - Tunnel 1 - Down Main at R0.545Km and R0.075Km
  - Tunnel 3 - Up Main at R0.545Km
  - Tunnel 4 - Down Main at J0.075Km
  - Tunnel 5 - Up Main at J0.669Km

Note:  
A -48m adjustment exists at 1.376Km  
i.e 1.376 = 1.328



**INSTRUCTIONS**

**NO PLACE OF SAFETY**

The below locations have No Place of Safety:

- Signal 610 to Milligan St On-Tracking (J0.684Km).
- On-Tracking Apron at R1.483Km to Signal D69 at Canning Bridge Station.

**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available:

- Signal 610 to On-Tracking Apron at R1.483km.

**STATION LIMITS**

**Up Main**

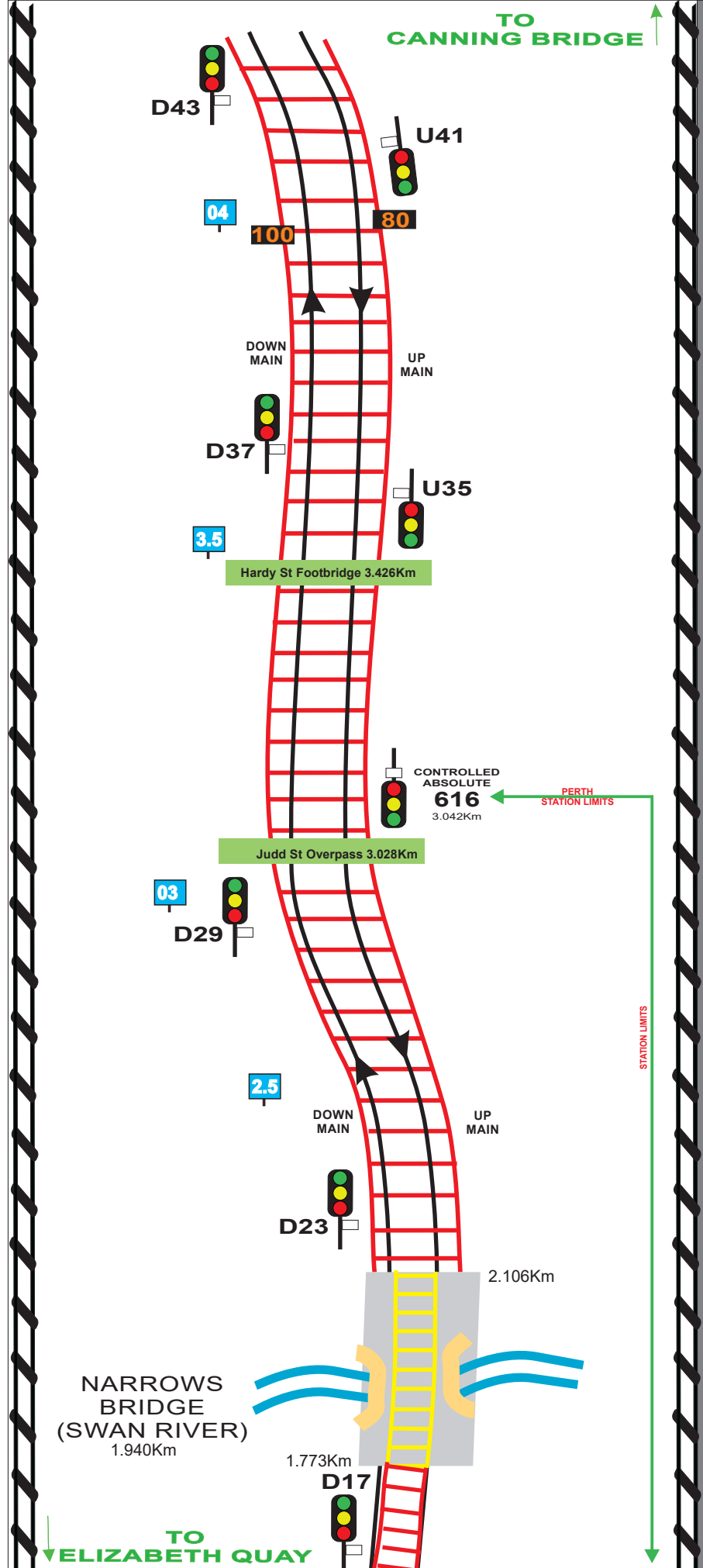
- Up Controlled Absolute Signal 616 (R3.042km) to Up Controlled Absolute Signal 509 (J2.479km).

**Down Main**

- Down Controlled Absolute Signal 609 (R1.256km) to Down Fixed-at-Red Signal 510 (J2.500km).

**PRECAUTION**

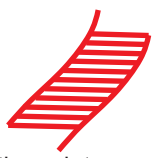
Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



**INSTRUCTIONS**

**NO PLACE OF SAFETY**

The below locations have No Place of Safety:



- 1. Narrows Bridge Esplanade End through to Signal D69 at Canning Bridge.

**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available:



- 1. Narrows Bridge. Designated Walking Route on Narrows Bridge, but no access to/from them at either end.

**STATION LIMITS**

**Up Main**

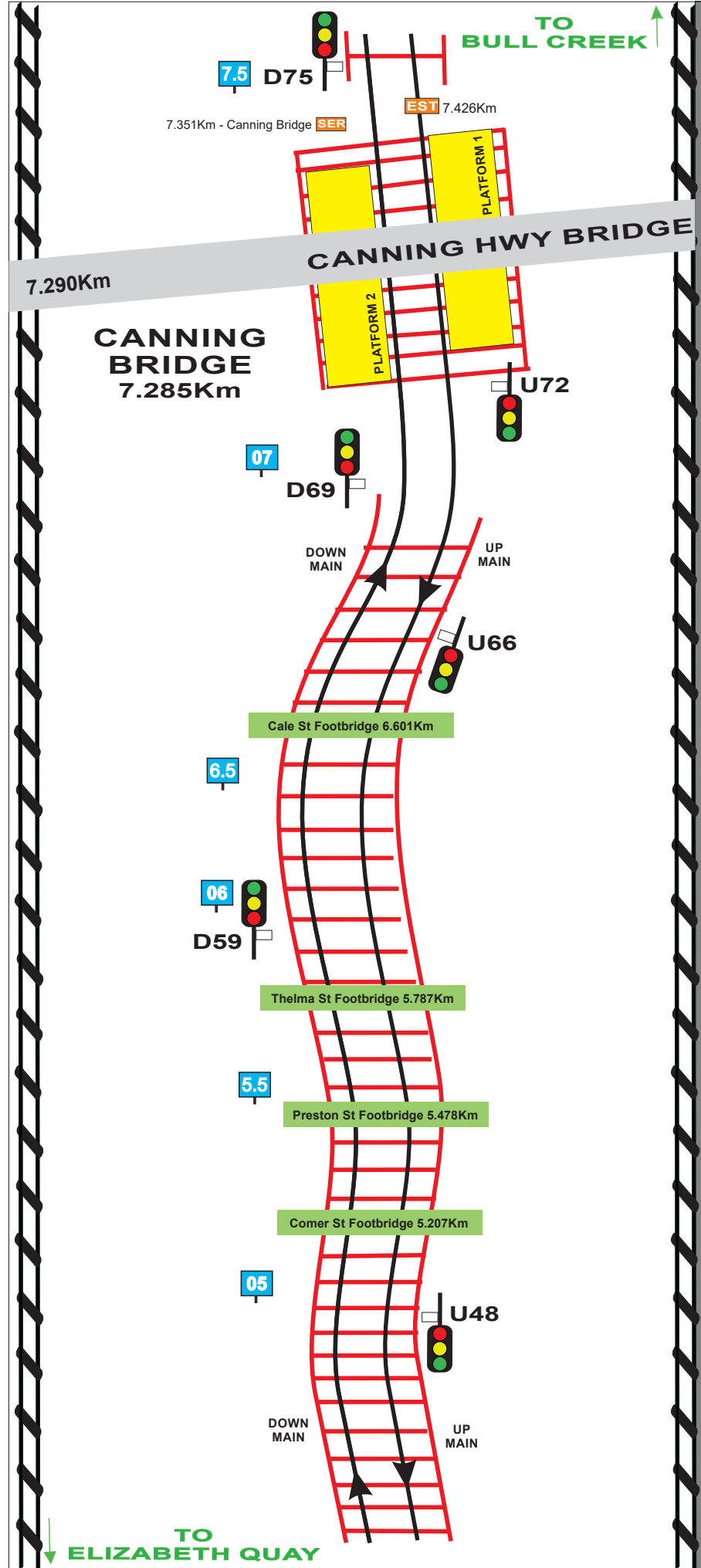
- 1. Up Controlled Absolute Signal 616 (3.042km) to Up Controlled Absolute Signal 510 (4.300km).

**NOTES**

- 1. Role 3011 must be used for accessing and egressing Narrows Bridge while trains are running.

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



**INSTRUCTIONS**

**NO PLACE OF SAFETY**

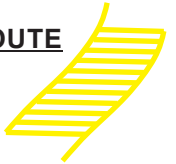
The below locations have No Place of Safety:



1. Signal D75 to Manning Road Bridge, Up & Down Main.
2. Canning Bridge Station, Up & Down Main.
3. Narrows Bridge to Signal D69, Up & Down Main.

**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available:

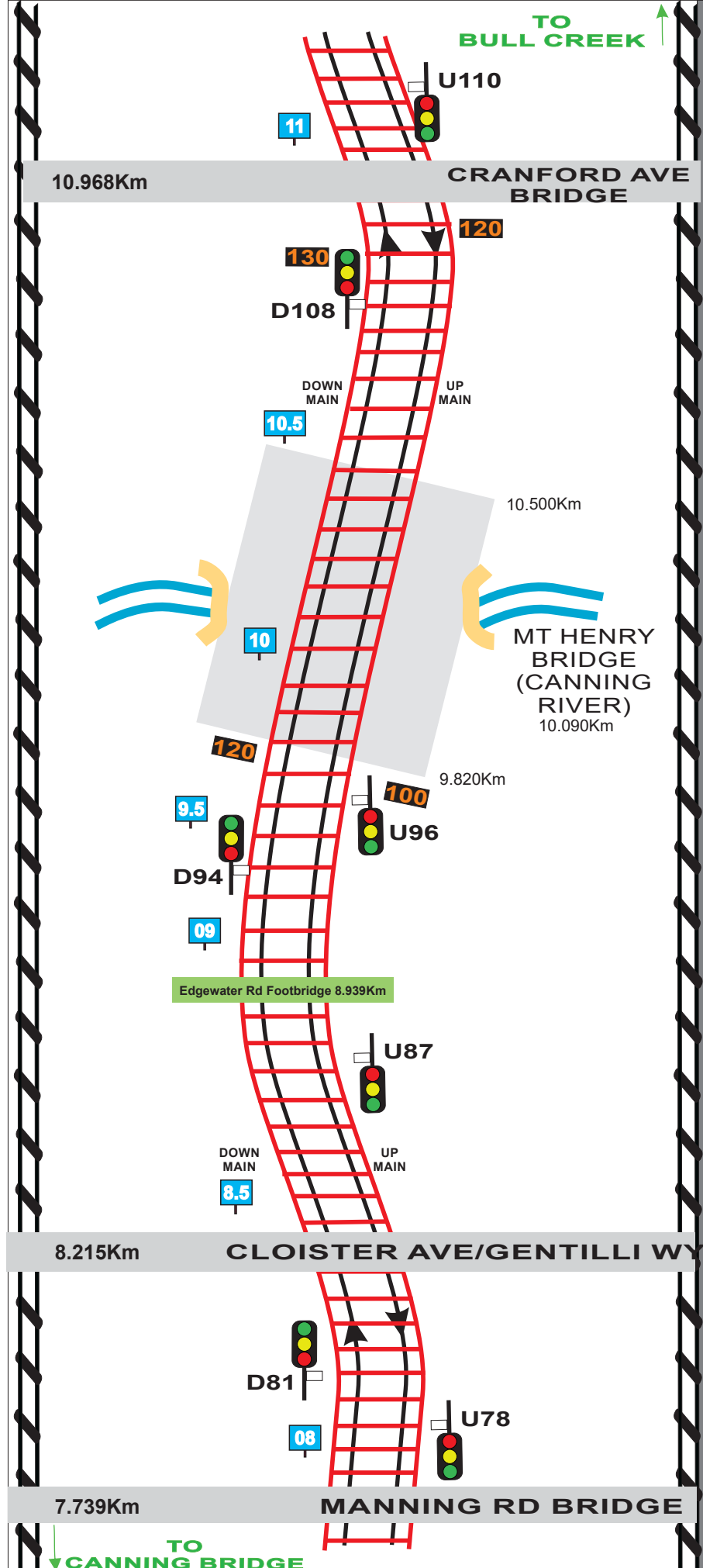


1. Nil.

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.





**INSTRUCTIONS**

**NO PLACE OF SAFETY**

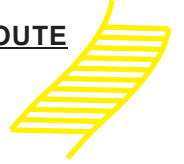
The below locations have No Place of Safety:



1. From Signal D75 at Canning Hwy Bridge to 11.5km at Leach Hwy Bridge, Up & Down Main.

**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available:



1. Nil.

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

TO  
MURDOCH ↑

13

DOWN  
MAIN



UP  
MAIN

12.707Km

PARRY AVE BRIDGE



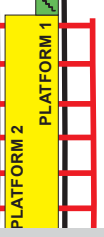
12.5

12

11.800Km Mast



BULLCREEK  
11.669Km



11.614Km

BUSWAY - LEACH HWY BRIDGE

11.576Km

LEACH HWY BRIDGE

11.5

EST 11.527Km

DOWN  
MAIN

UP  
MAIN

TO  
CANNING BRIDGE ↓

### INSTRUCTIONS

#### NO PLACE OF SAFETY

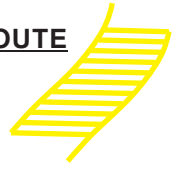
The below locations have  
No Place of Safety:



1. Mast 11.800Km to Signal D135, Up & Down Main.
2. Bullcreek Station, Up & Down Main.
3. Cranford Ave Bridge to 11.5km Peg, Up & Down Main.

#### DESIGNATED WALKING ROUTE

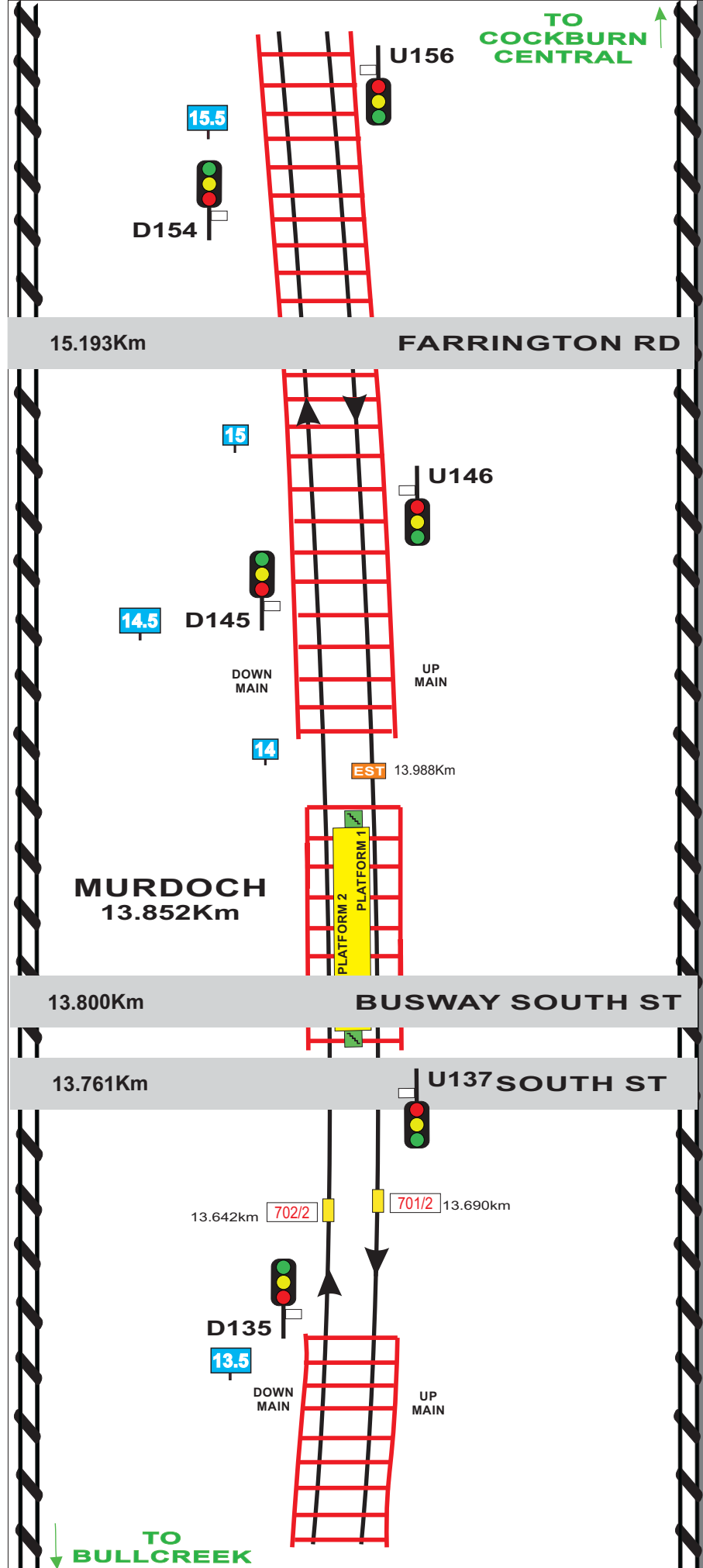
The below locations have a  
Designated Walking Route  
available:



1. Nil.

#### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



**INSTRUCTIONS**

**NO PLACE OF SAFETY**

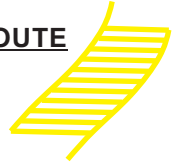
The below locations have No Place of Safety:



1. Roe Highway to 14KM Peg, Up & Down Main.
2. Murdoch Station, Up & Down Main.
3. Signal D135 to Parry Avenue Bridge, and 11.8km mast, Up & Down Main.

**DESIGNATED WALKING ROUTE**

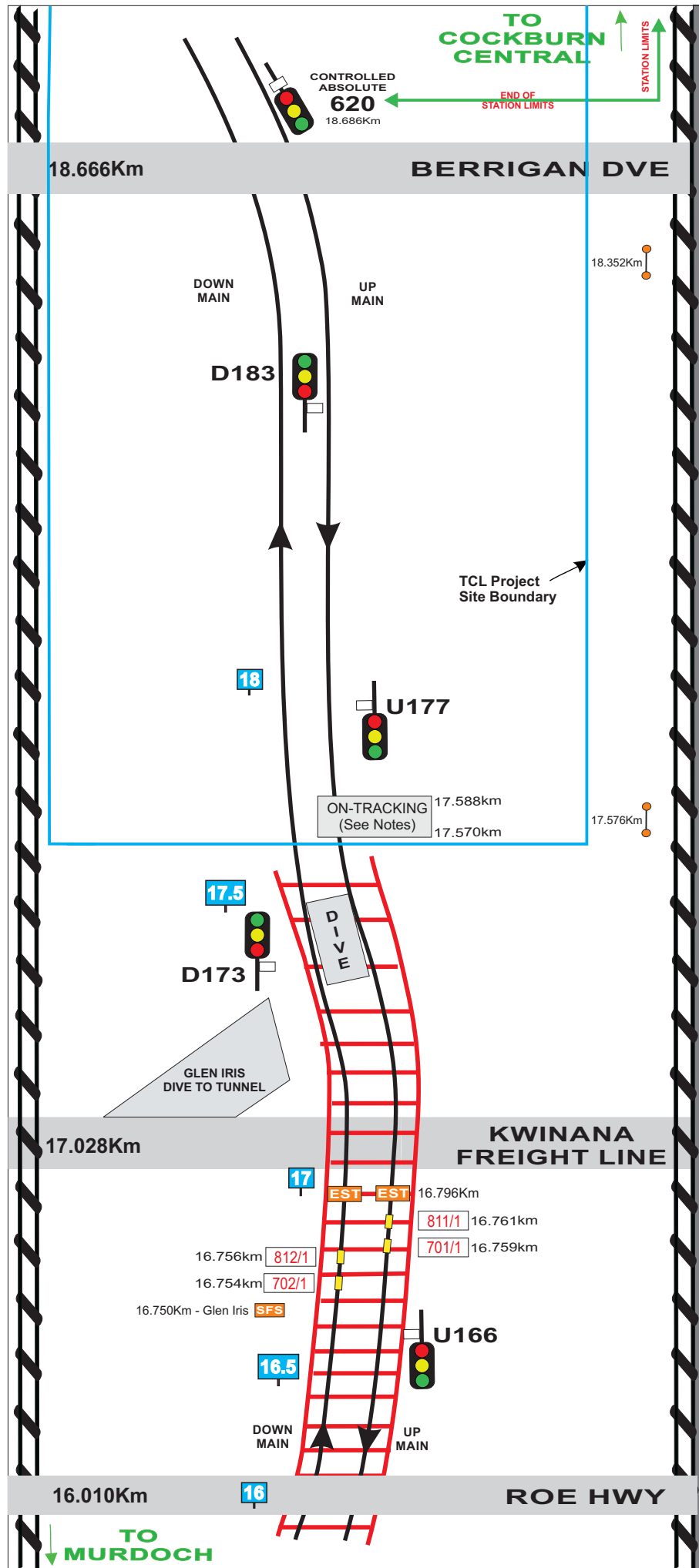
The below locations have a Designated Walking Route available:



1. Nil.

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

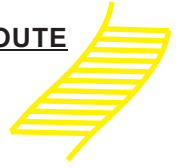
The below locations have No Place of Safety:



1. Roe Highway through to 17.5KM Peg, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:



1. Nil.

### STATION LIMITS

#### Up Main

1. Up Controlled Absolute Signal 634 (21.930km) and Up Controlled Absolute Signal 620 (18.686km).

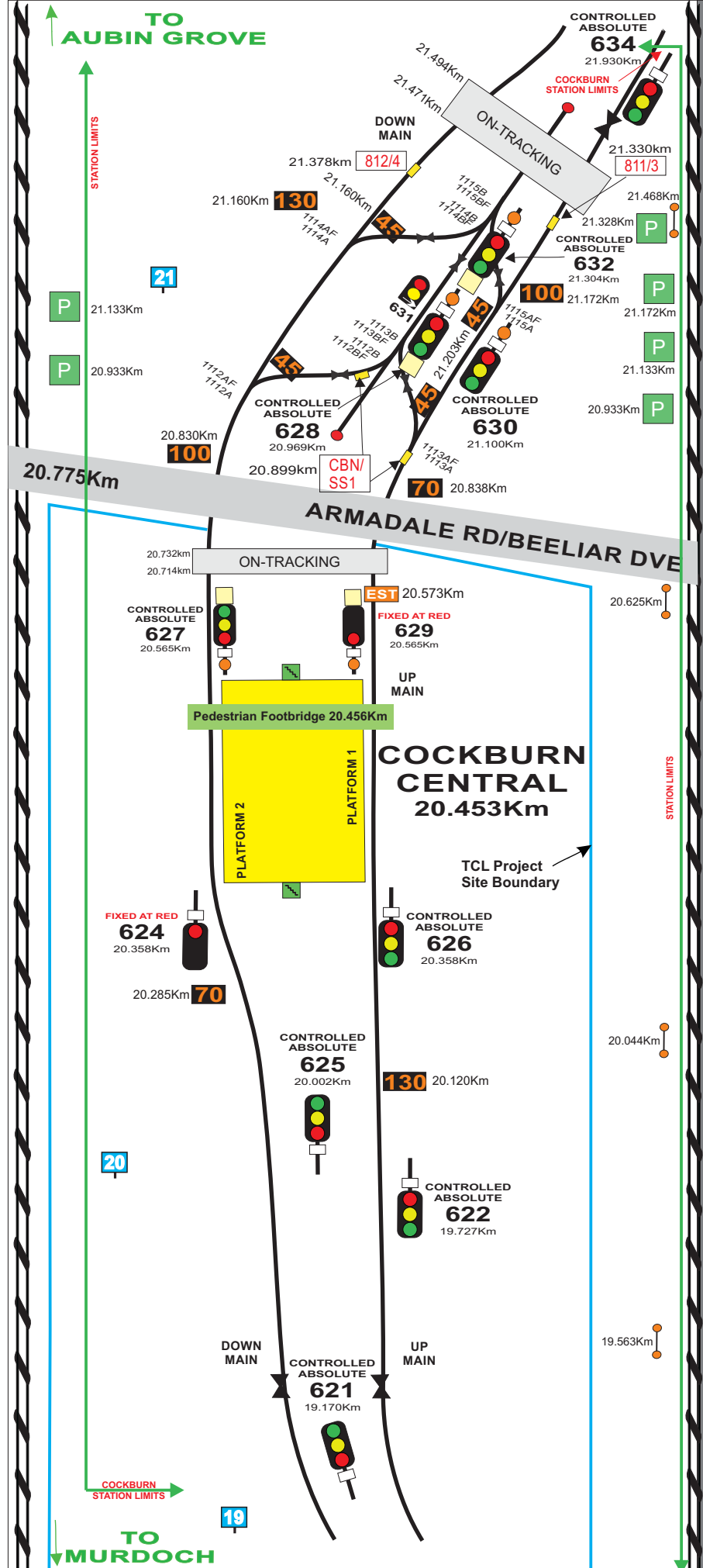
### COCKBURN CENTRAL (TCL PROJECT) JOB SITE

— Job Site 17.500km to 20.600km

1. GE fencing at approximately 2.5M from the nearest running rail for the extent of the job site.
2. Induction required for Job Site Access. Access requests to be made via OMTID Project Manager/Senior Site Supervisor.
3. On-Tracking Facility (OTF) at R17.570km now permanently blocked from the freeway side due to handrails being installed at R175 location case. It is only accessible by travelling through Glen Iris tunnel and crossing ARC lines to get into the tunnel. This is now a construction OTF only.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Nil.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Nil.

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 621 (19.170km) and Down Controlled Absolute Signal 633 (22.066km).

#### Up Main

1. Up Controlled Absolute Signal 634 (21.930km) and Up Controlled Absolute Signal 620 (18.686km).

### Note:



Controlled Absolute Signal 627, 628, 629 and 632 with Low Speed Shunt and Route Indicator

### COCKBURN CENTRAL (TCL PROJECT) JOB SITE

— Job Site 17.500km to 20.600km

1. GE fencing at approximately 1.8M from the nearest running rail for the extent of the job site.
2. Induction required for Job Site Access. Access requests to be made via OMTID Project Manager/Senior Site Supervisor.
3. Area adjacent to the station is Vortok fencing at 2.5m from closest running line.

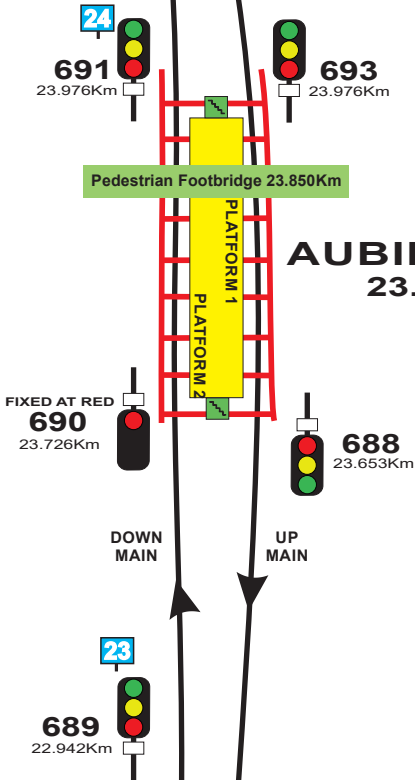
### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

TO KWINANA ↑

24.092Km

RUSSELL / GIBBS RD



**AUBIN GROVE**  
23.821Km

23.401Km

22.373Km

END OF STATION LIMITS →  
CONTROLLED ABSOLUTE  
**633**  
22.066Km

↓ STATION LIMITS  
TO COCKBURN CENTRAL

## INSTRUCTIONS

### NO PLACE OF SAFETY

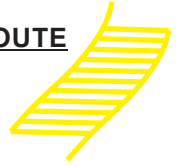
The below locations have No Place of Safety:



1. Aubin Grove Station, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:



1. Nil.

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 621 (19.170km) and Down Controlled Absolute Signal 633 (22.066km).

### NOTES

1. Bi-Directional Working Limits:
  - Up Direction 23.653Km
  - Down Direction 23.726Km
2. Bi-Directional working available only when enabled from train control.
3. Up Main, Down Direction - Bi-Directional Controlled Absolute Signal 693
4. Down Main, Up Direction - Fixed Red Signal 690

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

TO  
KWINANA ↑

26.685Km

ROWLEY RD

26.580Km - Mandogalup **SER**  
(on Kwinana Freeway  
immediately after  
Rowley Rd off-ramp)

**EST** 26.652Km

**26.5**

**U263**

**26** **D260**

26.024Km

**692**  
25.195Km

**U254**

**25**

**D249**

**U245**

↓ TO  
AUBIN GROVE

## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have  
No Place of Safety:

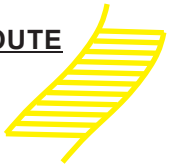
1. Nil.



### DESIGNATED WALKING ROUTE

The below locations have a  
Designated Walking Route  
available:

1. Nil.



### NOTES

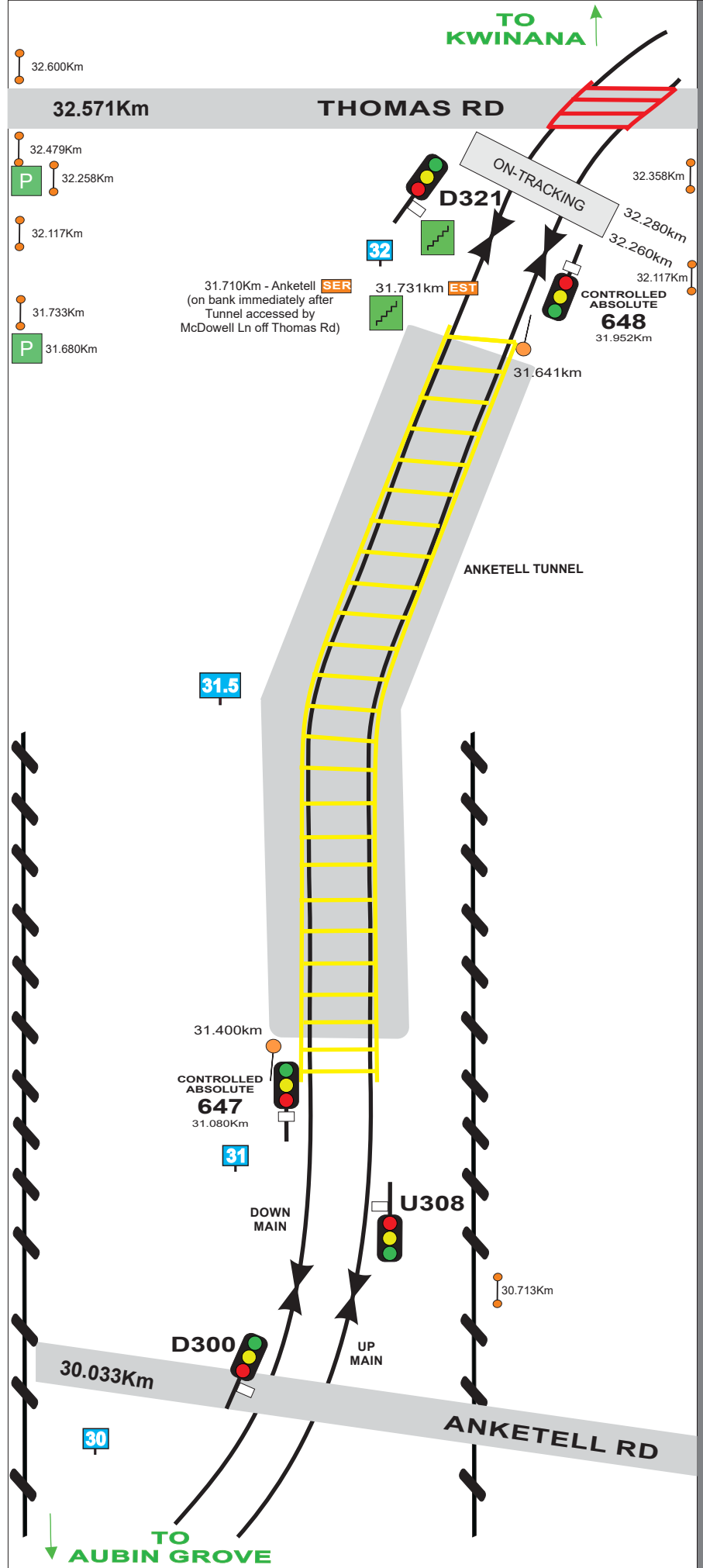
1. Bi-Directional working available only when enabled from train control.
2. Down Main, Up Direction - Bi-Directional Controlled Absolute Signal 692

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.







**INSTRUCTIONS**

**NO PLACE OF SAFETY**

The below locations have No Place of Safety:

1. Thomas Road Tunnel.



**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available:



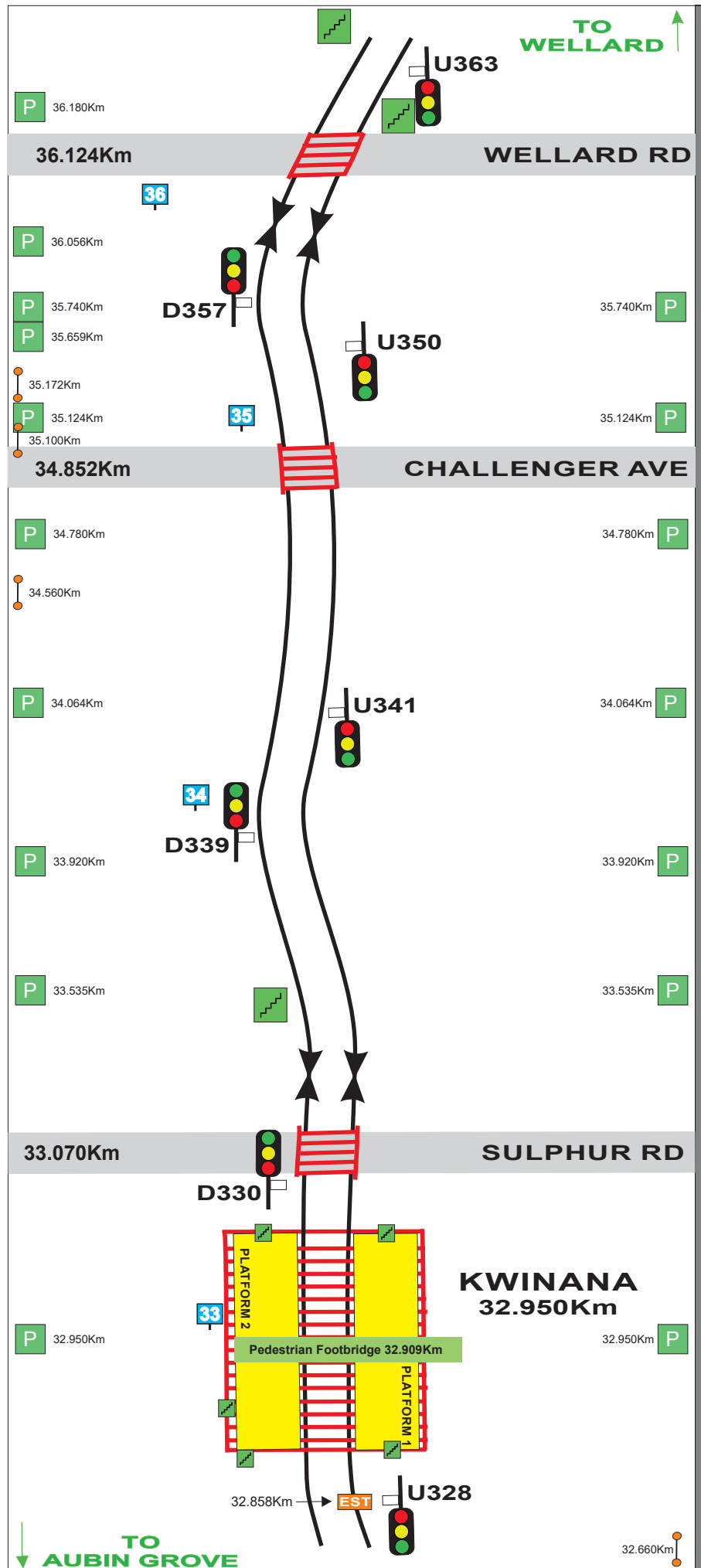
1. Anketell Tunnel.

**NOTES**

1. Contact ECO to activate/deactivate Flashing Man and Tunnel Lighting in Anketell Tunnel.
2. Rule 3011 must be used for accessing and egressing Anketell Tunnel while trains are running.
3. Bi-Directional working available only when enabled from train control.

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

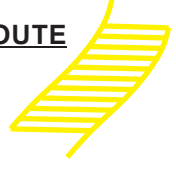
The below locations have No Place of Safety:



1. Wellard Road Tunnel, Up & Down Main.
2. Challenger Avenue Tunnel, Up & Down Main.
3. Sulphur Road Tunnel, Up & Down Main.
4. Kwinana Station, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:



1. Nil.

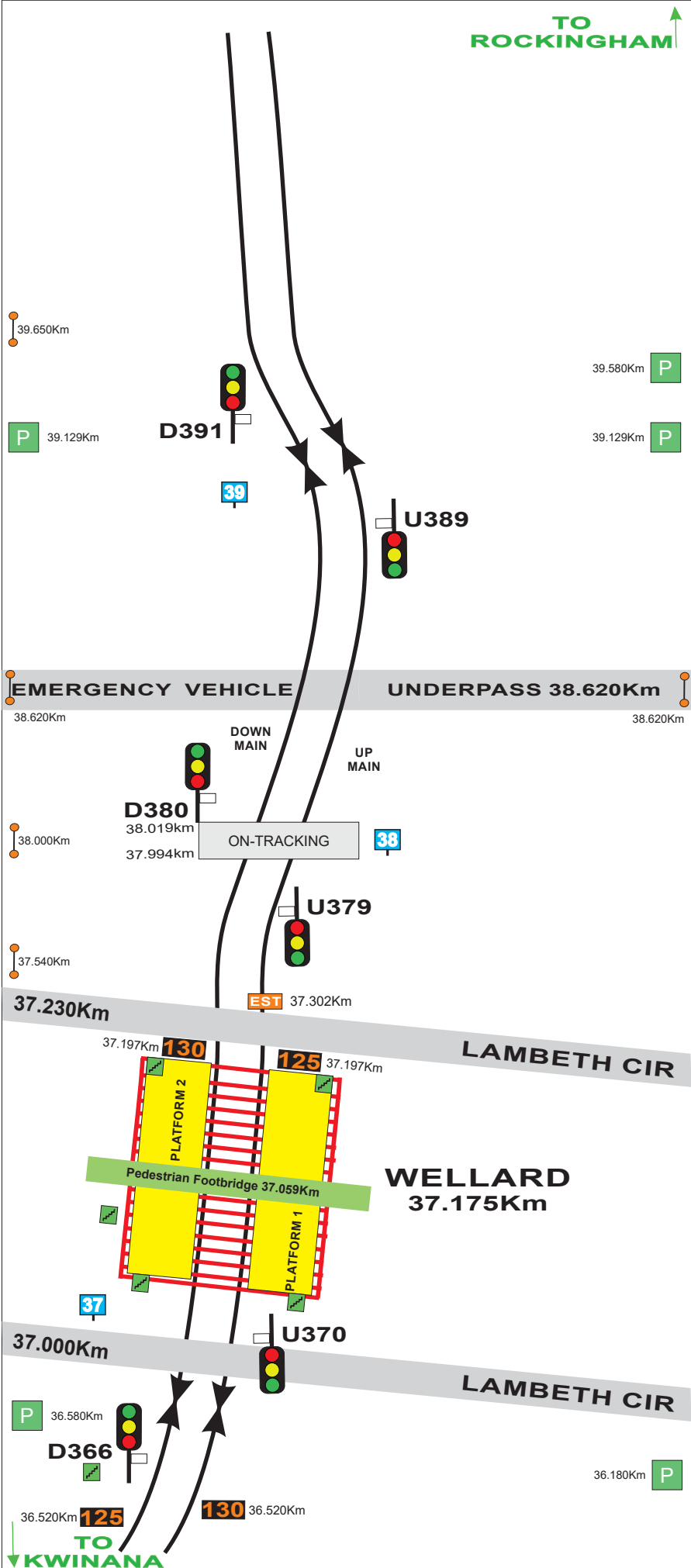
### NOTES

1. Bi-Directional working available only when enabled from train control.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

TO  
ROCKINGHAM ↑



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:



1. Wellard Station, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:



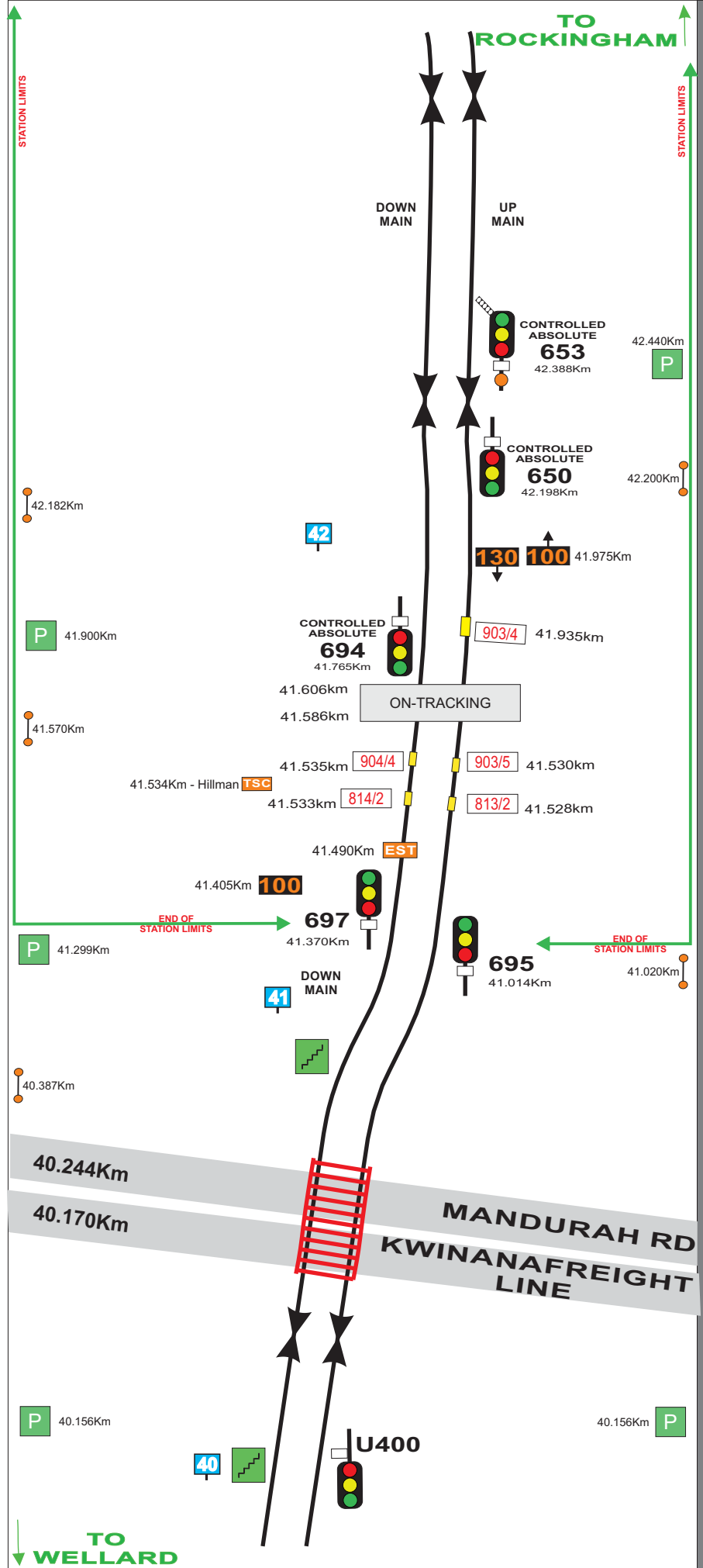
1. Nil.

### NOTES

1. Bi-Directional working available only when enabled from train control.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



**INSTRUCTIONS**

**NO PLACE OF SAFETY**

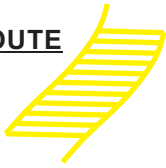
The below locations have No Place of Safety:



1. Mandurah Road / Kwinana Freight Line Bridges, Up & Down Main.

**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available:



1. Nil.

**STATION LIMITS**

**Down Main**

1. Down Controlled Absolute Signal 697 (41.370km) and Down Controlled Absolute Signal 655 (43.307km).

**Up Main**

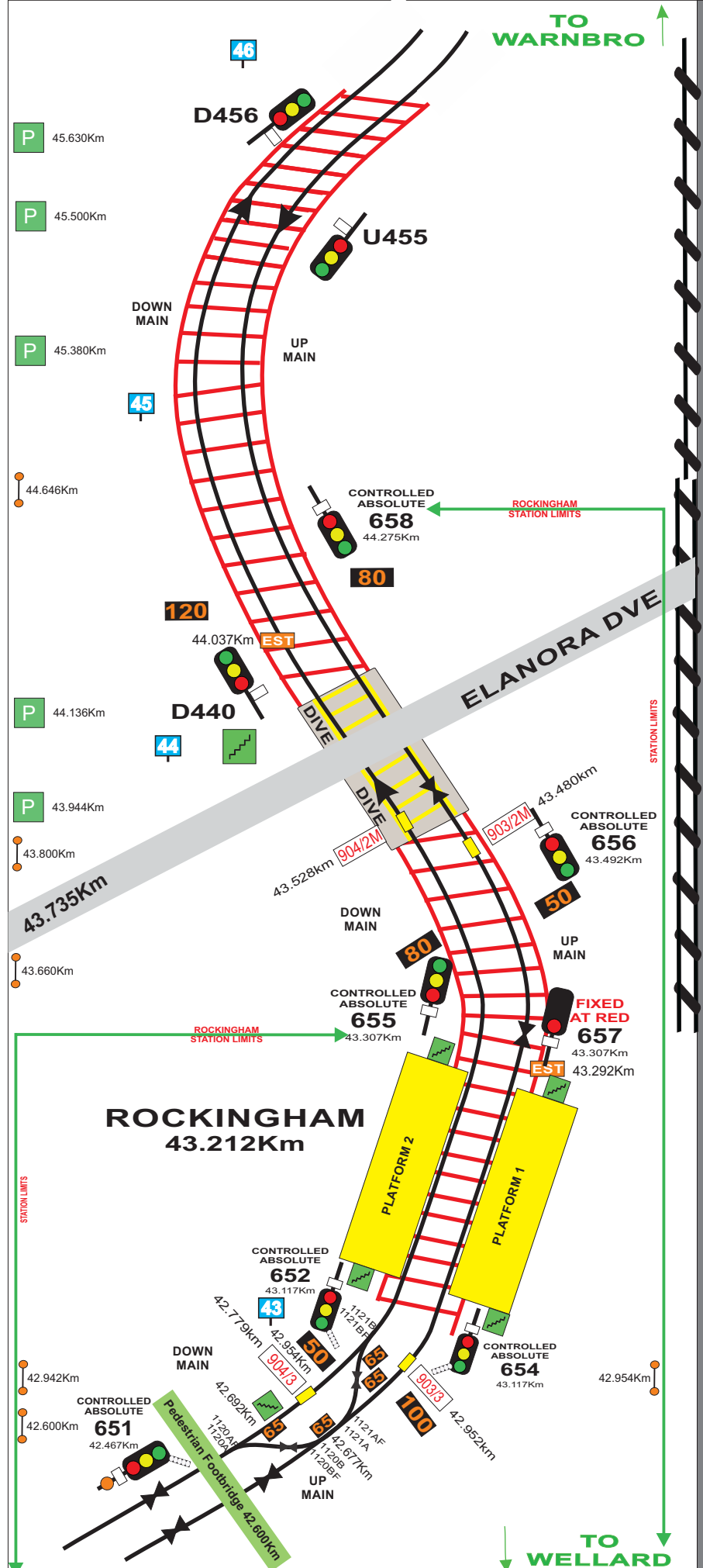
1. Up Controlled Absolute Signal 658 (44.275km) and Up Controlled Absolute Signal 695 (41.014km).

**NOTES**

1. Bi-Directional working available only when enabled from train control.
2. Down Main, Up Direction - Bi-Directional Controlled Absolute Signal 694 (41.765km)
3. Up Main, Down Direction - Bi-Directional Controlled Absolute Signal 695 (41.014km)

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Signal 652 through to 46KM Peg, Up & Down Main.



### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Elanora Drive Dive, Up & Down Main.



### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 697 (41.370km) and Down Controlled Absolute Signal 655 (43.307km).

#### Up Main

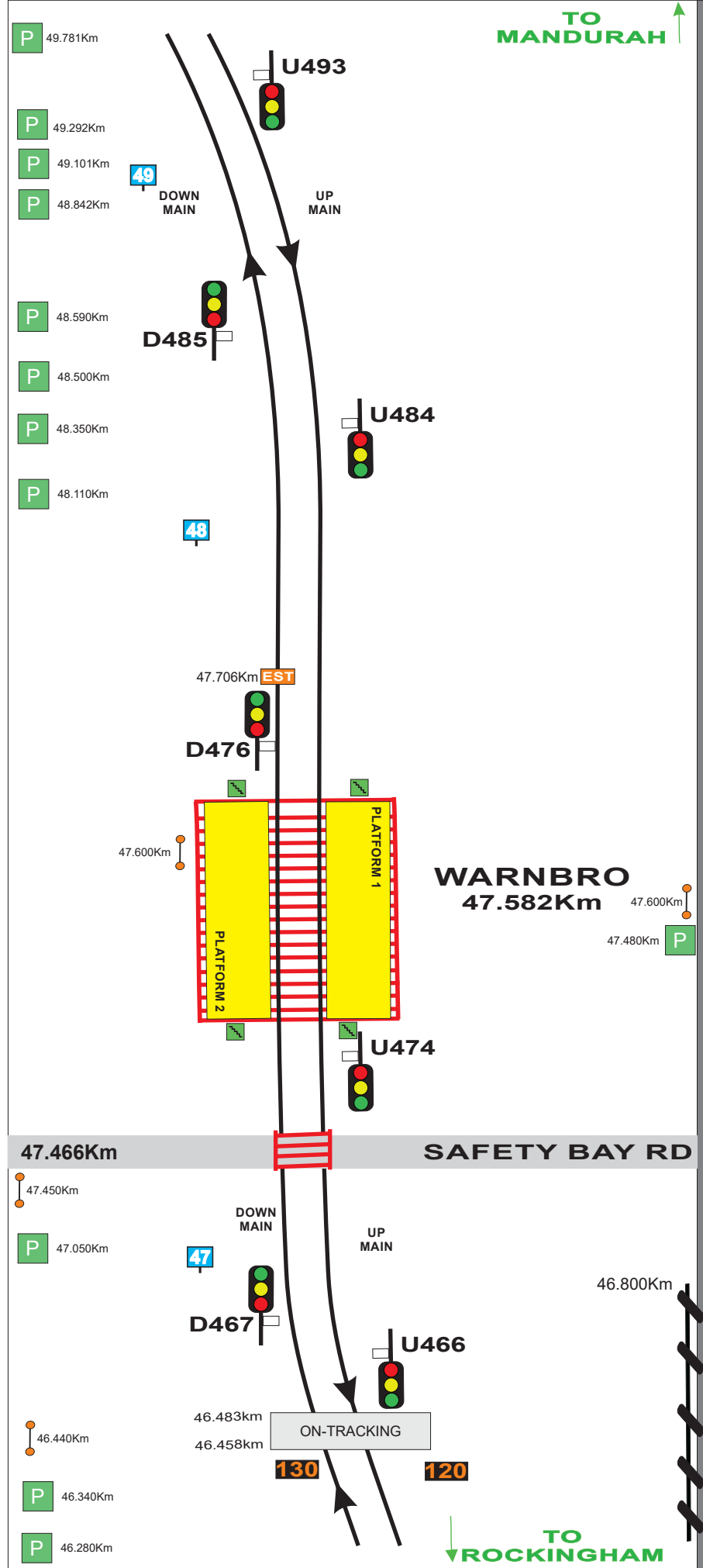
1. Up Controlled Absolute Signal 658 (44.275km) and Up Controlled Absolute Signal 695 (41.014km).

### NOTES

1. Bi-Directional Working Limits:
  - Up Direction 43.307Km
  - Down Direction 43.307Km
2. Bi-Directional working available only when enabled from train control.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

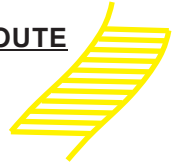
The below locations have No Place of Safety:



- Warnbro Station, Up & Down Main.
- Safety Bay Road Tunnel, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:



- Nil.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

TO MANDURAH ↑

P 54.024Km

54.140Km P

54

STAKEHILL RD

53.900Km

D538

53.865Km P

U537

53.714Km P

DOWN MAIN

UP MAIN

53.294km 902/3

EST 53.297Km

901/3 53.246km

53.294Km P

53.292km 904/1

903/1 53.244km

TSC 53.292Km - Baldivis  
(accessed from southbound  
lane of Ennis Avenue)

53

D529

52.900km

52.900km

ON-TRACKING

52.880km

P 52.886Km

U527

P 52.789Km

P 52.246Km

P 52.030Km

D520

52

P 51.900Km

P 51.595Km

UP MAIN

P 51.200Km

DOWN MAIN

P 50.815Km

51

D507

P 50.645Km

P 50.268Km

P 49.990Km

50

U505

TO WARNBRO ↓

## INSTRUCTIONS

### NO PLACE OF SAFETY

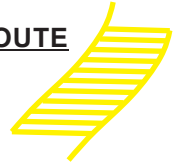
The below locations have No Place of Safety:



1. Stakehill Road Tunnel, Up & Down Main.

### DESIGNATED WALKING ROUTE

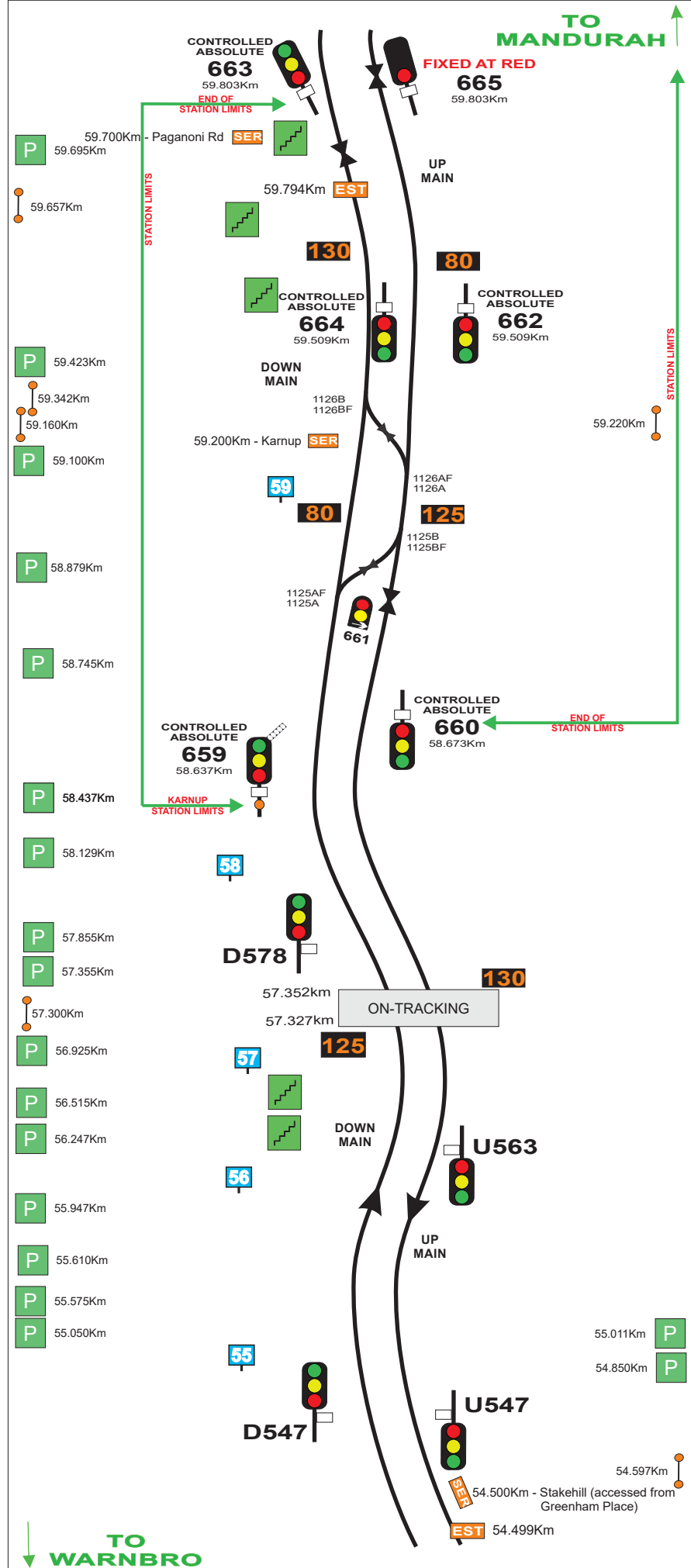
The below locations have a Designated Walking Route available:



1. Nil.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Nil.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Nil.

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 659 (58.637km) and Down Controlled Absolute Signal 663 (59.803km).

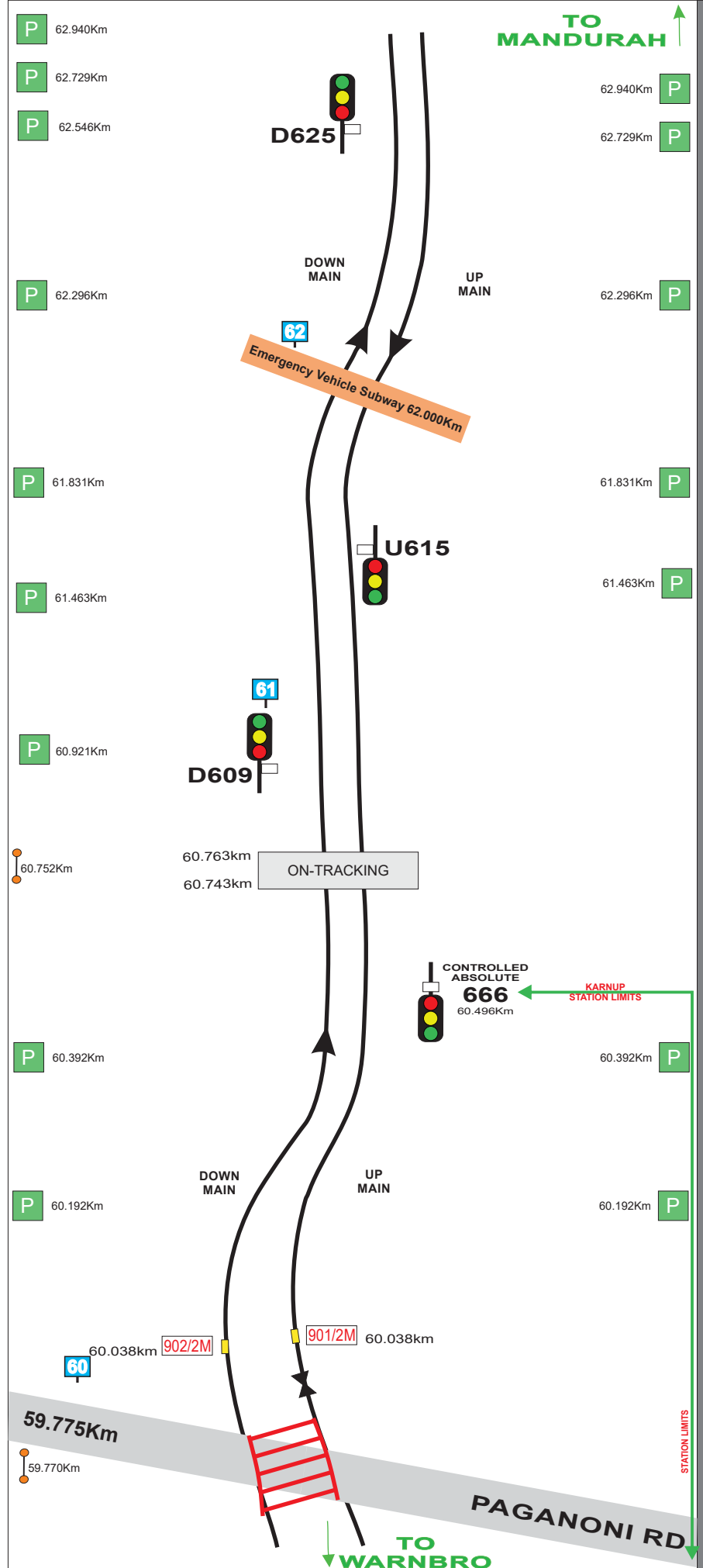
#### Up Main

1. Up Controlled Absolute Signal 666 (60.496km) and Up Controlled Absolute Signal 660 (58.673km).

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.





## INSTRUCTIONS

### NO PLACE OF SAFETY

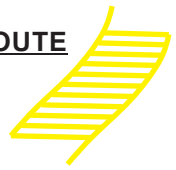
The below locations have No Place of Safety:



1. Paganoni Road Tunnel, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:



1. Nil.

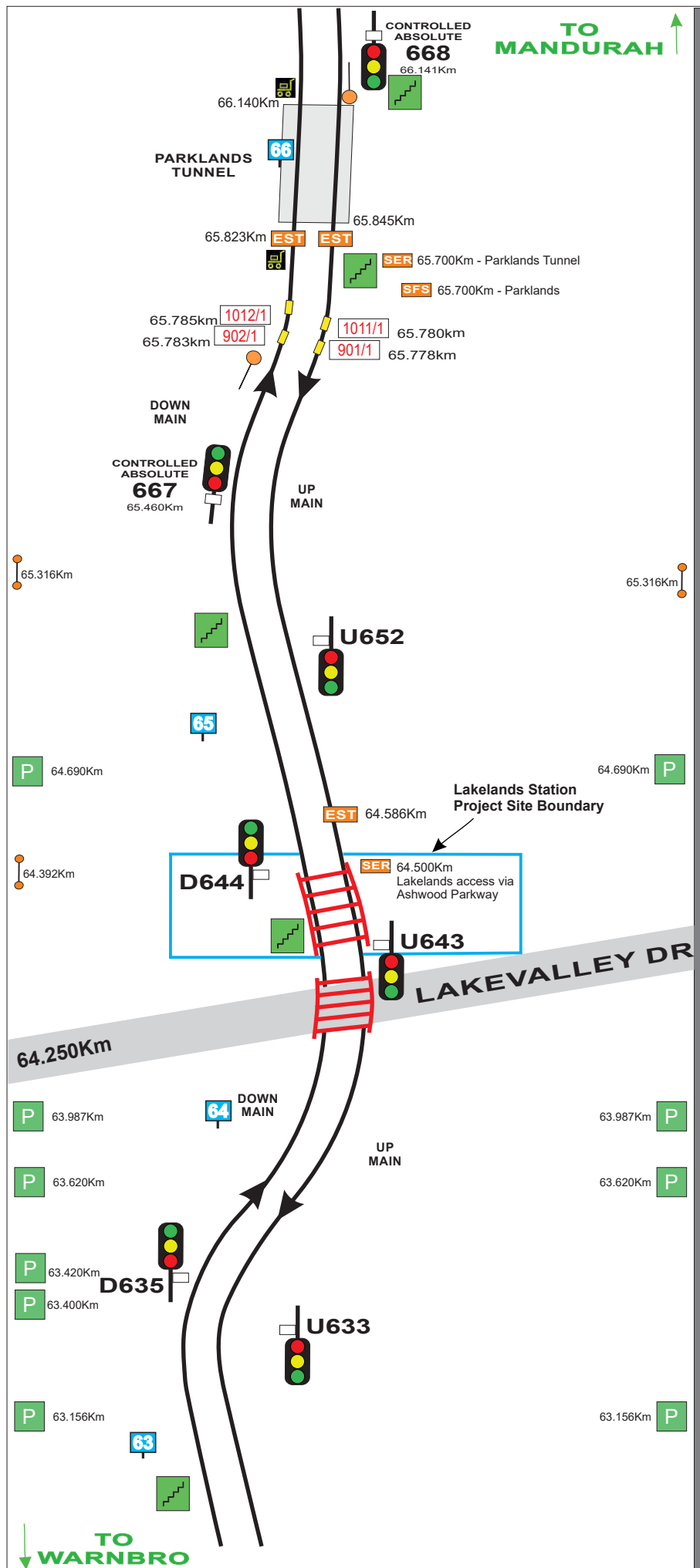
### STATION LIMITS

#### Up Main

1. Up Controlled Absolute Signal 666 (60.496km) and Up Controlled Absolute Signal 660 (58.673km).

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



TO MANDURAH ↑

## INSTRUCTIONS

### NO PLACE OF SAFETY

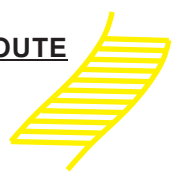
The below locations have No Place of Safety:



1. Lakevalley Drive Tunnel, Up & Down Main.
2. Up & Down Main between Down Main Controlled Absolute Signal 644 (64.489KM) and Up Controlled Absolute Signal 643 (64.299KM)

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:



1. Nil.

### NOTES

1. Contact ECO to activate/deactivate Flashing Man and Tunnel Lighting in Parklands Tunnel.
2. Track Trolley Locations:
  - Parklands Tunnel South - Down Main at R66.078Km
  - Parklands Tunnel North - Down Main at R65.735Km

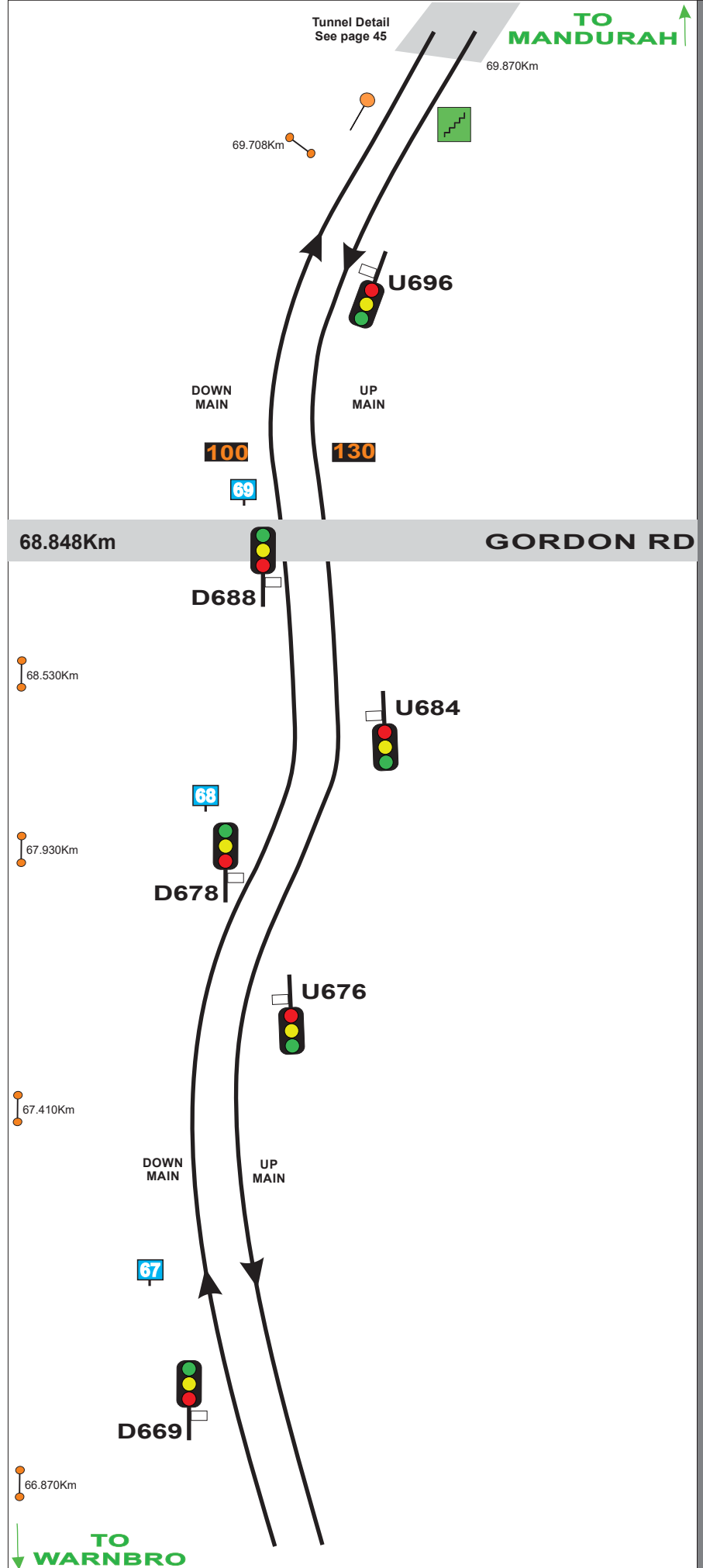
### LAKELANDS STATION PROJECT

— Job Site (64.200Km to 64.500Km)

1. Lakelands Station GE fence erected as integral part of platform wall installation.
2. GE fence represents Lakelands Site Boundary.
3. Access requests to PTA Project Manager.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



**INSTRUCTIONS**

**NO PLACE OF SAFETY**

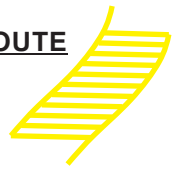
The below locations have No Place of Safety:



- 1. Nil.

**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available:



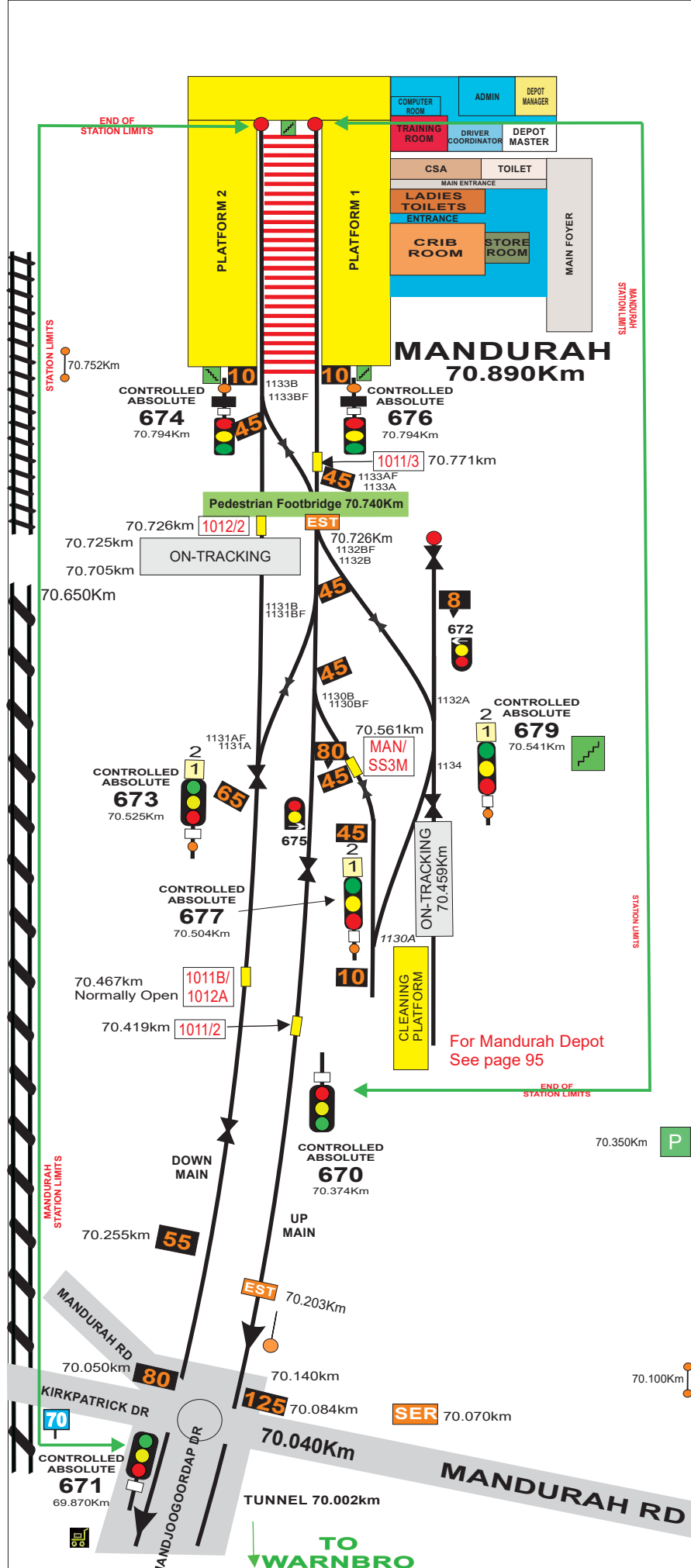
- 1. Nil.

**NOTES**

- 1. Contact ECO to activate/deactivate Flashing Man and Tunnel Lighting in Mandurah (Fremantle) Road Tunnel.

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

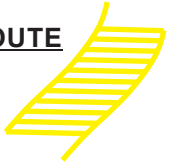
1. Mandurah Station, Up & Down Main.



### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Nil.



### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 671 (69.870km) and Platform 2 Buffer Stop Signal.

#### Up Main

1. Up Controlled Absolute Signal 670 (70.374km) and Platform 1 Buffer Stop Signal.

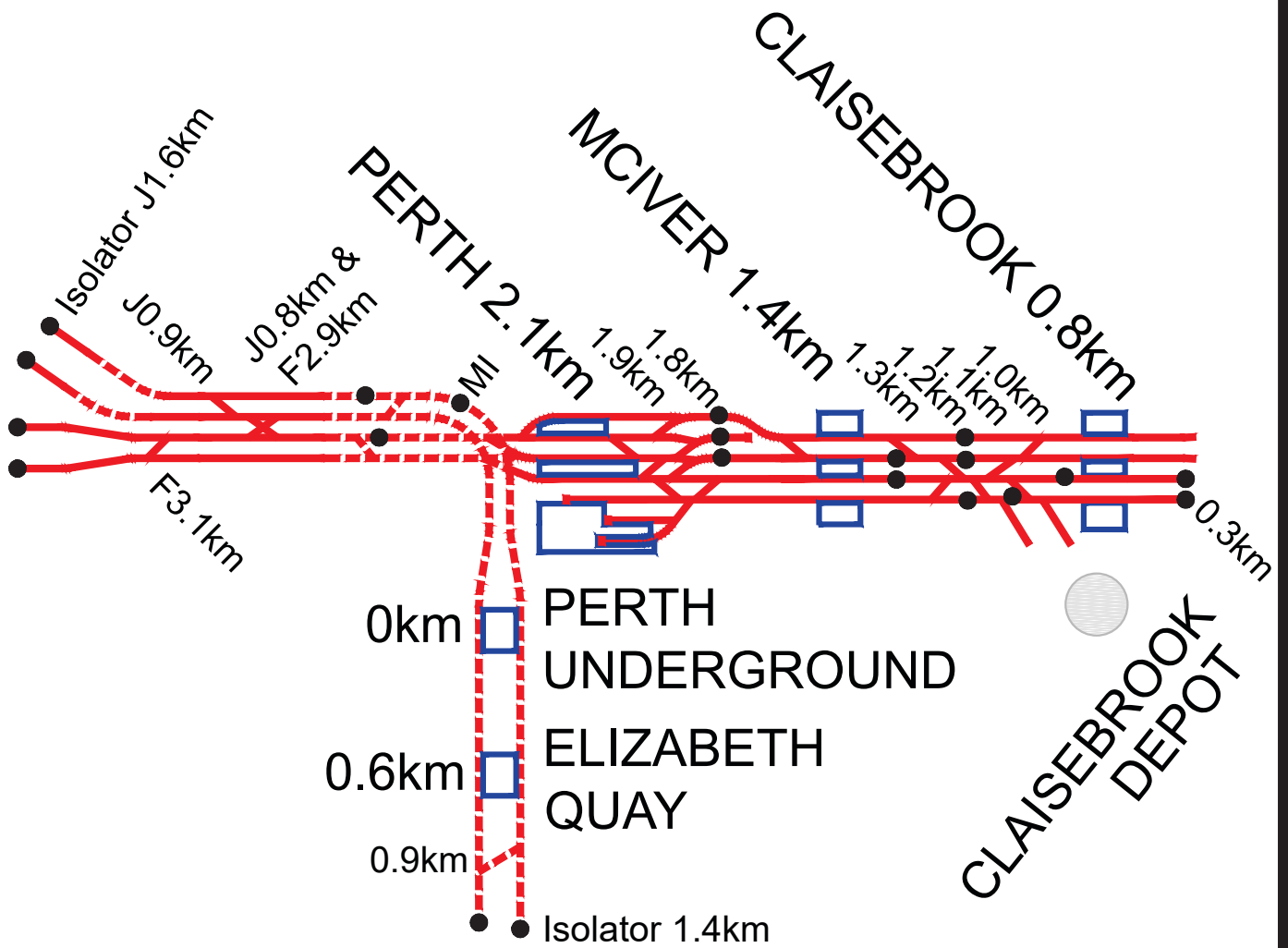
### NOTES

1. 70.694Km on-tracking for Down Main only.
2. Contact ECO to activate/deactivate Flashing Man and Tunnel Lighting in Mandurah (Fremantle) Road Tunnel.
3. Track Trolley Location:  
- Fremantle Road Tunnel - Down Main at R69.668Km

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

# CITY PRECINCT

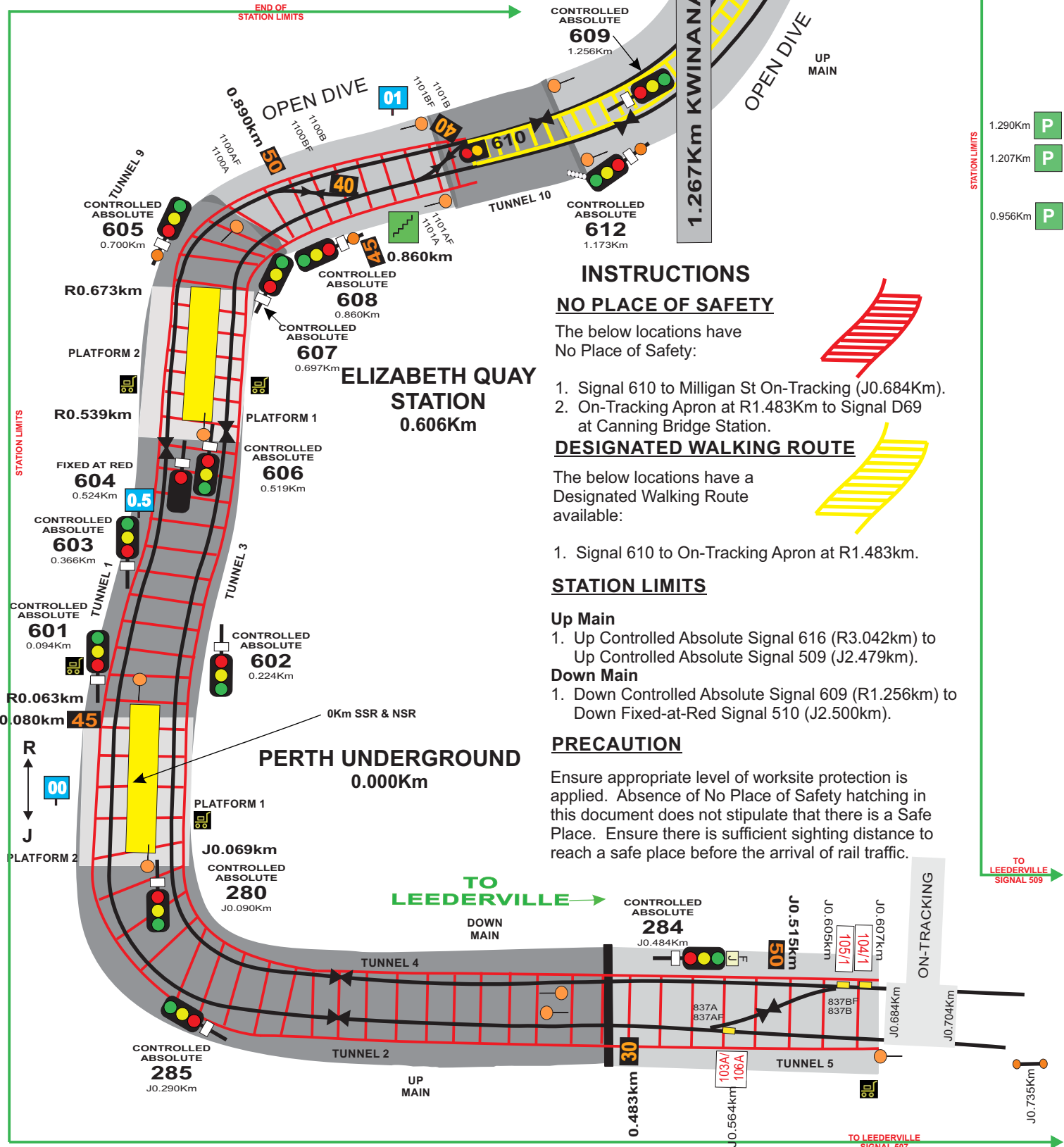


MI - Manual Isolator

**NOTES**

- Contact ICO to activate/deactivate Flashing Man and Tunnel Lighting in Tunnel 1, 2, 3, 4, 5, 9 and 10.
- Track Trolley Locations:
  - Tunnel 1 - Down Main at R0.545Km and R0.075Km
  - Tunnel 3 - Up Main at R0.545Km
  - Tunnel 4 - Down Main at J0.075Km
  - Tunnel 5 - Up Main at J0.669Km

Note:  
A -48m adjustment exists at 1.376Km  
i.e 1.376 = 1.328



**INSTRUCTIONS**

**NO PLACE OF SAFETY**

The below locations have No Place of Safety:

- Signal 610 to Milligan St On-Tracking (J0.684Km).
- On-Tracking Apron at R1.483Km to Signal D69 at Canning Bridge Station.

**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available:

- Signal 610 to On-Tracking Apron at R1.483km.

**STATION LIMITS**

**Up Main**

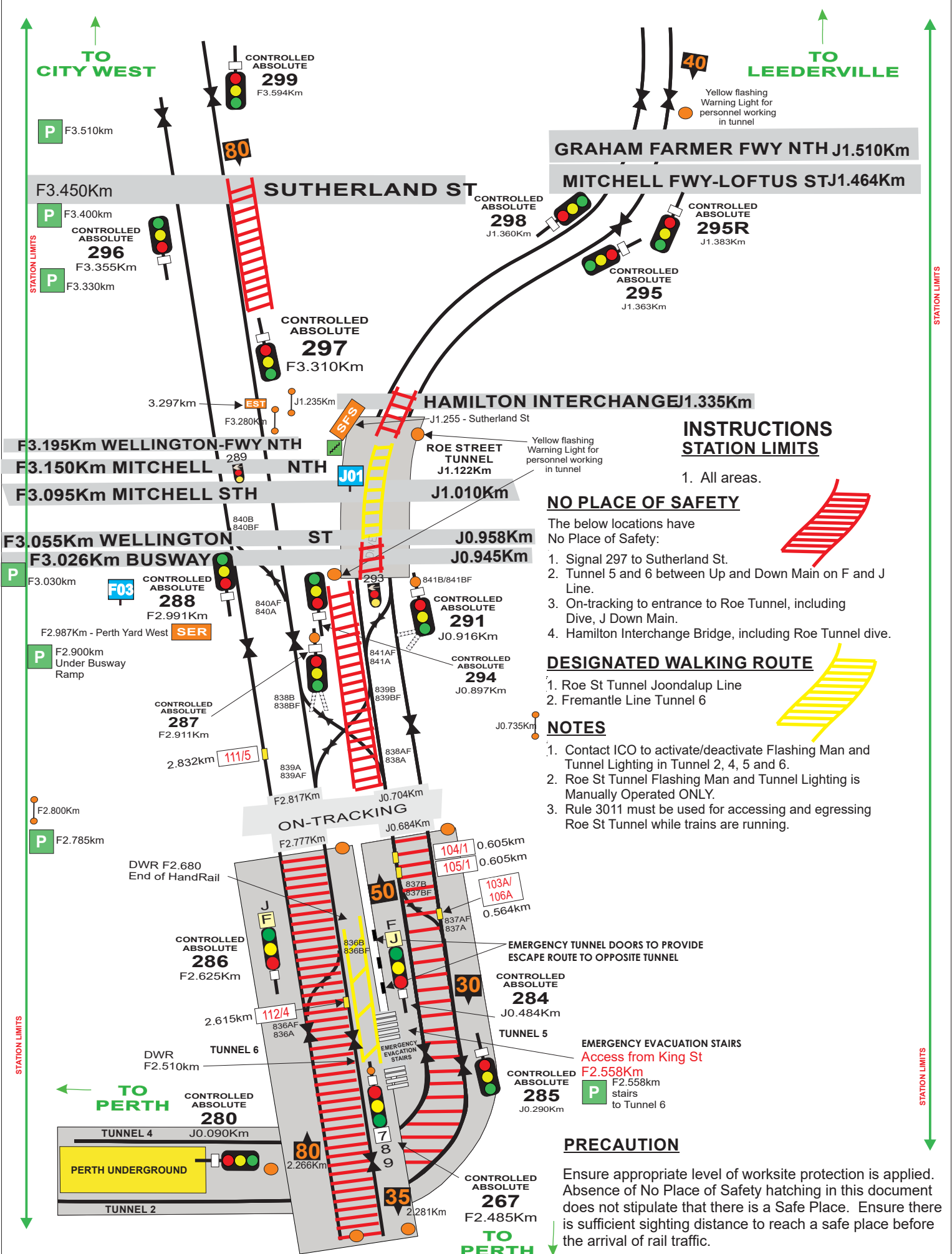
- Up Controlled Absolute Signal 616 (R3.042km) to Up Controlled Absolute Signal 509 (J2.479km).

**Down Main**

- Down Controlled Absolute Signal 609 (R1.256km) to Down Fixed-at-Red Signal 510 (J2.500km).

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



**INSTRUCTIONS  
STATION LIMITS**

1. All areas.

**NO PLACE OF SAFETY**

The below locations have No Place of Safety:

1. Signal 297 to Sutherland St.
2. Tunnel 5 and 6 between Up and Down Main on F and J Line.
3. On-tracking to entrance to Roe Tunnel, including Dive, J Down Main.
4. Hamilton Interchange Bridge, including Roe Tunnel dive.

**DESIGNATED WALKING ROUTE**

1. Roe St Tunnel Joondalup Line
2. Fremantle Line Tunnel 6

**NOTES**

1. Contact ICO to activate/deactivate Flashing Man and Tunnel Lighting in Tunnel 2, 4, 5 and 6.
2. Roe St Tunnel Flashing Man and Tunnel Lighting is Manually Operated ONLY.
3. Rule 3011 must be used for accessing and egressing Roe St Tunnel while trains are running.

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.





# INSTRUCTIONS

## PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

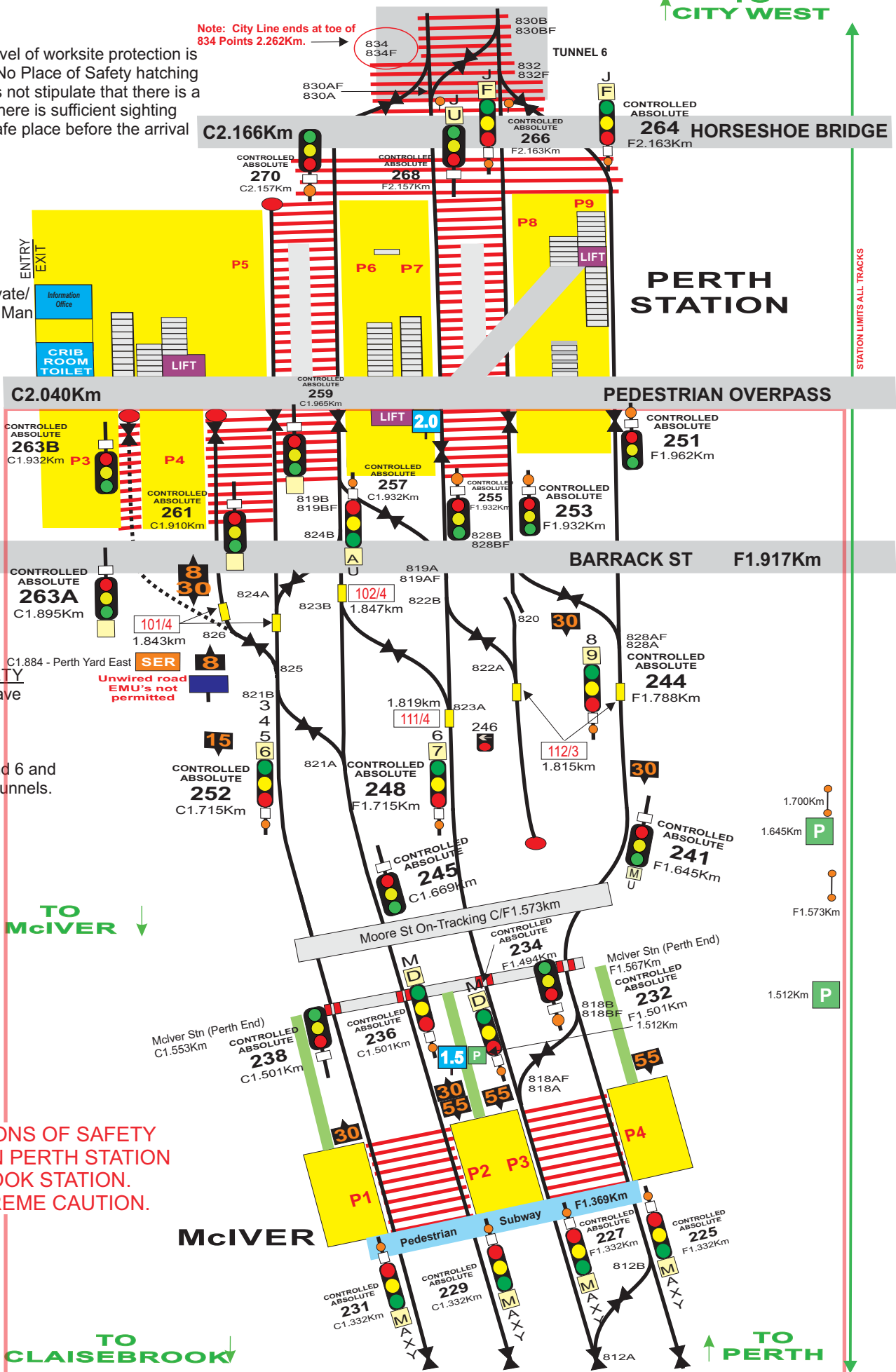
## STATION LIMITS

1. All Areas.

## NOTES

1. Contact ICO to activate/deactivate Flashing Man and Tunnel Lighting in Tunnel 6

Note: City Line ends at toe of 834 Points 2.262Km.



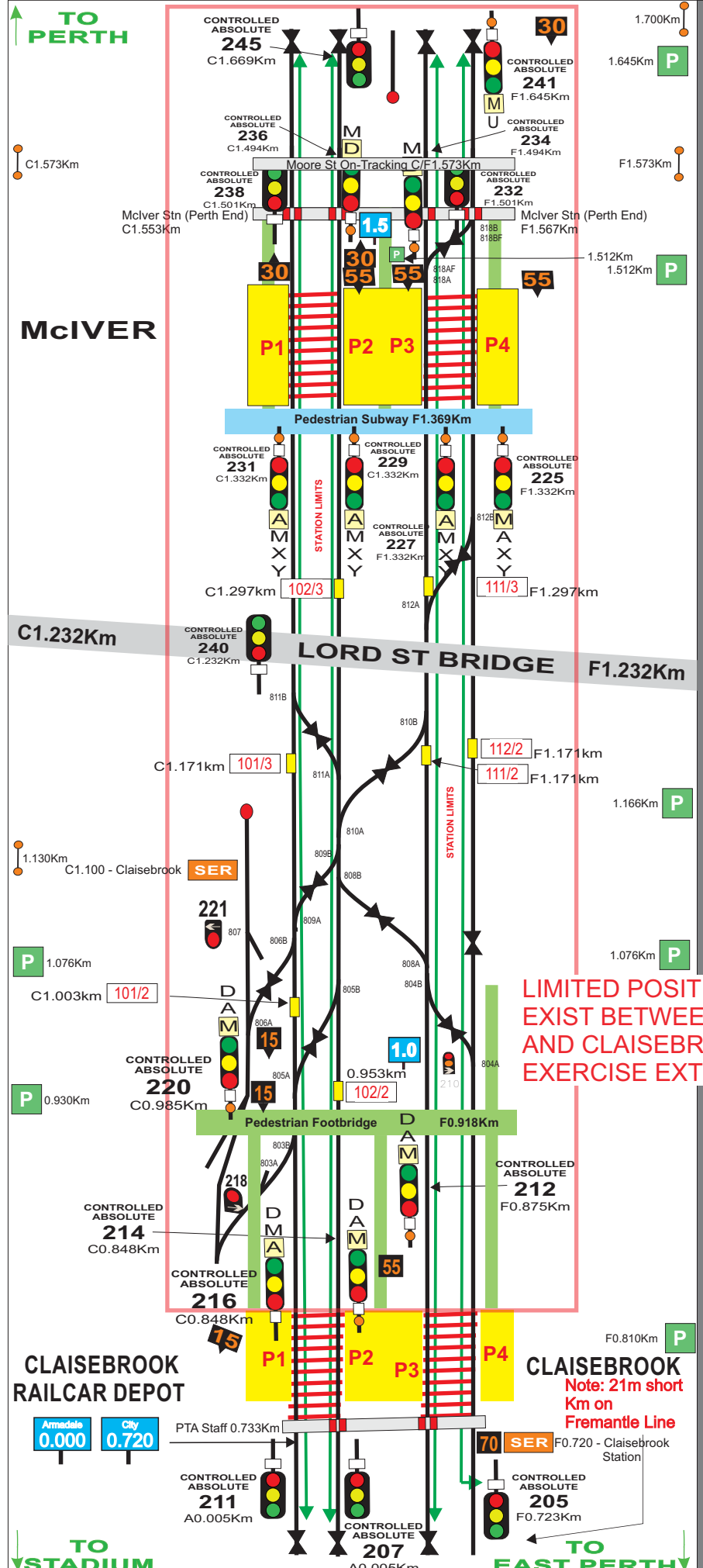
## NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Tunnel 5 and 6.
2. Platforms 3, 4, 5 and 6 and area heading into Tunnels.

- P C1.710Km
- P C1.705Km

LIMITED POSITIONS OF SAFETY EXIST BETWEEN PERTH STATION AND CLAISEBROOK STATION. EXERCISE EXTREME CAUTION.



LIMITED POSITIONS OF SAFETY EXIST BETWEEN PERTH STATION AND CLAISEBROOK STATION. EXERCISE EXTREME CAUTION.

### INSTRUCTIONS

#### NO PLACE OF SAFETY

The below locations have No Place of Safety:

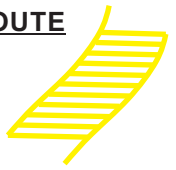
1. Claisebrook Station, Up & Down.
2. McIver Station, Up & Down.



#### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.

1. Nil.



#### NOTES

1. City Line starts at A0.000/C0.720 directly adjacent to Signal 207.
2. **21m Short Km on Fremantle Line at F0.710**

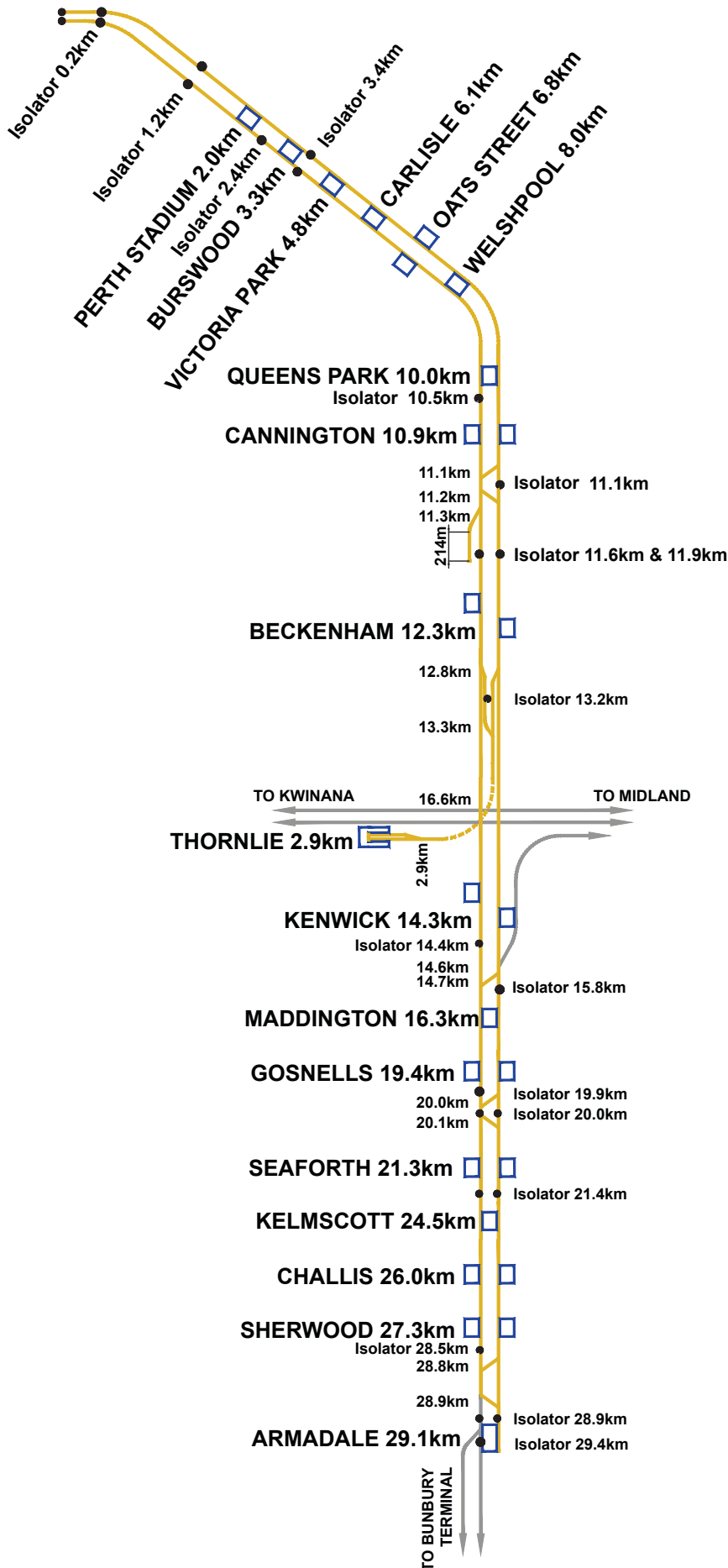
#### STATION LIMITS

1. All Areas.

#### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

# ARMADALE LINE



TO STADIUM ↑

GOONGOONGUP BRIDGE (SWAN RIVER)

1.206Km  
0.748Km

CONTROLLED ABSOLUTE  
**200**  
0.612Km  
**100**

CONTROLLED ABSOLUTE  
**203**  
0.412Km

**90**

CONTROLLED ABSOLUTE  
**202**  
0.414Km

0.630Km **P**

0.436Km **P**

0.350Km EAST PARADE

0.303km  
0.283km ON-TRACKING

DOWN MAIN

UP MAIN

0.231km **202/1**  
0.229km **102/1**

**201/1** 0.231km  
**101/1** 0.229km

0.225Km **P**

**90**

CONTROLLED ABSOLUTE  
**207**  
A0.005Km

CONTROLLED ABSOLUTE  
**205**  
0.723Km

CONTINUES TO SIGNAL 204

F0.720Km - Claisebrook Station **SER**

City **0.720**  
Armadale **0.000**

CONTROLLED ABSOLUTE  
**211**  
A0.005Km

**50**

Claisebrook Station - 0.733Km

0.750Km **P**

MIDLAND LINE DOWN MAIN

MIDLAND LINE UP MAIN

Claisebrook Station

PLATFORM 1

↓ TO MCIVER

**INSTRUCTIONS**

**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available.  
1. Goongoongup Bridge.



**STATION LIMITS**

1. All lines Victoria to Perth.

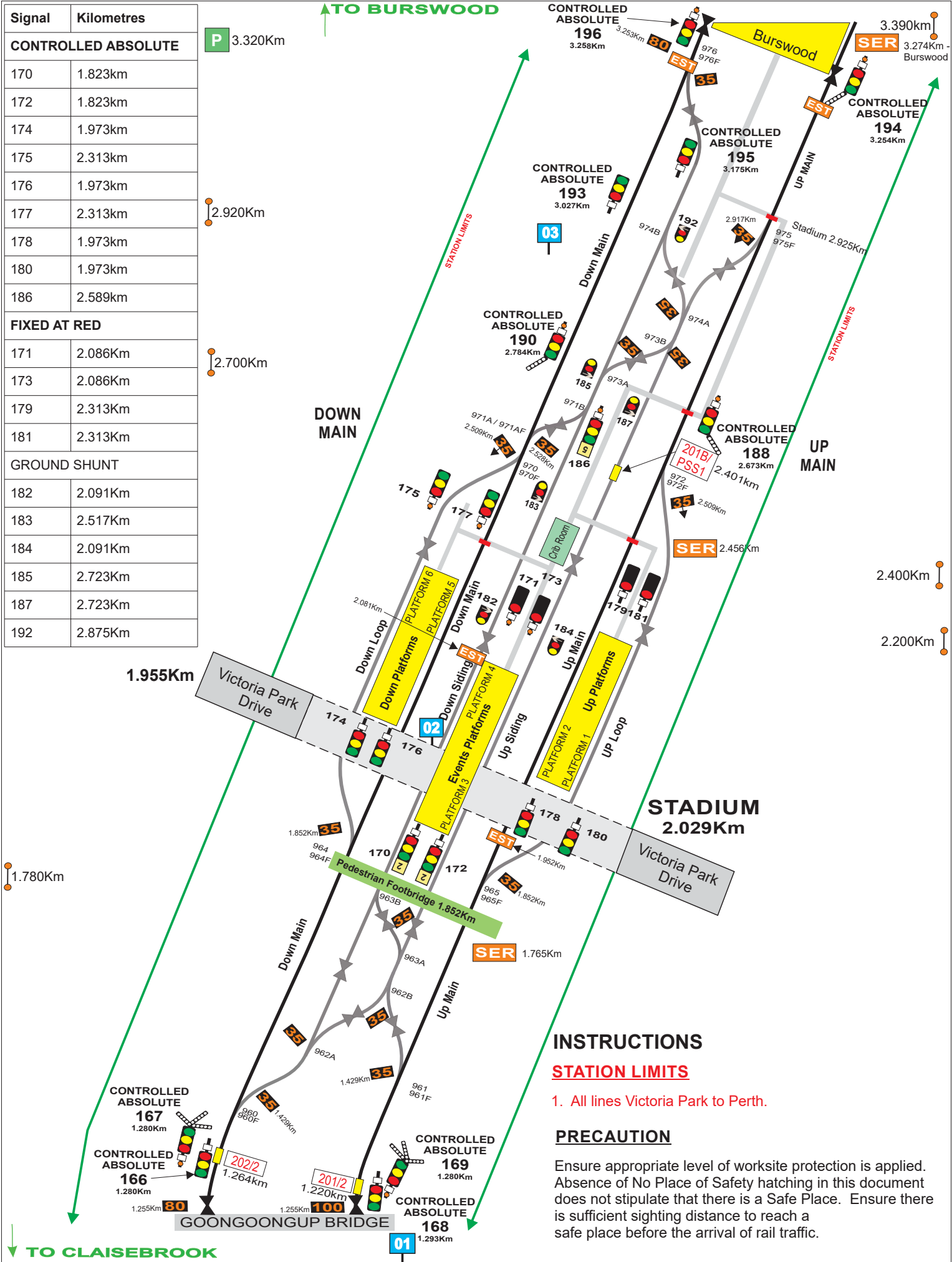
**NOTES**

1. City Line starts at A0.000/C0.720 directly adjacent Signal 207.

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Place of Safety.

Signal	Kilometres
<b>CONTROLLED ABSOLUTE</b>	
170	1.823km
172	1.823km
174	1.973km
175	2.313km
176	1.973km
177	2.313km
178	1.973km
180	1.973km
186	2.589km
<b>FIXED AT RED</b>	
171	2.086Km
173	2.086Km
179	2.313Km
181	2.313Km
<b>GROUND SHUNT</b>	
182	2.091Km
183	2.517Km
184	2.091Km
185	2.723Km
187	2.723Km
192	2.875Km



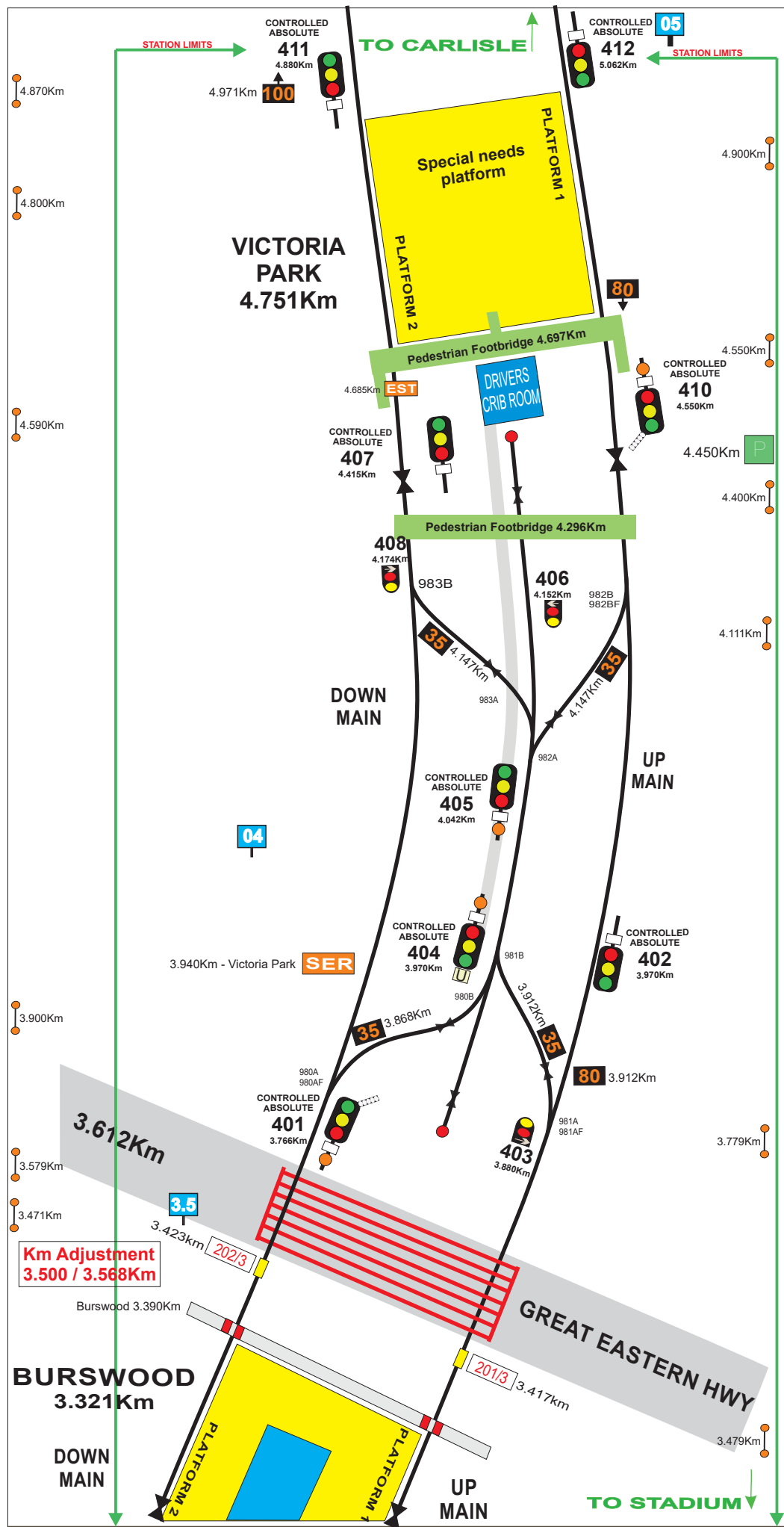
### INSTRUCTIONS

#### STATION LIMITS

- All lines Victoria Park to Perth.

#### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Great Eastern Hwy Bridge.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Nil.

### STATION LIMITS

#### Down Main

1. Signal 411 @ 4.880Km to Perth.

#### Up Main

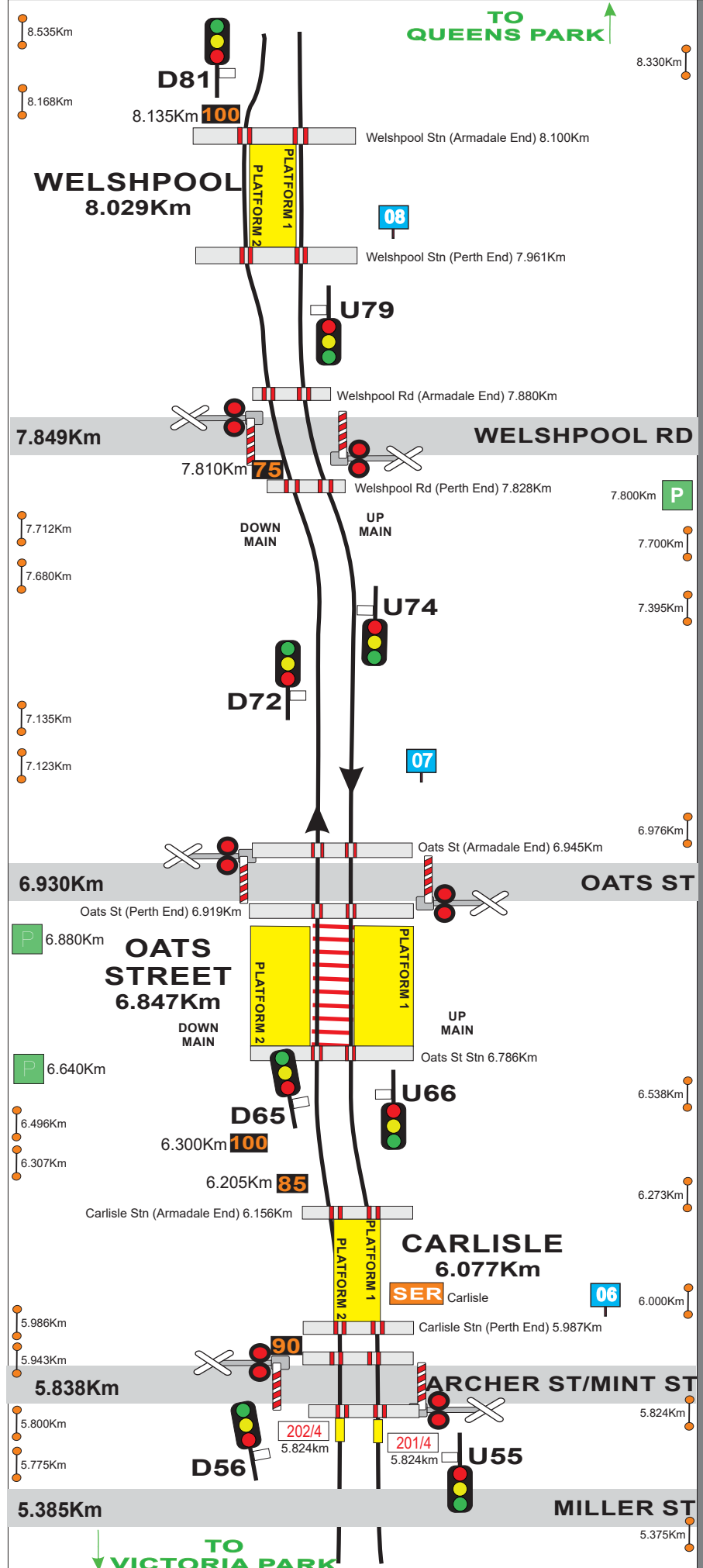
1. Signal 412 @ 5.062Km to Perth.

### NOTE

A 68m adjustment exists at 3.5km  
ie. 3.50km = 3.568km

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Oats Street Station, Up & Down Main.



### DESIGNATED WALKING ROUTE

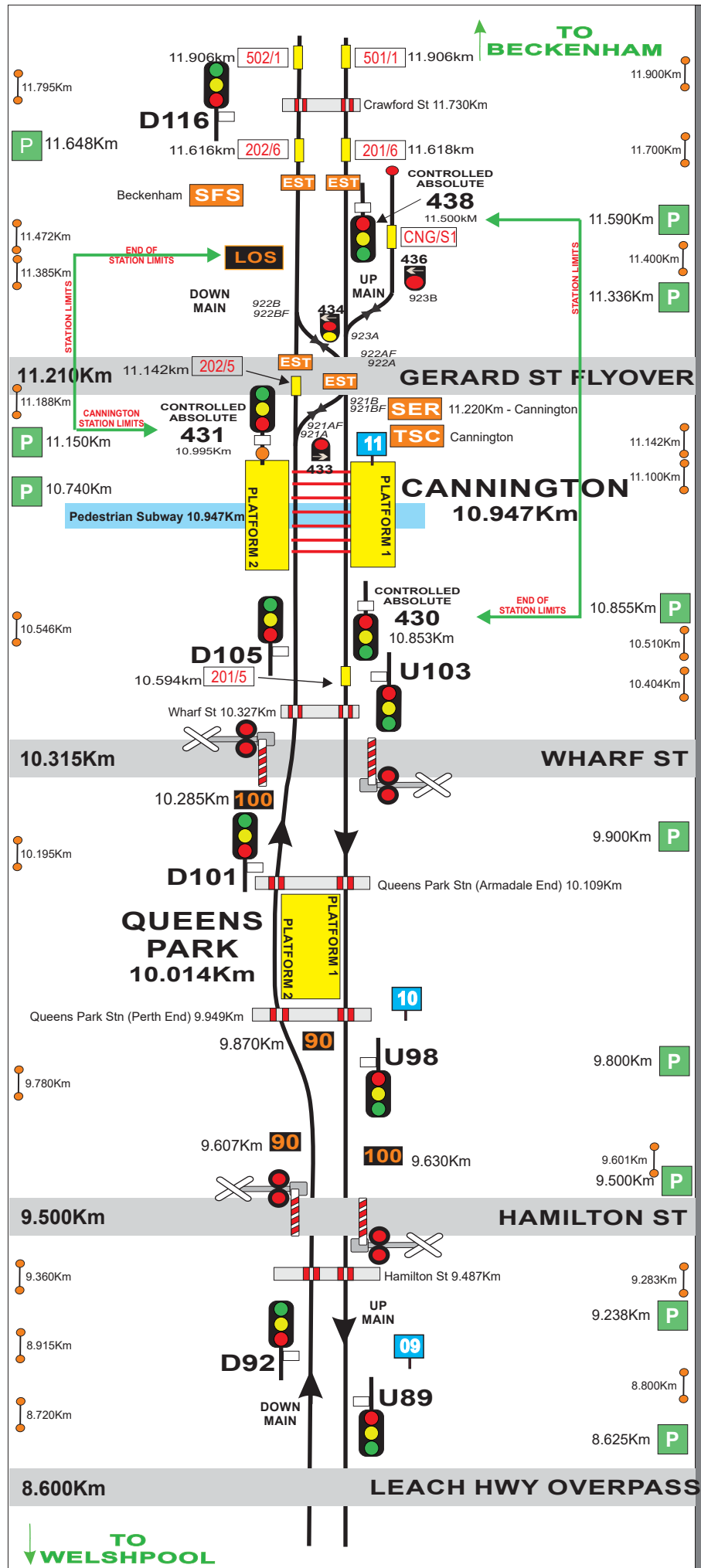
The below locations have a Designated Walking Route available:

1. Nil.



### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

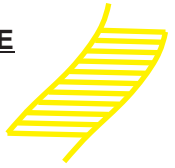
1. Cannington Station, Up & Down Main.



### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Nil.



### STATION LIMITS

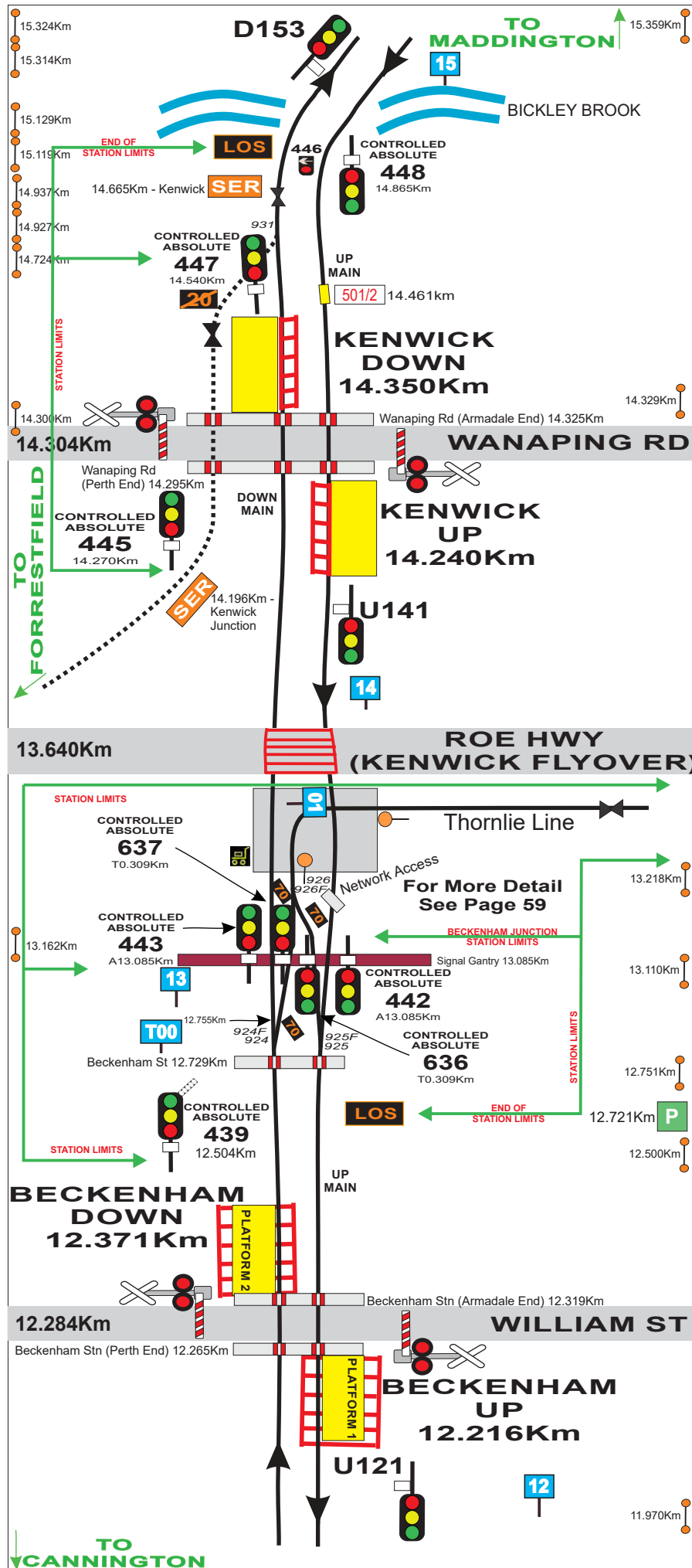
#### Down Main

1. Down Controlled Absolute Signal 431 (10.995Km) and Limit of Shunt Board (11.397Km) - approx. 160m Armadale side of 434 Ground Shunt Signal.

#### Up Main

1. Up Controlled Absolute Signal 438 (11.500Km).
2. Up Controlled Absolute Signal 430 (10.853Km).





## INSTRUCTIONS

### HAZARD, ARC INFRASTRUCTURE MAINS

The below locations are adjacent to ARC Infrastructure Mains and represent a Hazard:

1. Kenwick Station Down Main to Forrestfield

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Kenwick Flyover.
2. Beckenham Station Up & Down Main.
3. Kenwick Station Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Nil.

### STATION LIMITS

#### Beckenham Junction

#### Armadale line

#### Down Main

1. Down Controlled Absolute Signal 439 (A12.504Km) to Down Controlled Absolute Signal 443 (A13.085Km)

#### Up Main

1. LOS board (approx. 160m from 925 points at A12.780Km) to Up Controlled Absolute Signal 442 (A13.085Km).

#### Thornlie line

#### Down Main

1. Down Controlled Absolute Signal 439 (A12.504Km) to Single Line Controlled Absolute Signal 638 (T1.460Km)

#### Up Main

1. LOS board (approx. 160m from 925 points at A12.780Km) to Up Controlled Absolute Signal 638 (T1.460Km)

#### Thornlie Line Single Line Running

Trains move in both directions from 926 points to Thornlie Station Platform 1 and 2 buffer stops

#### Kenwick Junction

#### Down Main

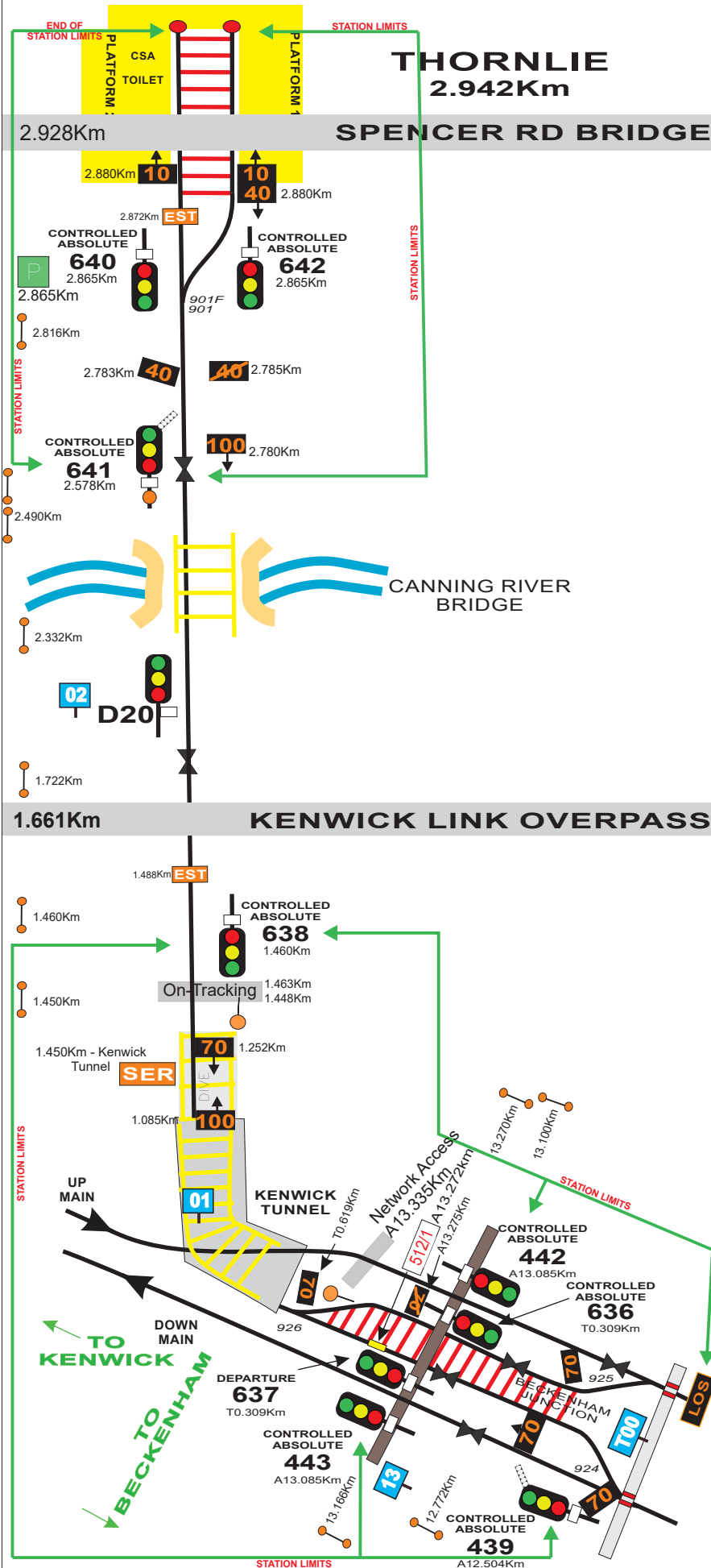
1. LOS board (approx 160m from 446 Ground Shunt Signal A14.892Km) to Down Controlled Absolute Signal 447 (A14.540Km) and to Down Controlled Absolute Signal 445 (A14.270Km) on Freight Line.

### NOTES

1. Contact ECO to activate/deactivate Flashing Man and Tunnel Lighting in Kenwick Tunnel.
2. Track Trolley Location:
  - Kenwick Tunnel - Down Main at T1.165Km

### Unwired Track PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Thornlie Station, Up & Down Main.
2. Beckenham Junction, Up & Down Main.



### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.

1. Canning River Bridge, Up & Down Main.
2. Kenwick Tunnel, Up & Down Main.



### STATION LIMITS

#### Beckenham Junction Armadale line

##### Down Main

1. Down Controlled Absolute Signal 439 (A12.504Km) to Down Controlled Absolute Signal 443(A13.085Km)

##### Up Main

1. LOS board (approx. 160m from 925 points at A12.780Km) to Up Controlled Absolute Signal 442 (A13.085Km).

#### Thornlie line

##### Down Main

1. Down Controlled Absolute Signal 439 (A12.504Km) to Single Line Controlled Absolute Signal 638 (T1.460Km)

##### Up Main

1. LOS board (approx. 160m from 925 points at A12.780Km) to Up Controlled Absolute Signal 638 (T1.460Km)

##### Up and Down Main

1. Controlled Absolute signal 641 (T2.578Km) to Platform 1 & 2.

### Thornlie Line Single Line Running

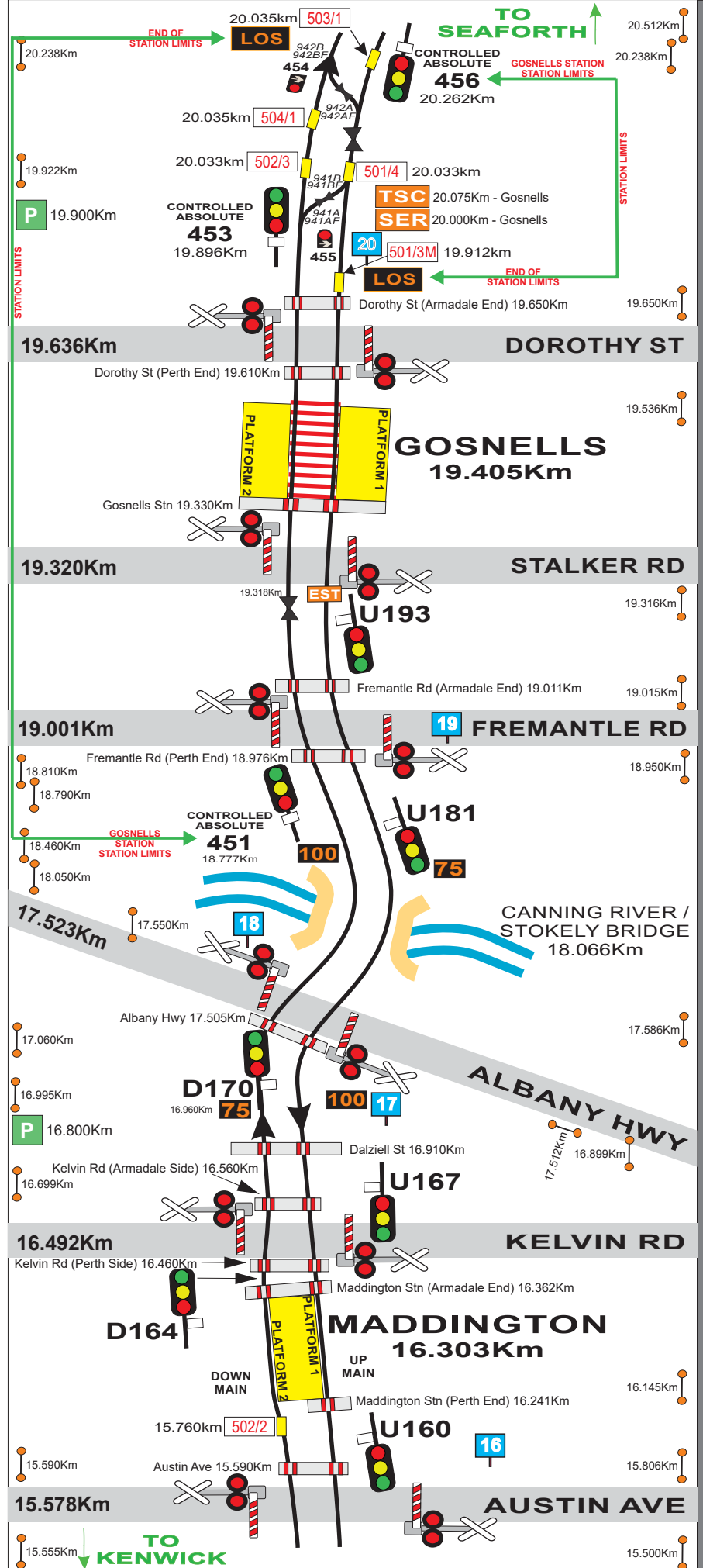
Trains move in both directions from 926 points to Thornlie Station Platform 1 and 2 buffer stops

### NOTES:

1. Contact ECO to activate/deactivate Flashing Man and Tunnel Lighting in Kenwick Tunnel.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Gosnells Station, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Nil.

### STATION LIMITS

#### Down Main

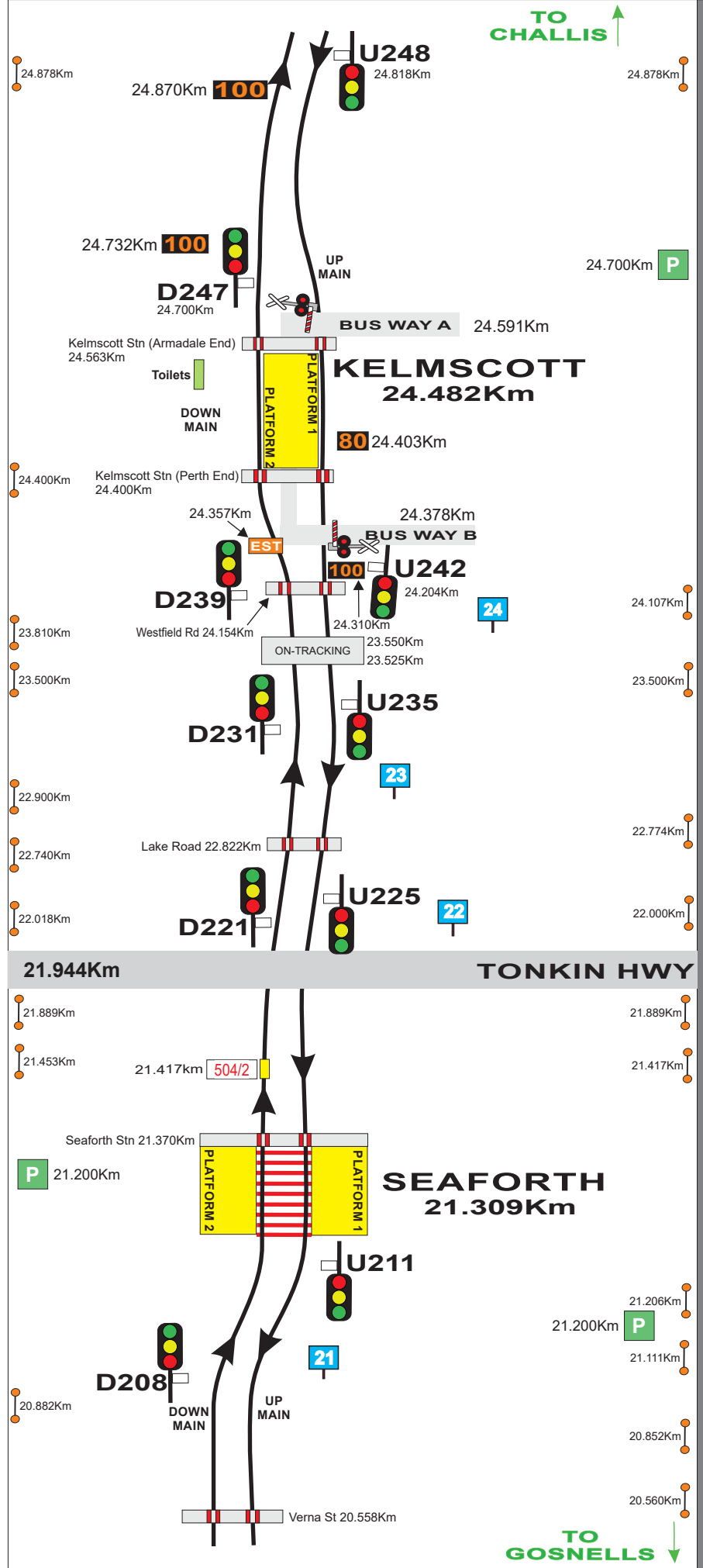
1. Down Controlled Absolute Signal 451 (18.777km) to LOS board (20.260km) approx. 160m Armadale side of 454 Ground Shunt Signal.

#### Up Main

1. Up Controlled Absolute Signal 456 (20.262km) to LOS board (19.715km) approx. 160m Perth side of 455 Ground Shunt Signal.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Seaforth Station, Up & Down Main.

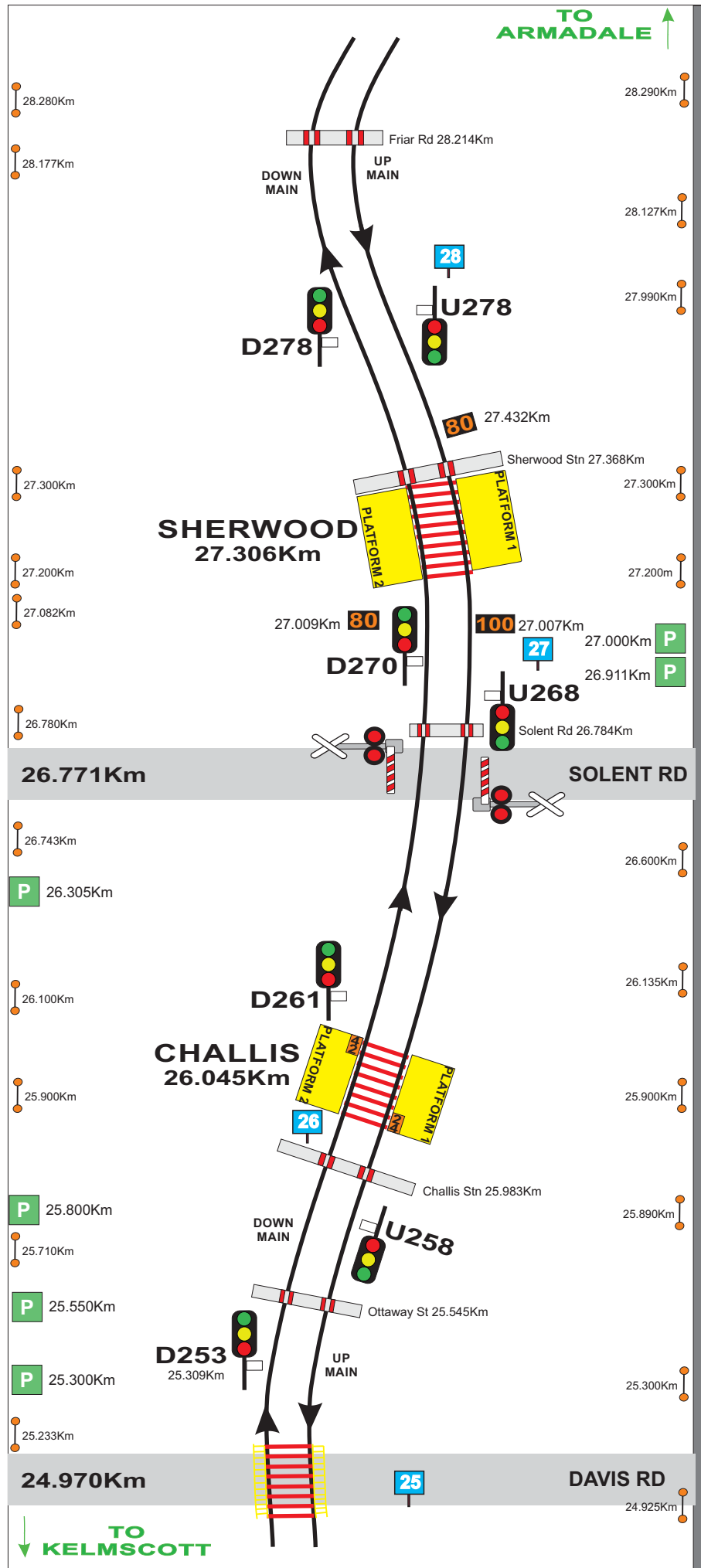
### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Nil.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Sherwood Station, Up & Down Main.
2. Challis Station, Up & Down Main.
3. Davis Road (Rail Over Road Underpass), Up & Down Main.



### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Davis Road (Rail Over Road Underpass)



### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



31.180Km

31.050Km

BYRON/WUNGONG RD

32

80/80

80/80

U310

31

CONTROLLED  
ABSOLUTE  
480  
30.099Km

ARMADALE  
STATION LIMITS

30

Deerness Way 29.910Km

## INSTRUCTIONS

### STATION LIMITS

- Armadale to Mundijong**
1. Single line bi-directional.
  2. Up Controlled Absolute Signal 480 on single bi-directional Mundijong line (30.099km) to LOS board (28.600km) approx. 160m Perth side of 463 Ground Shunt Signal.

**Unwired Track**

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

29.542Km

CHURCH AVE

470

CONTROLLED  
ABSOLUTE  
472  
29.560Km

Church Ave 29.522Km  
955 Catch Points

DOWN  
DEPARTURE  
477  
29.702Km

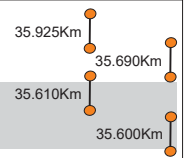
29.687Km

29.675Km

On-Track

LOCKED HAND POINTS

TO  
PICTON



35.609Km



Larsen Rd 35.610Km

LARSEN RD

35



34.868Km

THOMAS RD



80/80

34

### INSTRUCTIONS

#### STATION LIMITS

- Armadale to Mundijong
1. Single Line bi-directional.

Unwired Track

Road Base Level Crossing 33.200Km

80/80

33



32.816Km

ELEVENTH RD



### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

TO  
ARMADALE



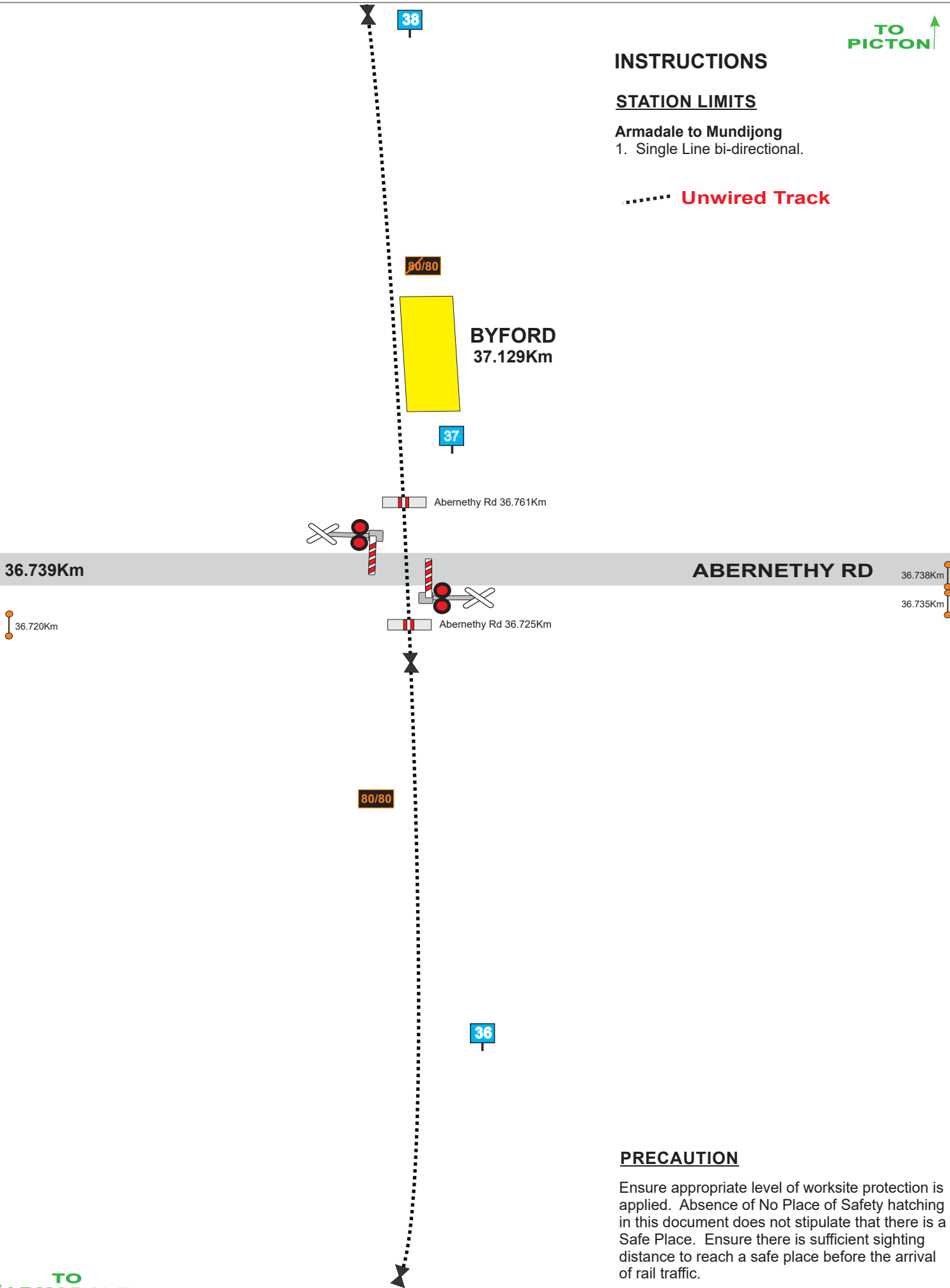
## INSTRUCTIONS

### STATION LIMITS

Armadale to Mundijong

1. Single Line bi-directional.

..... **Unwired Track**



### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

## INSTRUCTIONS

### STATION LIMITS

Armadale to Mundijong

1. Single Line bi-directional.

..... **Unwired Track**



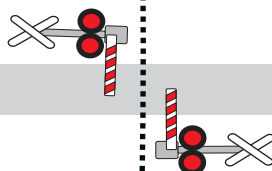
41

40

39

38.972Km

CARDUP SIDING RD



### PRECAUTION

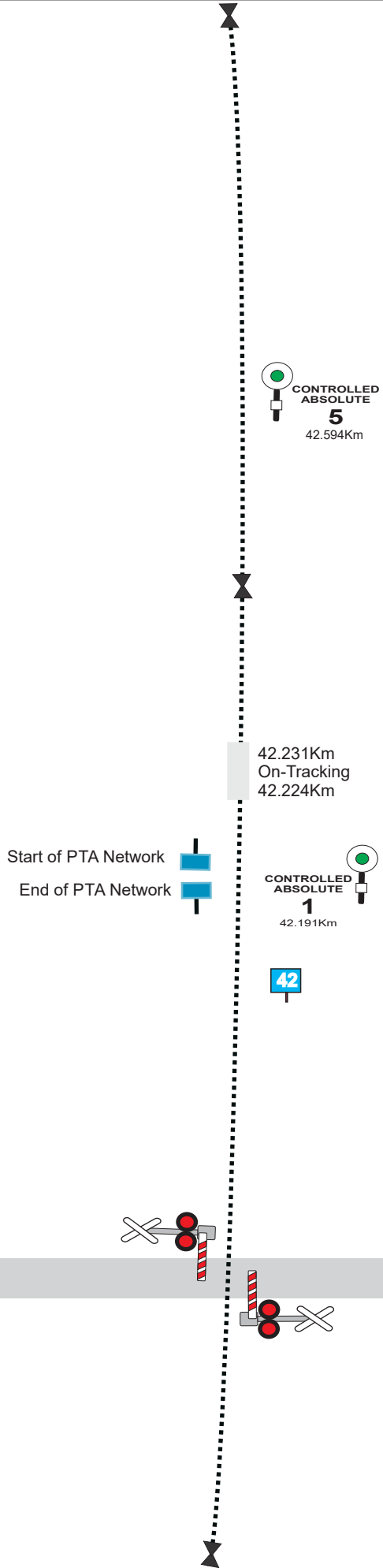
Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

# INSTRUCTIONS

## STATION LIMITS

Armadale to Mundijong  
1. Single Line bi-directional.

 **Unwired Track**



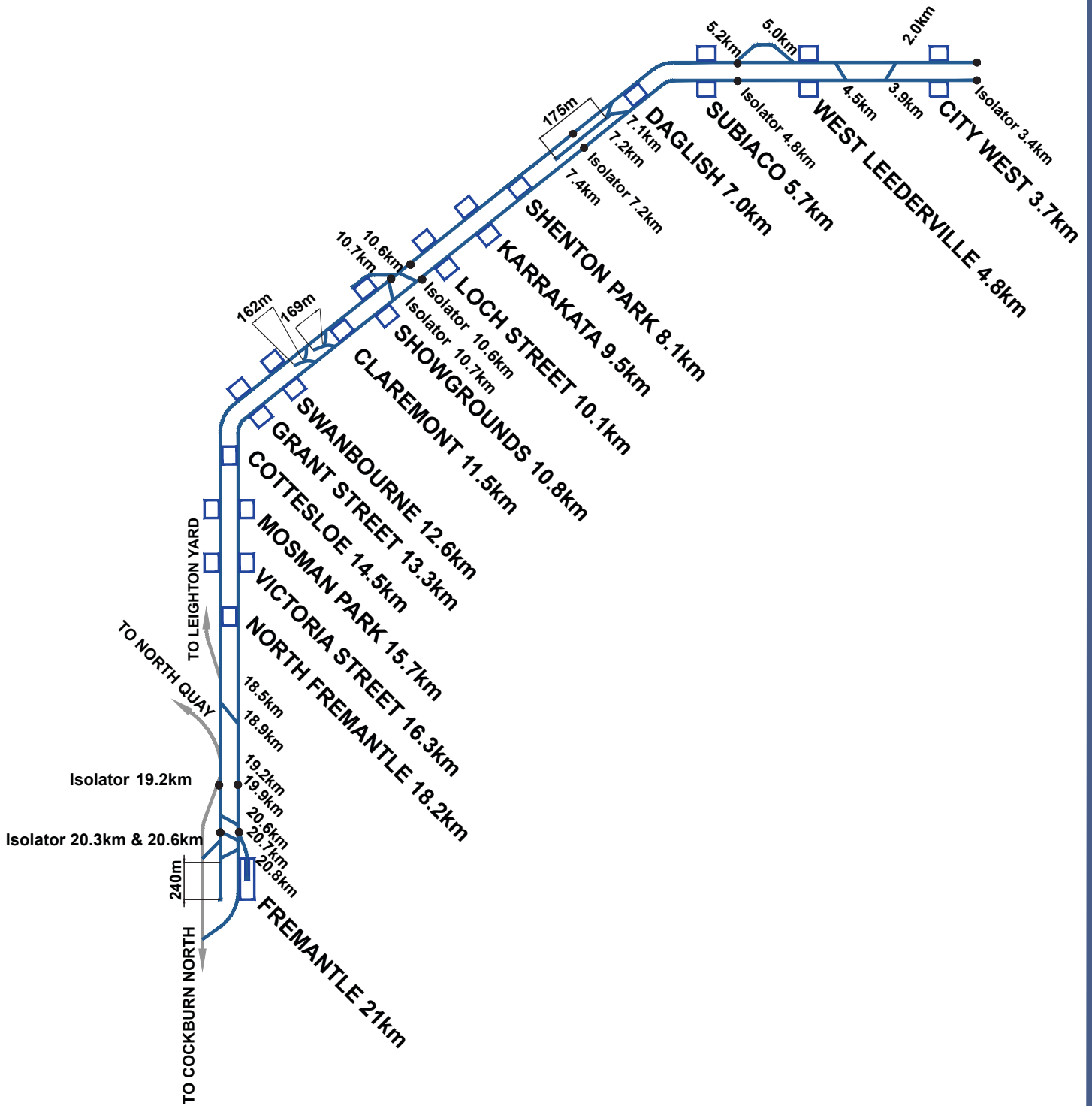
41.648Km

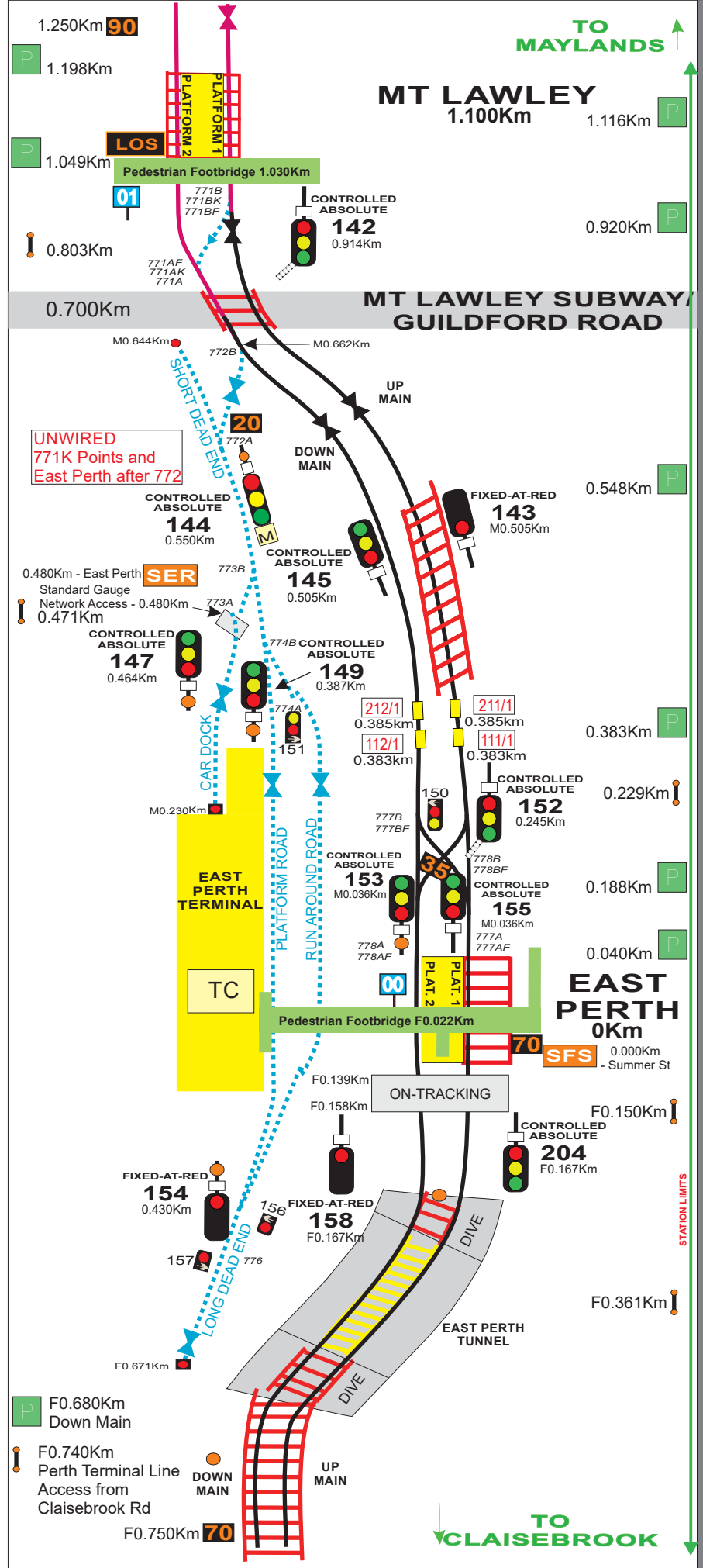
**NORMAN RD**

## PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

# FREMANTLE LINE

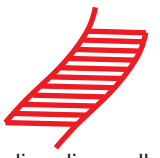




## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:



1. City end of East Perth tunnel including dive walls
2. East Perth Platform, Up Main
3. Isolators 211/1 & 111/1 to Controlled Absolute Signal 143
4. Mt Lawley Subway
5. Mt Lawley Station, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:



1. East Perth Tunnel.

### STATION LIMITS

#### East Perth Terminal Roads

1. East Perth Terminal all roads from 772B Points.

#### Down Main

1. Up Fixed-at-Red Signal 158 (F0.170km) to LOS Board (M1.073km) approx. 160m Midland side of 771K points.

#### Up Main

1. Up Controlled Absolute Signal 140 (1.641km) to Up Controlled Absolute Signal 204 (F0.170km).
2. Up Controlled Absolute Signal 204 (F0.170km) to Perth.

### MT LAWLEY and EAST PERTH

- Narrow gauge track
- Dual gauge track
- Standard gauge track
- ... Unwired Track

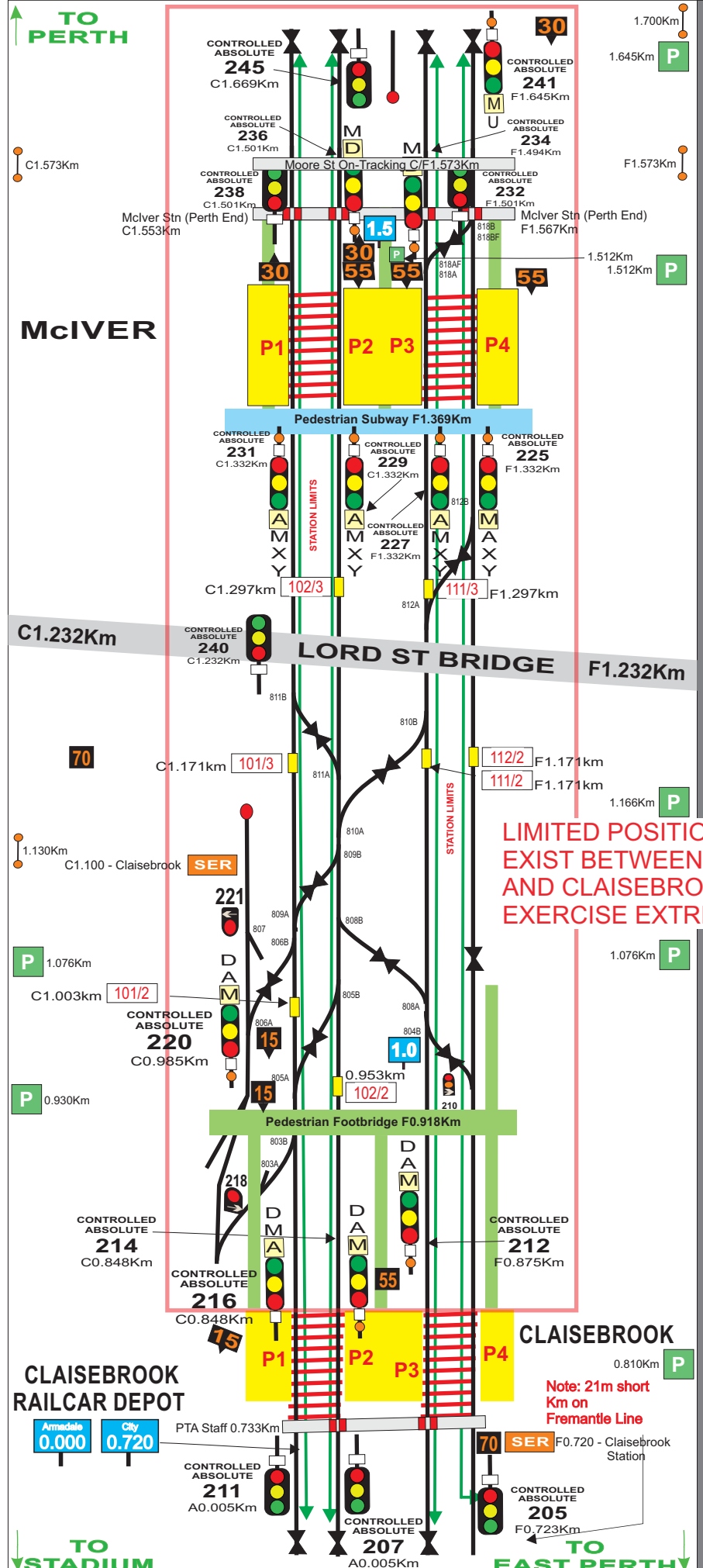
### NOTES

1. Contact ECO to activate/deactivate Flashing Man and Tunnel Lighting in East Perth Tunnel.
2. Rule 3011 must be used for accessing and egressing East Perth Tunnel while trains are running.

- Flashing Man
- ↑ MIDLAND LINE
- ↓ FREMANTLE LINE

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

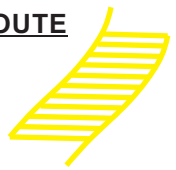
1. McIver Station, Up & Down Main.
2. Claisebrook Station, Up & Down Main.



### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.

1. Nil.



### STATION LIMITS

#### Midland Down Main

1. Down Absolute Controlled Signal 205 (F0.723Km) to Perth.

#### Midland Up Main

1. Armadale Up and Down Mains and City Up and Down Mains.

### NOTES

1. City Line starts at A0.000/C0.720 directly adjacent to Signal 207.
2. **21m Short Km on Fremantle Line at F0.710**

**LIMITED POSITIONS OF SAFETY EXIST BETWEEN PERTH STATION AND CLAISEBROOK STATION. EXERCISE EXTREME CAUTION.**

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

# INSTRUCTIONS

## PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

Note: City Line ends at toe of 834 Points 2.262Km.

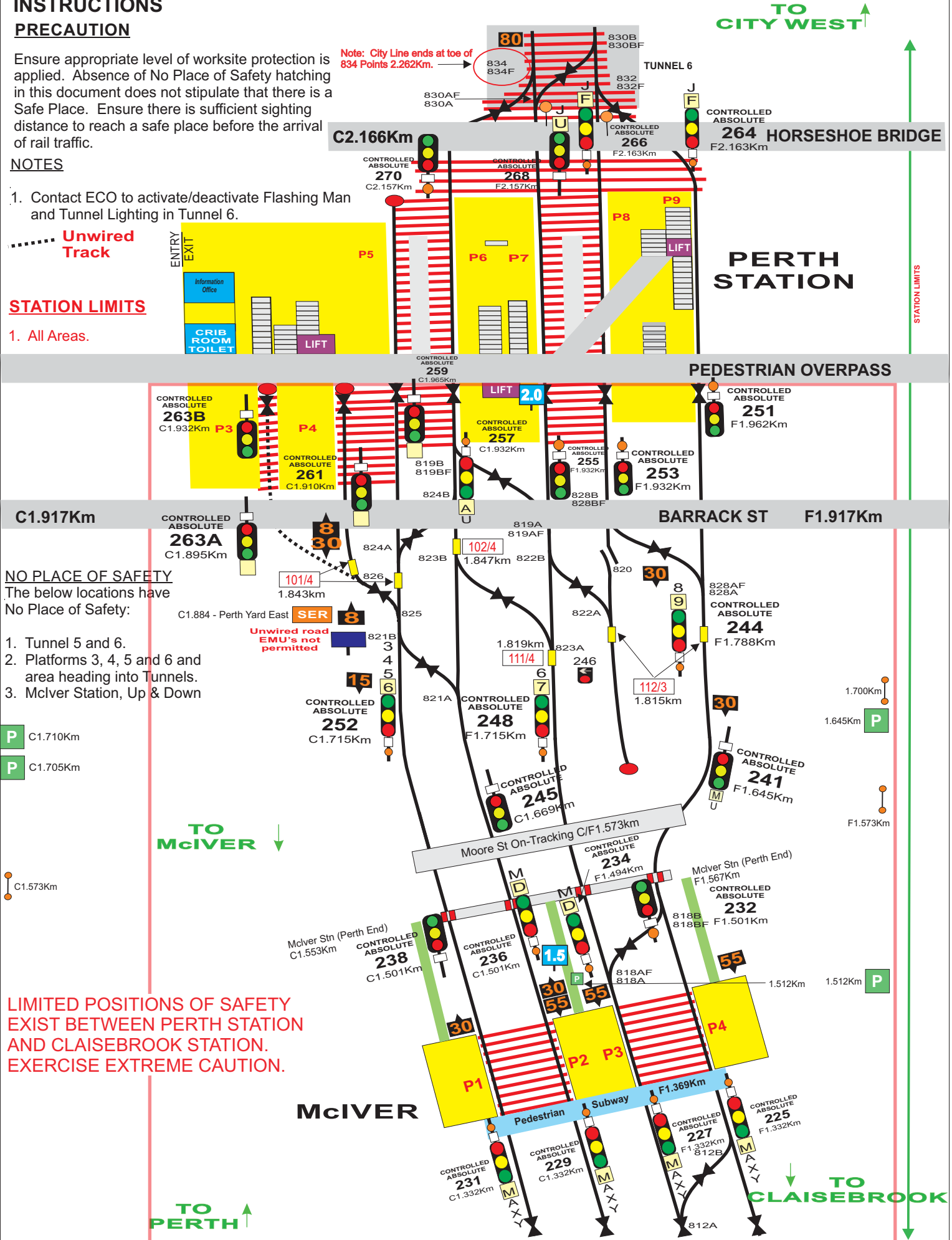
## NOTES

- Contact ECO to activate/deactivate Flashing Man and Tunnel Lighting in Tunnel 6.

**Unwired Track**

## STATION LIMITS

- All Areas.

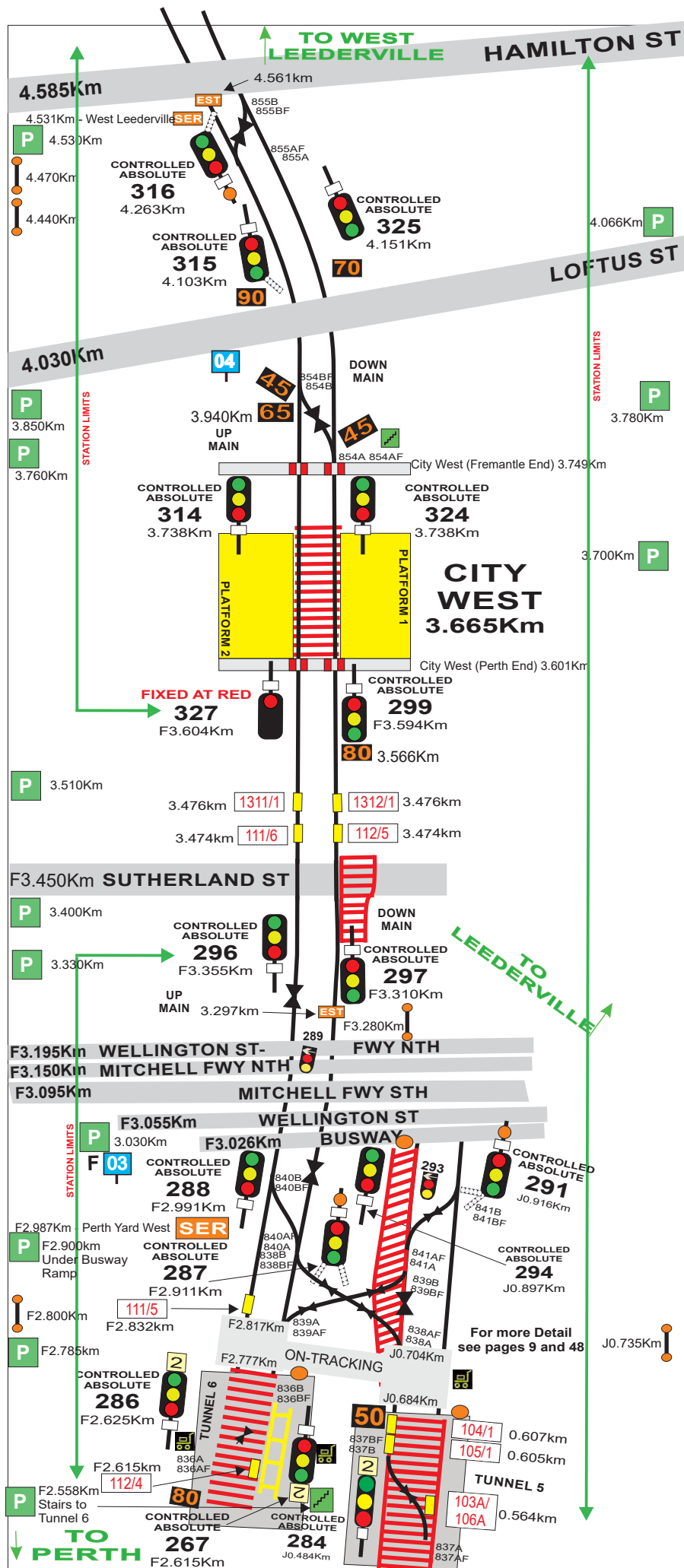


## NO PLACE OF SAFETY

The below locations have No Place of Safety:

- Tunnel 5 and 6.
- Platforms 3, 4, 5 and 6 and area heading into Tunnels.
- McIver Station, Up & Down

LIMITED POSITIONS OF SAFETY EXIST BETWEEN PERTH STATION AND CLAISEBROOK STATION. EXERCISE EXTREME CAUTION.



## INSTRUCTIONS

### NO PLACE OF SAFETY

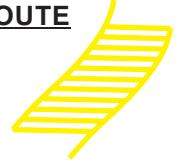
The below locations have No Place of Safety:



1. City West Station, Up & Down Main.
2. Tunnel 6, Up & Down Main.
3. Signal 297 to Sutherland Street Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.



1. Roe St Tunnel Joondalup Line
2. Refer to page 48 for DWR in Tunnel 6

### STATION LIMITS

1. All areas.

### NOTES

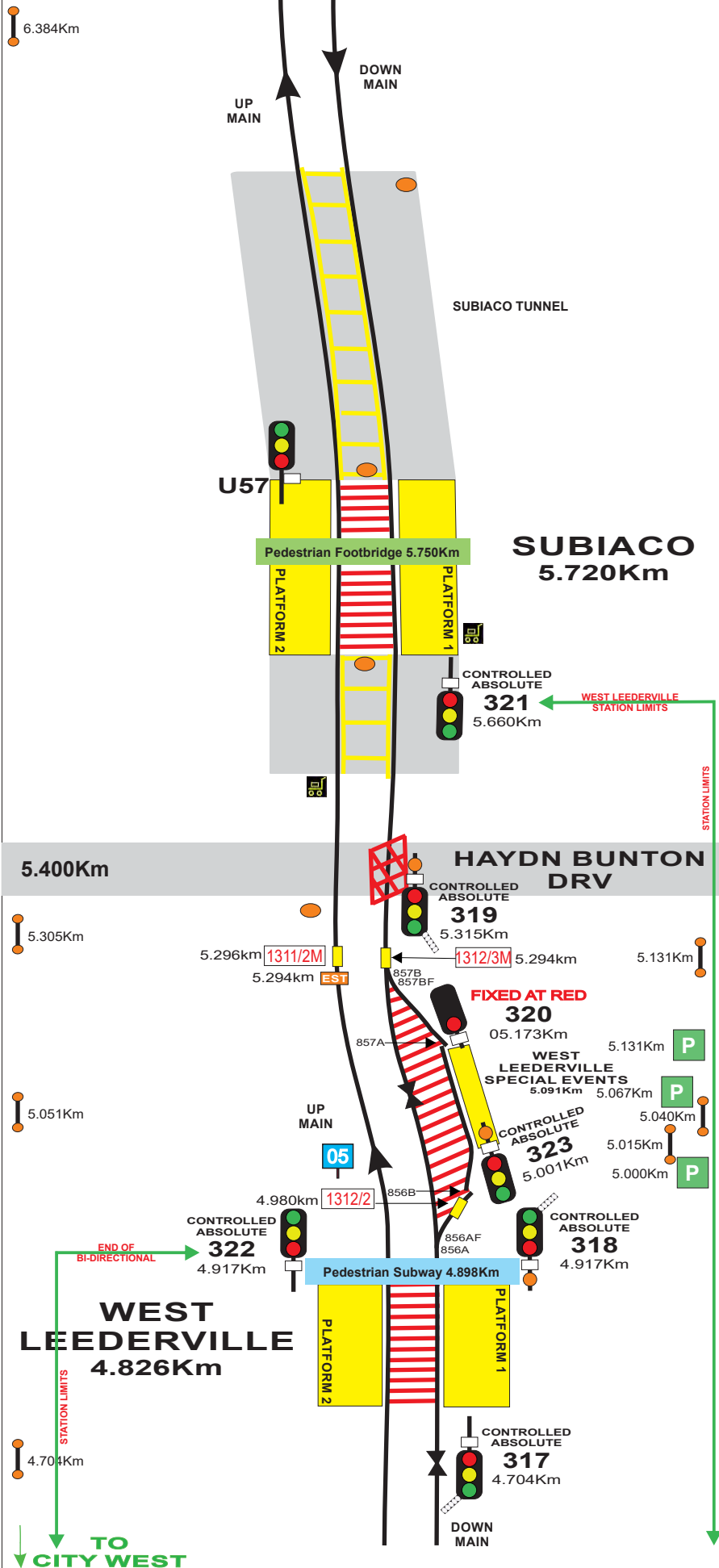
1. Contact ECO to activate/deactivate Flashing Man and Tunnel Lighting in Tunnels 5 and 6.
2. Roe St Tunnel Flashing Man and Tunnel Lighting is Manually Operated ONLY.  
Rule 3011 must be used for accessing and egressing Roe St Tunnel while trains are running.
3. Track Trolley Locations:
  - Tunnel 5 - Up Main at J0.669Km
  - Tunnel 6 - Up Main at F2.625Km
  - Tunnel 6 - Down Main at F2.612Km

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



TO  
DAGLISH



## INSTRUCTIONS

### NO PLACE OF SAFETY

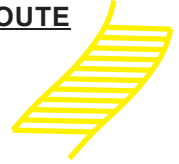
The below locations have No Place of Safety:



1. Subiaco Station, Up & Down Main.
2. West Leederville Station, Up & Down Main.
3. West Leederville Special Events Station, Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.



1. Subiaco Tunnel.

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 321 (5.660km) to Perth.

#### Up Main

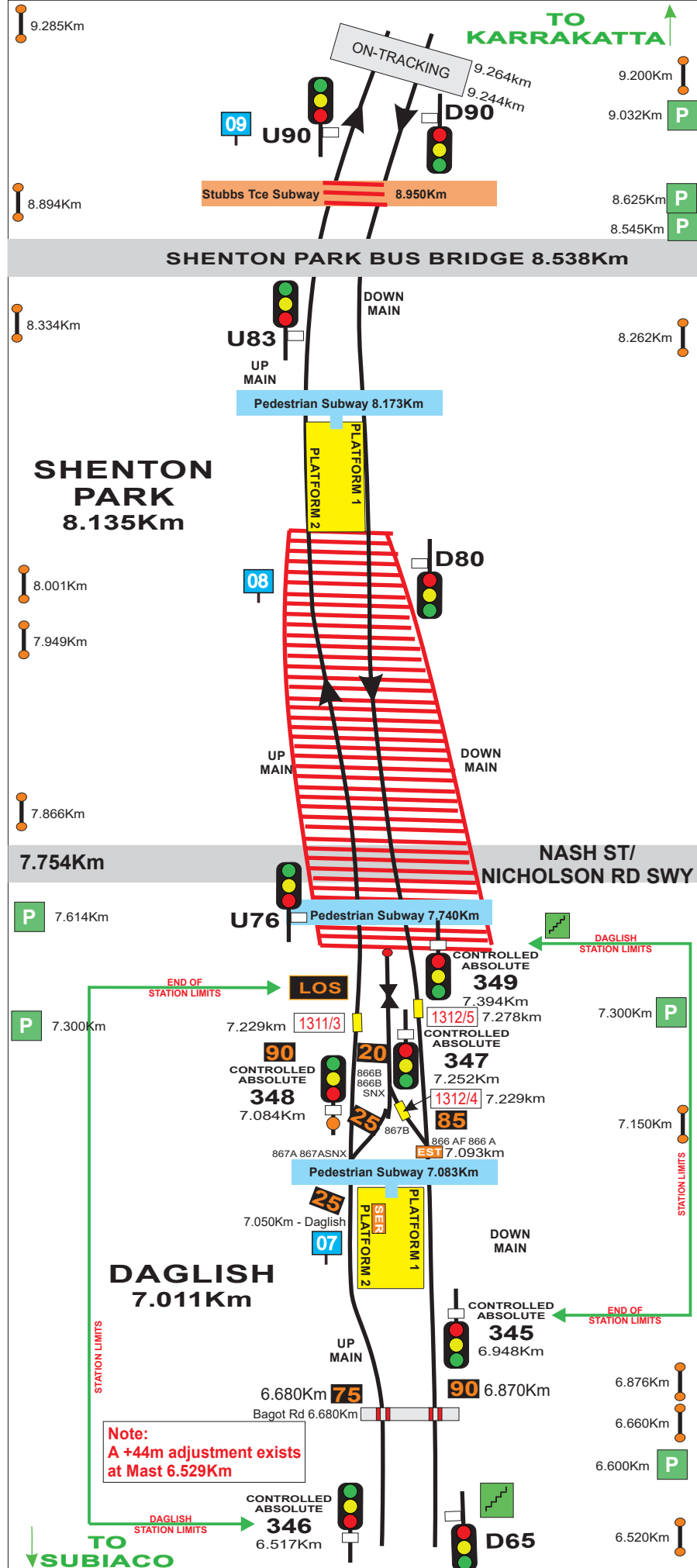
1. Perth to Up Controlled Absolute Signal 322.

### NOTES

1. Subiaco Tunnel Flashing Man and Tunnel Lighting is Manually Operated ONLY.
2. Rule 3011 must be used for accessing and egressing Subiaco Tunnel while trains are running.
3. Track Trolley Locations:
  - Subiaco Tunnel - Up Main at F5.452km
  - Subiaco Tunnel - Down Main at F5.670Km

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

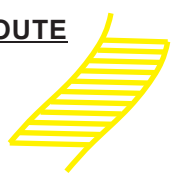
The below locations have No Place of Safety:



1. Shenton Park to Mast 7.549, Perth side of Nicholson Road Subway.
2. Stubbs Terrace Subway Bridge.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.



1. Nil.

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 349 (7.394km) to Down Controlled Absolute Signal 345 (6.948km).

#### Up Main

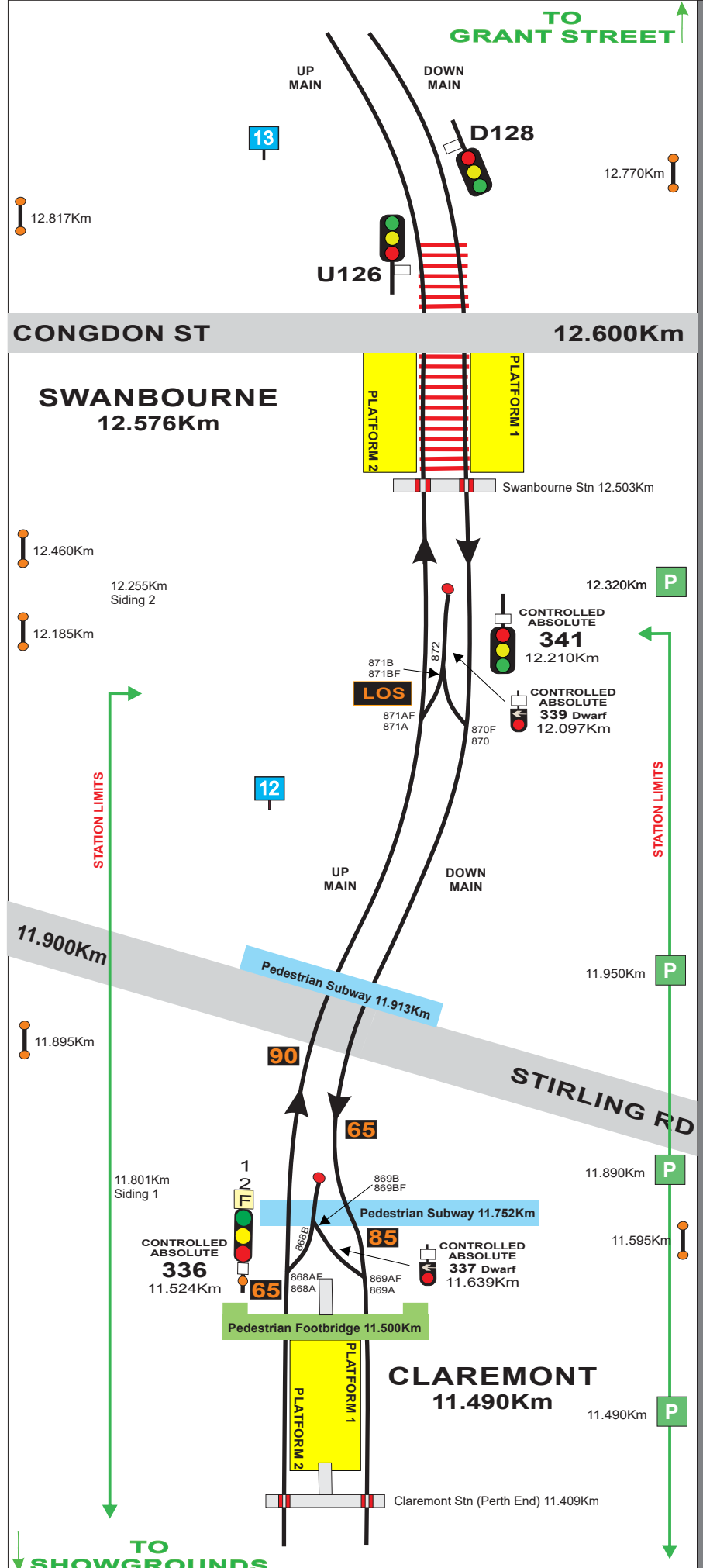
1. Up Controlled Absolute Signal 346 (6.517km) and LOS board (7.449Km) approx. 160m beyond insulated joint at end of 867A Points.

**Note:**  
A +44m adjustment exists at Mast 6.529Km

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.





## INSTRUCTIONS

### NO PLACE OF SAFETY

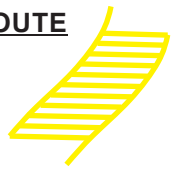
The below locations have No Place of Safety:



1. Swanbourne Station, Up & Down Main.
2. 200m Fremantle Side of Swanbourne Station, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.



1. Nil.

### STATION LIMITS

#### Down Main

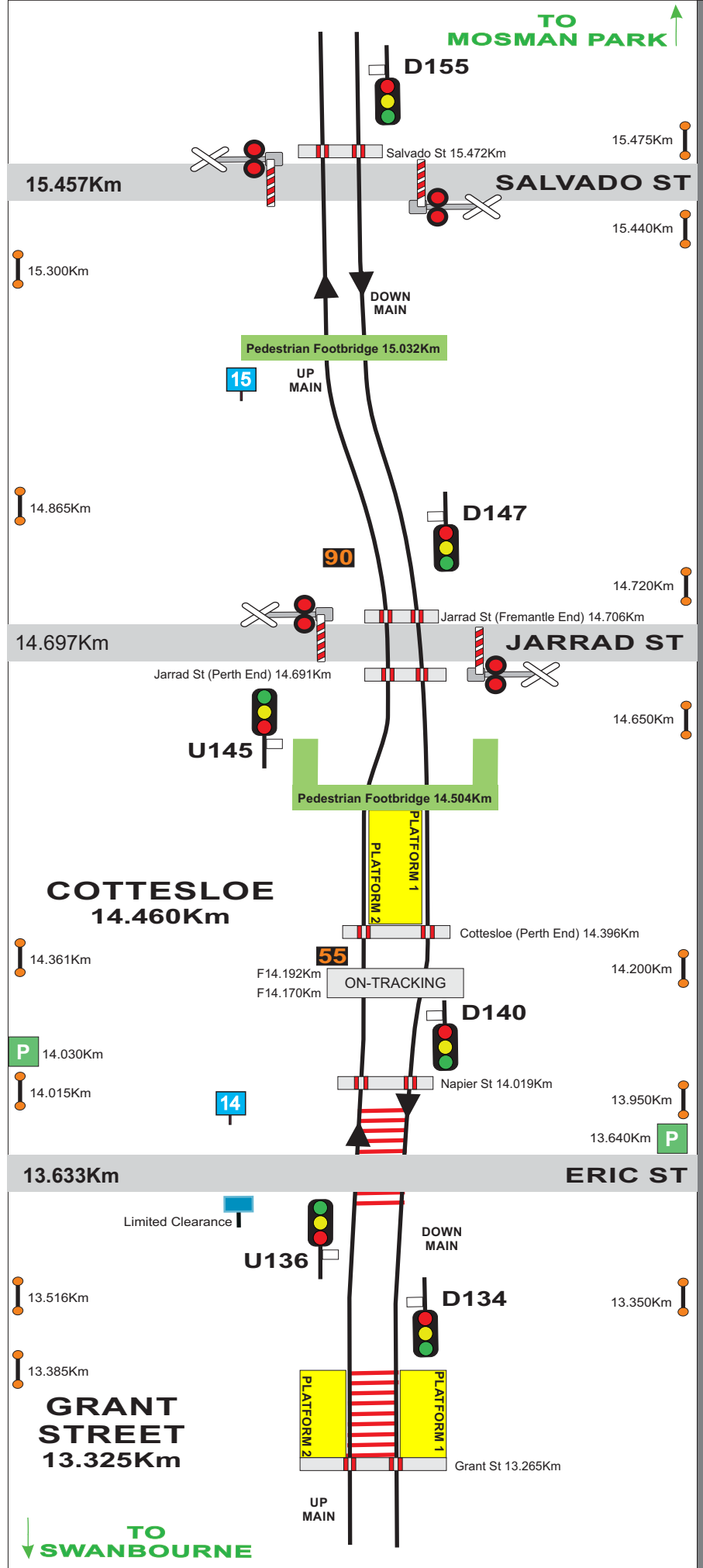
1. Controlled Absolute Signal 341 (12.210km) and LOS Board (10.430km) approx. 160m from 304 Ground Shunt Signal.

#### Up Main

1. LOS Board (12.026km) at clearance point of 871A Points and Controlled Absolute Signal 300 (10.116km).

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

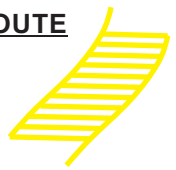
1. Grant Street Station, Up & Down Main.
2. From 13.597 Up Main to 13.689 Up Main.



### DESIGNATED WALKING ROUTE

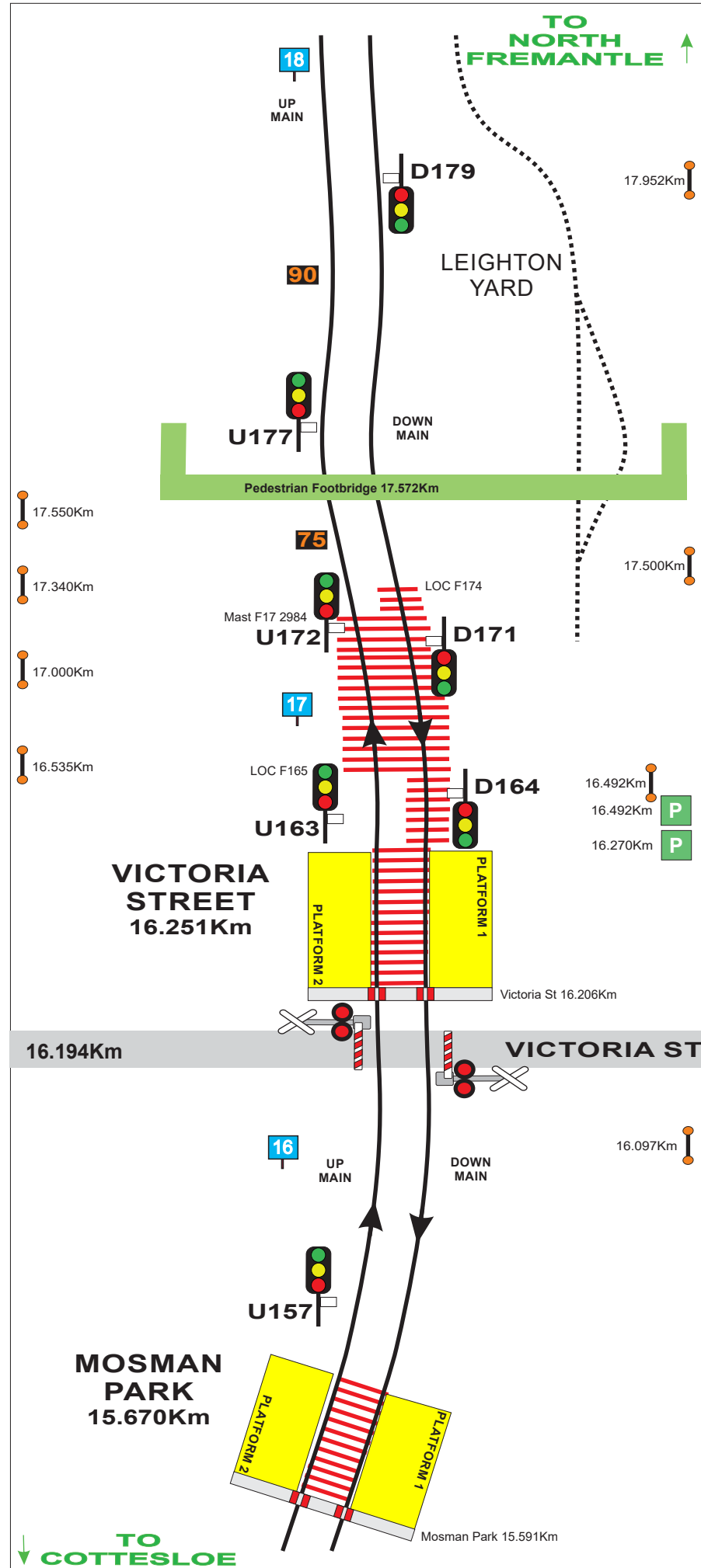
The below locations have a Designated Walking Route available.

1. Nil.



### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

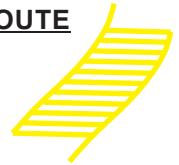
The below locations have No Place of Safety:



1. Victoria Street Station, Up & Down Main.
2. Mosman Park Station, Up & Down Main.
3. Down Main Victoria Station to LOC F174, and Up Main from LOC F165 to Mast F17 2984.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.



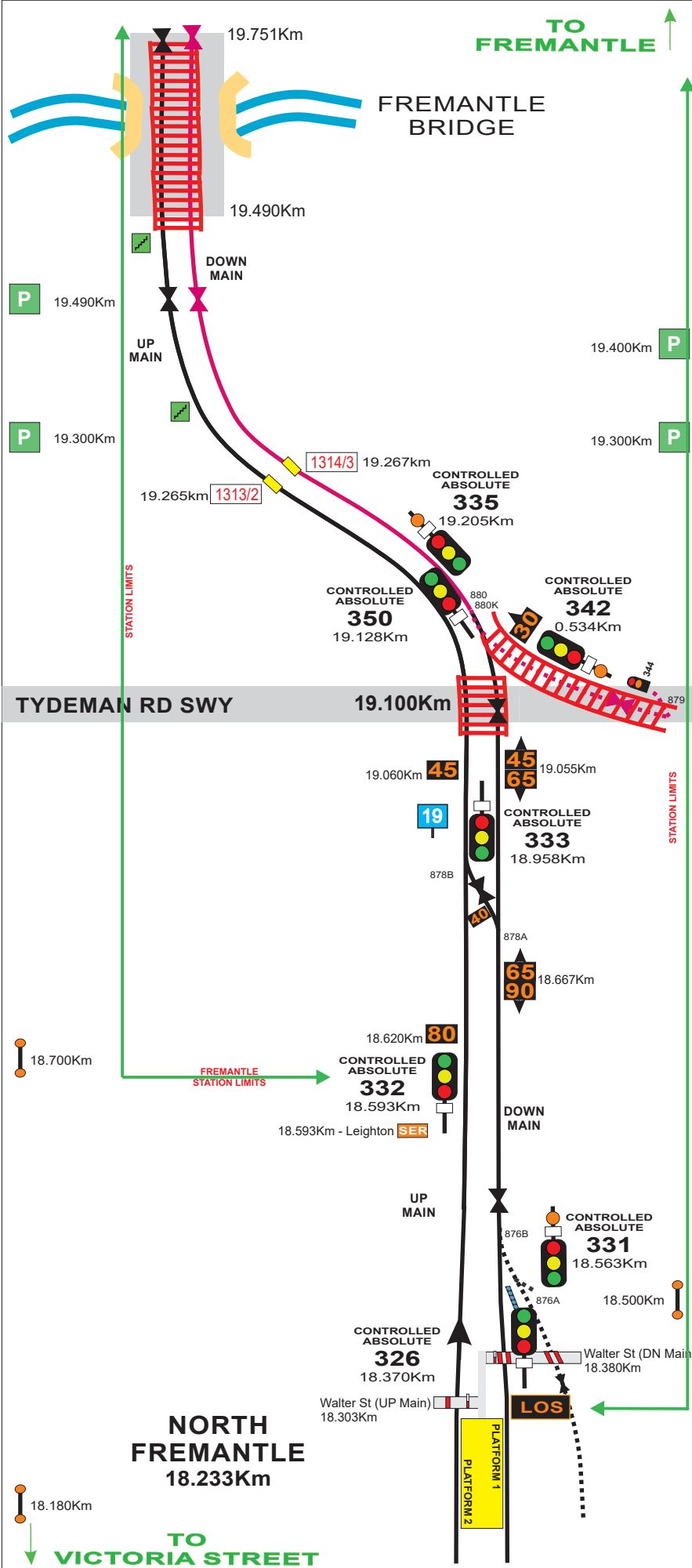
1. Nil.

### Gauge

- Narrow gauge track
- - - Unwired Track

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### HAZARD, ARC INFRASTRUCTURE MAINS

The below locations include ARC Infrastructure Mains and represent a Hazard:

1. Fremantle Station, Down Main to Tydemans Road

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Fremantle Bridge, Up & Down Main.
2. Tydemans Road Subway Bridge, Up & Down Main.
3. Tydemans Road - North Quay Freight Line.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.

1. Nil.

### STATION LIMITS

#### North Quay

1. Single line bi-directional.

#### Down Main

1. Down Controlled Absolute Signal 395 (24.394km) to LOS board at 18.337km approx. 160m from 876A Points.

#### Up Main

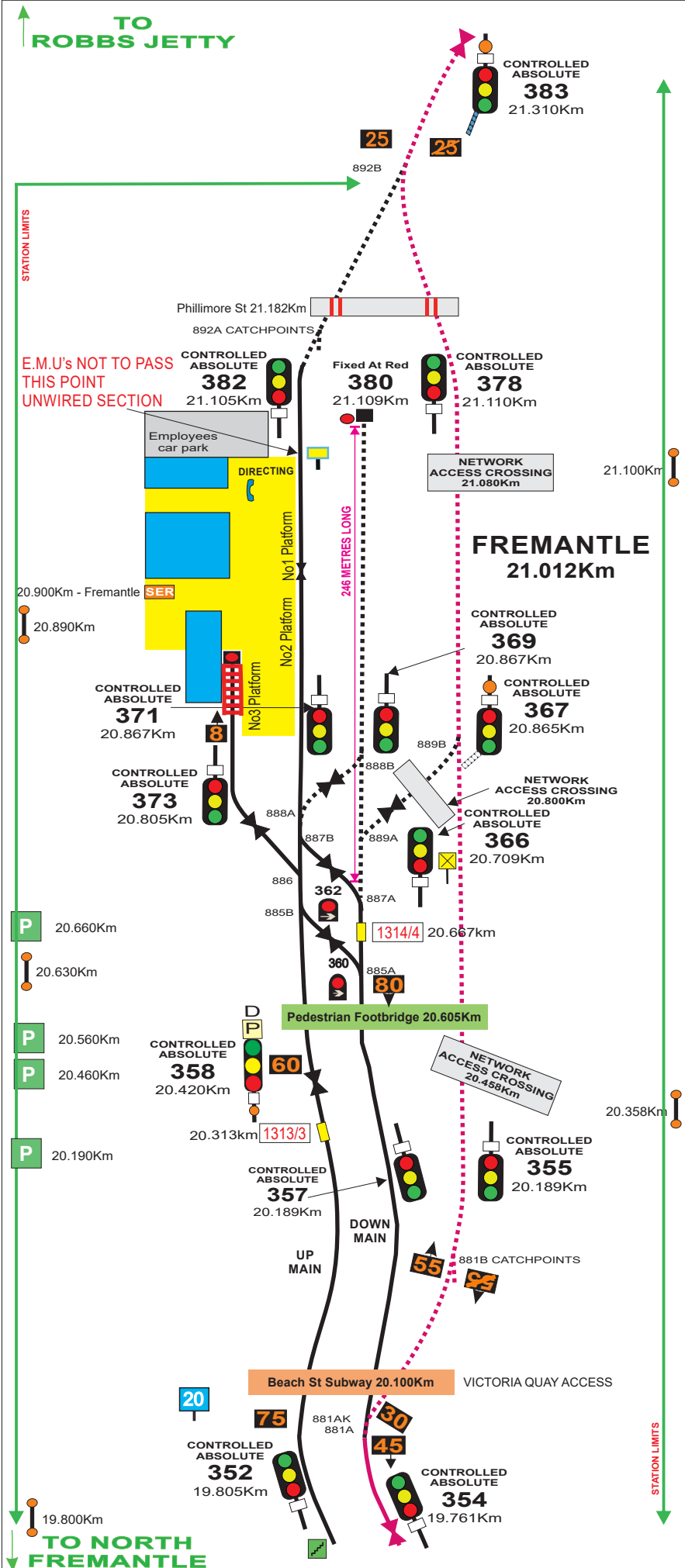
1. Up Controlled Absolute Signal 332 (18.593) to Points 892B Fremantle.

### Gauge

- Dual gauge track
- Narrow gauge track
- - - Unwired Dual Gauge

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### HAZARD, ARC INFRASTRUCTURE MAINS

The below locations include ARC Infrastructure Mains and represent a Hazard:

1. Fremantle Station, Down Main to Tydeman Road

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Fremantle Station Platform 3.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available.

1. Nil.

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 395 (24.394km) to LOS board at 18.337km approx. 160m from 867A Points.

#### Up Main

1. Up Controlled Absolute Signal 332 (18.593km).

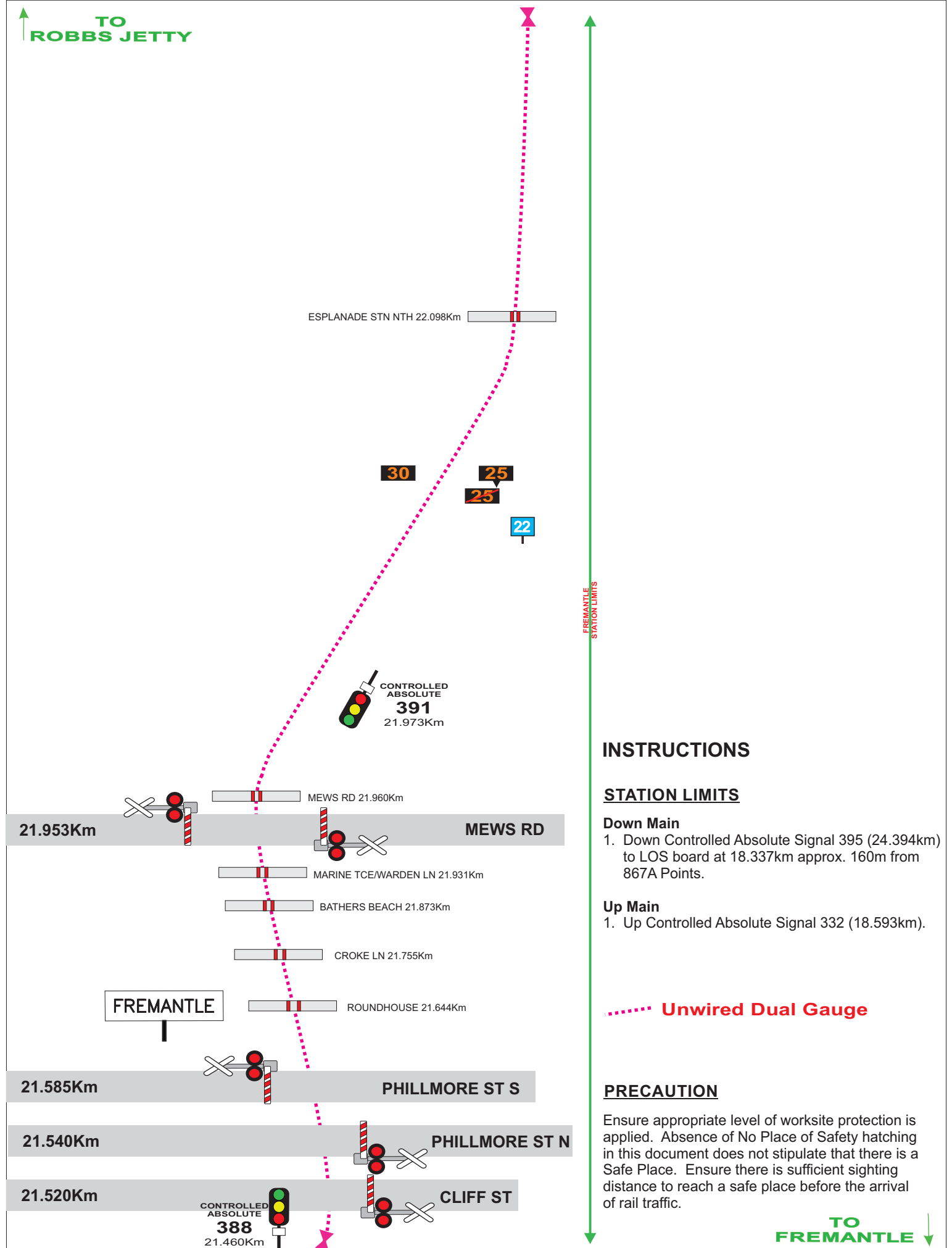
### FREMANTLE

- Dual gauge track
- Narrow gauge track
- Unwired Dual Gauge
- Unwired Narrow Gauge

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.





FREMANTLE STATION LIMITS

**INSTRUCTIONS**

**STATION LIMITS**

**Down Main**

- 1. Down Controlled Absolute Signal 395 (24.394km) to LOS board at 18.337km approx. 160m from 867A Points.

**Up Main**

- 1. Up Controlled Absolute Signal 332 (18.593km).

..... **Unwired Dual Gauge**

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 395 (24.394km) to LOS board at 18.337km approx. 160m from 867A Points.

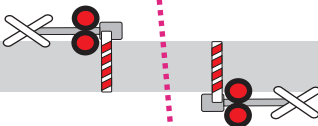
#### Up Main

1. Up Controlled Absolute Signal 332 (18.593km).

**Unwired Dual Gauge**



22.454Km



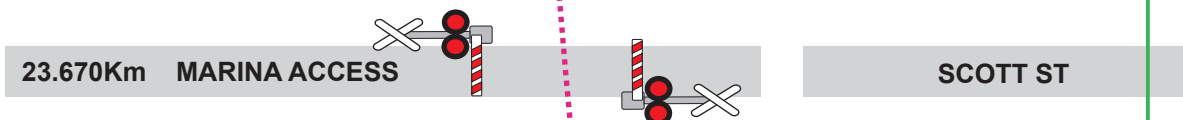
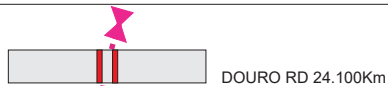
ARUNDEL ST



### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

FREMANTLE  
STATION LIMITS



FREMANTLE STATION LIMITS

## INSTRUCTIONS

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 395 (24.394km) to LOS board at 18.337km approx. 160m from 867A Points.

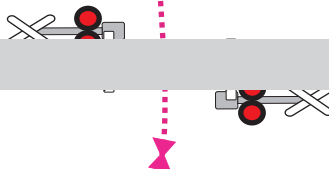
#### Up Main

1. Up Controlled Absolute Signal 332 (18.593km).

..... Unwired Dual Gauge

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



↓ TO FREMANTLE ↓



No 3 Points

24.599Km

Commence Train Order Territory / End PTA Network

Start PTA Network / End Train Order Territory

**INSTRUCTIONS**

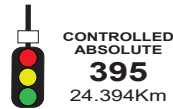
**STATION LIMITS**

**Down Main**

- 1. Down Controlled Absolute Signal 395 (24.394km) to LOS board at 18.337km approx. 160m from 867A Points.

**Up Main**

- 1. Up Controlled Absolute Signal 332 (18.593km).



OCEAN RD 24.389Km

24.380Km

OCEAN RD

FREMANTLE STATION LIMITS

**All Unwired**

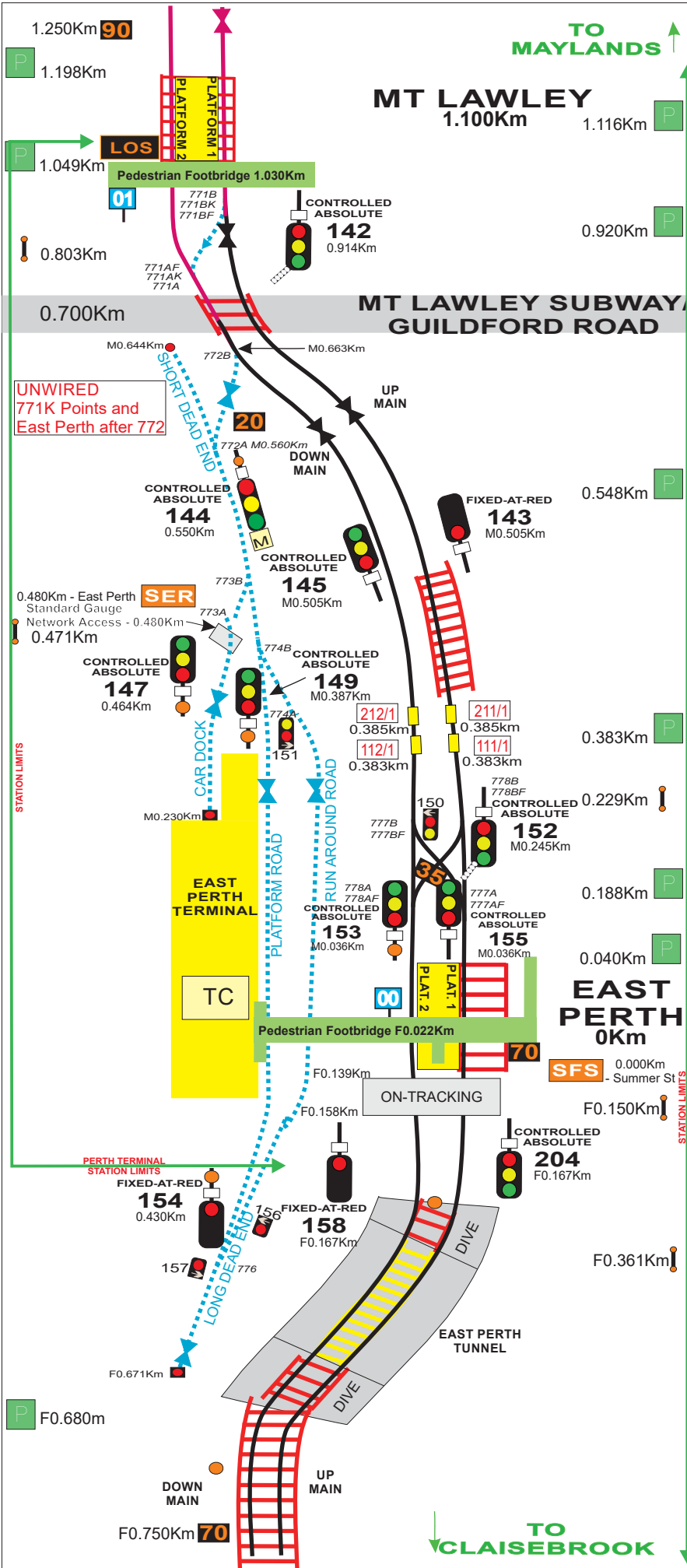
- ..... Narrow gauge track
- ..... Dual gauge track
- ..... Standard gauge track

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a Safe Place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

# MIDLAND LINE





## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. City end of East Perth tunnel including dive walls
2. East Perth Platform, Up Main
3. Isolators 211/1 & 111/1 to Controlled Absolute Signal 143
4. Mt Lawley Subway
5. Mt Lawley Station, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. East Perth Tunnel.

### STATION LIMITS

#### East Perth Terminal Roads

1. East Perth Terminal all roads from 772B Points.

#### Down Main

1. Up Fixed-at-Red Signal 158 (F0.170km) to LOS Board (M1.073km) approx. 160m Midland side of 771K points.

#### Up Main

1. Up Controlled Absolute Signal 140 (1.641km) to Up Controlled Absolute Signal 204 (F0.170km).
2. Up Controlled Absolute Signal 204 (F0.170km) to Perth.

### MT LAWLEY and EAST PERTH

- Narrow gauge track
- Dual gauge track
- Standard gauge track

..... Unwired Track

### NOTES

1. Contact ECO to activate/deactivate Flashing Man and Tunnel Lighting in East Perth Tunnel.
2. Rule 3011 must be used for accessing and egressing East Perth Tunnel while trains are running.

● Flashing Man

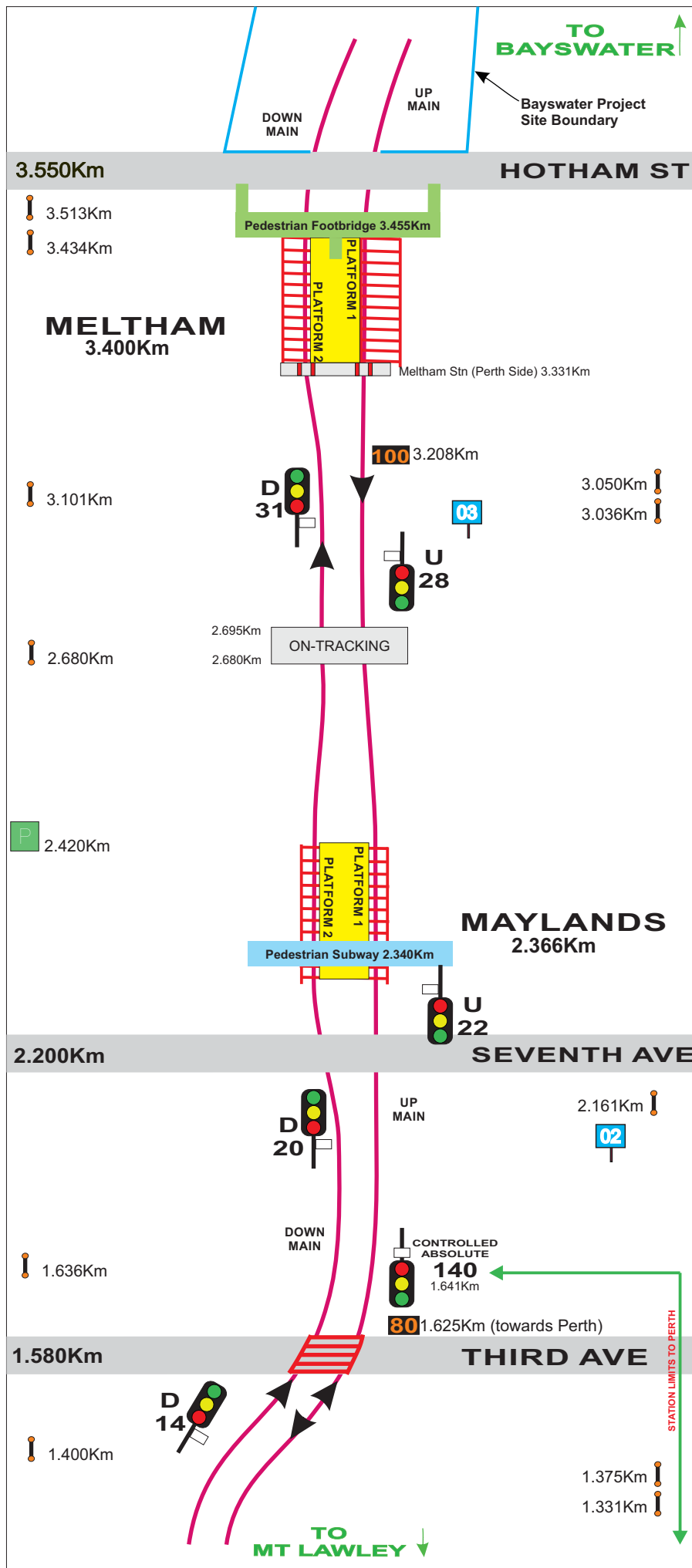
↑ MIDLAND LINE

00

↓ FREMANTLE LINE

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

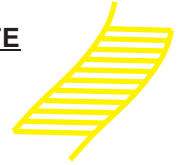
1. Third Avenue Tunnel.
2. Maylands Station, Up & Down Main.
3. Meltham Station, Up & Down Main.



### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Nil



### STATION LIMITS

#### Up Main

1. Up Controlled Absolute Signal 140 (1.641km) to Up Controlled Absolute Signal 204 (F0.170km).
2. Up Controlled Absolute Signal 204 (F0.170km) to Perth.

— Dual gauge track

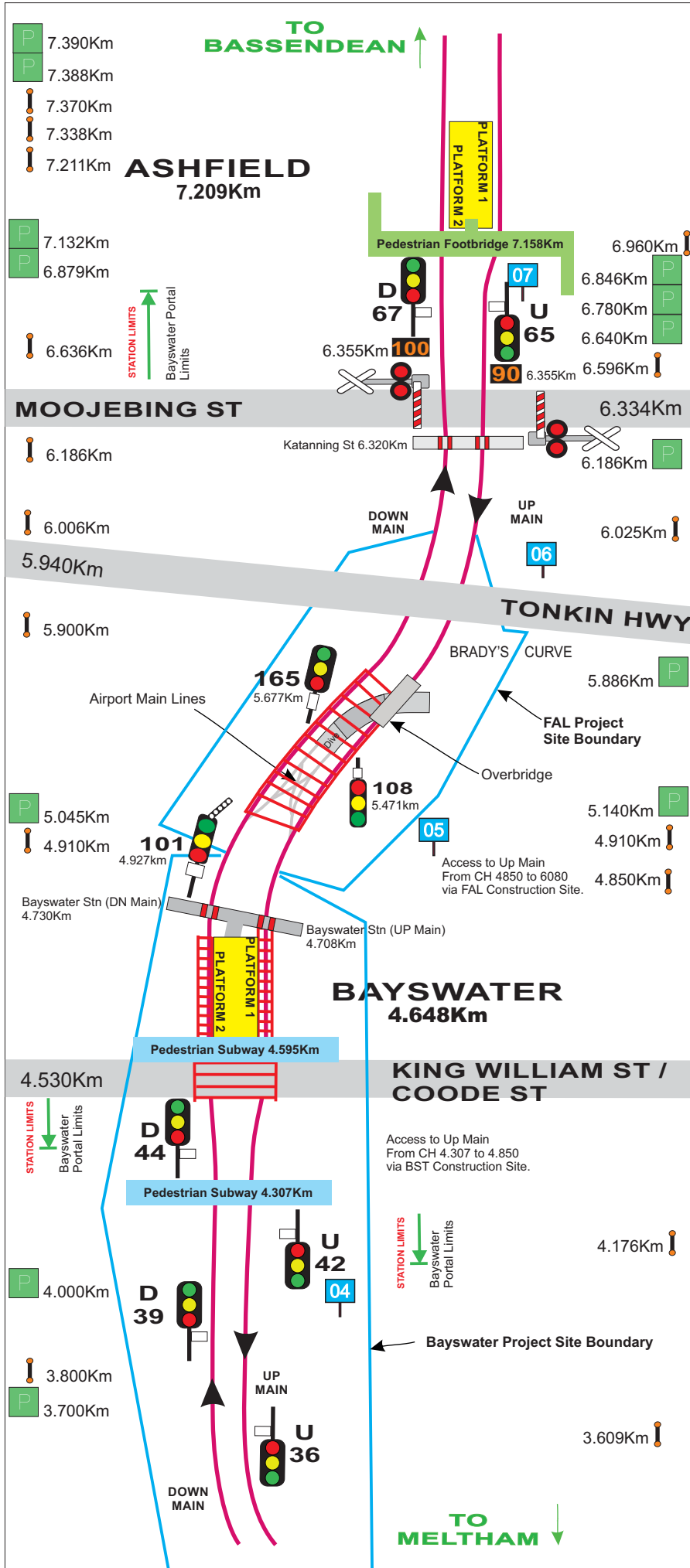
### BAYSWATER STATION AND TURNBACK PROJECT

— Job Site 3.600km to 4.850km

1. GE fence erected at 3M off nearest running rail for length of job site.
2. Induction required for Up Main Access. Access requests to OMTID Project Manager.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Bayswater Station, Up & Down Main.
2. Bayswater Subway.
3. 5.000Km to 5.900Km.



### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:



1. Nil

### ASHFIELD and BAYSWATER

— Dual gauge track

### SI-NRW JV JOB SITE (FAL PROJECT)

— Job Site 4.850km to 6.080km

1. Overbridge starts from UM 5.664Km.
2. Temporary limestone on-tracking facility located at 4.835Km.
3. Key for locks held by FAL Rail Infrastructure Manager.

### BAYSWATER STATION AND TURNBACK PROJECT

— Job Site 3.600km to 4.850km

1. GE fence erected at 3M off nearest running rail for length of job site.
2. Access to the Airport Line via FAL construction site to contact the FAL Infrastructure Manager.

### STATION LIMITS

#### Up Main

- Bayswater Portal to Up Signal 42.

#### Down Main

- Bayswater Portal to Down Signal 44 and 67.

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



**SUCCESS HILL**  
9.591Km

P 9.575Km

P 9.515Km

9.600Km P

Pedestrian Footbridge 9.532Km



9.475Km P

9.413Km

**WEST RD**

9.216km 214/2

DOWN MAIN

9.261Km

9.160Km



UP MAIN

09

8.966Km

8.884m 100

Pedestrian Subway 8.869Km

LOS

8.780Km P

END OF STATION LIMITS

214/1

**BASSENDEAN**  
8.664Km

Pedestrian Footbridge 8.630Km

8.604Km

8.605Km 80



8.538Km P

BASSENDEAN STATION LIMITS

8.512Km P

8.375Km

8.290Km - Bassendean

SER

8.275Km P

Bassendean

TSC

8.158Km

8.221km

212/2

213/1

211/3

8.219km

763B  
763BK

100

8.135Km

LOS

8.048Km

8.200Km - Bassendean

763AK  
763A

Collier Rd 8.059Km

**COLLIER RD/  
IOLANTHE ST**

7.814Km



7.791Km

7.950km

211/2M

7.839km

UP MAIN

7.935Km P

7.733Km P

7.715Km P

End of PTA Network

764A

DOWN MAIN

7.600Km P

7.750km



CONTROLLED ABSOLUTE 121

7.750km

7.580Km

TO ASHFIELD ↓

**INSTRUCTIONS**

**HAZARD, ADJACENT AND INCLUDES ARC INFRASTRUCTURE MAINS**

The below locations are adjacent to ARC Infrastructure Mains and represent a Hazard:

1. Collier Road, Up and Down Mains to Rail Museum

**NO PLACE OF SAFETY**

The below locations have No Place of Safety:

1. Bassendean Station, Up Main.
2. Success Hill Station, Down Main.

**DESIGNATED WALKING ROUTE**

The below locations have a Designated Walking Route available:

1. Nil

**STATION LIMITS**

**Down Main**

1. Down Controlled Absolute Signal 121 (7.750km) to LOS board at 8.760km approx. 160m Midland side of 104 Ground Shunt Signal.

**Up Main**

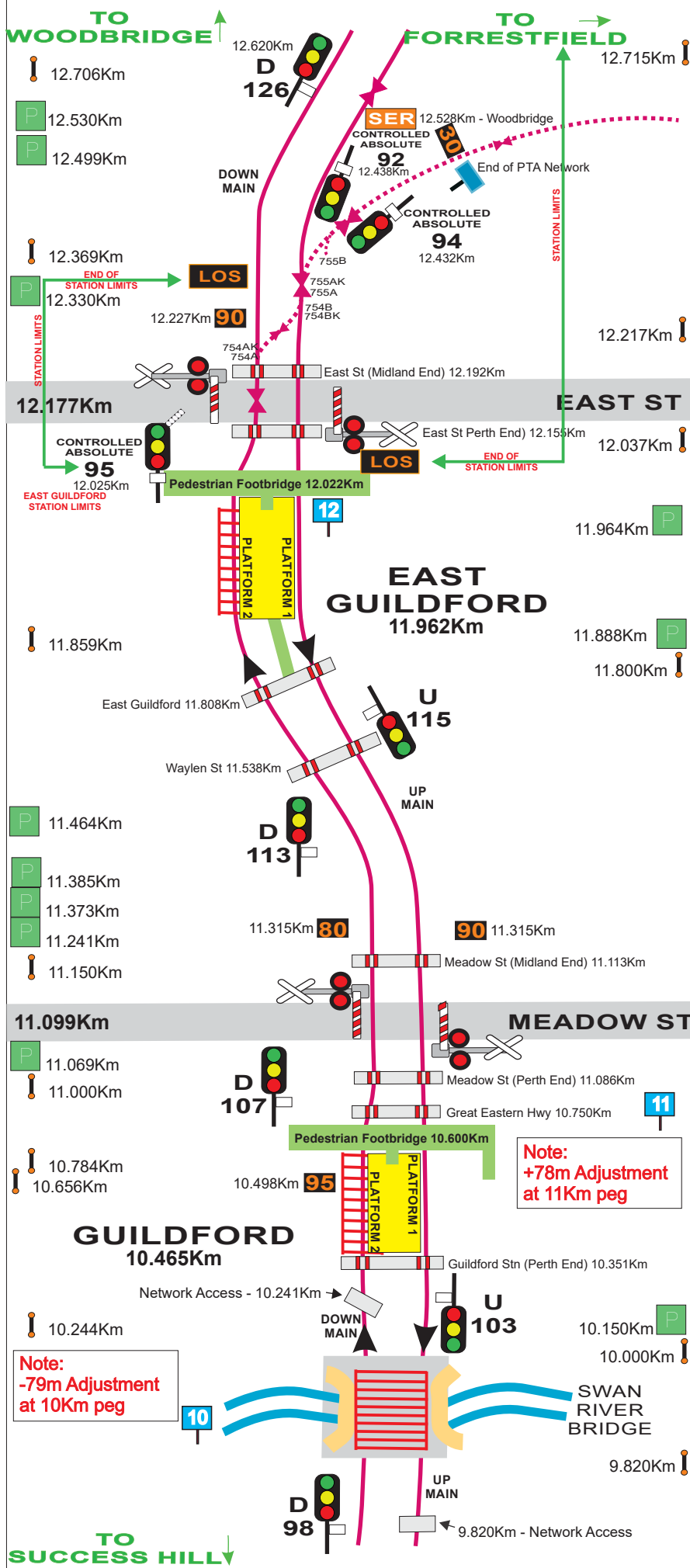
1. Up Controlled Absolute Signal 106 (8.522km) to LOS board (8.049km) approx. 208m Perth side of 107 Ground Shunt Signal.

**SUCCESS HILL and BASSENDEAN**

- Narrow gauge track
- Dual gauge track
- ... Unwired Track

**PRECAUTION**

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### HAZARD, ADJACENT AND INCLUDES ARC INFRASTRUCTURE MAINS

The below locations are adjacent to ARC Infrastructure Mains and represent a Hazard:

1. East Street, Up and Down Mains to Forrestfield

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. East Guildford Station, Down Main.
2. Guildford Station, Down Main.
3. Swan River Bridge, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Nil

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 95 (12.029km) to LOS board at 12.373km approx. 160m Midland side of 754AK points.

#### Up Main

1. Up Controlled Absolute Signal 90 to LOS at 12.153km approx. 160m Perth side of 754BK points.

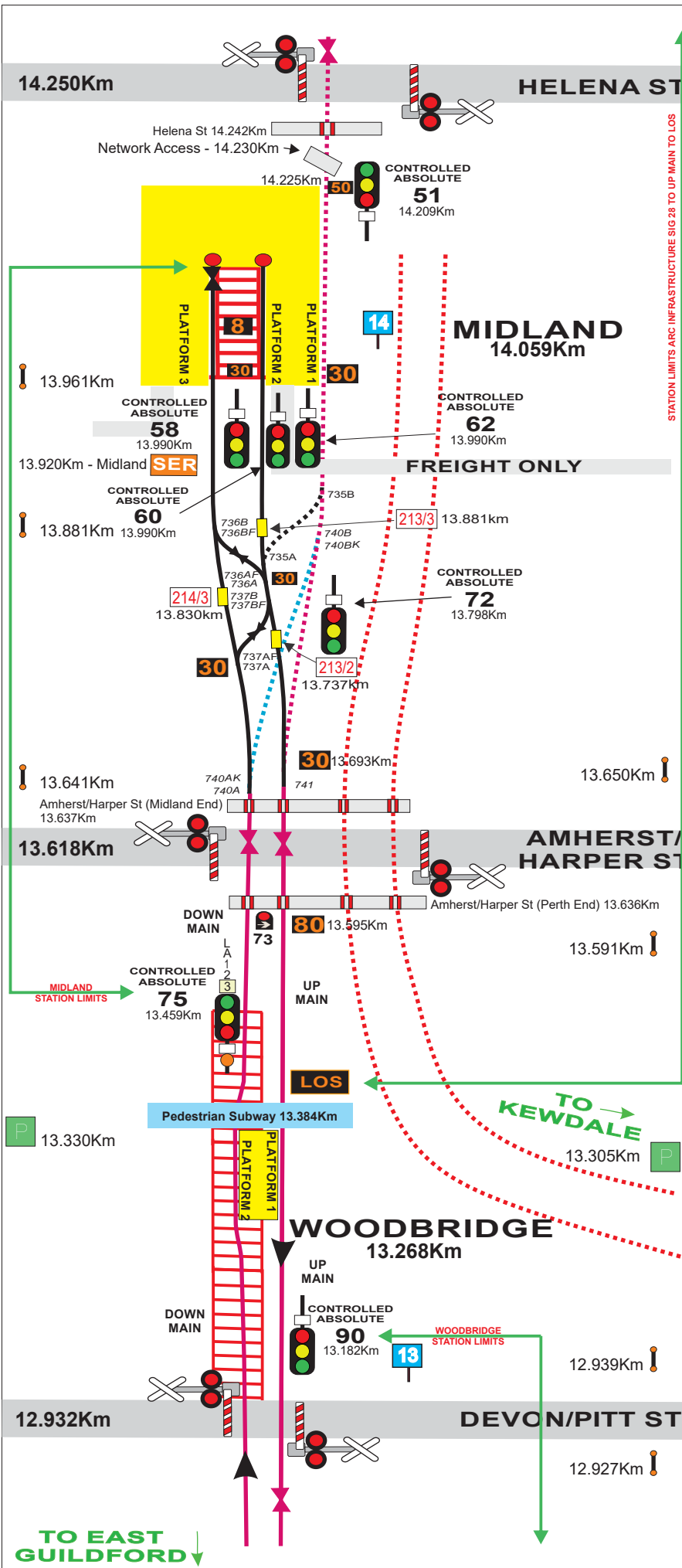
### EAST GUILDFORD and GUILDFORD

- Dual gauge track
- - - Unwired Track

**Note:**  
Metre adjustment between 10Km peg and 11Km peg

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.



## INSTRUCTIONS

### HAZARD, ADJACENT ARC INFRASTRUCTURE MAINS

The below locations are adjacent to ARC Infrastructure Mains and represent a Hazard:

1. Woodbridge Station, Up Main to Midland Station

### NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Woodbridge Station, Down Main.
2. Midland Station, Up & Down Main.

### DESIGNATED WALKING ROUTE

The below locations have a Designated Walking Route available:

1. Nil

### STATION LIMITS

#### Down Main

1. Down Controlled Absolute Signal 75 (13.459km) to Midland platforms 1 and 2.

#### Up Main

1. Up Controlled Absolute Signal 90 to LOS at 12.153km approx. 160m Perth side of 754BK points.
2. Up Controlled Absolute Signal 28 (ARC Infrastructure) and LOS Board at 13.436Km, approx. 160m up from 73 Ground Shunt Signal. Including unwired roads from 740 points and 741 points to ARC Infrastructure.

### MIDLAND and WOODBRIDGE

- Narrow gauge track
- Dual gauge track
- ..... Unwired Standard Gauge
- ..... Unwired Dual Gauge
- ..... Unwired Narrow Gauge

### PRECAUTION

Ensure appropriate level of worksite protection is applied. Absence of No Place of Safety hatching in this document does not stipulate that there is a safe place. Ensure there is sufficient sighting distance to reach a safe place before the arrival of rail traffic.

# AIRPORT LINE



↑ TO HIGH WYCOMBE

↓ TO PERTH

# INSTRUCTIONS

## NO PLACE OF SAFETY

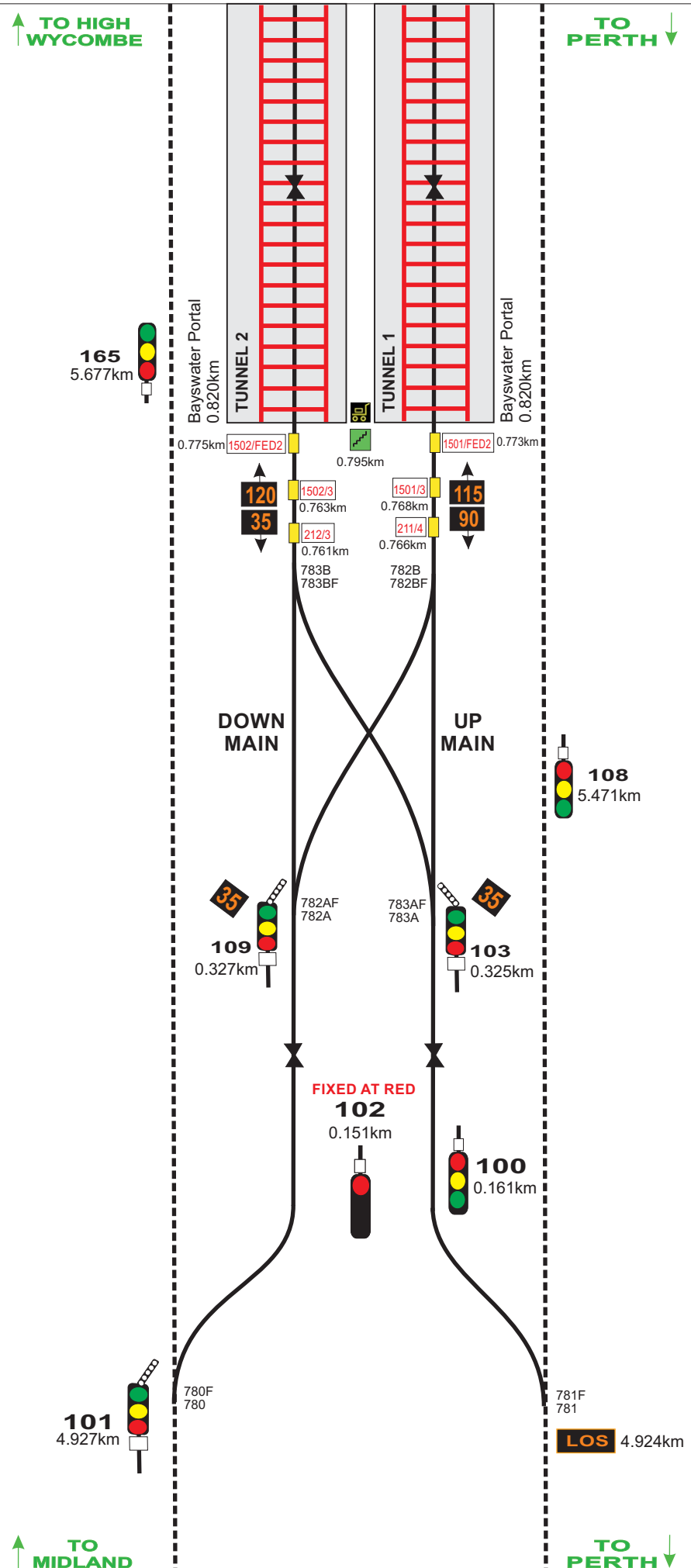
The below locations have No Place of Safety:

1. Tunnel 1, Up Main
2. Tunnel 2, Down Main

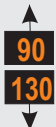
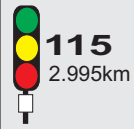


## NOTES:

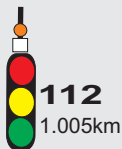
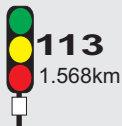
1. Access to the Airport Line via FAL construction site to contact the FAL Infrastructure Manager.
2. Track Trolley Locations:
  - Bayswater Portal at 0.820km
3. Point Machine Locations:
  - 783A at 0.336km, Up Main
  - 783B at 0.406km, Down Main
  - 782A at 0.338km, Down Main
  - 782B at 0.404km, Up Main
  - 781 at 5.127km, Up Main
  - 780 at 5.122km, Down Main



↑ TO HIGH WYCOMBE



DOWN MAIN



Bayswater Portal 0.820km

DOWN MAIN

CROSS PASSAGE BR4 2.770km

CROSS PASSAGE BR3 2.345km

EMERGENCY EGRESS SHAFT WCE

BR4 1.915km

CROSS PASSAGE BR2 1.605km

CROSS PASSAGE BR1 1.200km

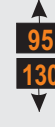
TUNNEL 2



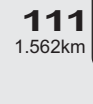
TUNNEL 1

Bayswater Portal 0.820km

UP MAIN TO PERTH ↓



UP MAIN



# INSTRUCTIONS

## NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Tunnel 1, Up Main
2. Tunnel 2, Down Main



## EMERGENCY EGRESS SHAFT

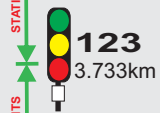
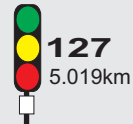
WCE (Wright Crescent EES) at 1.915km, Up & Down Main

EMERGENCY EGRESS SHAFT

## NOTES:

1. Access to the Airport Line via FAL construction site to contact the FAL Infrastructure Manager.
2. Track Trolley Locations:
  - WCE at 1.915km, Up Main
  - Bayswater Portal at 0.820km

↑ TO HIGH WYCOMBE



CROSS PASSAGE RA4  
5.680km

CROSS PASSAGE RA3  
5.350km

CROSS PASSAGE RA2  
4.960km

CROSS PASSAGE RA1  
4.110km

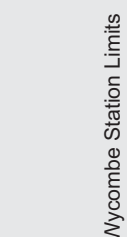
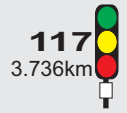
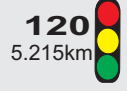
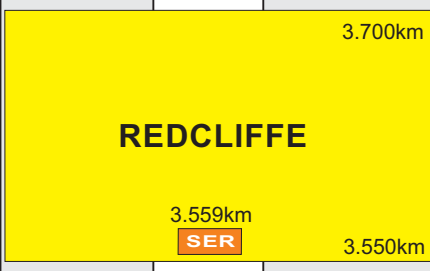
CROSS PASSAGE BR5  
3.170km

TUNNEL 4

TUNNEL 3

TUNNEL 2

TUNNEL 1



↓ TO PERTH

# INSTRUCTIONS

## NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Tunnels 1 & 3, Up Main
2. Tunnels 2 & 4, Down Main



## EMERGENCY EGRESS SHAFT

AWE (Airport West EES) at 4.550km, Up & Down Main



## STATION LIMITS

### Down Main

1. Bayswater Portal to Signal 123
2. High Wycombe to Signal 123

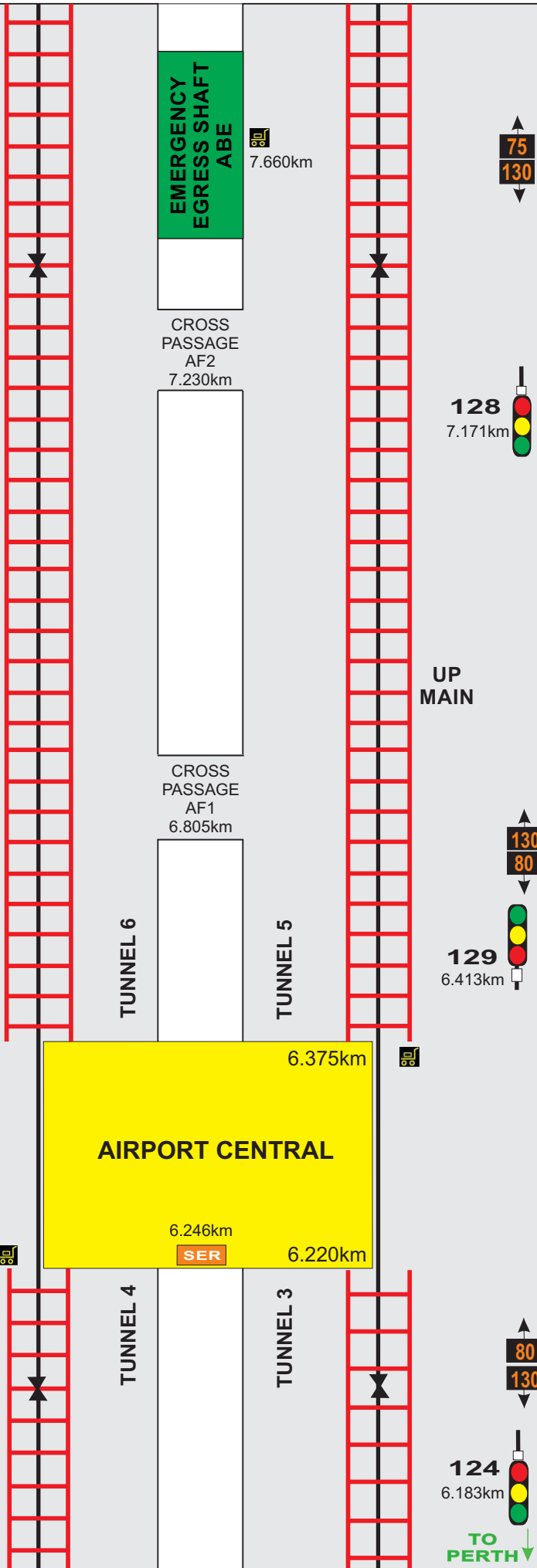
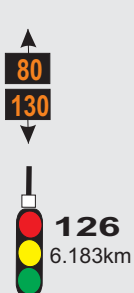
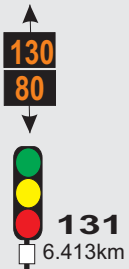
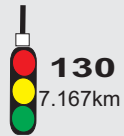
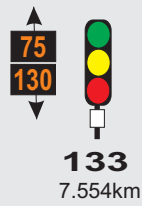
### Up Main

1. Bayswater Portal to Signal 116
2. High Wycombe to Signal 116

## NOTES:

1. Access to the Airport Line via FAL construction site to contact the FAL Infrastructure Manager.
2. Track Trolley Locations:
  - AWE at 4.550km, Up Main
  - Redcliffe Station at 3.700km, Up Main
  - Redcliffe Station at 3.550km, Down Main

↑ TO HIGH WYCOMBE



# INSTRUCTIONS

## NO PLACE OF SAFETY

The below locations have No Place of Safety:

1. Tunnels 3 & 5, Up Main
2. Tunnels 4 & 6, Down Main



## EMERGENCY EGRESS SHAFT

ABE (Abernethy Road EES) at 7.660km, Up & Down Main



## NOTES:

1. Access to the Airport Line via FAL construction site to contact the FAL Infrastructure Manager.
2. Track Trolley Locations:
  - ABE at 7.660km, Up Main
  - Airport Central Station at 6.375km, Up Main
  - Airport Central Station at 6.220km, Down Main



# INSTRUCTIONS

## NO PLACE OF SAFETY

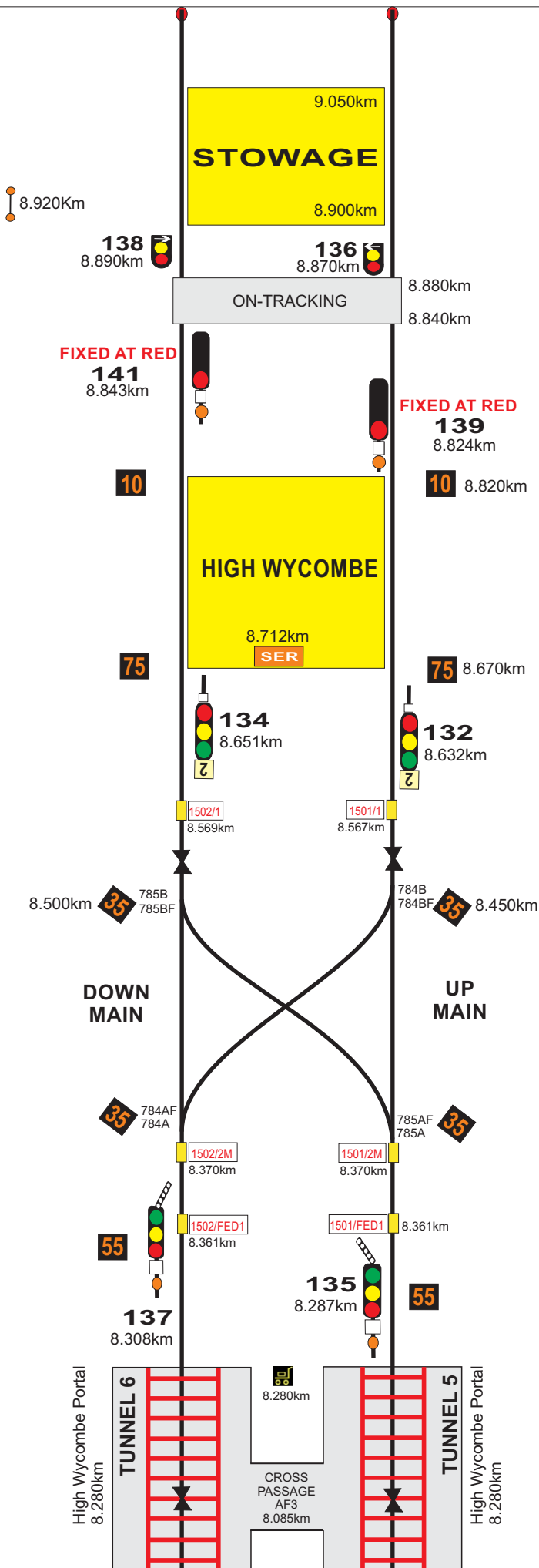
The below locations have No Place of Safety:

1. Tunnel 5, Up Main
2. Tunnel 6, Down Main

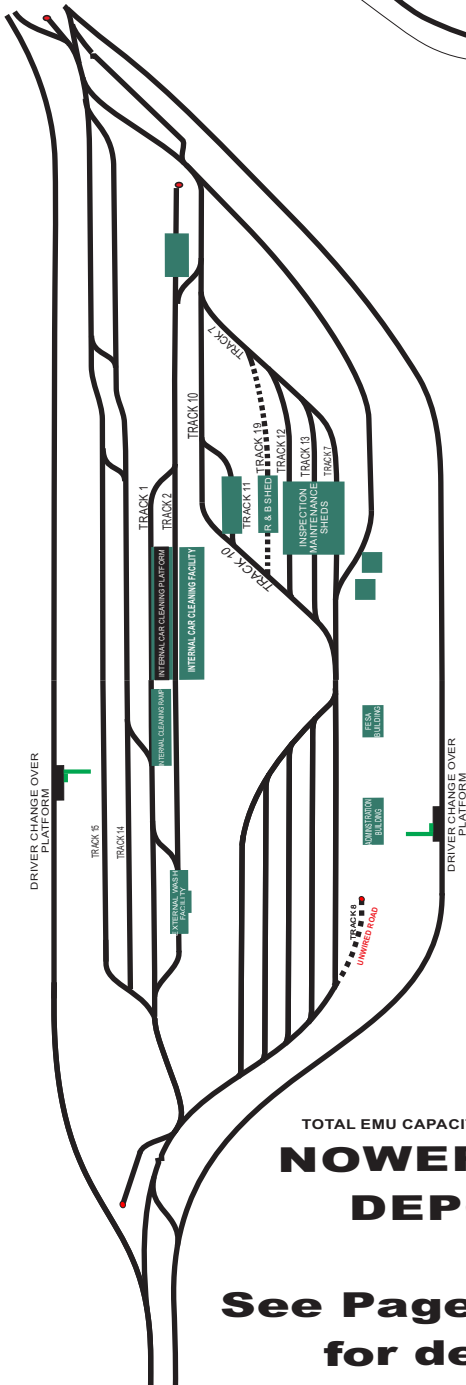
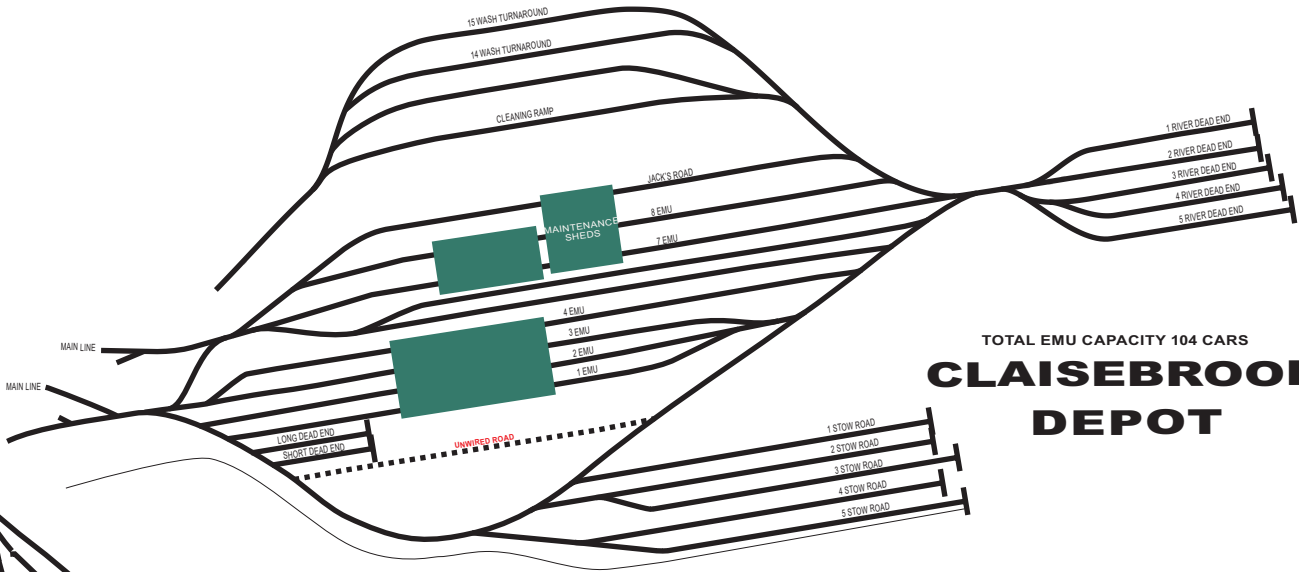


## NOTES:

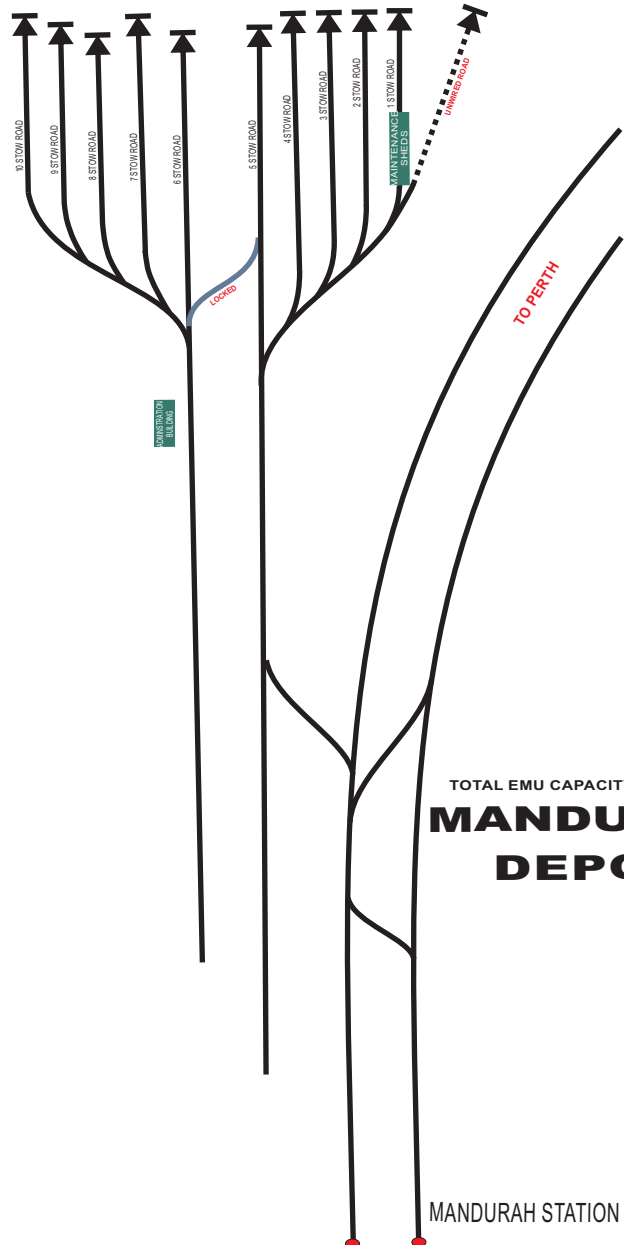
1. Access to the Airport Line via FAL construction site to contact the FAL Infrastructure Manager.
2. Track Trolley Location:  
- Bayswater Portal at 8.280km



# DEPOTS

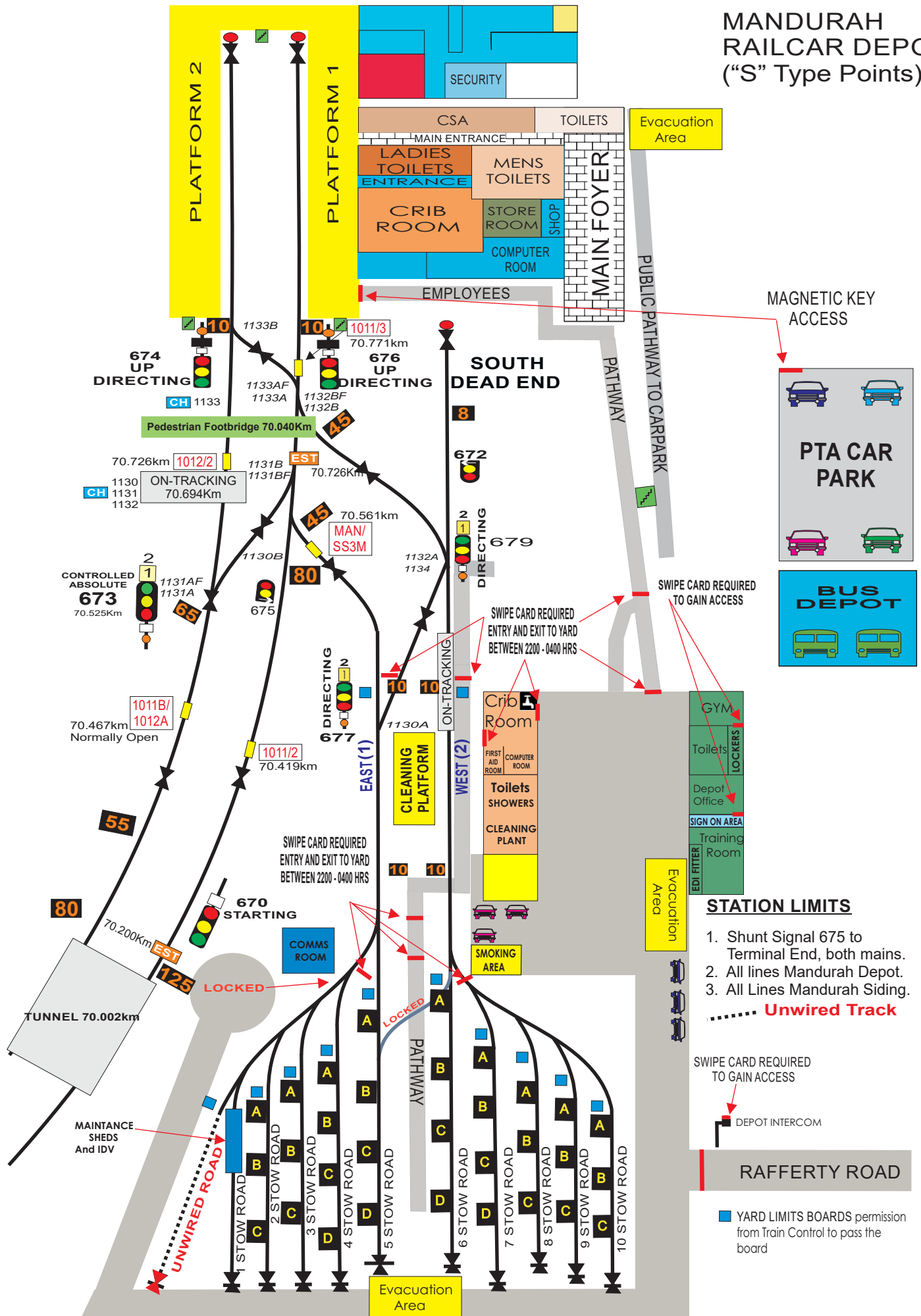


See Pages 24-25  
for detail





# MANDURAH RAILCAR DEPOT ("S" Type Points)



- STATION LIMITS**
1. Shunt Signal 675 to Terminal End, both mains.
  2. All lines Mandurah Depot.
  3. All Lines Mandurah Siding.
- ..... **Unwired Track**

SWIPE CARD REQUIRED TO GAIN ACCESS

DEPOT INTERCOM

**RAFFERTY ROAD**

■ YARD LIMITS BOARDS permission from Train Control to pass the board

## SYMBOL LEGEND

	NARROW GAUGE		UNWIRED ROAD
	DUAL GAUGE		UNWIRED ROAD
	STANDARD GAUGE		UNWIRED ROAD
	PEDESTRIAN MAZEWAY		
	PEDESTRIAN UNDERPASS		
	SPEED BOARD		
	END OF SPEED BOARD		
	SPEED BOARD FOR TURNOUT CROSSOVERS - UNMARKED CROSSOVERS 30KM/H		
	EMERGENCY SUPPLY TRANSFORMER		
	STANDALONE EQUIPMENT ROOM		
	TRACK SECTION CABIN		
	SUBFEEDER STATION		
	KILOMETRE PEGS		
	LIMIT OF SHUNT BOARD		
	FLASHING MAN - FOR PERSONNEL WORKING IN TUNNEL		
	ACCESS GATE FOR VEHICLES		
	PEDESTRIAN ACCESS GATE		
	ACCESS STAIRWAY / STATION ACCESS STAIRWAY		
	WIRE ROPE BARRIER		
	CONCRETE BARRIER		
	BUFFER STOP		
	PERMANENT SPEED BOARD SIGN (ARC)		

# SYMBOL LEGEND



INFORMATION BOARDS



CATCH POINTS



NETWORK ACCESS and ON-TRACKING - FOR VEHICLE ACCESS



CONTROLLED ABSOLUTE SIGNAL WITH ROUTE INDICATOR



CONTROLLED ABSOLUTE SIGNAL WITH LOW SPEED SHUNT AND JUNCTION INDICATOR



CONTROLLED ABSOLUTE SIGNAL WITH JUNCTION INDICATOR



ABSOLUTE SIGNAL



CONTROLLED ABSOLUTE SIGNAL



ABSOLUTE APPROACH SIGNAL



NO PLACE OF SAFETY



DESIGNATED WALKING ROUTE



GROUND SHUNT SINGLE ASPECT SIGNAL



GROUND SHUNT TWIN ASPECT SIGNAL



STATION LIMITS - TRAINS CAN APPROACH FROM EITHER DIRECTION AT ANY TIME



ABSOLUTE SIGNAL CONTROLLED AREA



ISOLATOR



TRACK TROLLEY



EMERGENCY EGRESS SHAFT

# PHOTOS



 **Narrow Gauge**



 **Dual Gauge**



 **Standard Gauge**



 **Unwired Road**



 **Station Access Stairway**



 **70** Speed Board for Turnout Crossovers  
**UNMARKED CROSSOVERS**  
30 KM/H



 **30** End of Speedboard



 **110** Speed Board



**TSC** Track Section Cabin



**SER** Standalone Equipment Room



**SFS** Sub Feeder Station



**Blue box icon** Pedestrian Underpass



**Green staircase icon** Access Stairway



**Grey path icon** Pedestrian Mazeway





 Access Gate for Vehicles



 Access Gate for Vehicles



 Flashing Man - For Personnel working in Tunnel



 Wire Rope Barrier



 Concrete Barrier



 Pedestrian Access Gate



 Kilometre Pegs



 Limit of Shunt Board



Station Limit Board



 Ground Shunt Single Aspect Signal  
Left Icon of Twin Aspect Signal



 Controlled Absolute Signal with Route Indicator



 Controlled Absolute Signal with Junction Indicator



 Information Boards



 Absolute Signal



 Controlled Absolute Signal



1054  Catch Points



 On-Tracking for Vehicle Access



**EST** Electrical Supply Transformer



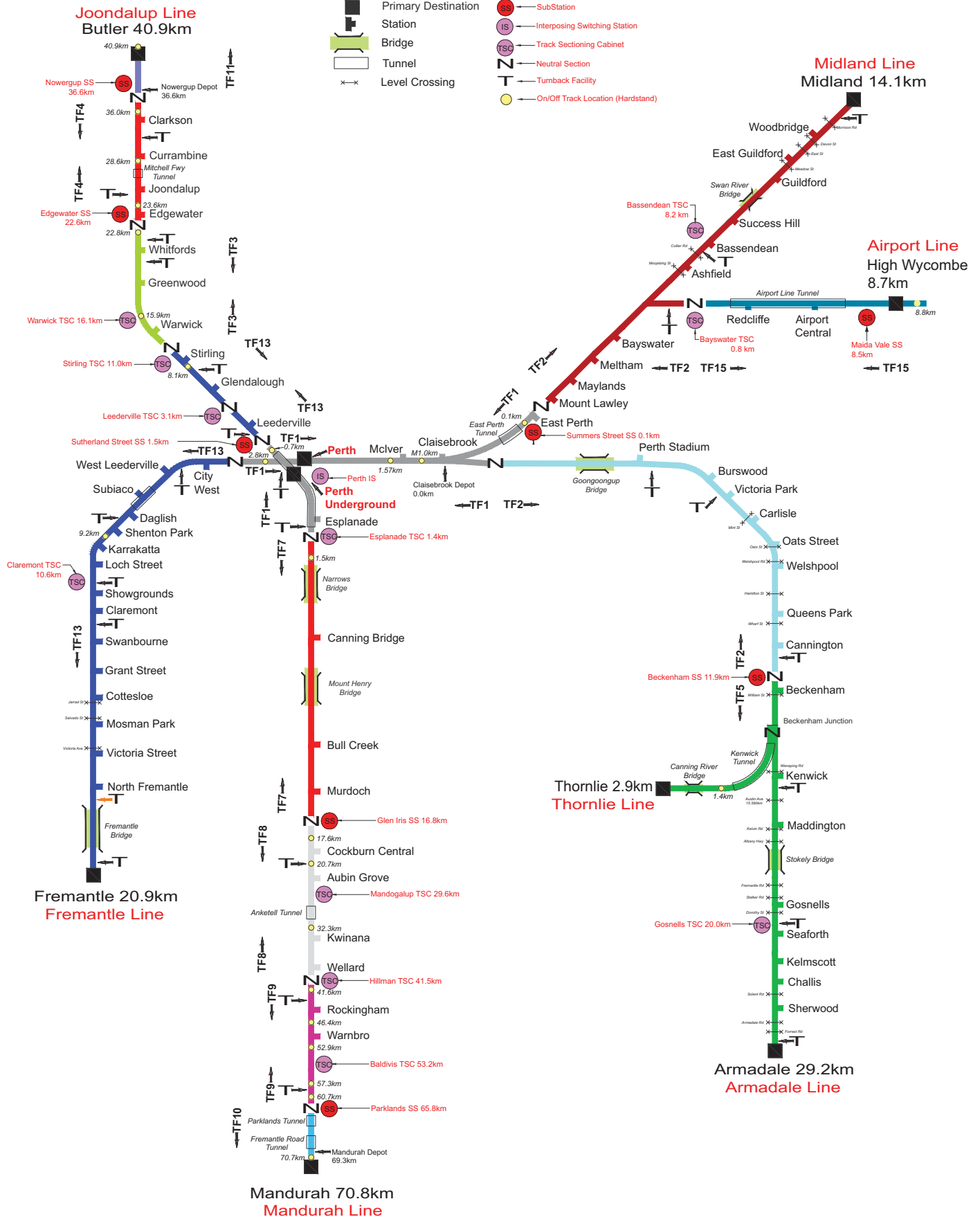
 Buffer Stop

# PTA System Map

## Key Electrical Infrastructure

### LEGEND

- Primary Destination
- Station
- Bridge
- Tunnel
- Level Crossing
- SubStation
- Interposing Switching Station
- Track Sectioning Cabinet
- Neutral Section
- Tumbuck Facility
- On/Off Track Location (Hardstand)



4 11.05.22 CALEDONIAN AVE REMOVED. 3 21.02.22 AIRPORT LINE ADDED 2 16.01.15 INCLUDE TF13 AND ON /OFF TRACK LOCATIONS 1 15.12.14 AMENDMENTS MADE 0 16.10.14 NETWORK DESIGN		AJ JAG RHS RS KC KM JC KC MM LB KC MM LB		SCALE : NTS (@ A1) DATUM : HORIZONTAL: VERTICAL:	<b>NETWORK &amp; INFRASTRUCTURE</b> DESIGNED <i>N NGUYEN</i> DRAWN <i>K COLLETTE</i> CHECKED <i>M MICHALEX</i>	APPROVED FOR ISSUE <i>R STACEY</i> ELECTRICAL ENGINEERING MANAGER Date <b>22.02.22</b>	Government of Western Australia Public Transport Authority PUBLIC TRANSPORT AUTHORITY SYSTEM MAP KEY ELECTRICAL INFRASTRUCTURE PTA DRG No : 00-P-05-0080 REV : 4
---	--	---	--	--	---	---	---





## PTA VEHICLE GATES LOCATIONS JOONDALUP LINE

Km	Track (U/D)	Gate Size	Gate Type
0.735	U		Vehicle Gate
1.235	D		Vehicle Gate
1.700	D	3.3 Metres	Vehicle Gate
2.200	U		Vehicle Gate
2.325	D		Vehicle Gate
3.100	D		Vehicle Gate
3.100	U	3.3 Metres	Vehicle Gate
3.500	D	3.3 Metres	Vehicle Gate
5.000	U	3.3 Metres	Vehicle Gate
5.135	D		Vehicle Gate
6.600	U	3.3 Metres	Vehicle Gate
7.200	D	3.3 Metres	Vehicle Gate
7.700	D	3.3 Metres	Vehicle Gate
8.100	D	3.3 Metres	Vehicle Gate
10.800	D		Vehicle Gate
11.000	U	3.3 Metres	Vehicle Gate
12.800	U	3.3 Metres	Vehicle Gate
15.900	D	3.3 Metres	Vehicle Gate
17.200	U	3.3 Metres	Vehicle Gate
19.300	D	3.3 Metres	Vehicle Gate
19.300	U	3.3 Metres	Vehicle Gate
20.700	D	3.3 Metres	Vehicle Gate
21.350	D	3.3 Metres	Vehicle Gate
22.200	D	3.3 Metres	Vehicle Gate
22.250	U	3.3 Metres	Vehicle Gate
22.700	D	3.3 Metres	Vehicle Gate
22.950	D	3.3 Metres	Vehicle Gate
23.450	U	3.3 Metres	Vehicle Gate
24.100	U	3.3 Metres	Vehicle Gate
25.682	U	4 Metres	Vehicle Gate
25.848	U		Vehicle Gate
26.545	D	6 Metres	Vehicle Gate
26.790	U	6 Metres	Vehicle Gate
27.383	D	4 Metres	Vehicle Gate
27.595	D	6 Metres	Vehicle Gate
27.635	D		Vehicle Gate
27.700	D		Vehicle Gate
27.743	U	6 Metres	Vehicle Gate
27.800	U	6 Metres	Vehicle Gate
29.085	D	3 Metres	Vehicle Gate
29.090	U	6 Metres	Vehicle Gate
29.500	D	6 Metres	Vehicle Gate
29.675	U	6 Metres	Vehicle Gate
30.275	D		Vehicle Gate
30.958	D	8 Metres	Vehicle Gate
31.180	U	3 Metres	Vehicle Gate
32.115	U	3 Metres	Vehicle Gate
32.640	D	4 Metres	Vehicle Gate
33.360	D	3 Metres	Vehicle Gate
33.560	U	3 Metres	Vehicle Gate
34.695	U		Vehicle Gate
35.241	U		Vehicle Gate
35.245	D		Vehicle Gate
35.335	D		Vehicle Gate
35.429	D		Vehicle Gate
35.539	U		Vehicle Gate
35.563	D		Vehicle Gate
35.614	D		Vehicle Gate

Km	Track (U/D)	Gate Size	Gate Type
35.630	D	3 Metres	Vehicle Gate
35.630	U		Vehicle Gate
35.947	D		Vehicle Gate
35.947	U		Vehicle Gate
36.950	D		Vehicle Gate
37.505	D		Vehicle Gate
38.945	D		Vehicle Gate
38.945	U		Vehicle Gate
39.202	U		Vehicle Gate
39.700	D	6 Metres	Vehicle Gate
39.800	D		Vehicle Gate
40.538	D		Vehicle Gate

## PTA PEDESTRIAN GATES LOCATIONS JOONDALUP LINE

Km	Track (U/D)	Gate Size	Gate Type
20.234	D		Pedestrian Gate
20.234	U		Pedestrian Gate
20.312	D		Pedestrian Gate
20.312	U		Pedestrian Gate
25.308	U		Pedestrian Gate
25.398	U		Pedestrian Gate
25.461	D		Pedestrian Gate
25.461	U		Pedestrian Gate
25.848	U		Pedestrian Gate
26.996	D		Pedestrian Gate
27.295	D		Pedestrian Gate



## PTA VEHICLE GATES LOCATIONS MANDURAH LINE

Km	Track (U/D)	Gate Size	Gate Type
1.516	D		Vehicle Gate
17.576	U		Vehicle Gate
18.352	U	3.6 Metres	Vehicle Gate
19.563	U	3.6 Metres	Vehicle Gate
20.044	U	3.6 Metres	Vehicle Gate
20.625	U	3.6 Metres	Vehicle Gate
21.420	U	On to On-Track	
21.468	U	Off freeway to On-Track	Vehicle Gate
22.373	U	3.6 Metres	Vehicle Gate
23.401	U	3.6 Metres	Vehicle Gate
26.024	U	3.6 Metres	Vehicle Gate
26.872	U	3.6 Metres	Vehicle Gate
28.386	U		Vehicle Gate
30.713	U	3.6 Metres	Vehicle Gate
31.733	D	4 Metres	Vehicle Gate
32.087	D		Vehicle Gate
32.117	U	4 Metres	Vehicle Gate
32.220	U	4 Metres	Vehicle Gate
32.258	D	4 Metres	Vehicle Gate
32.479	D	4 Metres	Vehicle Gate
32.660	U	4 Metres	Vehicle Gate
34.310	D		
35.172	D	8 Metres	Vehicle Gate
36.421	D		
36.800	D		
37.540	D		Vehicle Gate
37.737	D		
38.000	D		Vehicle Gate
38.620	DU	Emergency Vehicles	
39.415	D		
39.650	U	5 Metres	Vehicle Gate
40.220	D		
40.387	D	6 Metres	Vehicle Gate
41.020			Vehicle Gate
41.570	D		Vehicle Gate
42.120	U		Vehicle Gate
42.184	D	4 Metres	Vehicle Gate
42.600	D	6 Metres	Vehicle Gate
42.942	D	4 Metres	Vehicle Gate
42.954	U	4 Metres	Vehicle Gate
43.660	D		Vehicle Gate
43.800	D	4 Metres	Vehicle Gate
44.646	D	4 Metres	Vehicle Gate
46.440	D		Vehicle Gate
47.450	D		Vehicle Gate
47.600	U	4 Metres	Vehicle Gate
47.600	D		Vehicle Gate
52.900	D	6 Metres	Vehicle Gate
54.597	U	6 Metres	Vehicle Gate
57.300	D		Vehicle Gate
59.160	D		Vehicle Gate
59.220	U		Vehicle Gate
59.342	D		Vehicle Gate
59.350	U		Vehicle Gate
59.657	D	4 Metres	Vehicle Gate
59.770	D	3 Metres	Vehicle Gate
60.752	D	6 Metres	Vehicle Gate
65.286	D		

Km	Track (U/D)	Gate Size	Gate Type
65.316	D	4 Metres	Vehicle Gate
65.316	U	4 Metres	Vehicle Gate
65.600	U		
66.870	D	4 Metres	Vehicle Gate
67.407	D	4 Metres	Vehicle Gate
67.930	D	4 Metres	Vehicle Gate
68.530	D	4 Metres	Vehicle Gate
69.708	D		
70.100	U	6 Metres	Vehicle Gate
70.752	D		Vehicle Gate

## PTA PEDESTRIAN GATES LOCATIONS MANDURAH LINE

Km	Track (U/D)	Gate Size	Gate Type
0.956	U		Pedestrian Gate
1.207	U		Pedestrian Gate
1.302	U		Pedestrian Gate
20.933	U		Pedestrian Gate
21.133	U		Pedestrian Gate
21.172	U		Pedestrian Gate
21.328	U		Pedestrian Gate
31.680	D		Pedestrian Gate
31.990	D		Pedestrian Gate
32.950	D		Pedestrian Gate
32.950	U		Pedestrian Gate
33.535	D		Pedestrian Gate
34.064	U		Pedestrian Gate
34.780	U		Pedestrian Gate
35.124	U		Pedestrian Gate
35.659	D		Pedestrian Gate
35.740	U		Pedestrian Gate
36.056	D		Pedestrian Gate
36.180	U		Pedestrian Gate
36.400	D		Pedestrian Gate
36.580	D		Pedestrian Gate
37.028	D		Pedestrian Gate
37.120	U		Pedestrian Gate
37.820	D		Pedestrian Gate
37.888	D		Pedestrian Gate
38.244	D		Pedestrian Gate
38.734	D		Pedestrian Gate
38.825	D		Pedestrian Gate
39.415	D		Pedestrian Gate
40.000	D		Pedestrian Gate
40.510	D		Stairs
41.308	D		
41.490	D		TSC
41.900	D		
42.440	D		Pedestrian Gate
42.725	D		Stairs
43.800	D		Pedestrian Gate
45.500	D		Pedestrian Gate
45.680	D		
46.611	D		
48.110	D		Pedestrian Gate
48.350	D		Pedestrian Gate
48.500	D		
48.590	D		Pedestrian Gate
48.842	D		Pedestrian Gate
49.101	D		Pedestrian Gate
49.292	D		
49.780	D		
49.990	D		Pedestrian Gate
50.268	D		Pedestrian Gate
50.645	D		Pedestrian Gate
50.815	D		Pedestrian Gate
51.200	D		Pedestrian Gate
51.595	D		Pedestrian Gate
51.900	D		Pedestrian Gate
52.030	D		
52.246	D		Pedestrian Gate
52.789	D		Pedestrian Gate

Km	Track (U/D)	Gate Size	Gate Type
52.886	D		
53.294	U		
53.741	U		
53.865	U		Pedestrian Gate
54.024	D		Pedestrian Gate
54.140	U		Pedestrian Gate
54.850	U		Pedestrian Gate
55.011	U		Pedestrian Gate
55.575	D		Pedestrian Gate
56.247	D		Pedestrian Gate
56.515	D		Pedestrian Gate
56.925	D		Pedestrian Gate
57.355	D		Pedestrian Gate
57.855	D		Pedestrian Gate
58.129	D		Pedestrian Gate
58.437	D		Pedestrian Gate
58.745	D		Pedestrian Gate
58.879	D		
59.100	D		Pedestrian Gate
59.200	D		Karnup SER
59.423	D		Pedestrian Gate
59.602	D		Stairs
59.700	D		Paganoni SER
60.192	D		Pedestrian Gate
60.392	D		Pedestrian Gate
60.392	U		Pedestrian Gate
60.912	D		
61.463	D		Pedestrian Gate
61.831	D		Pedestrian Gate
61.900	U		
62.000	U		
62.296	D		Pedestrian Gate
62.546	D		
62.729	D		Pedestrian Gate
62.940	D		Pedestrian Gate
63.156	D		Pedestrian Gate
63.400	D		Stairs
63.620	D		Pedestrian Gate
63.987	D		Pedestrian Gate
63.987	U		Pedestrian Gate
64.260	D		Stairs
64.690	D		Pedestrian Gate
65.240	D		Stairs
65.730	U		Parklands SER
65.825	U		Pedestrian Gate
66.030	U		Parklands Tunnel Stairs
66.030	U		Parklands Tunnel Stairs
66.030	U		Parklands Tunnel Stairs
69.800	U		Mandurah Rd Tunnel
70.570	U		Yard - Carpark
70.830	U		Pedestrian Gate

## PTA VEHICLE GATES LOCATIONS ARMADLE LINE

Km	Track (U/D)	Gate Size	Gate Type
0.210	D		
0.641	U	5 Metres	Vehicle Gate
1.095	U	4 Metres	Vehicle Gate
1.780	U	4 Metres	Vehicle Gate
2.000	U	4 Metres	Vehicle Gate
2.622	U		
2.713	D		
3.100	D	5 Metres	Vehicle Gate
3.390	U	5 Metres	Vehicle Gate
3.469	U	3 Metres	Vehicle Gate
3.479	D	4 Metres	Vehicle Gate
3.625	D		
3.779	U	4 Metres	Vehicle Gate
3.900	U	4 Metres	Vehicle Gate
4.370	U		
4.500	D		
4.500	U	4 Metres	Vehicle Gate
4.750	D		
4.800	U	6 Metres	Vehicle Gate
5.071	D		
5.158	D	6 Metres	Vehicle Gate
5.208	U		
5.824	U	3 Metres	Vehicle Gate
5.943	D	6 Metres	Vehicle Gate
6.000	U	4 Metres	Vehicle Gate
6.240	D		
6.273	U	6 Metres	Vehicle Gate
6.496	D	5 Metres	Vehicle Gate
6.538	U	4 Metres	Vehicle Gate
6.976	D	4 Metres	Vehicle Gate
7.000	U	4 Metres	Vehicle Gate
7.395	U	4 Metres	Vehicle Gate
7.626	D		
7.628	U		
8.168	D	4 Metres	Vehicle Gate
8.330	U	4 Metres	Vehicle Gate
8.535	D	4 Metres	Vehicle Gate
8.800	D	4 Metres	Vehicle Gate
9.283	U	4 Metres	Vehicle Gate
9.601	U	5 Metres	Vehicle Gate
10.195	D	4 Metres	Vehicle Gate
10.404	U	6 Metres	Vehicle Gate
10.510	D	6 Metres	Vehicle Gate
11.100	U	3.5 Metres	Vehicle Gate
11.142	D	4 Metres	Vehicle Gate
11.385	D	4 Metres	Vehicle Gate
11.400	D		
11.400	U	4 Metres	Vehicle Gate
11.700	D	4 Metres	Vehicle Gate
11.900	U	4 Metres	Vehicle Gate
11.970	U	4 Metres	Vehicle Gate
12.100	U	4 Metres	Vehicle Gate
12.500	U	4 Metres	Vehicle Gate
12.751	U	4 Metres	Vehicle Gate
13.110	D	6 Metres	Vehicle Gate
13.218	U	4 Metres	Vehicle Gate
14.329	U	4 Metres	Vehicle Gate
14.360	D		

Km	Track (U/D)	Gate Size	Gate Type
14.724	U	4 Metres	Vehicle Gate
14.937	D	4 Metres	Vehicle Gate
15.119	D	4 Metres	Vehicle Gate
15.129	D	4 Metres	Vehicle Gate
15.314	U	4 Metres	Vehicle Gate
15.470	D		
15.500	U	4 Metres	Vehicle Gate
15.540	D		
15.930	D		
16.145	U	4 Metres	Vehicle Gate
16.630	D		
16.899	U	4 Metres	Vehicle Gate
17.060	D	4 Metres	Vehicle Gate
17.430	U		
17.512	U	5 Metres	Vehicle Gate
17.586	D	3.6 Metres	Vehicle Gate
18.125	D		
18.460	D	4 Metres	Vehicle Gate
18.810	D	4 Metres	Vehicle Gate
19.015	U	4 Metres	Vehicle Gate
19.128	U	4 Metres	Vehicle Gate
19.536	U	4 Metres	Vehicle Gate
19.660	U		
19.760	U		
19.922	D	4 Metres	Vehicle Gate
20.238	U	4 Metres	Vehicle Gate
20.512	U	6 Metres	Vehicle Gate
20.560	U	4 Metres	Vehicle Gate
20.852	D	4 Metres	Vehicle Gate
21.206	U	4 Metres	Vehicle Gate
21.417	D	4 Metres	Vehicle Gate
21.889	D		
21.889	U	6 Metres	Vehicle Gate
22.000	U	6 Metres	Vehicle Gate
22.774	D	6 Metres	Vehicle Gate
22.774	U		
22.900	D		
22.900	U	4 Metres	Vehicle Gate
23.500	D		
23.500	U	4 Metres	Vehicle Gate
23.550	U	4 Metres	Vehicle Gate
23.810	D	4 Metres	Vehicle Gate
24.107	U	4 Metres	Vehicle Gate
24.878	D	4 Metres	Vehicle Gate
24.925	U	4 Metres	Vehicle Gate
25.420	U		
25.420	U		
25.420	U		
25.710	D	4 Metres	Vehicle Gate
25.900	U	4 Metres	Vehicle Gate
26.100	D		
26.100	U	4 Metres	Vehicle Gate
26.135	D	4 Metres	Vehicle Gate
26.600	U	4 Metres	Vehicle Gate
26.743	D	3.5 Metres	Vehicle Gate
27.082	U	4 Metres	Vehicle Gate
27.200	D	6 & 4 Metres	Vehicle Gate
27.300	D	4 Metres	Vehicle Gate

## PTA VEHICLE GATES LOCATIONS ARMADLE LINE

Km	Track (U/D)	Gate Size	Gate Type
27.990	U	4 Metres	Vehicle Gate
28.127	D	4 Metres	Vehicle Gate
28.177	D	4 Metres	Vehicle Gate
28.280	U	4 Metres	Vehicle Gate
28.621	U	4 Metres	Vehicle Gate
28.825	U	4 Metres	Vehicle Gate
29.020	U	4 Metres	Vehicle Gate
29.050	D	6 Metres	Vehicle Gate
29.350	U	6 Metres	Vehicle Gate
31.180	D	4 Metres	Vehicle Gate
32.800	D	4 Metres	Vehicle Gate
32.870	U	4 Metres	Vehicle Gate
34.780	U		
34.800	U	4 Metres	Vehicle Gate
34.820	U	6 Metres	Vehicle Gate
34.900	D	6 Metres	Vehicle Gate
35.600	U	6 Metres	Vehicle Gate
35.610	D	6 Metres	Vehicle Gate
35.690	U	6 Metres	Vehicle Gate
36.735	U	6 Metres	Vehicle Gate

## PTA PEDESTRIAN GATES LOCATIONS ARMADALE LINE

Km	Track (U/D)	Gate Size	Gate Type
0.225	U		
0.436	U		Pedestrian Gate
0.630	U		
0.700	U		Pedestrian Gate
3.320	D		Pedestrian Gate
3.410	D		
3.410	U		
4.150	U		
4.390	U		
4.952	D		
5.020	D		Pedestrian Gate
5.905	D		
6.059	D		
6.560	D		
7.800	U		Pedestrian Gate
8.625	U		Pedestrian Gate
9.238	U		Pedestrian Gate
9.500	U		Pedestrian Gate
9.800	U		Pedestrian Gate
9.900	U		Pedestrian Gate
10.740	D		Pedestrian Gate
11.336	U		Pedestrian Gate
11.590	U		Pedestrian Gate
11.648	D		Pedestrian Gate
12.721	U		Pedestrian Gate
13.028	U		
14.861	D		
19.240	U		
21.200	D		Pedestrian Gate
21.200	U		Pedestrian Gate
24.320	D		
24.630	U		
24.700	U		Pedestrian Gate
24.750	D		
25.457	D		
25.800	D		Pedestrian Gate
26.305	D		Pedestrian Gate
26.738	U		
26.831	U		
26.911	U		Pedestrian Gate
27.000	U		Pedestrian Gate
28.160	U		
28.470	U		
28.518	U		
28.900	D		
29.030	D		
29.178	U		
29.260	U		Pedestrian Gate

## PTA VEHICLE GATES LOCATIONS THORNLIE LINE

Km	Track (U/D)	Gate Size	Gate Type
1.251	D	4 Metres	Vehicle Gate
1.450	D	4 Metres	Vehicle Gate
1.722	D	4 Metres	Vehicle Gate
2.332	D	4 Metres	Vehicle Gate
2.500	D	4 Metres	Vehicle Gate
2.816	D		Vehicle Gate

## PTA PEDESTRIAN GATES LOCATIONS THORNLIE LINE

Km	Track (U/D)	Gate Size	Gate Type
2.870	D	At station	Pedestrian Gate

## PTA VEHICLE GATES LOCATIONS FREMANTLE LINE

Km	Track (U/D)	Gate Size	Gate Type
0.150	U	To On-Track PTM	Vehicle Gate
0.361	U	3 Metres	Vehicle Gate
0.740	D		Vehicle Gate
0.819	D		Vehicle Gate
1.573	D	4 Metres	Vehicle Gate
1.700	D	4 Metres	Vehicle Gate
2.800	U	6 Metres	Vehicle Gate
3.280	D	6 Metres	Vehicle Gate
3.330	U		Vehicle Gate
3.510	U		Vehicle Gate
4.440	U	4 Metres	Vehicle Gate
4.470	U	4 Metres	Vehicle Gate
4.704	U	4 Metres	Vehicle Gate
5.015	D	8 Metres	Vehicle Gate
5.040	D	4 Metres	Vehicle Gate
5.051	U	4 Metres	Vehicle Gate
5.305	U	6 Metres	Vehicle Gate
6.384	U	6 Metres	Vehicle Gate
6.520	D	4 Metres	Vehicle Gate
6.660	D	4 Metres	Vehicle Gate
6.876	D	4 Metres	Vehicle Gate
7.150	D	6 Metres	Vehicle Gate
7.300	D		Vehicle Gate
7.866	U		Vehicle Gate
8.000	U	6 Metres	Vehicle Gate
8.262	D	6 Metres	Vehicle Gate
8.334	U	4 Metres	Vehicle Gate
8.894	U	4 Metres	Vehicle Gate
9.200	D	4 Metres	Vehicle Gate
9.285	D	3 Metres	Vehicle Gate
9.450	D		Vehicle Gate
9.833	U	6 Metres	Vehicle Gate
9.848	U	6 Metres	Vehicle Gate
10.300	D		Vehicle Gate
10.656	D		Vehicle Gate
10.715	U	4 Metres	Vehicle Gate
10.730	U		Vehicle Gate
10.921	U	4 Metres	Vehicle Gate
10.930	U		Vehicle Gate
11.201	D		Vehicle Gate
11.351	U	4 Metres	Vehicle Gate
11.595	D		Vehicle Gate
11.895	U		Vehicle Gate
12.185	U	4 Metres	Vehicle Gate
12.460	U	4 Metres	Vehicle Gate
12.817	U	3 Metres	Vehicle Gate
13.385	U	4 Metres	Vehicle Gate
13.450	D		Vehicle Gate
13.516	U	3 Metres	Vehicle Gate
13.950	D	6 Metres	Vehicle Gate
14.015	U	4 Metres	Vehicle Gate
14.200	D	4 Metres	Vehicle Gate
14.361	U		Vehicle Gate
14.650	D		Vehicle Gate
14.720	D		Vehicle Gate
14.865	U	4 Metres	Vehicle Gate
15.300	U		Vehicle Gate
15.440	D	4 Metres	Vehicle Gate

Km	Track (U/D)	Gate Size	Gate Type
15.800	U		Vehicle Gate
16.097	D	4 Metres	Vehicle Gate
16.492	U	4 Metres	Vehicle Gate
16.535	U	4 Metres	Vehicle Gate
17.000	U	4 Metres	Vehicle Gate
17.340	U	4 Metres	Vehicle Gate
17.500	U	6 Metres	Vehicle Gate
18.180	U	3 Metres	Vehicle Gate
18.500	D	3 Metres	Vehicle Gate
18.700	U	4 Metres	Vehicle Gate
19.800	U	6 Metres	Vehicle Gate
20.358	D	6 Metres	Vehicle Gate
20.890	U	4 Metres	Vehicle Gate
21.100	D/U	6 Metres	Vehicle Gate

## PTA PEDESTRIAN GATES LOCATIONS FREMANTLE LINE

Km	Track (U/D)	Gate Size	Gate Type
0.680	D	F side EPerth Tun	Pedestrian Gate
0.819	D		Pedestrian Gate
1.080	D		Pedestrian Gate
1.117	D		Pedestrian Gate
1.500	D		Pedestrian Gate
1.650	D		Pedestrian Gate
2.558	D		Pedestrian Gate
2.625	U		Pedestrian Gate
3.019	U		Pedestrian Gate
3.400	U		Pedestrian Gate
3.700	U		Pedestrian Gate
3.810	D		Pedestrian Gate
4.550	U		Pedestrian Gate
5.000	D		Pedestrian Gate
5.160	D		Pedestrian Gate
6.600	D		Pedestrian Gate
7.614	U		Pedestrian Gate
8.190	D		Pedestrian Gate
12.320	D		Pedestrian Gate
13.355	D		Pedestrian Gate
13.640	D		Pedestrian Gate
19.400	D		Pedestrian Gate
19.490	U		Pedestrian Gate
20.150	U		Pedestrian Gate
20.630	U		Pedestrian Gate
20.800	U		Pedestrian Gate



## PTA VEHICLE GATES LOCATIONS CITY PRECINCT

Km	Track (U/D)	Gate Size	Gate Type
1.140	U		Vehicle Gate
1.573	U	4 Metres	Vehicle Gate
1.765	U		Vehicle Gate

## PTA PEDESTRIAN GATES LOCATIONS CITY PRECINCT

Km	Track (U/D)	Gate Size	Gate Type
0.960	U		Pedestrian Gate
1.080	U		Pedestrian Gate
1.780	U		Pedestrian Gate

## PTA VEHICLE GATES LOCATIONS MIDLAND LINE

Km	Track (U/D)	Gate Size	Gate Type
0.229	U	4 Metres	Vehicle Gate
0.471	D	4 Metres	Vehicle Gate
0.803	D	5 Metres	Vehicle Gate
1.331	U	4 Metres	Vehicle Gate
1.375	U	6 Metres	Vehicle Gate
1.419	D	6 Metres	Vehicle Gate
1.645	D	4 Metres	Vehicle Gate
2.161	U	6 Metres	Vehicle Gate
2.680	D	8 Metres	Vehicle Gate
2.800	D	8 Metres	Vehicle Gate
3.036	U	4 Metres	Vehicle Gate
3.101	D	4 Metres	Vehicle Gate
3.434	D		Vehicle Gate
3.513	D		Vehicle Gate
3.609	U	4 Metres	Vehicle Gate
3.750	D	4 Metres	Vehicle Gate
4.196	U	2 Metres	Vehicle Gate
4.850	U		Vehicle Gate
4.910	U		Vehicle Gate
4.910	D	Temporary fence	Vehicle Gate
5.250	U	4 Metres	Vehicle Gate
5.255	U		Vehicle Gate
5.940	D	12 Metres	Vehicle Gate
5.961	U		Vehicle Gate
6.006	D	4 Metres	Vehicle Gate
6.025	U		Vehicle Gate
6.186	D	4 Metres	Vehicle Gate
6.596	U	4 Metres	Vehicle Gate
6.636	D	4 Metres	Vehicle Gate
6.960	U	Set of double gates	Vehicle Gate
7.211	D	4 Metres	Vehicle Gate
7.340	D	4 Metres	Vehicle Gate
7.370	D		Vehicle Gate
7.390	U		Vehicle Gate
7.580	U		Vehicle Gate
7.791	D	4 Metres	Vehicle Gate
7.814	D		Vehicle Gate
8.125	U	6 Metres	Vehicle Gate
8.158	D	4 Metres	Vehicle Gate
8.375	D	5 Metres	Vehicle Gate
8.966	D	4 Metres	Vehicle Gate
9.160	D		Vehicle Gate
9.261	U	4 Metres	Vehicle Gate
10.244	U	4 Metres	Vehicle Gate
10.656	D		Vehicle Gate
10.784	D	3 Metres	Vehicle Gate
11.000	D		Vehicle Gate
11.150	D	4 Metres	Vehicle Gate
11.331	U	6 Metres	Vehicle Gate
11.800	U/D	4 Metres	Vehicle Gate
12.037	U	2 Metres	Vehicle Gate
12.217	U		Vehicle Gate
12.369	D	6 Metres	Vehicle Gate
12.706	D	6 Metres	Vehicle Gate
12.715	U		Vehicle Gate
12.927	U		Vehicle Gate
12.939	U		Vehicle Gate
13.591	U	4 Metres	Vehicle Gate

Km	Track (U/D)	Gate Size	Gate Type
13.641	D	4 Metres	Vehicle Gate
13.650	U		Vehicle Gate
13.881	D	4 Metres	Vehicle Gate
13.961	D	6 Metres	Vehicle Gate
14.050	U		Vehicle Gate

## PTA PEDESTRIAN GATES LOCATIONS MIDLAND LINE

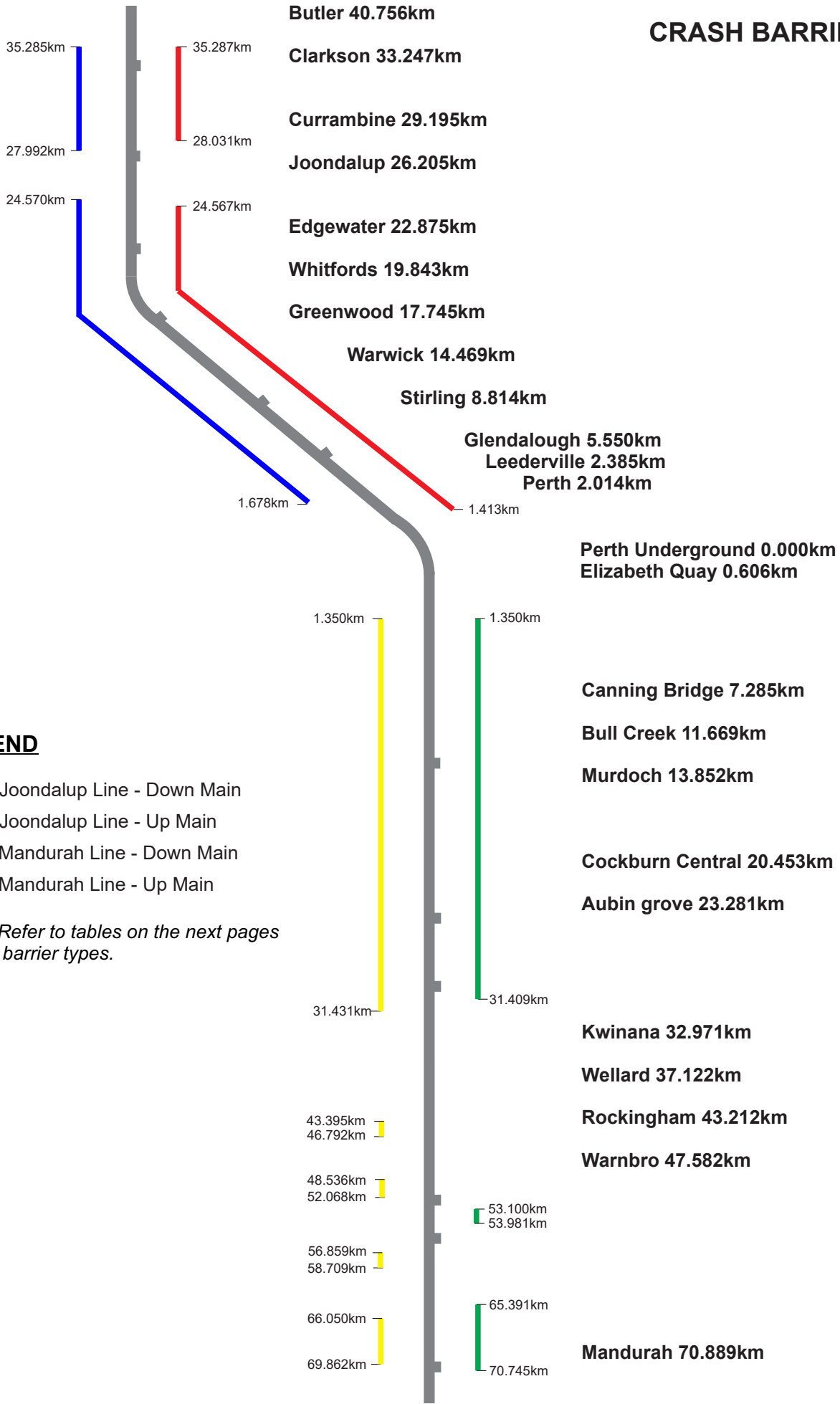
Km	Track (U/D)	Gate Size	Gate Type
0.040	U	Designated path to Platform	Pedestrian Gate
0.188	U		Pedestrian Gate
0.383	U		Pedestrian Gate
0.548	U		Pedestrian Gate
0.920	U		Pedestrian Gate
1.049	D		Pedestrian Gate
1.116	U		Pedestrian Gate
1.198	D		Pedestrian Gate
2.420	D		Pedestrian Gate
3.578	D		Pedestrian Gate
3.700	D		Pedestrian Gate
4.000	D		Pedestrian Gate
5.045	D		Pedestrian Gate
5.094	D		Pedestrian Gate
5.140	U		Pedestrian Gate
5.886	U		Pedestrian Gate
6.186	U		Pedestrian Gate
6.640	U		Pedestrian Gate
6.780	U		Pedestrian Gate
6.846	U		Pedestrian Gate
6.879	D		Pedestrian Gate
7.132	D		Pedestrian Gate
7.340	D		Pedestrian Gate
7.388	D		Pedestrian Gate
7.600	D		Pedestrian Gate
7.715	D		Pedestrian Gate
7.733	U		Pedestrian Gate
7.935	U		Pedestrian Gate
8.275	D		Pedestrian Gate
8.512	D		Pedestrian Gate
8.538	U		Pedestrian Gate
8.620	D		Pedestrian Gate
8.780	D		Pedestrian Gate
9.475	U		Pedestrian Gate
9.515	D		Pedestrian Gate
9.575	D		Pedestrian Gate
9.600	U		Pedestrian Gate
10.150	U		Pedestrian Gate
11.064	D		Pedestrian Gate
11.241	D		Pedestrian Gate
11.373	D		Pedestrian Gate
11.385	D		Pedestrian Gate
11.464	U		Pedestrian Gate
11.888	U		Pedestrian Gate
11.964	U		Pedestrian Gate
12.217	U		Pedestrian Gate
12.330	D		Pedestrian Gate
12.499	D		Pedestrian Gate
12.530	D		Pedestrian Gate

**NOTE:** ACCESS TO MIDLAND UP MAIN FROM CH4.850 TO CH 6.186 IS THROUGH FAL PROJECT CONSTRUCTION SITE. REFER TO FENCING PLAN AND ACCESS AGREEMENT. ALL ACCESS VIA MAIN GATE AT INTERSECTION OF WHATLEY AND NEWTON STREETS.

# PTA VEHICLE GATES LOCATIONS AIRPORT LINE

Km	Track (U/D)	Gate Size	Gate Type
8.29	D	4 Metres	Vehicle Gate

# CRASH BARRIERS



## LEGEND

- █ Joondalup Line - Down Main
- █ Joondalup Line - Up Main
- █ Mandurah Line - Down Main
- █ Mandurah Line - Up Main

**Note:** Refer to tables on the next pages for the barrier types.

## CRASH BARRIER TYPES JOONDALUP LINE

Joondalup Line - Down Main				
Section	Barrier Type	Start KM	End KM	Length (M)
1	Formed Concrete	1.678	5.868	4190
2A	Wire Rope	5.868	6.756	888
2B	Wire Rope	6.756	7.992	1236
3	Lip Channel	7.992	8.426	434
4	Formed Concrete	8.426	8.757	331
5	Tri - Conc block	8.757	9.136	379
6	Formed Concrete	9.136	9.378	242
7	Lip Channel	9.378	9.894	516
8	Tri - Conc block	9.894	9.902	8
9	Lip Channel	9.902	11.244	1342
10	Tri - Conc block	11.244	11.271	27
11	Lip Channel	11.271	11.632	361
12	Formed Concrete	11.632	12.773	1141
13	W-beam	12.773	12.778	5
14	Tri - Conc block	12.778	12.806	28
15	Lip Channel	12.806	13.170	364
16	Tri - Conc block	13.170	13.181	11
17	Lip Channel	13.181	13.379	198
18	Tri - Conc block	13.379	13.409	30
19	Lip Channel	13.409	13.459	50
20	Tri - Conc block	13.459	13.499	40
21	Lip Channel	13.499	13.678	179
22	Tri - Conc block	13.678	13.708	30
23	Lip Channel	13.708	14.165	457
24	Tri - Conc block	14.165	14.195	30
25	Lip Channel	14.195	14.339	144
26	Tri - Conc block	14.339	14.382	43
27	Lip Channel	14.382	14.542	160
28	Tri - Conc block	14.542	15.262	720
29	Lip Channel	15.262	15.406	144
30	Tri - Conc block	15.406	15.446	40
31	Lip Channel	15.446	15.739	293
32	Tri - Conc block	15.739	15.769	30
33	Lip Channel	15.769	16.059	290
34	Tri - Conc block	16.059	16.099	40
35	Lip Channel	16.099	16.149	50
36	Tri - Conc block	16.149	16.179	30
37	Lip Channel	16.179	16.281	102
38	Tri - Conc block	16.281	16.311	30
39	Lip Channel	16.311	16.474	163
40	Tri - Conc block	16.474	16.504	30
41	Lip Channel	16.504	16.678	174
42	Tri - Conc block	16.678	16.718	40
43	Lip Channel	16.718	16.968	250
44	Tri - Conc block	16.968	16.998	30
45	Lip Channel	16.998	17.179	181
46	Tri - Conc block	17.179	17.209	30
47	Lip Channel	17.209	17.513	304
48	Wire Rope	17.513	17.615	102
49	Formed Concrete	17.615	18.037	422
50	Wire Rope	18.037	19.679	1642
51	Formed Concrete	19.679	19.965	286
52	Wire Rope	19.965	21.676	1711
53	Formed Concrete	21.676	22.692	1016
54	Wire Rope	22.692	22.854	162
55	Formed Concrete	22.854	22.940	86

Joondalup Line - Down Main				
Section	Barrier Type	Start KM	End KM	Length (M)
56	Wire Rope	22.940	24.127	1187
57	Formed Concrete	24.127	24.190	63
58	Wire Rope	24.190	24.270	80
59	Formed Concrete	24.270	24.570	300
60	Formed Concrete	27.992	28.441	449
61	Wire Rope	28.441	29.062	621
62	Formed Concrete	29.062	29.697	635
63	W-beam	29.697	29.754	57
64	Wire Rope	29.754	30.297	543
65	Formed Concrete	30.297	30.475	178
66	W-Beam	30.475	30.533	58
67	Wire Rope	30.533	32.912	2379
68	Formed Concrete	32.912	33.730	818
69	Wire Rope	33.730	35.285	1555

## CRASH BARRIER TYPES JOONDALUP LINE

Joondalup Line - Up Main				
Section	Barrier Type	Start KM	End KM	Length (M)
1	Lip Channel	1.413	1.481	68
2	Tri - Conc block	1.481	1.521	40
3	Lip Channel	1.521	1.923	402
4	Tri - Conc block	1.923	1.988	65
5	Lip Channel	1.988	2.107	119
6	Tri - Conc block	2.107	2.115	8
7	Lip Channel	2.115	2.126	11
8	Tri - Conc block	2.126	2.154	28
9	Lip Channel	2.154	2.168	14
10	Tri - Conc block	2.168	2.176	8
11	Wire Rope	2.176	2.677	501
12	Lip Channel	2.677	3.927	1250
13	Formed Concrete	3.927	4.678	751
14	Lip Channel	4.678	4.767	89
15	Wire Rope	4.767	5.571	804
16	Lip Channel	5.571	7.052	1481
17	Formed Concrete	7.052	9.768	2716
18	Lip Channel	9.768	10.238	470
19	Tri - Conc block	10.238	10.278	40
20	Lip Channel	10.278	12.093	1815
21	Tri - Conc block	12.093	12.127	34
22	Lip Channel	12.127	13.102	975
23	Formed Concrete	13.102	13.162	60
24	W-Beam	13.162	13.166	4
25	Tri - Conc block	13.166	13.291	125
26	Lip Channel	13.291	13.386	95
27	Tri - Conc block	13.386	13.424	38
28	Lip Channel	13.424	13.822	398
29	Tri - Conc block	13.822	13.852	30
30	Lip Channel	13.852	14.340	488
31	Tri - Conc block	14.340	14.388	48
32	Lip Channel	14.388	14.540	152
33	Tri - Conc block	14.540	15.092	552
34	Lip Channel	15.092	15.252	160
35	Tri - Conc block	15.252	15.294	42
36	Lip Channel	15.294	15.424	130
37	Tri - Conc block	15.424	15.454	30
38	Lip Channel	15.454	15.743	289
39	Tri - Conc block	15.743	15.783	40
40	Lip Channel	15.783	16.596	813
41	Tri - Conc block	16.596	16.636	40
42	Lip Channel	16.636	16.695	59
43	Tri - Conc block	16.695	16.725	30
44	Lip Channel	16.725	17.533	808
45	Wire Rope	17.533	17.626	93
46	Formed Concrete	17.626	17.876	250
47	Wire Rope	17.876	18.043	167
48	Lip Channel	18.043	19.731	1688
49	Formed Concrete	19.731	20.008	277
50	Lip Channel	20.008	22.253	2245
51	Formed Concrete	22.253	24.511	2258
52	Lip Channel	24.511	24.567	56
53	W-Beam	28.031	28.061	30
54	Formed Concrete	28.061	28.401	340
55	Wire Rope	28.401	28.798	397
56	Formed Concrete	28.798	29.678	880

Joondalup Line - Up Main				
Section	Barrier Type	Start KM	End KM	Length (M)
57	Wire Rope	29.678	31.918	2240
58	W-Beam	31.918	31.973	55
59	Formed Concrete	31.973	32.234	261
60	Wire Rope	32.234	32.782	548
61	W-Beam	32.782	32.838	56
62	Formed Concrete	32.838	33.418	580
63	Wire Rope	33.418	33.857	439
64	Formed Concrete	33.857	34.740	883
65	Wire Rope	34.740	35.287	547

## CRASH BARRIER TYPES MANDURAH LINE

Mandurah Line - Down Main				
Section	Barrier Type	Start KM	End KM	Length (m)
0	Formed Concrete	1.350	17.620	16270
1	Wire Rope	17.620	18.605	985
2	Formed Concrete	18.605	18.918	313
3	Wire Rope	18.920	20.077	1157
4	Formed Concrete	20.077	20.811	734
5	Wire Rope	20.811	23.583	2772
6	Formed Concrete	23.583	24.263	680
7	Wire Rope	24.259	26.156	1897
8	Formed Concrete	26.159	26.710	551
9	Wire Rope	26.710	29.743	3033
10	Formed Concrete	29.741	30.026	285
11	Wire Rope	30.026	30.922	896
12	Formed Concrete	30.924	31.409	485
13	W-Beam	53.100	53.981	881
14	Wire rope	65.391	65.571	180
15	Formed Concrete	65.571	65.903	332
16	W-Beam	66.571	66.642	71
17	W-Beam	66.002	66.043	41
18	Formed Concrete	66.043	66.877	834
19	Wire Rope	66.877	68.801	1924
20	Formed Concrete	68.801	69.878	1077
21	Formed Concrete	70.121	70.231	110
22	W-Beam	70.231	70.664	433
23	Wire Rope	70.664	70.745	81

Mandurah Line - Up Main				
Section	Barrier Type	Start KM	End KM	Length (m)
0	Formed Concrete	1.350	17.567	16217
1a	Wire Rope	17.567	20.184	2617
1b	Wire Rope	20.184	25.967	5783
2	Formed Concrete	25.970	26.030	60
3	Wire Rope	26.030	31.000	4970
4	Formed Concrete	31.000	31.431	431
5	Formed Concrete	43.395	43.708	313
6	Formed Concrete	43.772	44.787	1015
7	Wire Rope	44.787	46.792	2005
8	Wire Rope	48.536	52.068	3532
9	Wire Rope	56.859	58.709	1850
10	Formed Concrete	66.050	66.743	693
11	Wire Rope	66.743	68.823	2080
12	Formed Concrete	68.826	69.862	1036