

# Network Information Book

## South CTC

### Mile End (exc) to Wolseley (inc)

OGW-30-07

#### Applicability

Interstate Network

#### Publication Requirement

Internal / External

#### Primary Source

Route Access Standard – Defined Interstate Rail Network Section Pages D3

#### Document Status

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1.6	6 Jun 2023	Configuration Management Administrator	Corridor Assets & Operational Representatives	Configuration Manager	Head of Operations Standards

#### Amendment Record

Amendment Version #	Date Reviewed	Clause	Description of Amendment
1.0	04 Aug 2016		Initial issue
1.1	20 Apr 2016		Correction of minor errors and removal of ARTC Addendum reference and Passive LX at Balhannah.
1.2	8 Jun 2018	Various	Shunting GWA tracks added to Taillem Bend text section 2.12. Coomandook signal aspects information added to section 2.13. Corrections to various diagrams including kms, signals & level crossing protection type. Diagram legend updated.

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1.3	18 Sep 2020	Various	Wayside equipment updated at Heathfield & Monarto South. Monarto South location updated. Mile End, Mt Lofty, Mt Lofty to Ambleside, Monarto South, Taillem Bend & Bordertown diagrams updated. GWA references updated to One Rail Australia
1.4	21 Jan 2022	1.1, 1.4, 1.5.2, 1.7, 1.14, 1.17, 2.8, 2.12, 2.13, 2.18	Board Extent, Adjacent Train Control information updated. Switch Lock details, Level Crossings table and drawing legend updated. Heathfield wayside equipment updated. Callington, Taillem Bend, Coomandook & Wirrega locations updated. Goodwood, Goodwood-Belair, Belair – Mt Lofty, Mt Lofty – Ambleside, Bordertown-Wolseley & Wolseley diagrams updated. Usage note added to all diagrams
1.5	18 Apr 2023	Various	Board Extent & Level Crossings table updated. Wolseley diagram updated. One Rail Australia references updated to Aurizon.
1.6	6 Jun 2023	2.3	Mt Lofty location text and diagram updated.

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## 1 General Information

### 1.1 Board Extent

Mile End 1 Signal 4.055 km to Wolseley 12 Signal 307.130km.

This area is controlled by South CTC Network Controller, Network Control Centre West (NCCW).

Contact Numbers:

Phone: (08) 8152 8009

Emergency: (08) 8152 8069

Train Transit Manager: (08) 8152 8020

TTM Emergency: (08) 8152 8080

### 1.2 Safe Working System

Centralised Train Control (CTC)

Interface procedures are documented for the various locations that ARTC network control interfaces with Keolis Downer control or the entrances to yards owned by the train operators.

### 1.3 Applicable Rules

The CoP and ARTC Addendum apply to the sections covered by this Information Book

#### 1.3.1 Index to CoP and ARTC Addendum

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Track work - Parallel Lines	Nil	25.1
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Warning device - locomotive - failure	5.5.2	
Warning device - locomotive - normal use	5.5.1	
Warning signs	Nil	33
Whistle sign - gang	Nil	33.1
Work train working in section	3.20.	
<b>X</b>		
<b>Y</b>		
<b>Z</b>		

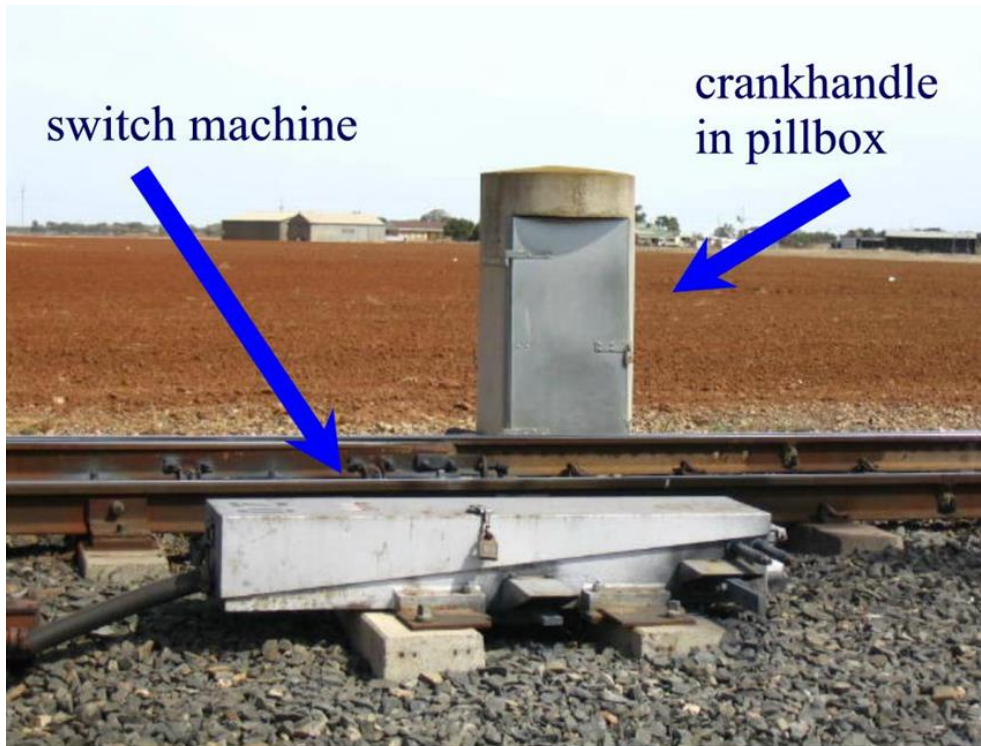
## 1.4 Adjacent Train Control Boards / Centres

ARTC Adelaide Metro	(08) 8152 8011	Emergency	(08) 8152 8071
ARTC Vic North West	(08) 8152 8010	Emergency	(08) 8152 8070
Aurizon	(08) 8343 7732		
	(08) 8343 7730		
	(08) 8262 5424		
Keolis Downer - DIT			
Belair			(08) 7201 5009
Seaford			(08) 7201 5011
Outer Harbour			(08) 7201 5008
Gawler			(08) 7201 5010
Area Control			(08) 7201 5018
Shift Manager			(08) 7201 5016

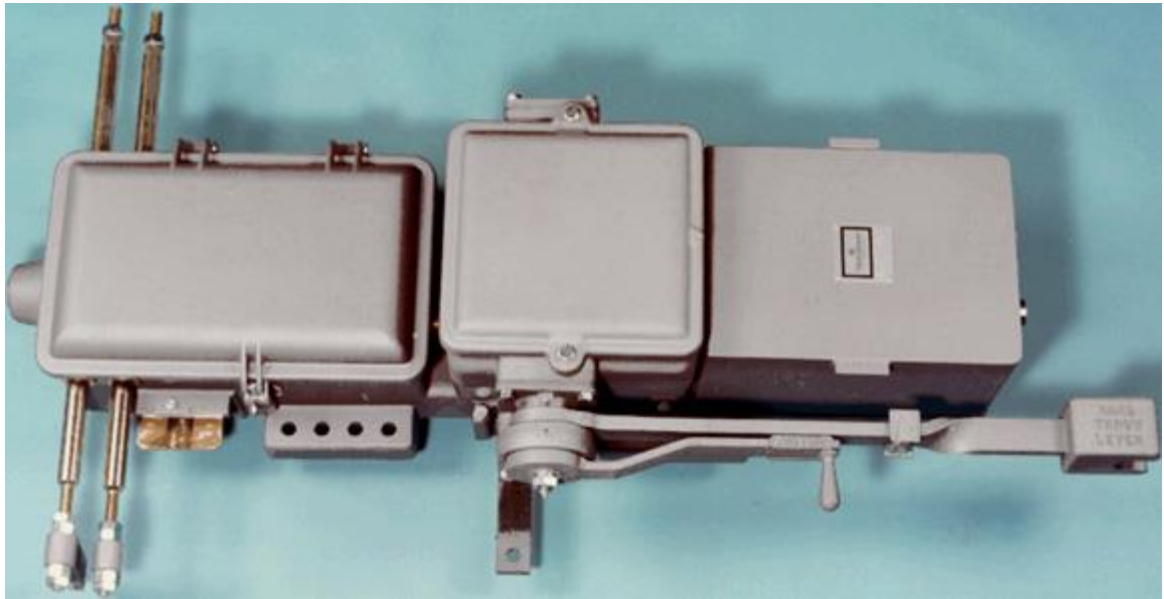
## 1.5 Section Operating Equipment

### 1.5.1 Motorised Point Machines

Motorised points that require a crank handle have a special key attached to the crank handle to access the point machine cover.



M70 points machine as used at no 5 points Mile End.



M23 A MkII  
Dual Control

Selector Lever  
(motor hand operation)

Hand throw lever



## McKenzie & Holland Dual Control Points Machine



S Lock

Motor/Hand Lever

Normal/Reverse Lever  
(for use in hand mode)

Hand

Motor

Reverse

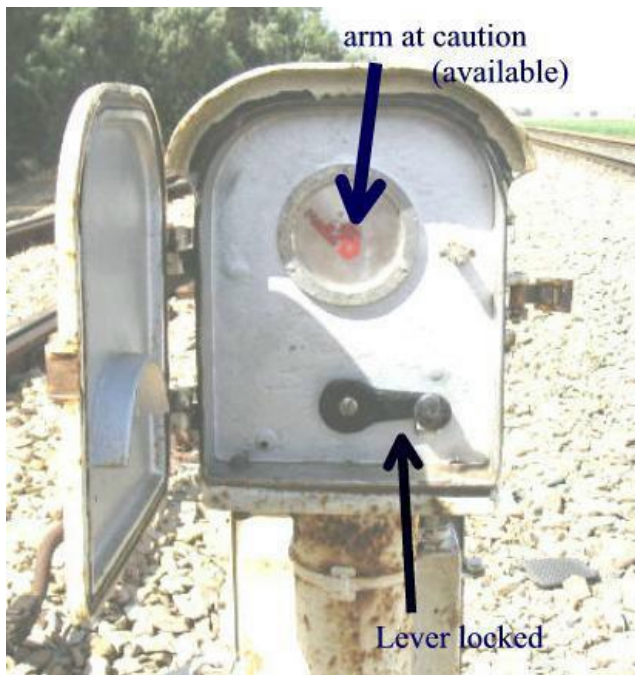
Normal

### 1.5.2 Outlying Switch Locks & HLM Point Locks



Electric Points Lock





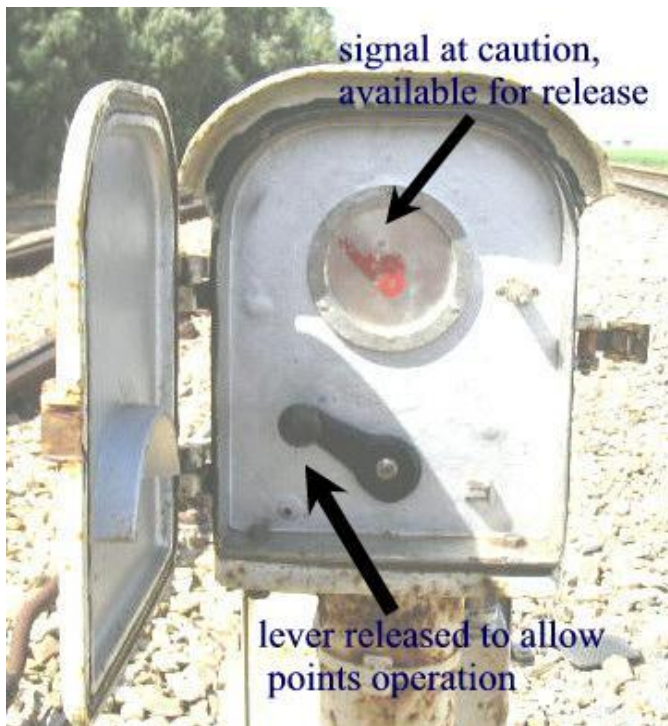
Typical OSL as used on South line with indicator at caution and lever locked.

- No through route set and OSL available for release.



OSL with indicator at stop and lever locked.

- Route set through yard or train on point circuit. OSL not available for release.



Indicator at caution, lever unlocked.

- OSL released and points may now be turned.

#### 1.5.2.1 Operation of Switch Locks:

Contact Network Controller for permission and release of the switch lock

- Upon approval, open the switch lock door and once free indication is displayed:
  - turn the handle to the left position
  - set the points to the required direction
  - return the handle to the right
  - close and secure the switch lock door
- When the train movement is clear of the points
  - open the switch lock door
  - turn the handle to the left position
  - set the points back to normal direction
  - return the handle to the right
  - close and secure the switch lock door and advise Network Controller

## 1.6 Train Braking Requirements

Train braking and holding test are covered in the CoP and can be found by using the CoP and addendum index, however these are included here for quick reference.

### BRAKE HOLDING TESTS FOR THE REARMOST VEHICLES (RETENTION TESTS)

The following apply:

1. The operator **shall** put into place systems for conducting brake holding tests.
2. The number of vehicles (or for articulated or permanently coupled vehicles the number of triple valve control units) required to conform to the requirements of this sub-section shall be:
  - a. Three (3) for freight trains operated in New South Wales;
  - b. Two (2) for freight trains not entering New South Wales; and
  - c. One (1) for all passenger trains where a guard is provided or three (3) for passenger trains without guards.
3. The vehicle operator shall ensure that air and hand brakes operate correctly.
4. The air brakes on the vehicles **shall** remain effectively applied for a period of time, based on train length, considered sufficient for a member of the train (locomotive) crew to reach the vehicles and secure handbrakes in the event of a breakaway en route.
5. This time **shall** be ten (10) minutes plus three (3) minutes for each 100 metres or part thereof of train length. For example, a train 1240 metres long will require a holding (retention) time of  $13 \times 3 + 10 = 49$  minutes.
6. If any of the required number of vehicles (as specified in item (2) above) fail the above test (as specified in item (5) above), generally known as a holding or retention test, the faulty vehicle(s) **shall** be repaired or the train remmarshalled to ensure compliance with the requirements of items (3) and (4) above.
7. Brake holding tests successfully completed will remain valid for the departure within a period of 24 hours from completion of the test. After that period, the vehicles **shall** be re-tested.

### FREIGHT TRAINS

On freight trains, the maximum number of inoperative or isolated brakes permitted on a train **shall** be either of the following:

1. One conventional two-bogie vehicle for every ten (10) vehicles in the train where the vehicle is isolated as a unit.
2. One bogie for every ten (10) bogies in the train where individual bogies can be isolated or the isolation of triple valve control units affects more than two (2) bogies. This applies, only on the proviso that the total un-braked mass of the train **shall not** exceed 10% of the total train mass (excluding the mass of the hauling locomotives).

Item (1) above applies where the only vehicles isolated are conventional two-bogie vehicles. In all other cases, the requirements of item (2) **shall** be followed.

For the purposes of this clause, a four-wheel (two-axle) vehicle **shall** be counted as one bogie, and locomotives under power **shall not** be counted as train vehicles.

## 1.7 Level Crossings

ALCAM ID is the number allocated from the Australian Level Crossing Assessment Model used by rail and road managers across Australia. It's a national database for assessing risk which is overseen by a National Committee and supported by the Rail Industry Safety Standards Board (RISSB).

ALCAM ID	Road Name	Line Segment	KM	Traffic Type	Access	Control Type
3	Leader Street Goodwood	Belair Line	4.630	Road	Public	Half Boom Flashing Lights
553	Victoria Street Goodwood	Belair Line	5.192	Road	Public	Half Boom Flashing Lights
2	Cross Rd Unley Park	Belair Line	6.900	Road	Public	Half Boom Flashing Lights
543	Sussex Tce Hawthorn	Belair Line	7.262	Road	Public	Half Boom Flashing Lights
544	Angas Rd Hawthorn	Belair Line	8.020	Road	Public	Half Boom Flashing Lights
89	Grange Road Mitcham	Belair Line	8.390	Road	Public	Half Boom Flashing Lights
55	Wattlebury Rd Mitcham	Belair Line	8.790	Road	Public	Half Boom Flashing Lights
545	Barretts Rd Lynton	Belair Line	10.520	Road	Public	Half Boom Flashing Lights
546	Brighton Pde Coromandel	Belair Line	17.340	Road	Public	Half Boom Flashing Lights
42	Main Rd Blackwood	Belair Line	17.840	Road	Public	Half Boom Flashing Lights
1	Main Rd Glenalta	Belair Line	19.390	Road	Public	Half Boom Flashing Lights
1988	Belair station Adelaide end	Belair Line	21.450	Pedestrian	Public	Maze
1989	Belair station Belair end	Belair Line	21.570	Pedestrian	Public	Maze
967	Wilyawa (Lodge) Track	Adelaide - Wolseley	23.284	Road	Private	
968	Yulti Wirra Track	Adelaide - Wolseley	23.968	Road	Private	
969	Tilti Walking Track	Adelaide - Wolseley	25.373	Road	Private	
970	Ballast Pit Track	Adelaide - Wolseley	26.503	Road	Private	
971	Berri Werri Walking Track	Adelaide - Wolseley	27.480	Road	Private	

ALCAM ID	Road Name	Line Segment	KM	Traffic Type	Access	Control Type
973	Hi-Rail Access	Adelaide - Wolseley	30.966	Road	Private	
566	Milan Terrace / Cricklewood Rd	Adelaide - Wolseley	33.702	Road	Public	Primary Flashing Lights
567	Yatina Rd Aldgate	Adelaide - Wolseley	35.545	Road	Public	Primary Flashing Lights
568	Kain Ave Bridgewater	Adelaide - Wolseley	36.312	Road	Public	Primary Flashing Lights
569	Carey Gully Rd Bridgewater	Adelaide - Wolseley	37.161	Road	Public	Primary Flashing Lights
975	Occupational Crossing	Adelaide - Wolseley	43.496	Road	Private	
27	Spoehr Road Balhannah	Adelaide - Wolseley	43.962	Road	Public	Primary Flashing Lights
570	Onkaparinga Valley Road Balhannah	Adelaide - Wolseley	44.440	Road	Public	Half Boom Flashing Lights
976	Hi-Rail Access	Adelaide - Wolseley	45.821	Road	Private	
977	Junction Road Balhannah	Adelaide - Wolseley	45.978	Road	Public	Half Boom Flashing Lights
24	Wenzel Road Balhannah	Adelaide - Wolseley	46.579	Road	Public	Primary Flashing Lights
23	Mattner Road Balhannah	Adelaide - Wolseley	47.400	Road	Public	Primary Flashing Lights
571	Daniels Road Balhannah	Adelaide - Wolseley	48.782	Road	Private	Stop Signs
572	Altmanns Road Mt Barker	Adelaide - Wolseley	49.513	Road	Public	Primary Flashing Lights
979	Cottage Lane Mt Barker	Adelaide - Wolseley	50.245	Road	Private	Stop Signs
980	Wilhelm Road Mt Barker	Adelaide - Wolseley	51.395	Road	Private	Stop Signs
573	Norris Road Littlehampton	Adelaide - Wolseley	51.891	Road	Public	Primary Flashing Lights
981	Blakiston Road Littlehampton	Adelaide - Wolseley	52.503	Road	Public	Primary Flashing Lights
982	Woodside – Nairne Road Nairne	Adelaide - Wolseley	55.355	Road	Public	Primary Flashing Lights
983	Old Princes Hwy Nairne	Adelaide - Wolseley	55.814	Road	Public	Primary Flashing Lights
984	Jeffery Street Nairne	Adelaide - Wolseley	56.310	Road	Public	Primary Flashing Lights

ALCAM ID	Road Name	Line Segment	KM	Traffic Type	Access	Control Type
985	Bartley Street Nairne	Adelaide-Wolseley	56.815	Road	Public	Primary Flashing Lights
987	Ironstone Range Road Petwood	Adelaide - Wolseley	63.490	Road	Public	Primary Flashing Lights
78	Back Callington Road	Adelaide - Wolseley	68.024	Road	Public	Stop Signs
60	Eclair Mine Road	Adelaide - Wolseley	68.480	Road	Public	Stop Signs
80	Callington RS Road	Adelaide - Wolseley	69.560	Road	Public	Half Boom Flashing Lights
989	Private Road	Adelaide - Wolseley	70.134	Road	Private	
79	Callington Road Callington	Adelaide - Wolseley	72.507	Road	Public	Primary Flashing Lights
990	East Tce Callington	Adelaide - Wolseley	73.173	Road	Public	Primary Flashing Lights
991	Jaensch Road Callington	Adelaide - Wolseley	75.347	Road	Public	Stop Signs
992	Ferries - McDonald Road Monarto South	Adelaide - Wolseley	82.425	Road	Public	Primary Flashing Lights
993	Old Princes Highway Monarto South	Adelaide - Wolseley	84.676	Road	Public	Primary Flashing Lights
994	Maurice Rd	Adelaide - Wolseley	89.024	Road	Public	Stop Signs
995	Private Road	Adelaide - Wolseley	90.275	Road	Private	Stop Signs
996	Netley Rd Murray Bridge	Adelaide - Wolseley	93.019	Road	Public	Stop Signs
997	Cypress Terrace Murray Bridge	Adelaide - Wolseley	94.467	Road	Public	Primary Flashing Lights
48	Mannum Road Murray Bridge	Adelaide - Wolseley	95.657	Road	Public	Primary Flashing Lights
998	Private Road	Adelaide - Wolseley	101.142	Road	Private	Stop Signs
999	Pfeiler Road	Adelaide - Wolseley	101.670	Road	Public	Stop Signs
1000	Orland Road Monteith	Adelaide - Wolseley	110.250	Road	Public	Stop Signs
1001	Westbrook Road Taillem Bend	Adelaide - Wolseley	114.759	Road	Public	Primary Flashing Lights
1002	Private Road Taillem Bend	Adelaide - Wolseley	117.191	Road	Private	
84	North Terrace Taillem Bend	Adelaide - Wolseley	119.892	Road	Public	Half Boom Flashing Lights

ALCAM ID	Road Name	Line Segment	KM	Traffic Type	Access	Control Type
1003	Trevena Road Tailem Bend	Adelaide - Wolseley	120.760	Road	Public	Half Boom Flashing Lights
1004	Magpie Drive Tailem Bend	Adelaide - Wolseley	122.335	Road	Public	Half Boom Flashing Lights
1005	Unknown Road	Adelaide - Wolseley	127.137	Road	Private	
1006	Private Road	Adelaide - Wolseley	132.611	Road	Private	
1007	Johncock Road Cooke Plains	Adelaide - Wolseley	134.431	Road	Public	Stop Signs
81	Darwin Road Cooke Plains	Adelaide - Wolseley	137.094	Road	Public	Primary Flashing Lights
1008	Hender Road Cooke Plains	Adelaide - Wolseley	140.196	Road	Public	Stop Signs
1009	Ifould Road	Adelaide - Wolseley	142.587	Road	Public	Stop Signs
1010	Hannah Well Road Coomandook	Adelaide - Wolseley	150.209	Road	Public	Primary Flashing Lights
1011	Williams Road Coomandook	Adelaide - Wolseley	153.960	Road	Public	Stop Signs
1012	Private Road	Adelaide - Wolseley	156.686	Road	Private	
1013	Yumali Road Yumali	Adelaide - Wolseley	160.420	Road	Public	Primary Flashing Lights
1014	Private Road	Adelaide - Wolseley	162.541	Road	Private	Stop Signs
1015	Frost Rd Ki Ki	Adelaide - Wolseley	168.323	Road	Public	Stop Signs
1016	Nicholson Road Coonalpyn	Adelaide - Wolseley	175.788	Road	Public	Stop Signs
1017	Private Road Coonalpyn	Adelaide - Wolseley	179.495	Road	Private	Stop Signs
1018	Railway Terrace (North) Coonalpyn	Adelaide - Wolseley	182.869	Road	Public	Primary Flashing Lights
1019	Railway Terrace (South) Coonalpyn	Adelaide - Wolseley	184.141	Road	Public	Stop Signs
1020	Jacobs Rd Coonalpyn	Adelaide - Wolseley	187.208	Road	Public	Stop Signs
1021	Todd Road	Adelaide - Wolseley	191.481	Road	Public	Stop Signs
1022	Boothby Road Culburra	Adelaide - Wolseley	199.438	Road	Public	Stop Signs
1023	Jaeschke Road Culburra	Adelaide - Wolseley	201.370	Road	Public	Stop Signs

ALCAM ID	Road Name	Line Segment	KM	Traffic Type	Access	Control Type
1024	Fulwood Avenue Tintinara	Adelaide - Wolseley	211.052	Road	Public	Primary Flashing Lights
1025	Kings Road Tintinara	Adelaide - Wolseley	212.551	Road	Public	Half Boom Flashing Lights
1026	Private Road	Adelaide - Wolseley	217.977	Road	Private	
1027	Golf Club Road Kumorna	Adelaide - Wolseley	221.185	Road	Public	Stop Signs
1028	Private Road	Adelaide - Wolseley	222.879	Road	Private	No Control
1029	Coombe Road Coombe	Adelaide - Wolseley	225.130	Road	Public	Stop Signs
1030	Siding Road Coombe	Adelaide - Wolseley	228.783	Road	Public	Stop Signs
1031	Snoswell Road Coombe	Adelaide - Wolseley	232.896	Road	Public	Stop Signs
1032	Private Road	Adelaide - Wolseley	236.676	Road	Private	
1033	Banealla East Road Banealla	Adelaide - Wolseley	241.179	Road	Public	Stop Signs
1034	Hender Rd	Adelaide - Wolseley	245.821	Road	Private	Stop Signs
1035	Emu Flat Rd Keith	Adelaide - Wolseley	247.954	Road	Public	Half Boom Flashing Lights
47	Densley Road Keith	Adelaide - Wolseley	249.302	Road	Public	Primary Flashing Lights
1036	Zwars Road Keith	Adelaide - Wolseley	250.695	Road	Public	Stop Signs
1037	Unknown Road Name	Adelaide - Wolseley	252.669	Road	Public	Stop Signs
1038	Eckerts Rd Brimbago	Adelaide - Wolseley	261.616	Road	Public	Stop Signs
1039	Unknown Road Name	Adelaide - Wolseley	264.050	Road	Private	Stop Signs
1040	Unknown Road Name	Adelaide - Wolseley	267.670	Road	Private	Stop Signs
1041	Wirrega North Road Wirrega	Adelaide - Wolseley	273.666	Road	Public	Primary Flashing Lights
1042	Ngarkat Highway Cannawigara	Adelaide - Wolseley	282.565	Road	Public	Primary Flashing Lights
1043	Unknown Road Name	Adelaide - Wolseley	285.018	Road	Public	Stop Signs
1044	Barts Pastoral	Adelaide - Wolseley	285.776	Road	Private	Stop Signs
1045	Aerodrome Road Bordertown	Adelaide - Wolseley	288.277	Road	Public	Stop Signs

ALCAM ID	Road Name	Line Segment	KM	Traffic Type	Access	Control Type
1046	Golf Course Road Bordertown	Adelaide - Wolseley	293.216	Road	Public	Primary Flashing Lights
1047	North Terrace Bordertown	Adelaide - Wolseley	293.661	Road	Public	Primary Flashing Lights
1048	Creecoona Terrace Bordertown	Adelaide - Wolseley	295.023	Road	Public	Half Boom Flashing Lights
1049	Sullivans Road	Adelaide - Wolseley	298.946	Road	Public	Stop Signs (duplicated)
49	Tatiara Road	Adelaide - Wolseley	300.210	Road	Public	Half Boom Flashing Lights
1050	Reschkes Crossing	Adelaide - Wolseley	304.291	Road	Public	Give Way Signs
1051	Private Road Wolseley	Adelaide - Wolseley	305.168	Road	Private	
1052	West Terrace # Wolseley	Adelaide - Wolseley	307.315	Road	Public	Half Boom Flashing Lights
1053	Ridgway Road # Wolseley	Adelaide - Wolseley	308.210	Road	Public	Stop Signs
1054	Colwill Road # Wolseley	Adelaide - Wolseley	313.120	Road	Public	Give Way Signs

# These level crossings are geographically in the State of South Australia, however they are within the jurisdiction of Vic North West Control Board.

## 1.8 Emergency Local Releases

All yards with Goods Loops have a yard release which can be accessed by train crews if the outlying switch locks will not release.

## 1.9 Maximum Permanent Speeds and Permanent Speed Restrictions

Refer the Route Access Standard - Defined Interstate Rail Network Section Pages D3 for all speed information.

## 1.10 Maximum Train Length

The maximum train length is 1800 metres.

## 1.11 Structure Clearances

Refer Route Access Standards for Rolling Stock Outlines.

.KM	LOCATION	TYPE
0.800	Hilton Rd bridge	Concrete abutment
3.400	Passenger Terminal Rd. bridge.	Reinforced earth
3.800	Keswick footbridge	Steel columns
3.850	Anzac Highway bridge.	Conc. column/abutment
4.900	Tram Bridge Goodwood	Steel columns
9.800	Springbank Rd. overbridge	
12.071	Sleeps Hill tunnel	Masonry
14.100	Eden Hills overway bridge	Steel columns
14.896	Brickworks tunnel	Masonry
16.500	Coromandel footbridge	Steel columns
17.700	Coromandel Pde. o/w bridge	Steel columns
20.500	Pinera Main Rd. o/w bridge	
21.300	Upper Sturt Rd. o/w bridge	
21.800	National Park entrance o/w bridge	Steel columns
24.629	National Park Tunnel	Masonry
27.039	Long Gully tunnel	Masonry
29.408	Upper Sturt tunnel	Masonry
31.000	Mt Lofty footbridge	Steel columns
31.000	Avenue Rd o/w bridge	
38.400	Onkaparinga Rd. o/w bridge	
38.440	SE Freeway up track	Concrete columns
38.470	SE Freeway down track	Concrete columns
39.850	Ambleside tunnel	Masonry
41.200	Beaumonts Rd. o/w bridge	
96.847	Murray Bridge Tunnel	Concrete
97.070	Murray River bridge.	Steel truss
102.950	Princess Hwy o/w bridge	Concrete column
123.850	Highway Overpass	
217.000	Highway Overpass	Concrete column
293.000	Tolmer Overpass	

## 1.12 Tunnels

NAME	FROM KM	TO KM
<b>ADELAIDE TO WOLSELEY</b>		
Sleep's Hill Tunnel	12.071	12.809
Eden Hills Tunnel	14.896	15.052
National Park Tunnel	24.629	24.822
Long Gully Tunnel	27.039	27.234
Upper Sturt Tunnel	29.408	29.605
Ambleside Tunnel	39.850	40.022
Murray Bridge Tunnel	96.847	96.936

## 1.13 Communications

The National Train Communications System (NTCS) is the Primary communications system for the ARTC controlled rail network and is mandatory for all operators to operate their locomotives using a NTCS ICE (In-Cabin Equipment) Unit as the primary communications device.

A standard ICE unit is installed with the following components

- Telstra NextG™ transceiver
- Iridium satellite transceiver
- UHF Radio
- GPS

The ICE unit primary communications is via the Telstra NextG™ and backup communications is provided via the Iridium Satellite network. The ICE unit will automatically call the Mile End network control centre when the routine and emergency buttons are pressed.

The UHF radio is used for the Local Train Radio - Train to Train and Train to Track Side communications.

UHF Local Train Radio (LTR) frequency details

Frequency: 418.425 MHz (UHF),

Bandwidth: 12.5 KHz,

EIRP: 41W (remote/low density areas), 8.3W (medium & high density areas)

Tx CTCSS: 162.2 Hz

Rx CTCSS: 162.2 Hz

Selcall: disabled

Alternate Communication for this section is by mobile or satellite phones.

The UHF radio transmitter is located at Mount Lofty.

### 1.14 Wayside Monitoring Systems

Heathfield - Rail Squeal Acoustic Detector at 32.874km

Monarto South – Truck Bogie Optical Geometry Inspection Hunting Detector (TBOGI-HD) at 82.175km on the main line.

### 1.15 Ruling Gradients

Mile End to Tailern Bend	1 in 45
Tailern Bend to Wolseley	1 in 80

### 1.16 Curve and Gradient Data

For all Curve and Gradient data, refer to the ARTC Internet.

[https://extranet.artc.com.au/eng\\_network-config\\_cd.html](https://extranet.artc.com.au/eng_network-config_cd.html)

## 1.17 Drawing Legend

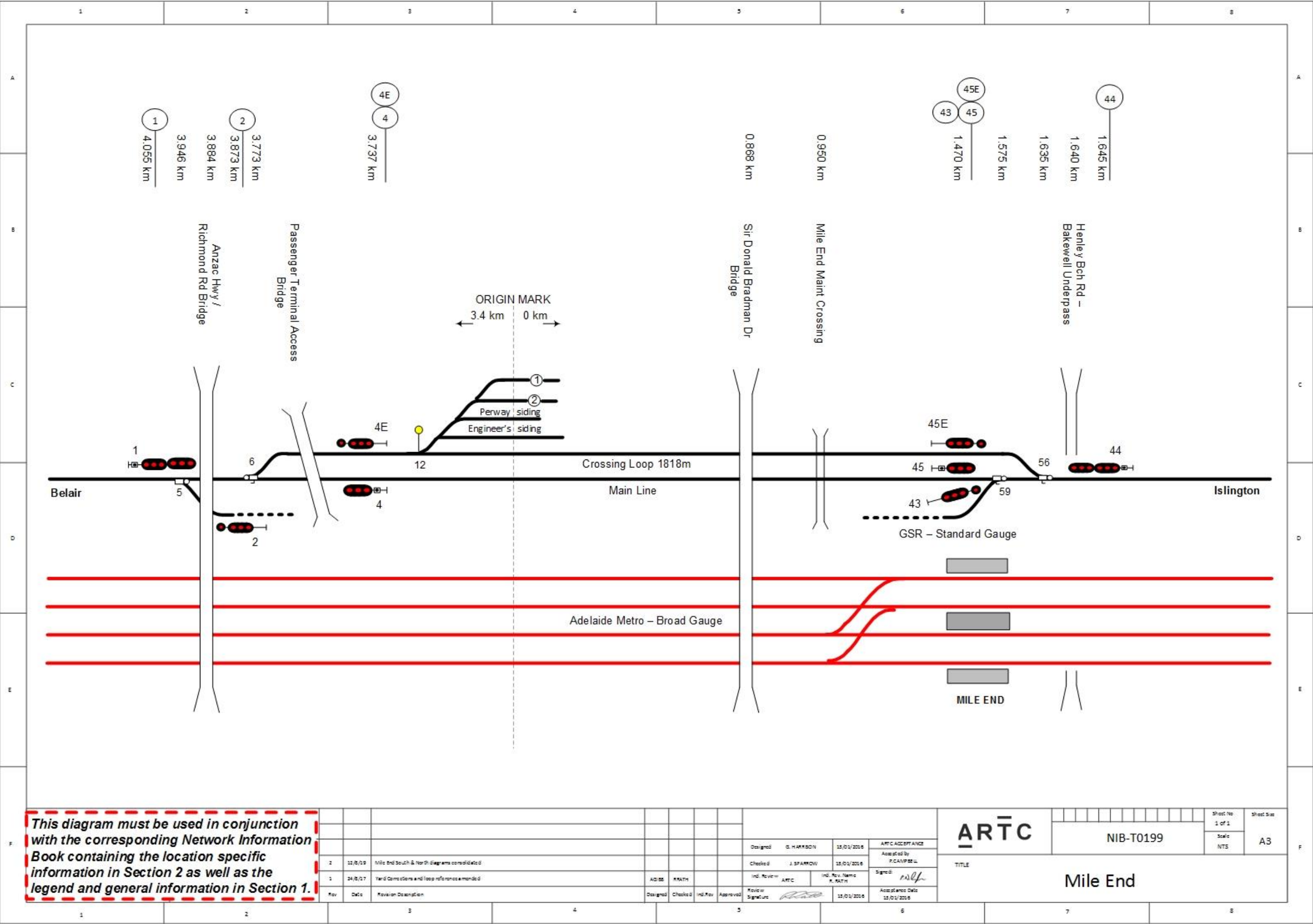
	Standard gauge track		Dual gauge track
	Broad gauge track		Crossover
	Advisory Sign or Location Sign		Tunnel
	Pedestrian Crossing		Passive Protection Level Crossing
	Active Protection Level Crossing – Flashing Lights		Active Protection Level Crossing – Lights and Boom
	Bridge or Overpass		Underpass
	River/Creek or Significant river bridge or Viaduct		Station or Platform
	Derail		Dual Control Motorised Points
	Point Indicator		Mechanical Frame
	Absolute Signals (Absolute signals in Victoria containing a 'P' on the name plate are co-acting signals)		
	Permissive Signals		Signal number reference
	Dwarf Signals		Banner Indicator
	Overheight Detectors		Wayside Equipment

## 2 Locations and Sections Information

### 2.1 Mile End (MED)

The South CTC board boundary is Sig 4 & 4E at Mile End 3.737km.

Refer Network Information Book OGW-30-08 Adelaide Metro – Mile End (inclusive) to Dry Creek (inclusive) for information pertaining to Mile End.



### 2.1.1 Mile End – Goodwood – Belair Section

Adjacent lines:

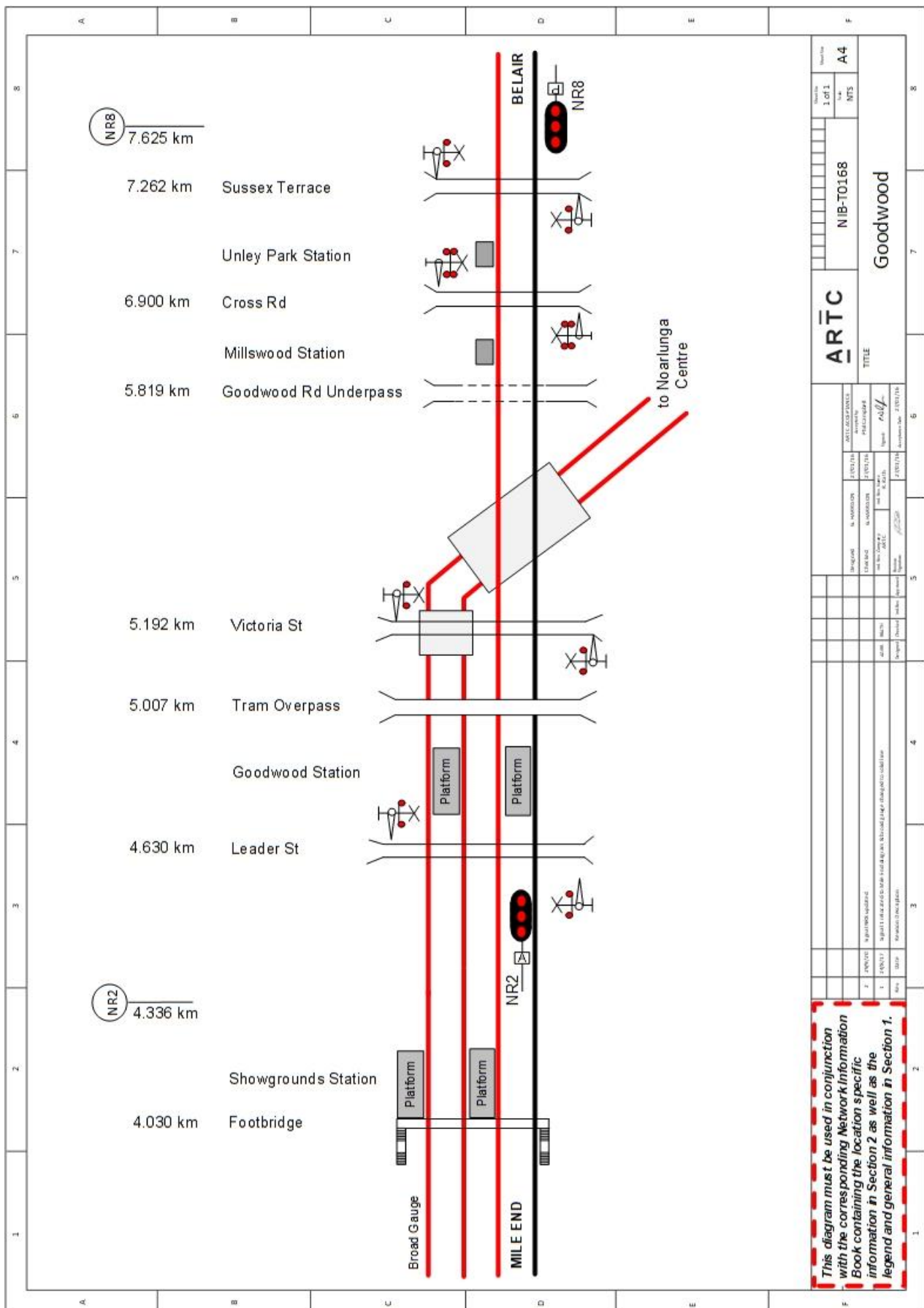
Between Mile End and Belair the Standard gauge track is parallel and adjacent to the Keolis Downer broad gauge to Belair. The level crossings are all common to both tracks and so any signal or level crossing operating faults are reported to the Keolis Downer Signal Maintainers whose job it is to fix them.

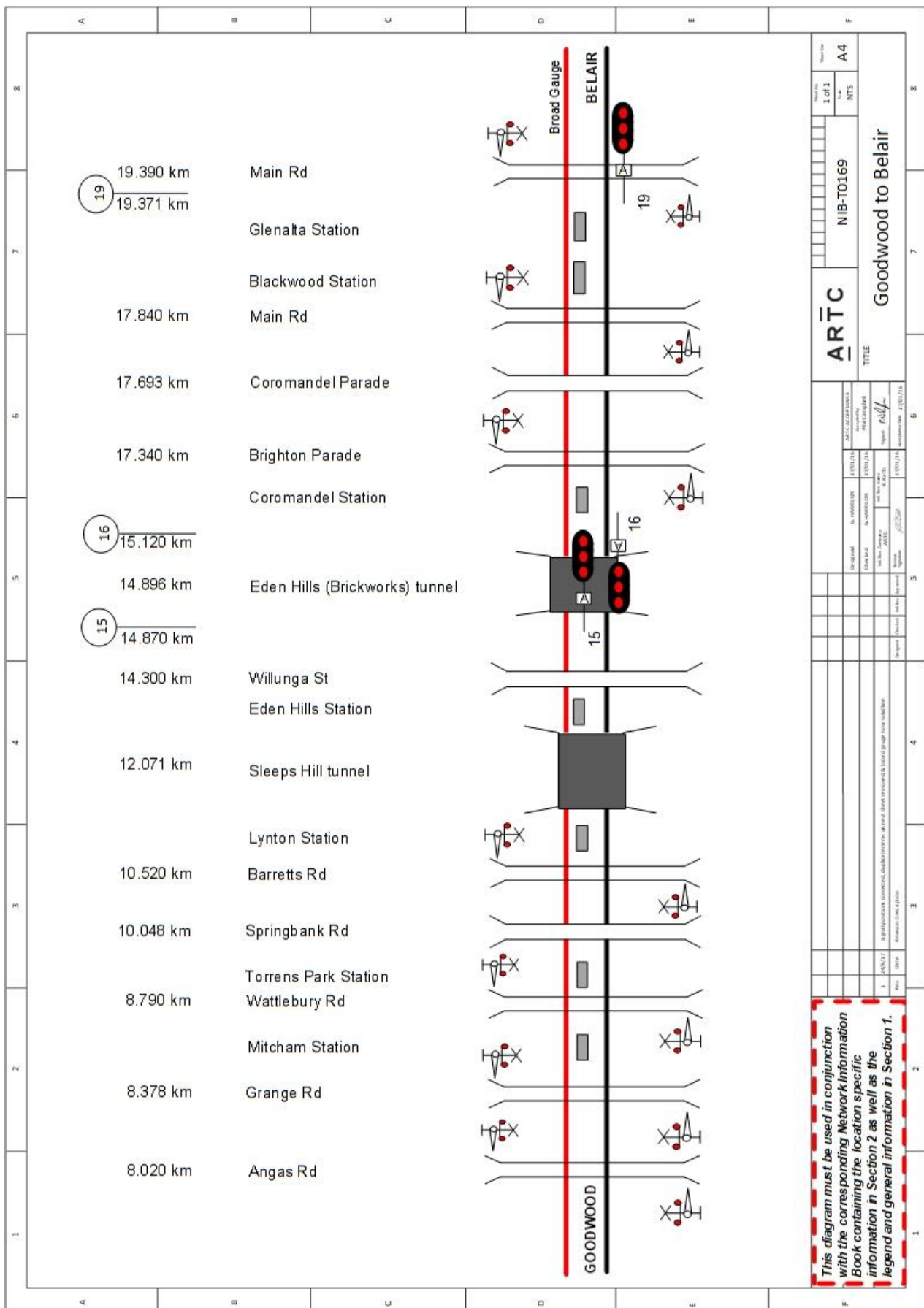
Because the broad and standard tracks are so close together, it is imperative that any incident that could possibly cause fouling or damage to the other track be reported as soon as possible to Keolis Downer Train Control via the emergency phone. If a train crew report having lost their air it could mean that a vehicle has derailed and is fouling the adjoining track. Also a track misalignment like a heat buckle could reduce the distance to the adjacent track and cause a danger of fouling.

Track force working Mile End to Belair (see Safety Interface Agreement IA4012)

Track force working on either the broad or standard gauge tracks must be undertaken in compliance with the track force working procedures of the track owner concerned, but if the work is to intrude closer than two metres from the other track then the permission of the controller in charge of the other track must be obtained and all requirements adhered to.

There are a series of footbridges for pedestrian access to the stations between Mile End to Belair.





## 2.2 Belair (BEL)

Standing Room:

- 1543m

Goods Siding:

- No

Local Control Panel:

- In section of Station – no access for train crews

Crank Handles:

- No – Dual Control Point Machines

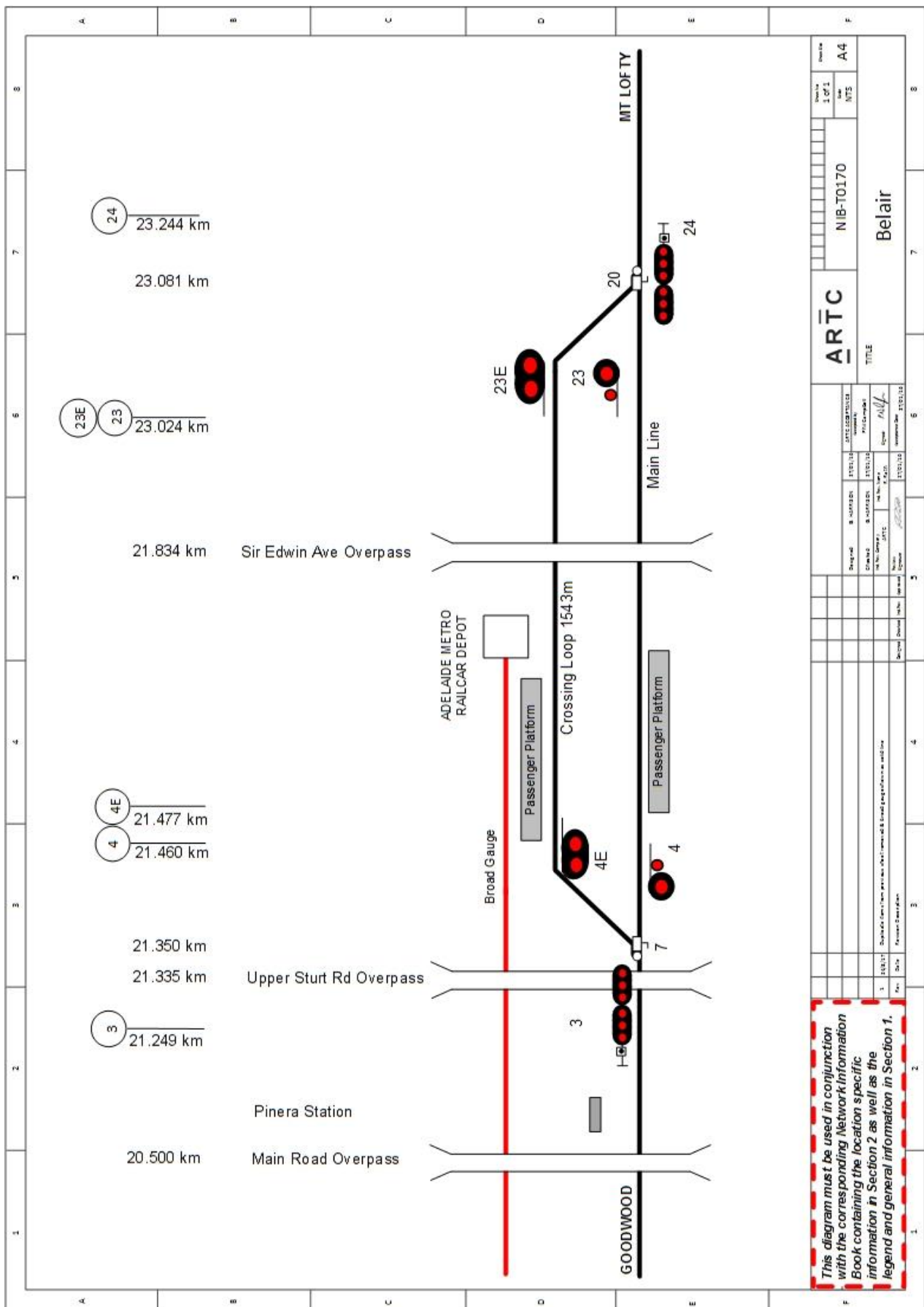
Other Information:

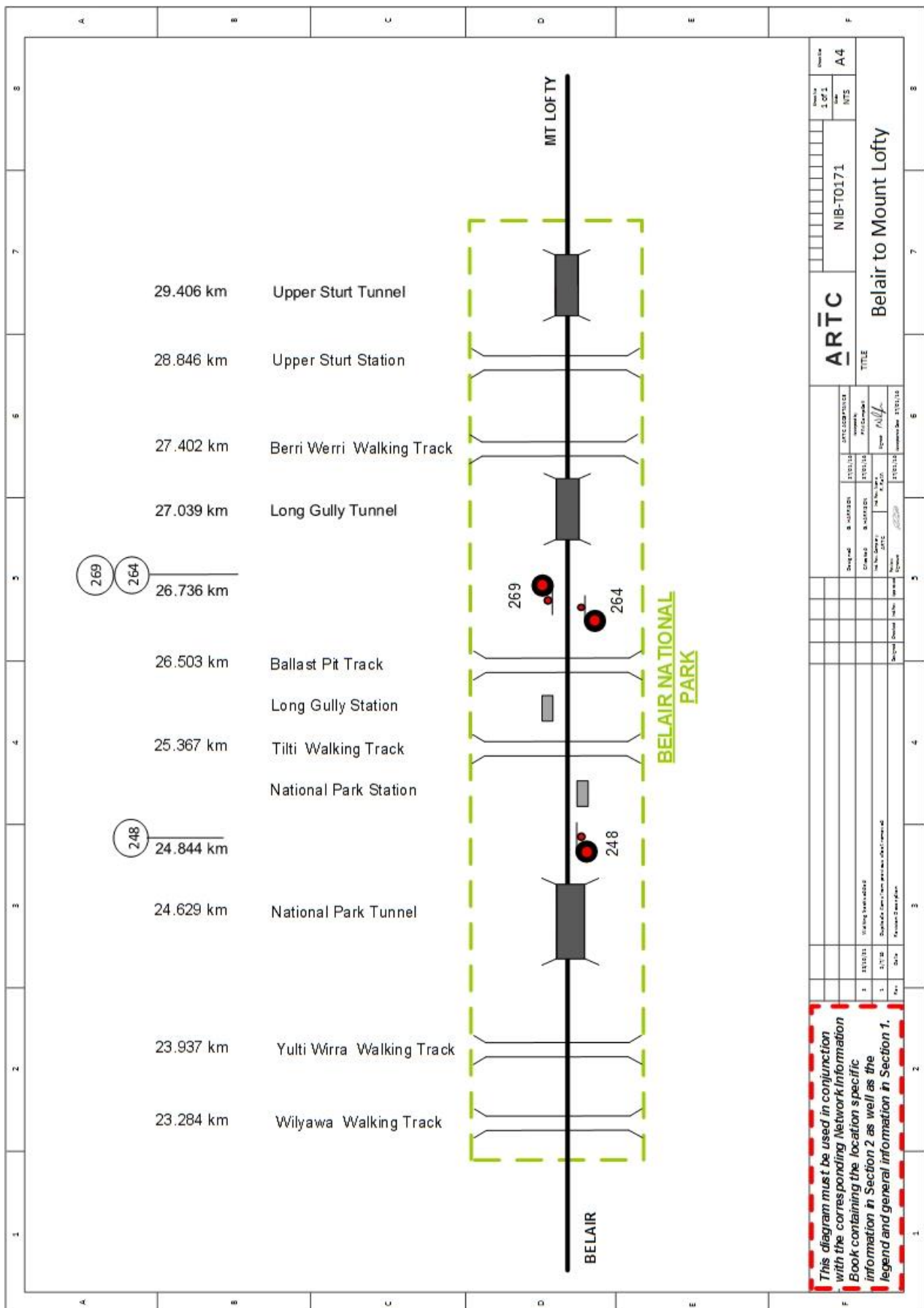
### **Tailem Bend bound trains**

- When held at Belair should pull right up to the signal to avoid complaints of noise and fumes in local houses especially at night.

At the MED end of the yard adjacent to the crossing loop is the Keolis Downer railcar depot.

There is a pedestrian walkway at the MED end, which crosses both main line and crossing loop. Large trains will occasionally block this when held at Belair.





## 2.3 Mount Lofty (MTL)

Standing Room:

- 642m (crossing loop)
- 639m (main line)

Goods Siding:

- Yes 220 metres long.

Local Control Panel:

- Local control panel within Signal Equipment Room (SER) – no access for train crews

Crank Handles:

- No- Dual Control Point Machines.

Other Information:

The highest point on the route is roughly in the middle of the yard, with a steep up grade into the yard from both ends.

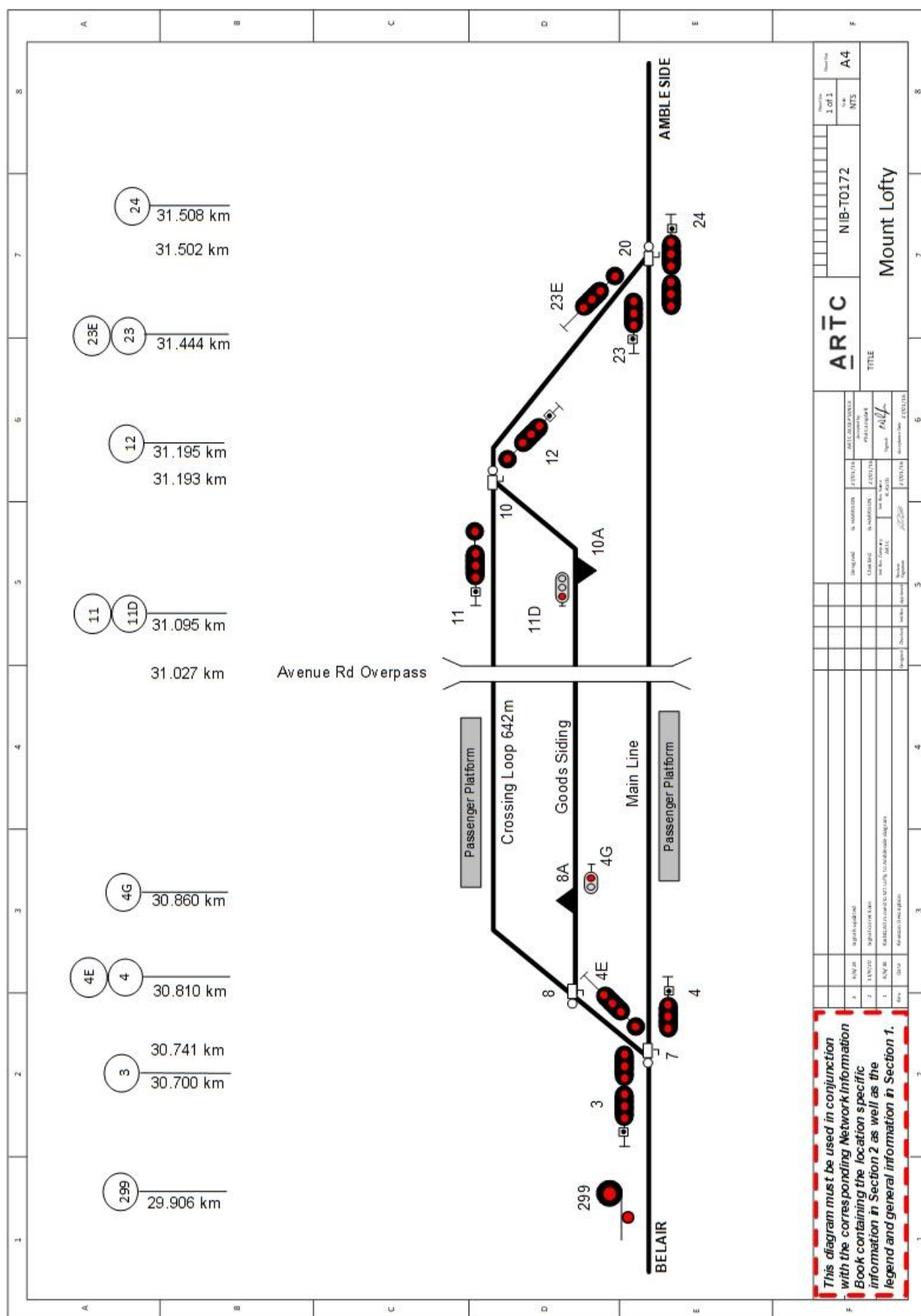
Mount Lofty is unique in having the goods siding located between the mainline and crossing loop, access to which is controlled remotely by the train controller. This goods siding is used for stabling track machines and also for detaching disabled vehicles from trains. The track machines should be stabled in the middle of the siding to allow emergency detaches to be made.

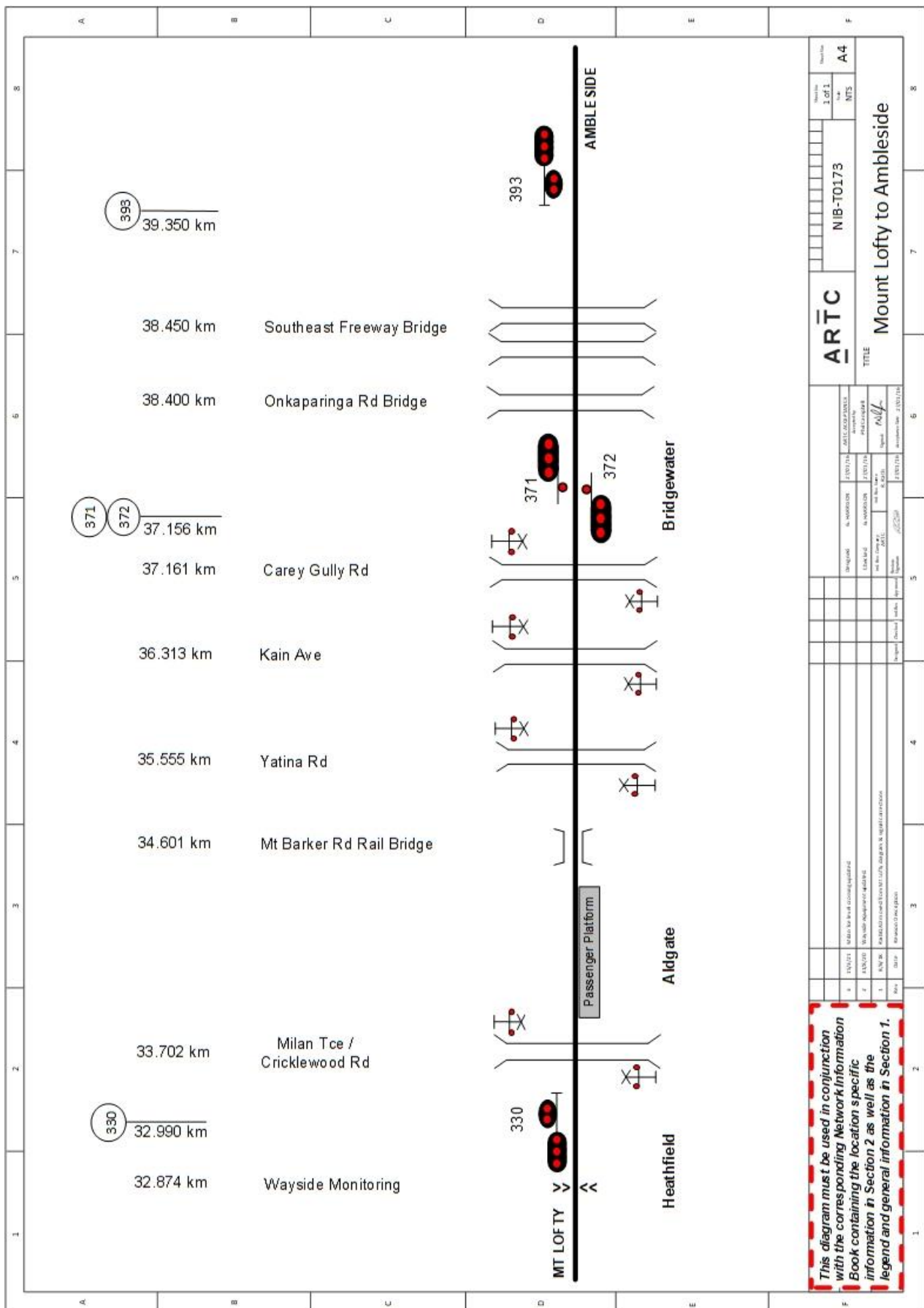
There are absolute signals facing each way part way along the crossing loop and both the DOWN direction signal (#11) and the UP direction signal (#12) have a low speed indication.

Requirements for opposing Train Movement protection:

- Movement from 3 to 23 signal will require 20 points reversed if 23 is at stop.
- Movement from 3 to 23E signal via 11 signal will require 20 points normal if 23E is at stop
- Movement from 24 to 4 signal will require 7 points reversed if 4 is at stop.

Heathfield 32.874 km Rail Squeal Acoustic Detector wayside device is installed.





## 2.4 Ambleside (AMB)

Standing Room:

- 1850m (minimum)

Goods Siding:

- No

Local Control Panel:

- No. Local Control via laptop only.

Crank Handles:

- No. Dual control point machines

Other Information:

Onkaparinga Valley Road is in the Ambleside to Balhannah section only 560m from 24 Signal. Do not block.

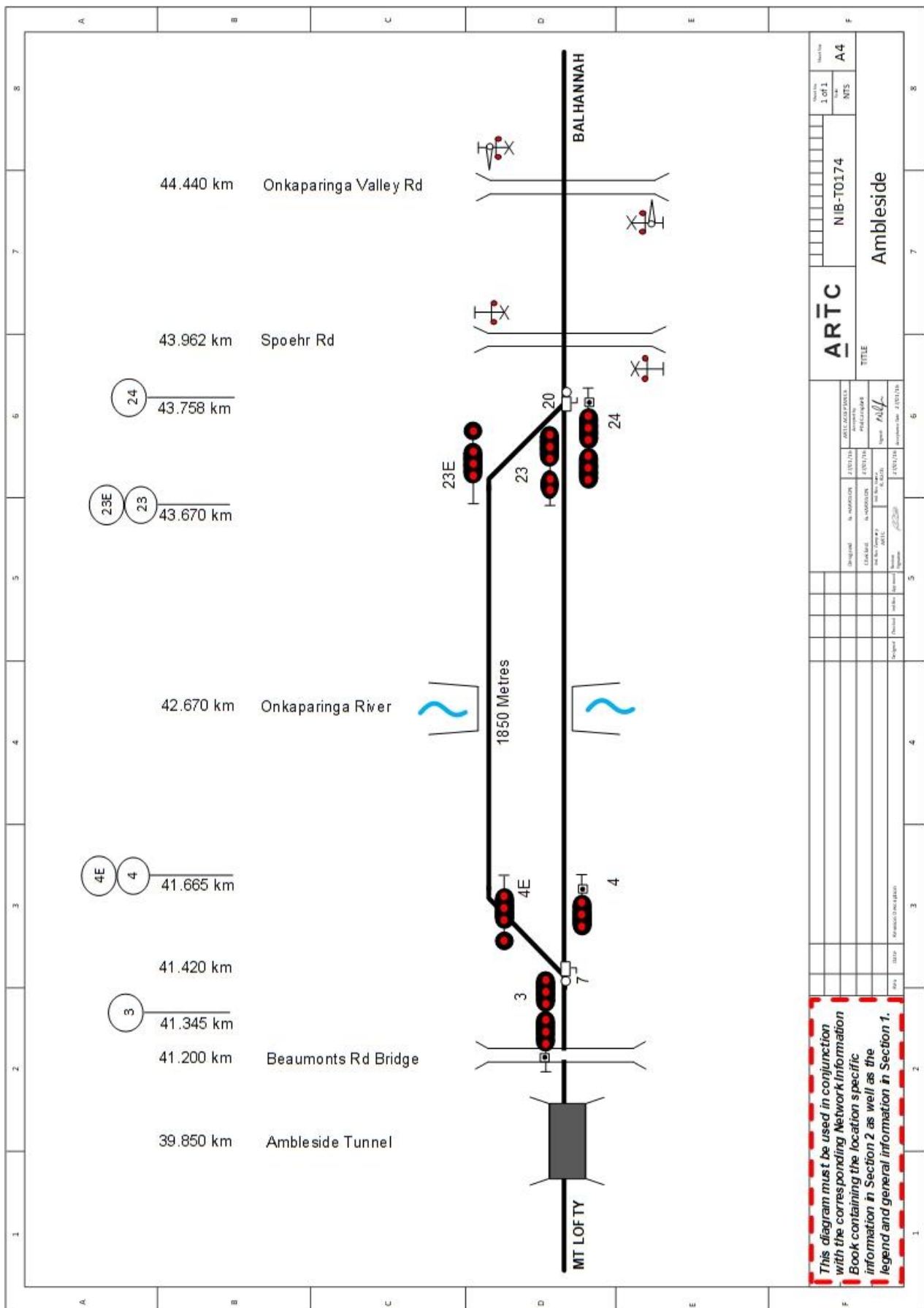
- Count down boards have been commissioned approaching 4, 4E, 23 and 23E signals to assist train crews.
- Spoehr Road has been updated to a Predictor crossing for up train movements. For Down Train movements, the Crossing will activate prior to the Train passing Ambleside 23 or 23E Signal.
- Onkaparinga Valley Rd has been updated to a Predictor crossing

The Phoenix Screen will also display an Oil Sump alarm which will activate when excess Oil has been detected in the Sump adjacent to Onkaparinga River Bridge at 43.496 km.

When activated, the network controller is to contact the Track Maintainer to remove the excess Oil.

Signals 23 & 23E provide "Reduce to Medium Speed" indication for Balhannah when Balhannah is set for the crossing loop.

## Locations and Sections Information



## 2.5 Balhannah (BAL)

Standing Room:

- 694m

Goods Siding:

- Yes. Single ended with access from MBJ end only. 180 metres long.

Outlying Switchlock Release:

- Mounted on the outside of 10 SW Loc Hut opposite 10 points

Local Control Panel:

- Located inside 10 SW Loc Hut. No access for train crews.

Crank Handles:

- No. Dual control point machines

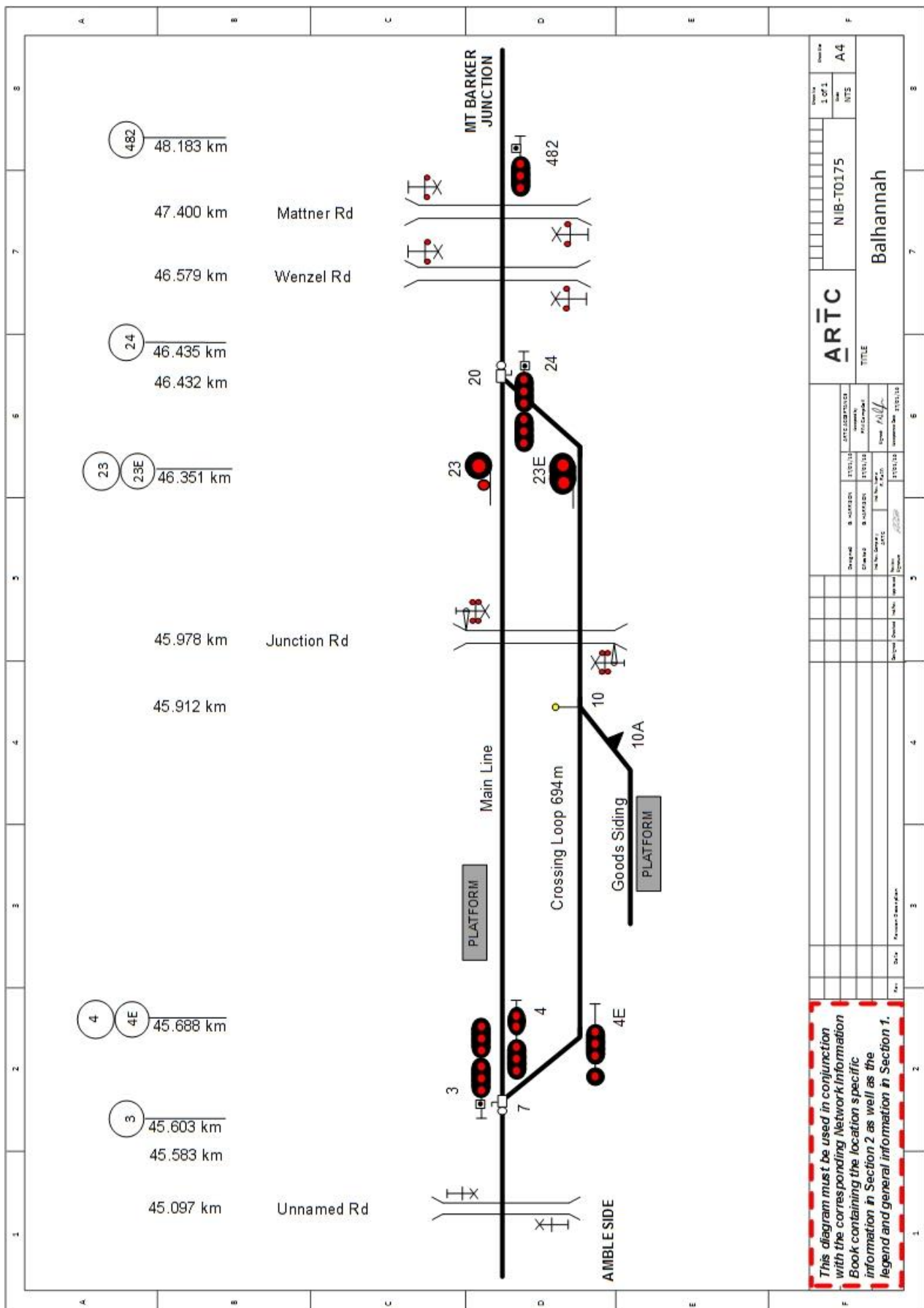
Other Information:

Junction Rd level crossing is in the middle of the yard and has active protection. When crossing trains at this location it is best to hold the first train to arrive there outside until the opposing train is nearly there to avoid lengthy blocking of the road crossing.

Woodside Rd. is in the Ambleside to Balhannah section only 1200m from 3 Signal. Do not block.

Signals 4 & 4E provide "Reduce to Medium Speed" indication for Ambleside when Ambleside is set for the crossing loop.

## Locations and Sections Information



## 2.6 Mount Barker Junction (MBJ)

Standing Room:

- 1550m

Goods Siding:

- No

Local Control Panel:

- No

Crank Handles:

- No. Dual control point machines.

Other Information:

This is a Computer Based Interlocking location. The CBI also contains the level crossing equipment.

There is a broad gauge track adjacent to and parallel with the crossing loop which serves a passenger platform. This is the Steam Ranger line to Mt Barker and Victor Harbour.

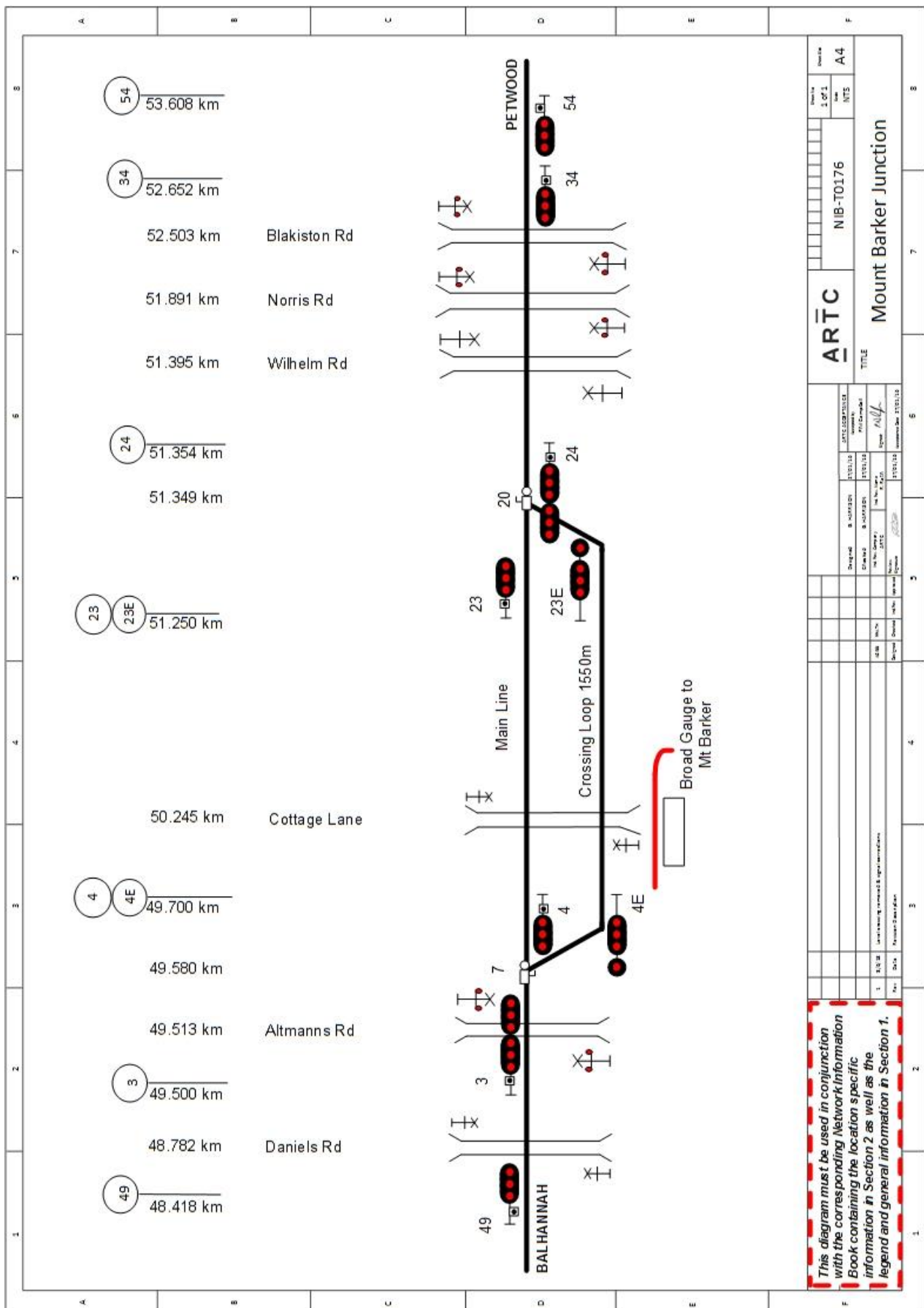
Signal 34 has been placed so that trains can be held if required and still keep Blakiston Road level crossing clear for road traffic.

### 2.6.1 Signal Failures at Balhannah End of Yard

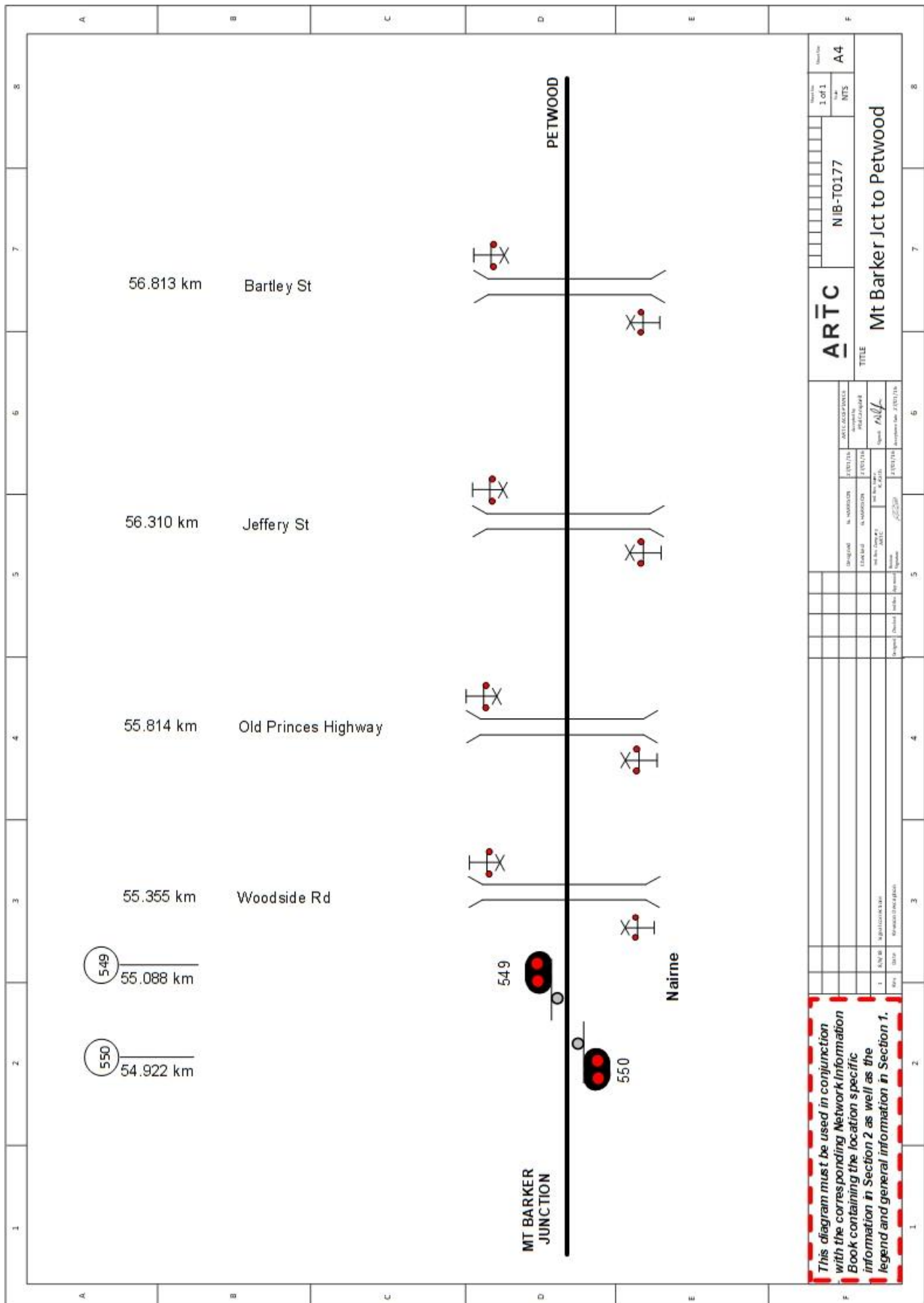
Altmanns Road level crossing is very close to Signal 3 and if Signal 3 has failed and a train is advanced past it by train authority the loco will be partly foul of the road before the crossing operates.

Prior to passing Signal 3 at stop and AFTER having been issued with a train authority, the crew must operate the test switch and activate the crossing before the train passes the signal.

Once the train is on the point circuit the crossing will operate normally so the crew can turn off the test switch and re-join the train.



## Locations and Sections Information



## 2.7 Petwood (PEW)

Standing Room:

- 1052m

Goods Siding:

- No

Local Control Panel:

- In relay room by signals at South end of yard. Accessible by train crews.

Crank Handles:

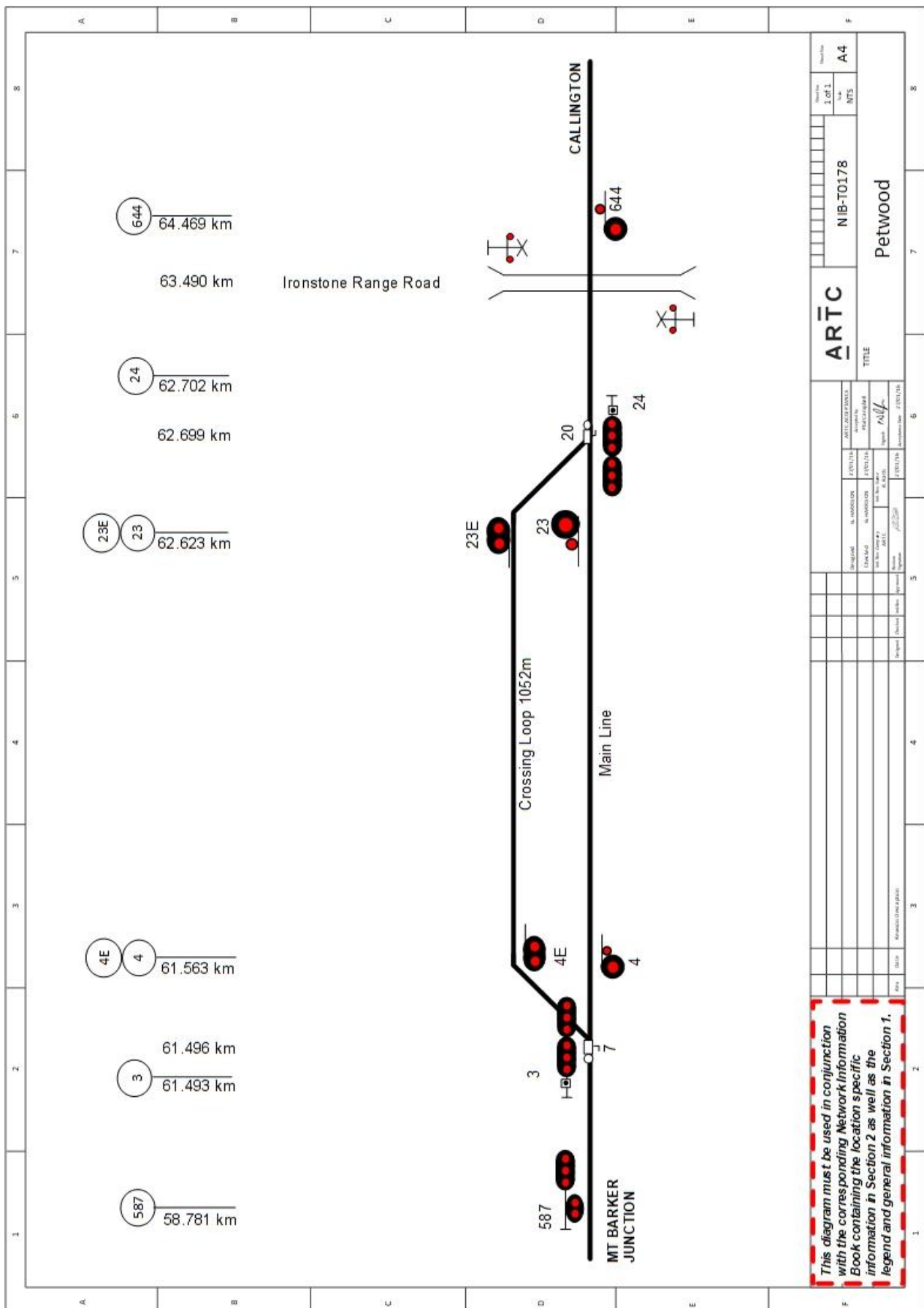
- No. Dual control point machines

Other Information:

To obtain a normal or medium speed signal into the main line or crossing loop respectively all the points must be set for a through route i.e. Either both ends set in the same position – either normal or reverse.

There is a Very Steep gradient through yard and also some curves.

## Locations and Sections Information



## 2.8 Callington (CGT)

Standing Room:

- 1850m

Goods Siding:

- Yes, siding 300m

Local Control Panel:

- No

Crank Handles:

- No, Dual Control Point Machines.

Other Information:

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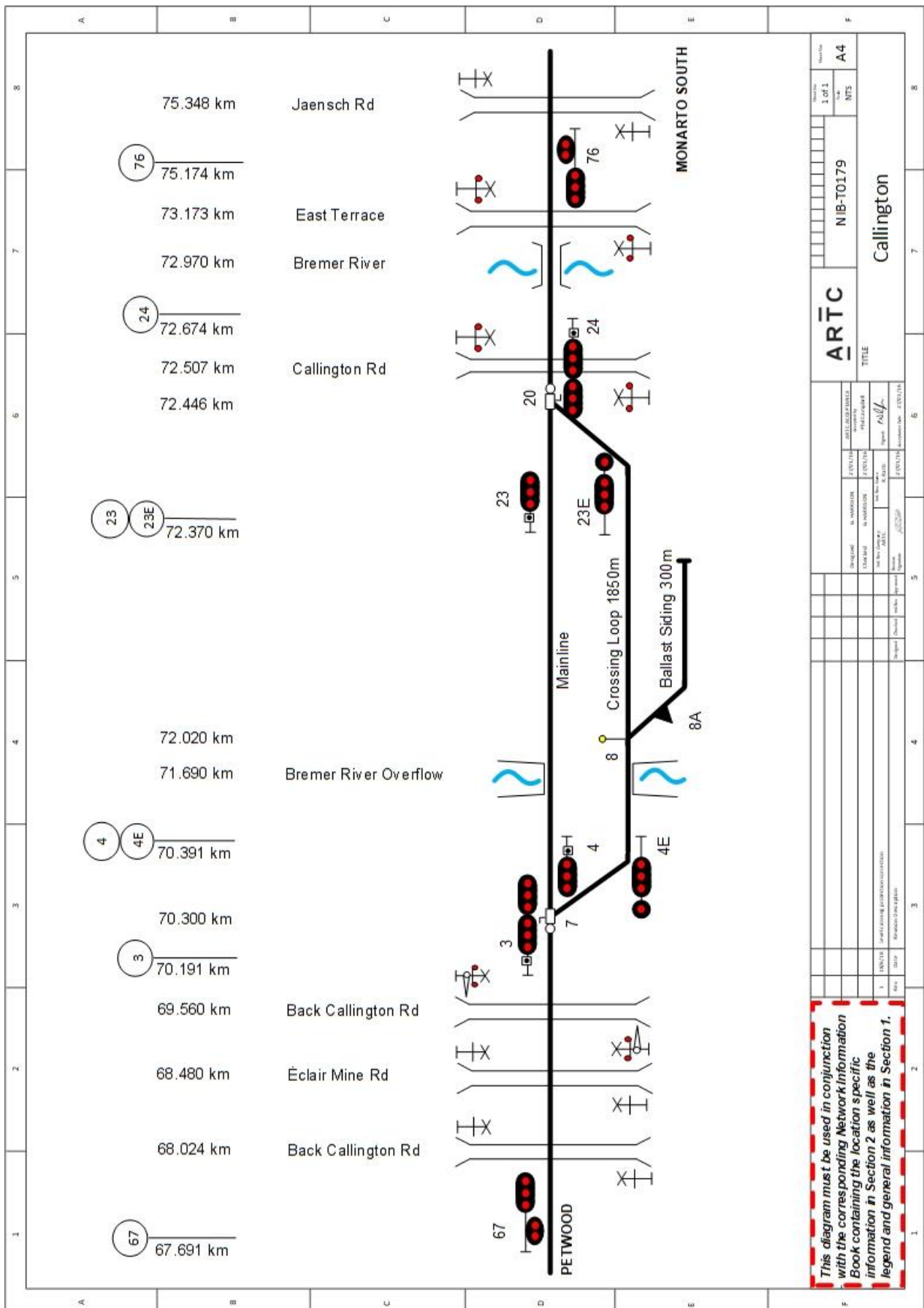
*Note: 8 points associated with the turnout leading from the Crossing Loop to the Ballast Siding at 72.020 km is an Outlying Switch Lock (OSL)..*

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The following level crossings are equipped with Grade Crossing Predictors:

- Ironstone Range Road, Petwood level crossing at 63.52 km
- East Terrace, Callington level crossing at 73.198 km

## Locations and Sections Information



## 2.9 Monarto South (MSU)

Standing Room:

- 1550m

Goods Siding:

- Yes. (Currently closed).
- Goods Loop No. 1 (into dead end) 435 metres
- Goods Loop No. 2 (into dead end) 355 metres
- Goods Loop No. 1 (in clear of crossing loop) 255 metres
- Goods Loop No. 2 (in clear of No. 1 goods loop) 225 metres
- Block 1 to No. 2 dead end 203 metres
- Block 1 to west end derail 232 metres
- Block 2 to No. 2 dead end 103 metres
- Block 2 to west end derail 132 metres
- No. 2 dead end (in clear) 91 metres
- No. 1 dead end (in clear) 30 metres

Local Control Panel:

- No- Computer based interlocking so local control by laptop only. OSL release is in box on the side of 24G Cabinet adjacent to # 22 signal.

Crank Handles:

- No. Dual control point machines

Other Information:

Signal interlocking will only allow signals to be cleared for one movement at a time over Ferries McDonald Rd.

The Apamurra line runs off the Murray Bridge End of the crossing loop. This branch line is currently closed.

Goods sidings 1 and 2 are currently booked out of service with red targets erected at switchlocks 15 & 16.

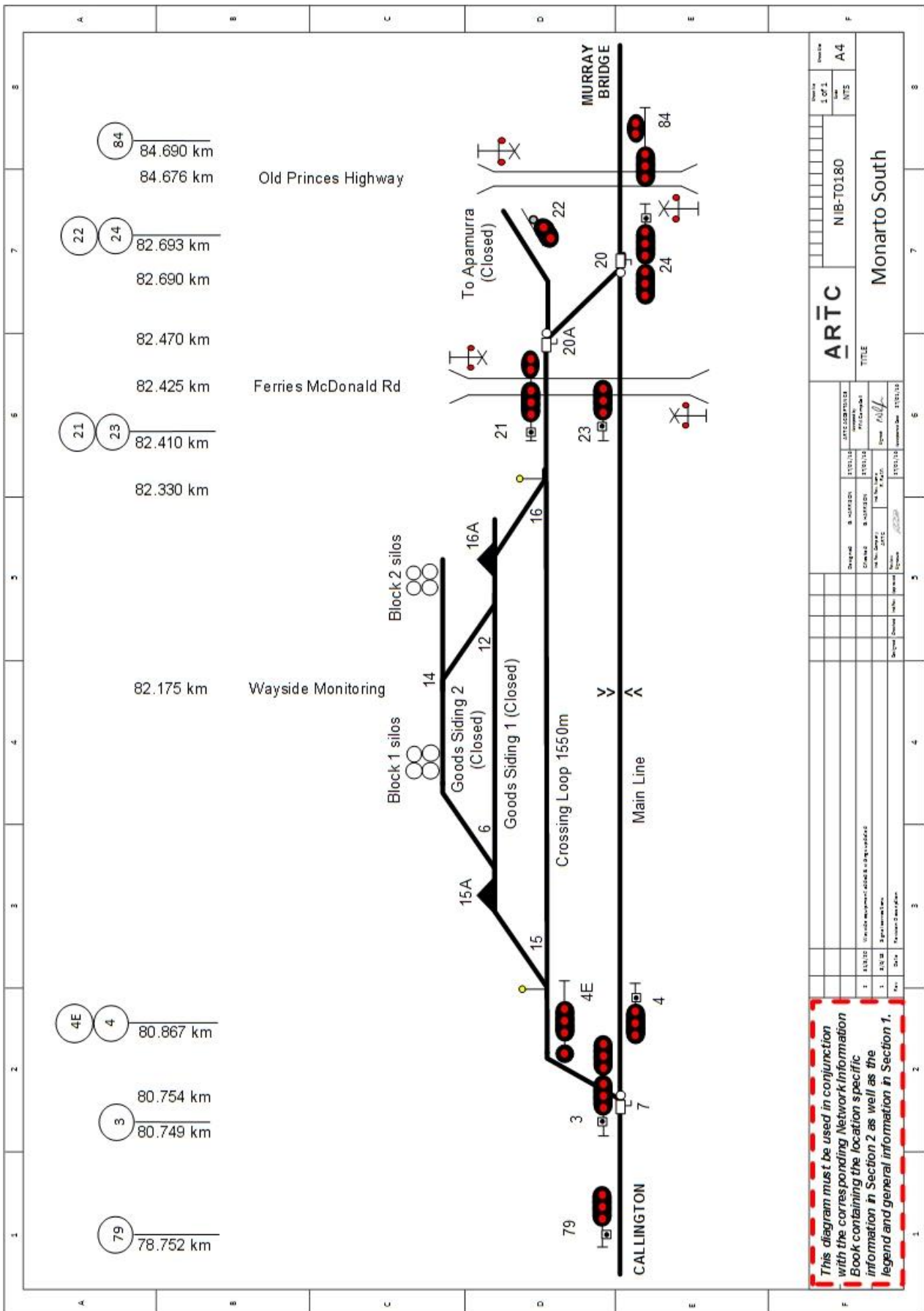
Track machines working in the Monarto South yard will do so under the direction of ARTC control.

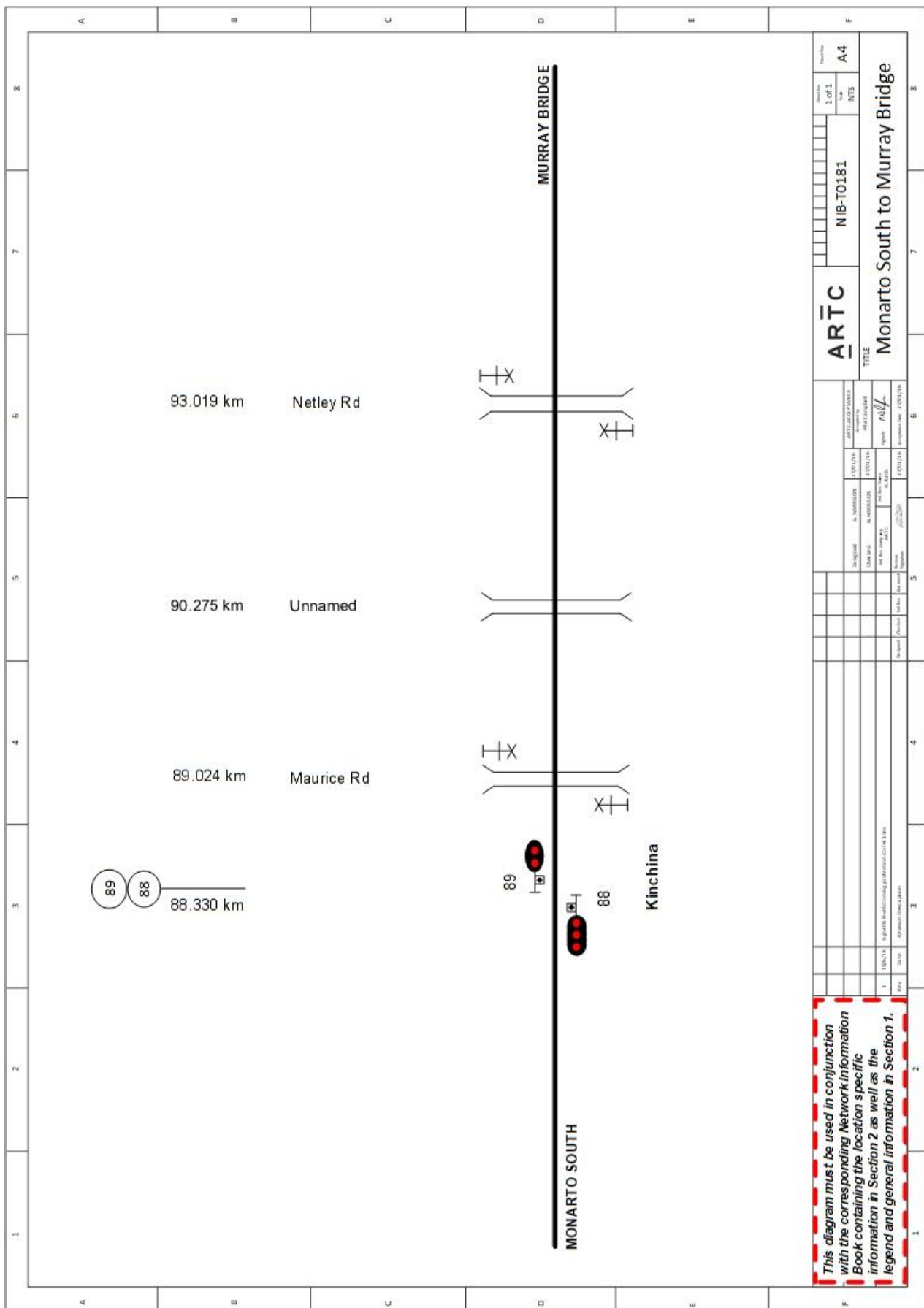
Grain:

Set up grain hoppers either side of loading chutes or as per instructions from Grain Agent. Wagons load in either direction.

Wayside Equipment:

A Truck Bogie Optical Geometry Inspection Hunting Detector (TBOGI-HD) system is installed on the main line at 82.175km.





## 2.10 Murray Bridge (MUB)

Standing Room:

- 961m

Goods Siding:

- Yes. (Leased to Aurizon. See IA 31 for details).
- Goods Loop No. 1 (clear) 206 metres
- Block 1 to dead end (via No. 1 goods loop) 253 metres
- Block 2 to dead end (via No. 1 goods loop) 303 metres

Local Control Panel:

- In station building – not available to train crews.

Crank Handles:

- No. Dual control point machines

Other Information:

OSL emergency release in grey metal box with raised “T” on door situated on station platform side front wall.

When trains are required to shunt the goods sidings they must be admitted to the crossing loop with a low speed signal. If the train is admitted to the loop with a medium speed signal then the OSLs will not release. If this occurs, either the OSL emergency release must be operated or the complete train shunted out of the crossing loop and re-admitted with a low speed signal.

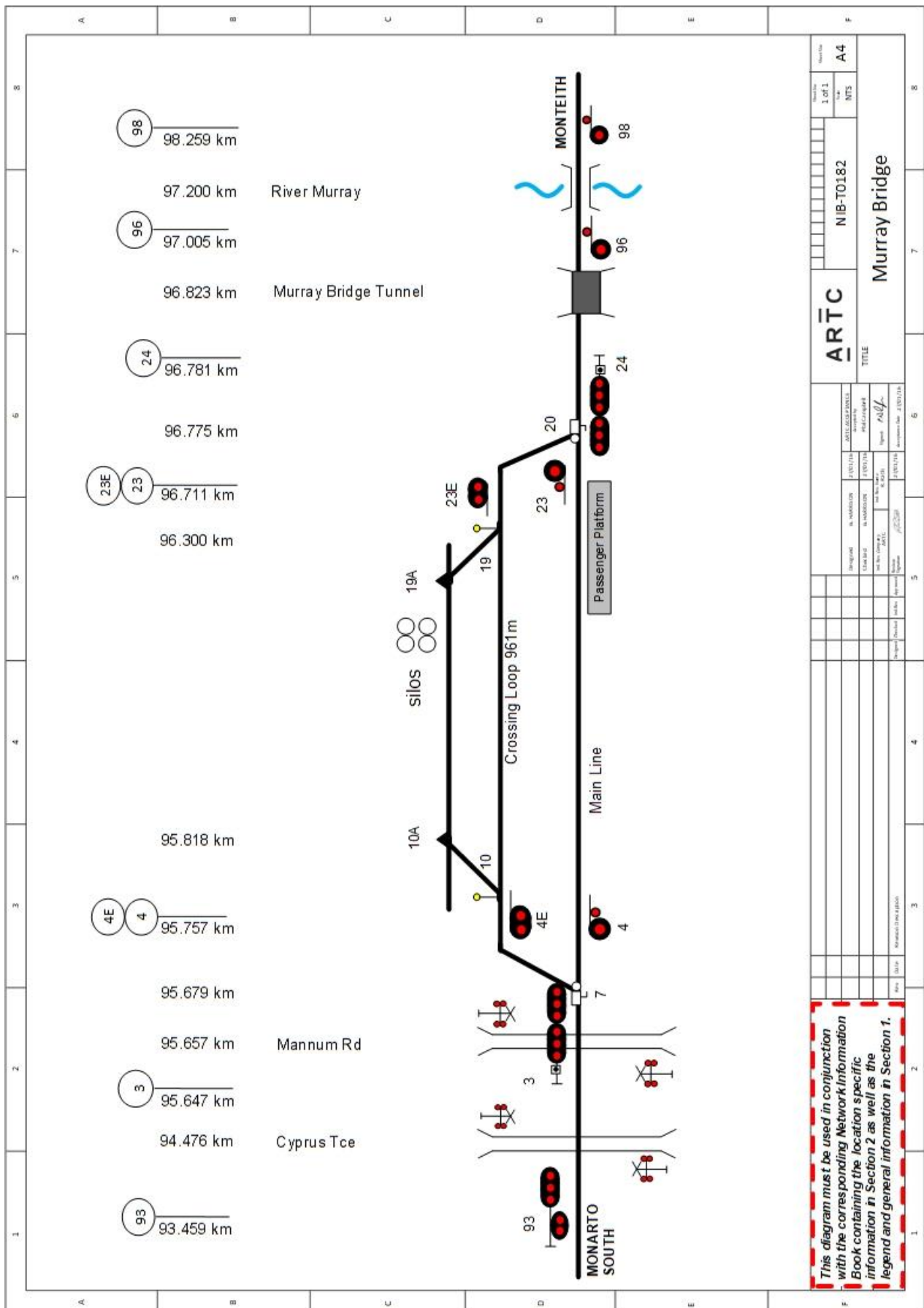
To obtain a normal or medium speed signal into the main line or crossing loop respectively all the points must be set for a through route i.e. Either both ends set in the same position – either normal or reverse.

A long passenger platform is located on main line.

Grain:

Set up grain hoppers Monarto South side of loading chutes or as per instructions from Grain Agent. Wagons load towards Taillem Bend.

Block 1 is Adelaide end, Block 2 is Melbourne end.



## **2.11 Monteith (MTO)**

Standing Room:

- 1850m (minimum)

Goods Siding:

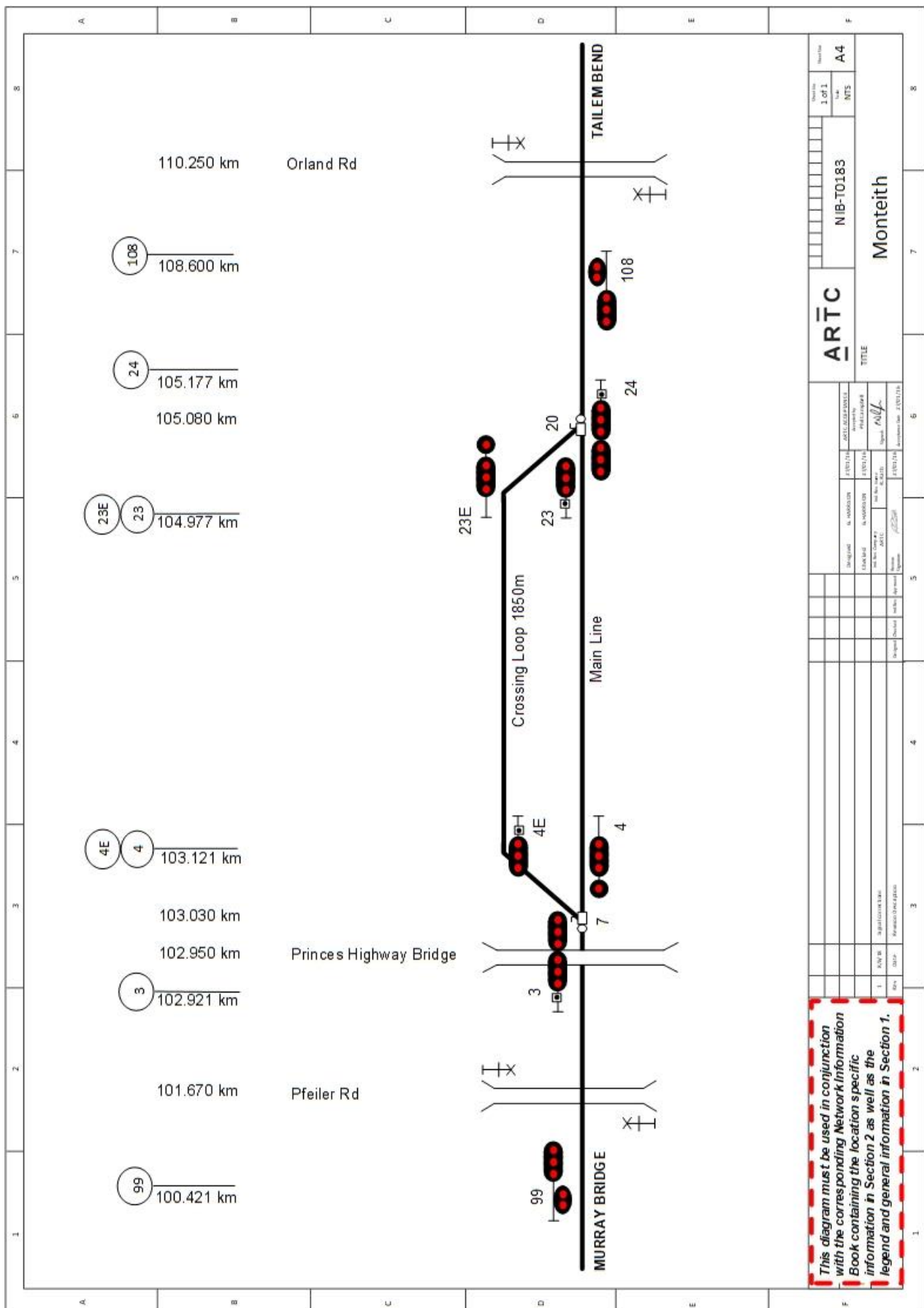
- No

Local Control Panel:

- No. Local Control via laptop only.

Crank Handles:

- No. Dual control point machines



## 2.12 Taillem Bend (TBD)

Standing Room:

- 2054m

Goods Siding:

- Aurizon yard complex (Leased to Aurizon. See IA 31 for details).

Crank Handles:

- No. Dual control point machines

Other Information:

Taillem Bend CTC is comprised of two locations TBD north and TBD south.

Local control panels:

- OSL release for # 8 points in box on side of hut adjacent to #4 signal
- OSL release for # 9 points in grey T box on pole between main line and crossing loop adjacent to # 9 points.
- Local Control Panel in South end hut adjacent to North Terrace crossing– no access for train crews. OSL release for 11 points and crossing test switch in box on the side of this hut.

The Pinnaroo and Loxton branch lines depart from the yard and so do not directly interface with the ARTC running lines.

Trains or track machines entering the Taillem Bend yard must do so under Aurizon Yard Access Authority. Trains or track machines departing the yard onto ARTC running lines must do so with the approval of ARTC control. Movements in both directions must have ARTC control's approval to operate the OSLs and must report them as restored to normal when the movement is completed.

Signal 122 will display a STOP indication until signal 24 has been operated to proceed, to prevent the unnecessary blocking of the Trevena Road level crossing by westbound movements.

Westbound trains requiring access to 11 points must enter the location on a Low Speed aspect on Signal 24.

The passenger platform is in the Coomandook section adjacent to signal 24.

Grain:

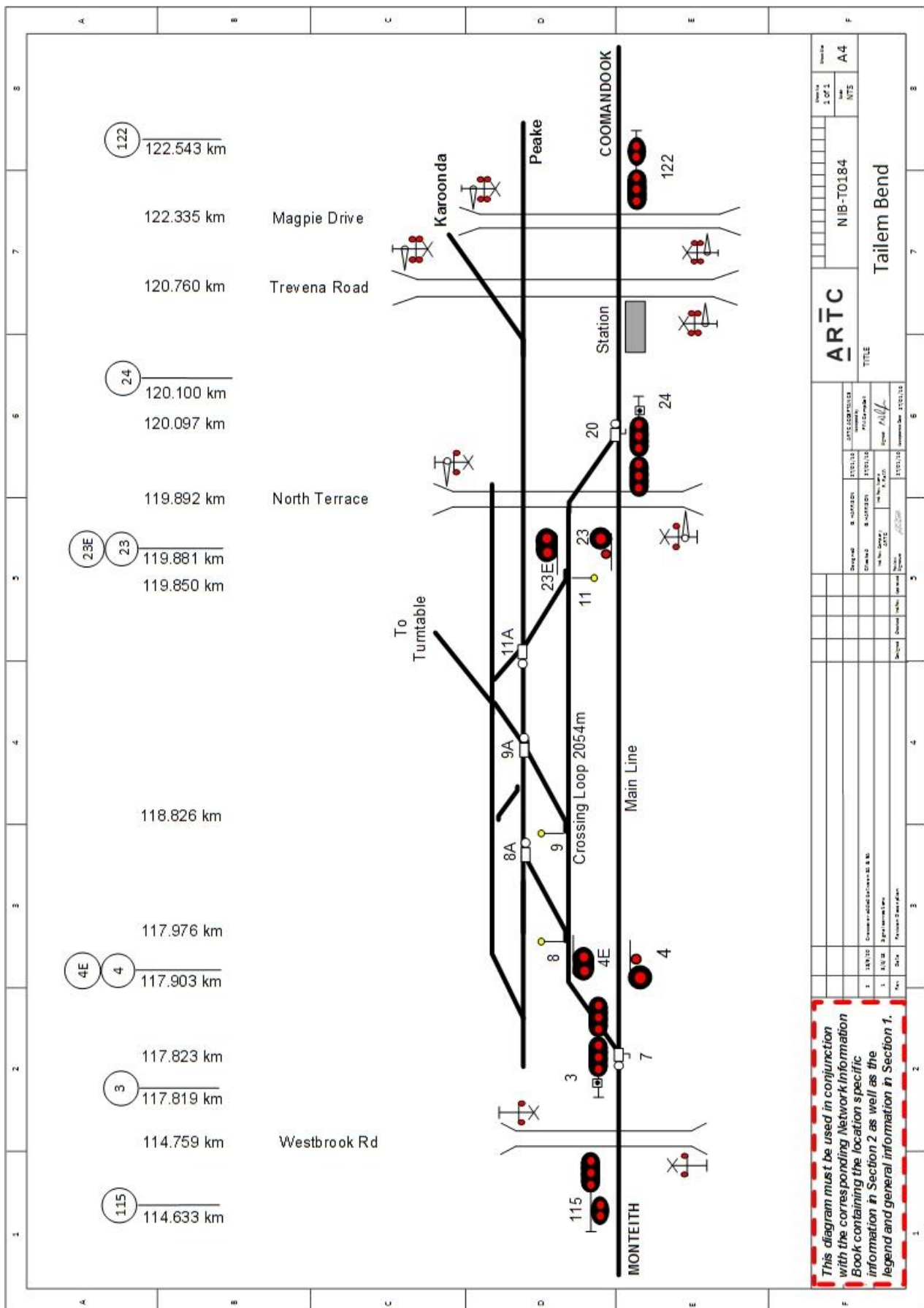
Set up grain hoppers Murray Bridge side of loading chutes or as per instructions from Grain Agent. Wagons load towards Taillem Bend Yard.

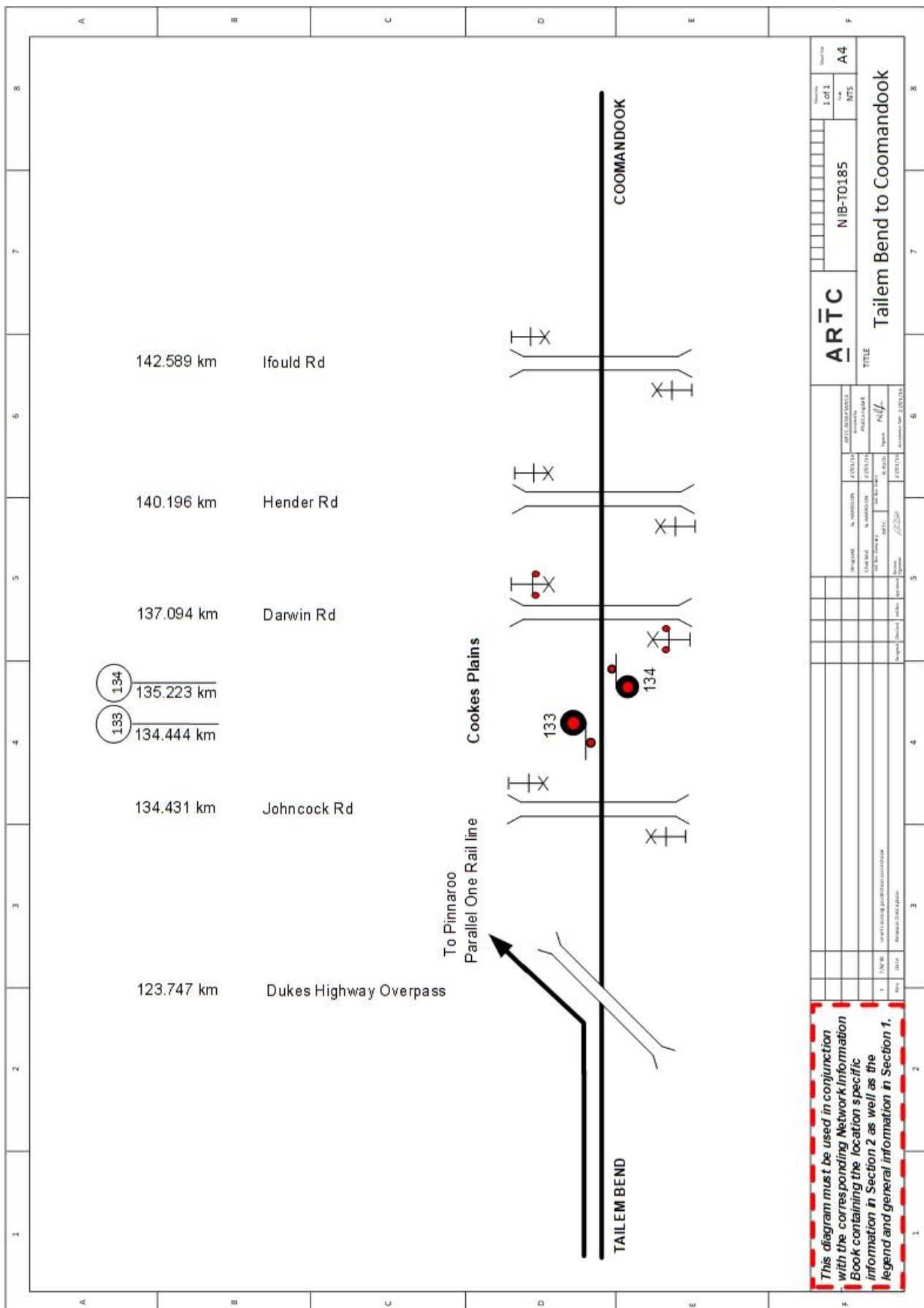
Block 1 is Melbourne end, Block 2 is in the middle and Block 3 is Adelaide end.

Shunting on Aurizon Tracks to the east end yard limit board

Until further notice any movement traversing the North Terrace Level Crossing (119.975 km) or the Trevena Road Level Crossing (120.775 km) on the Aurizon line towards Pinnaroo must utilise the Test Switch to operate the crossing due to rail head contamination.

Access by rail and shunt crews to the existing 'Push Button' operation boxes will be withdrawn.





## 2.13 Coomandook (CDK)

Standing Room:

- 1960m

Goods Siding:

- Yes. (Leased to Aurizon. See IA 31 for details).
- Goods Loop No. 1 (in clear) 376 metres
- Block 1 to western derail 261 metres
- Block 2 to western derail 188 metres
- Block 1 to eastern derail 286 metres
- Block 2 to eastern derail 359 metres

Local Control Panel:

- No. Local Control via laptop only.

Crank Handles:

- No. Dual control point machines

Other Information:

The emergency releases for the Outlying Switch Locks (OSL) at 8 and 11 points are mounted within enclosures located on the side of the signalling equipment boxes on the other side of the main line across from 8 points and 11 points.

Grain:

Set up grain hoppers Taillem Bend side of loading chutes or as per instructions from Grain Agent. Wagons load towards Coonalpyn.

Block 1 is Melbourne end, Block 2 is Adelaide end.

Coomandook Signal Aspects

Signal aspect alterations were undertaken affecting the operation of Permissive Signal 156 and Absolute Signal 16 when Absolute Signal 4 is at Stop during the crossing loop extension works.

The alterations apply to Adelaide bound movements only.

Permissive Signal 156 displays 'Stop', 'Caution Normal Speed', 'Clear Normal Speed' and 'Reduce to Medium Speed' aspects dependent on the aspect displayed on Absolute Signal 16 and the condition of the track immediately ahead of Permissive Signal 156.

Absolute Signal 16 displays 'Stop', 'Low Speed', 'Caution Normal Speed' and 'Clear Normal Speed' when the route is set for the main line and 'Stop', 'Low Speed', 'Caution Medium Speed' or 'Clear Medium Speed' when the route is set for the Crossing Loop.

Absolute Signal 4 displays 'Stop', 'Caution Normal Speed' and 'Clear Normal Speed'.

The following Route Signalling will now apply:

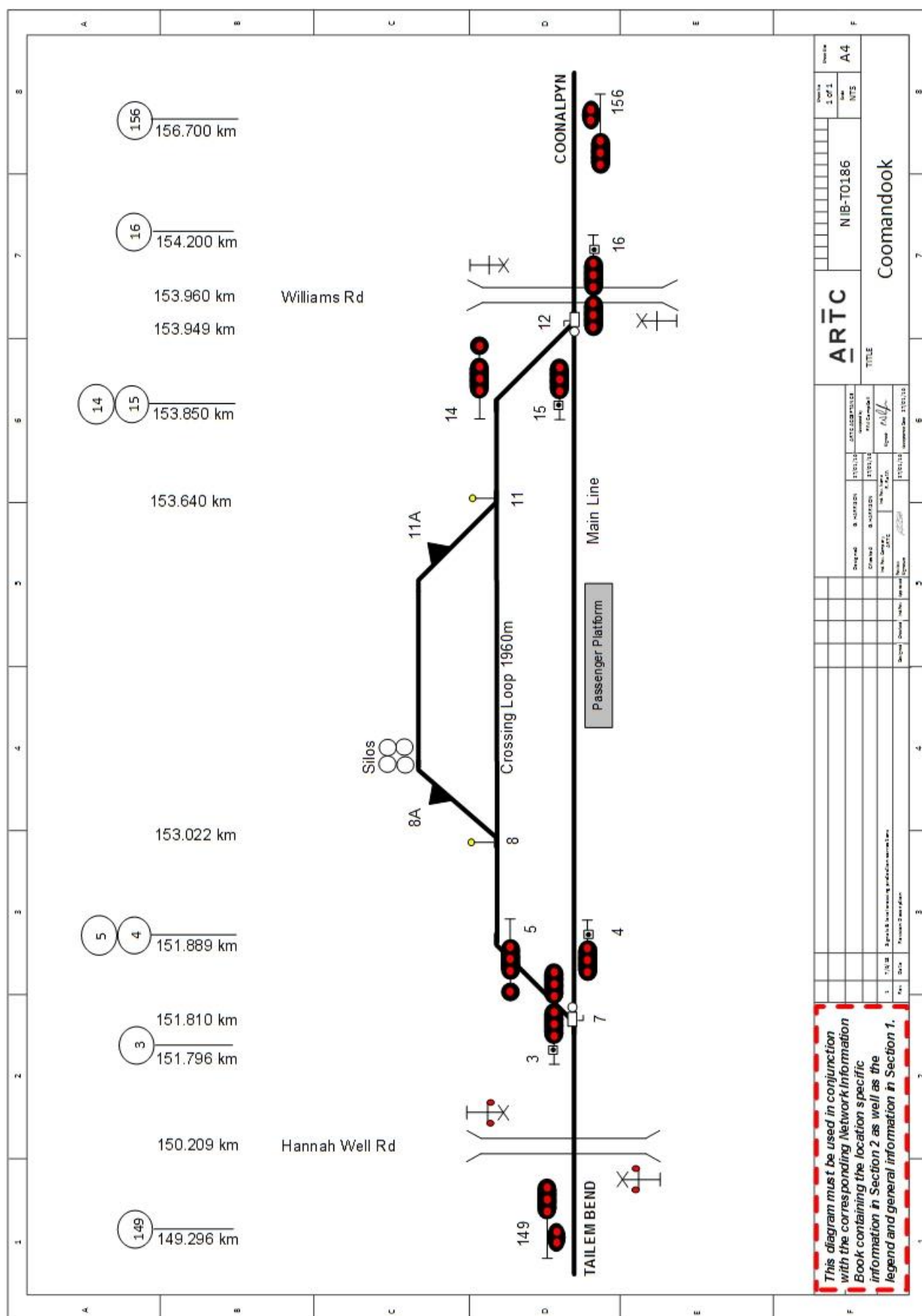
For Main Line Movements with 7 and 12 Points set for the Main Line: -

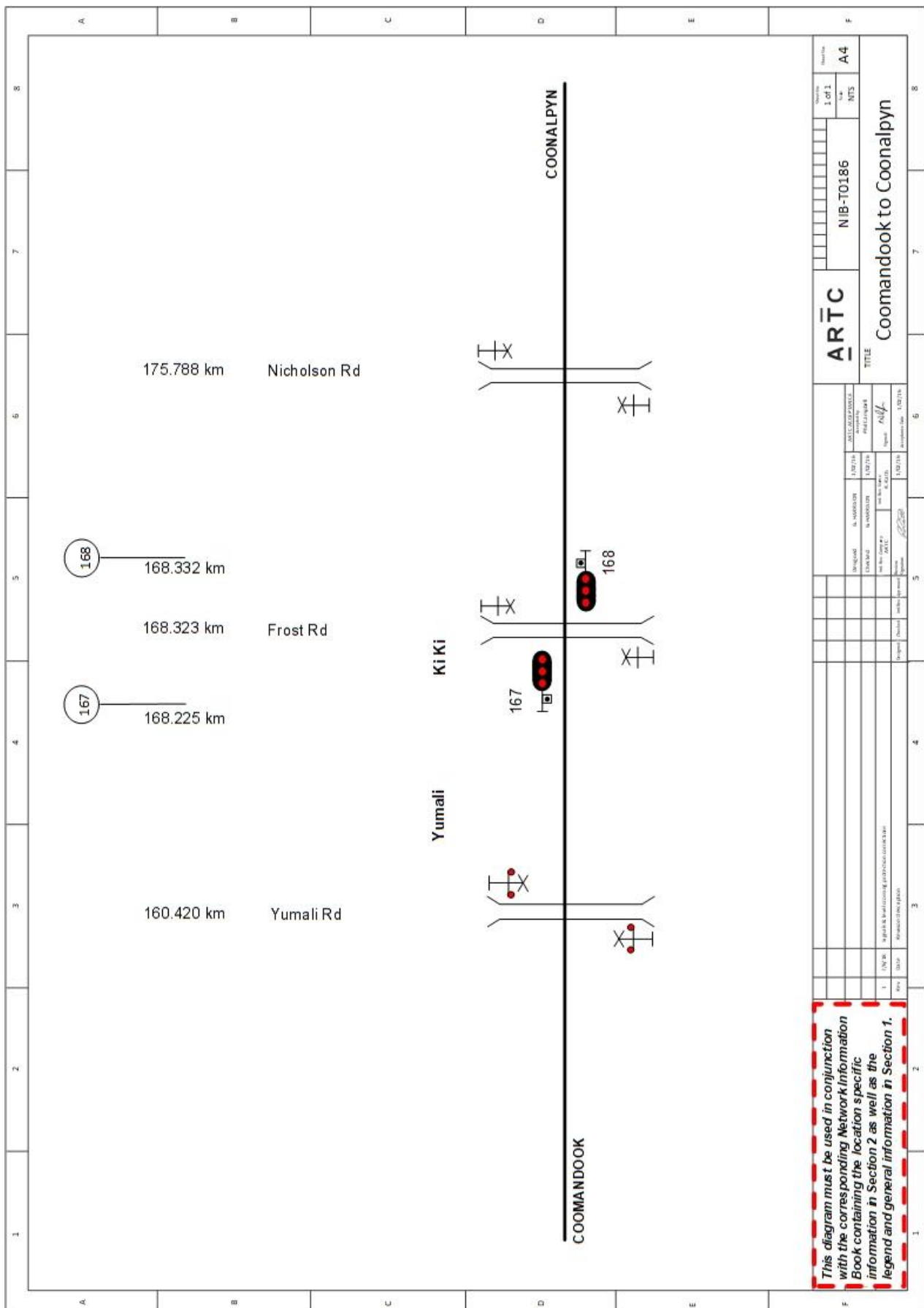
When Absolute Signal 4 is at 'Stop', Permissive Signal 156 and Absolute Signal 16 will display 'Caution Normal Speed' aspects.

When Absolute Signal 4 is displaying a 'Normal Speed' aspect Permissive Signal 156 and Absolute Signal 16 will display 'Clear Normal Speed' aspects.

For Movements into the Crossing Loop with 12 Points reverse: -

When Absolute Signal 16 displays 'Caution Medium Speed' or 'Clear Medium Speed' when the route is set for the Crossing Loop Permissive Signal 156 will display a 'Reduce to Medium Speed' aspect.





## 2.14 Coonalpyn (CYN)

### Standing Room:

- 1550m

### Goods Siding:

- Yes. (Leased to Aurizon. See IA 31 for details).
- Goods Loop No. 1 (in clear) 577 metres
- Block 1 to western derail 261 metres
- Block 2 to western derail 340 metres
- Block 1 to eastern derail 316 metres
- Block 2 to eastern derail 237 metres

### Local Control Panel:

- No. Local Control via laptop only.

### Crank Handles:

- No. Dual control point machines

### Other Information:

OSL release and crossing test switch in box on the side of the cabinet at the level crossing.

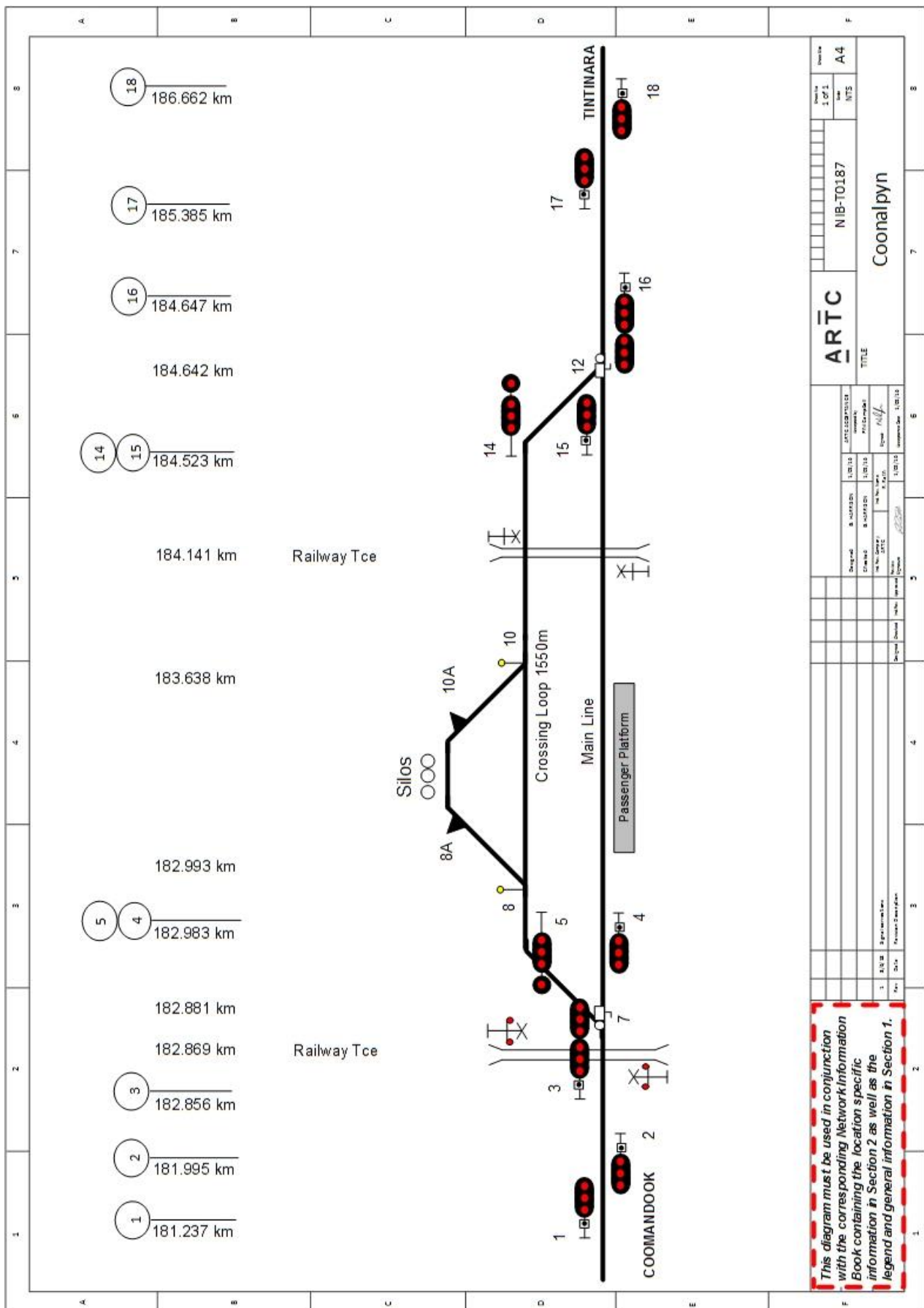
Local Control: Computer Based Interlocking with the CBI unit in the silver cabinet adjacent to the level crossing at the Coomandook end of the yard

### Grain:

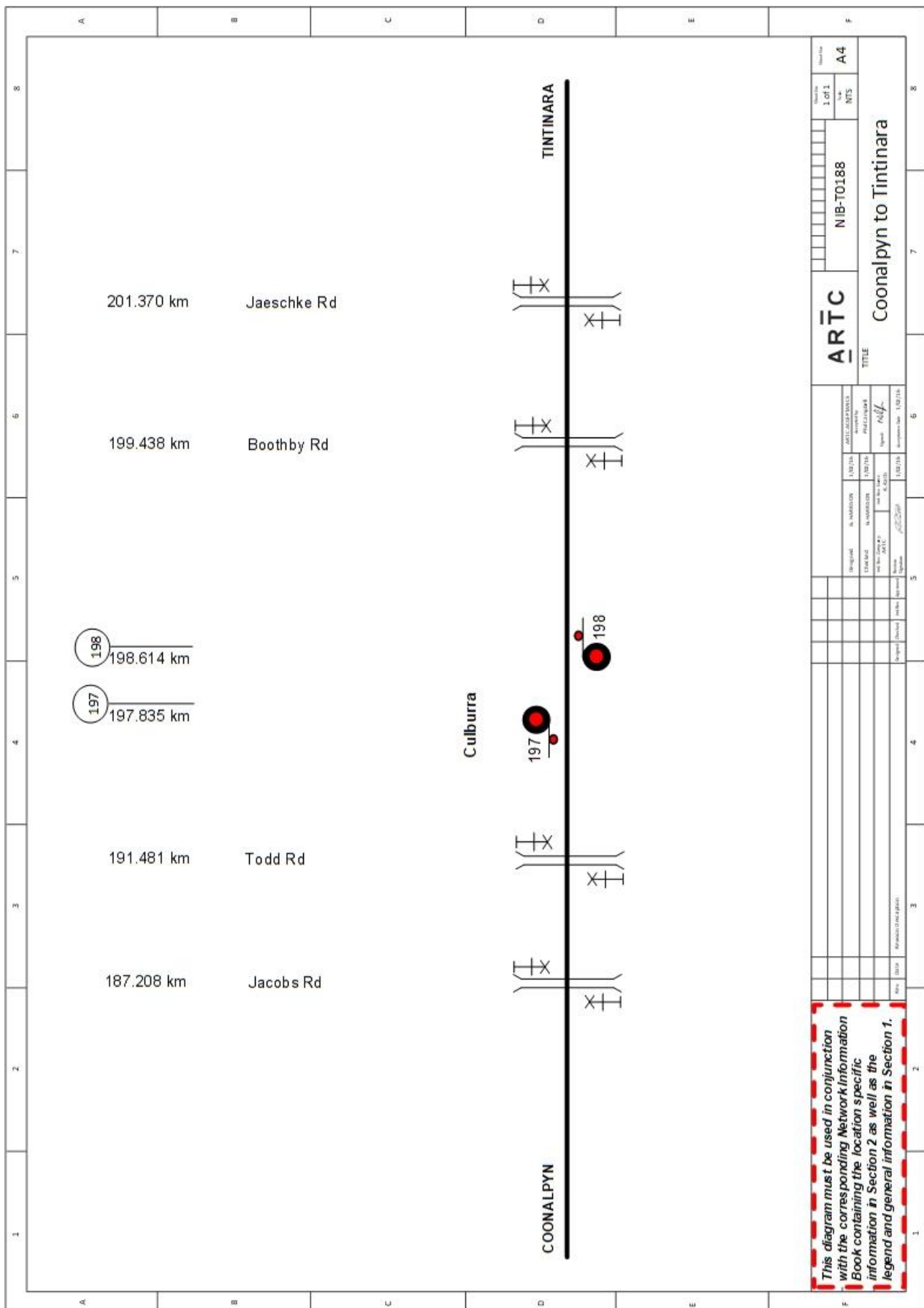
Set up grain hoppers Tintinara side of loading chutes or as per instructions from Grain Agent.

Wagons load towards Coomandook.

Block 1 is Melbourne end, Block 2 is Adelaide end.



## Locations and Sections Information



## 2.15 Tintinara (TIN)

### Standing Room:

- 1850m

### Goods Siding:

- Yes. (Leased to Aurizon. See IA 31 for details).
- Goods Loop No. 1 (in clear) 607 metres
- Block 1 to western derail 234 metres
- Block 2 to western derail 217 metres
- Block 1 to eastern derail 373 metres
- Block 2 to eastern derail 390 metres

### Local Control Panel:

- No. Local Control via laptop only.

### Crank Handles:

- No. Dual Control Point Machines.

### Other Information:

OSL release and crossing test switch in box on the side of the cabinet at the Fulwood Avenue level crossing.

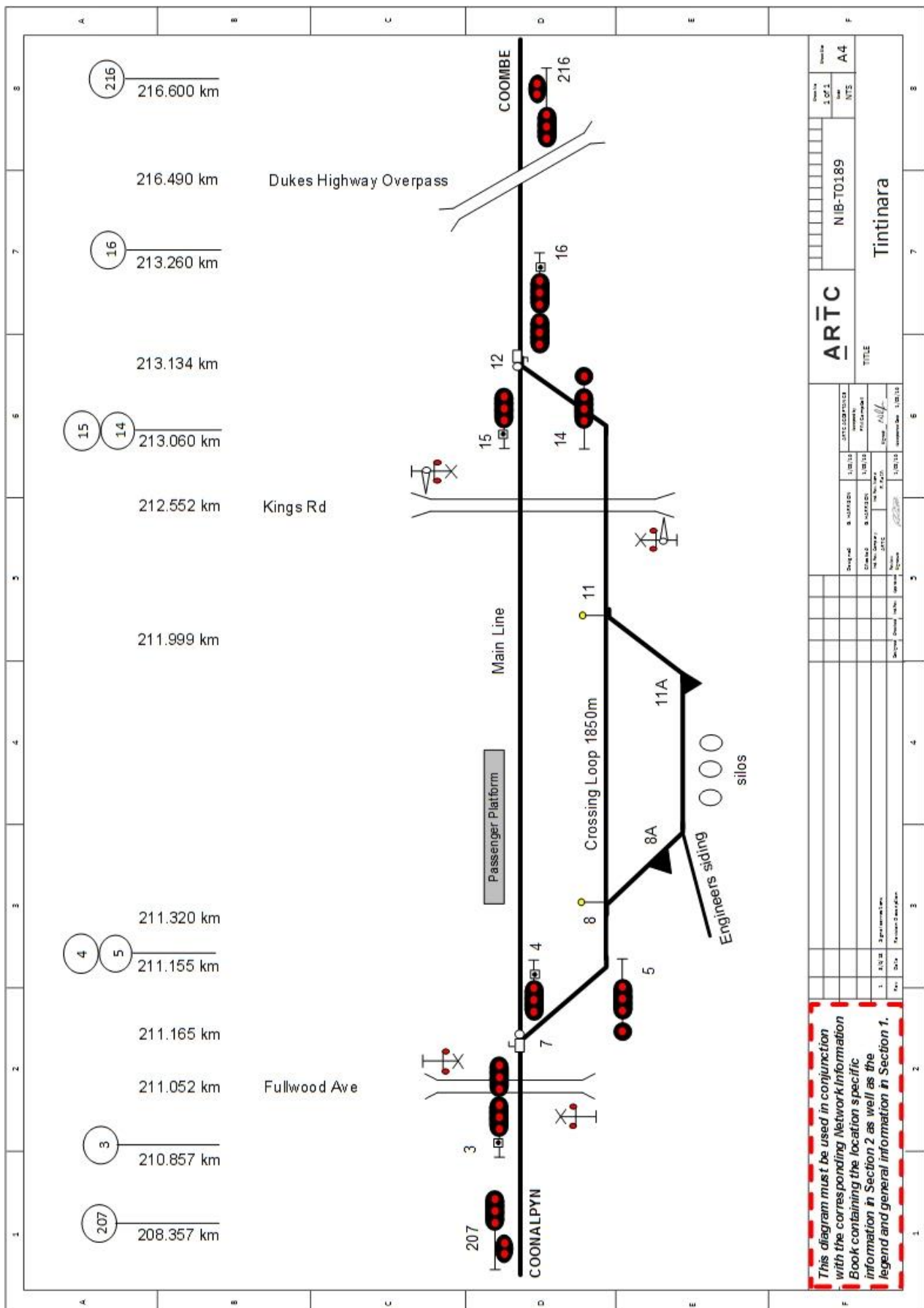
Local Control: Computer Based Interlocking with the CBI unit in the silver cabinet adjacent to the level crossing at the Coomandook end of the yard.

### Grain:

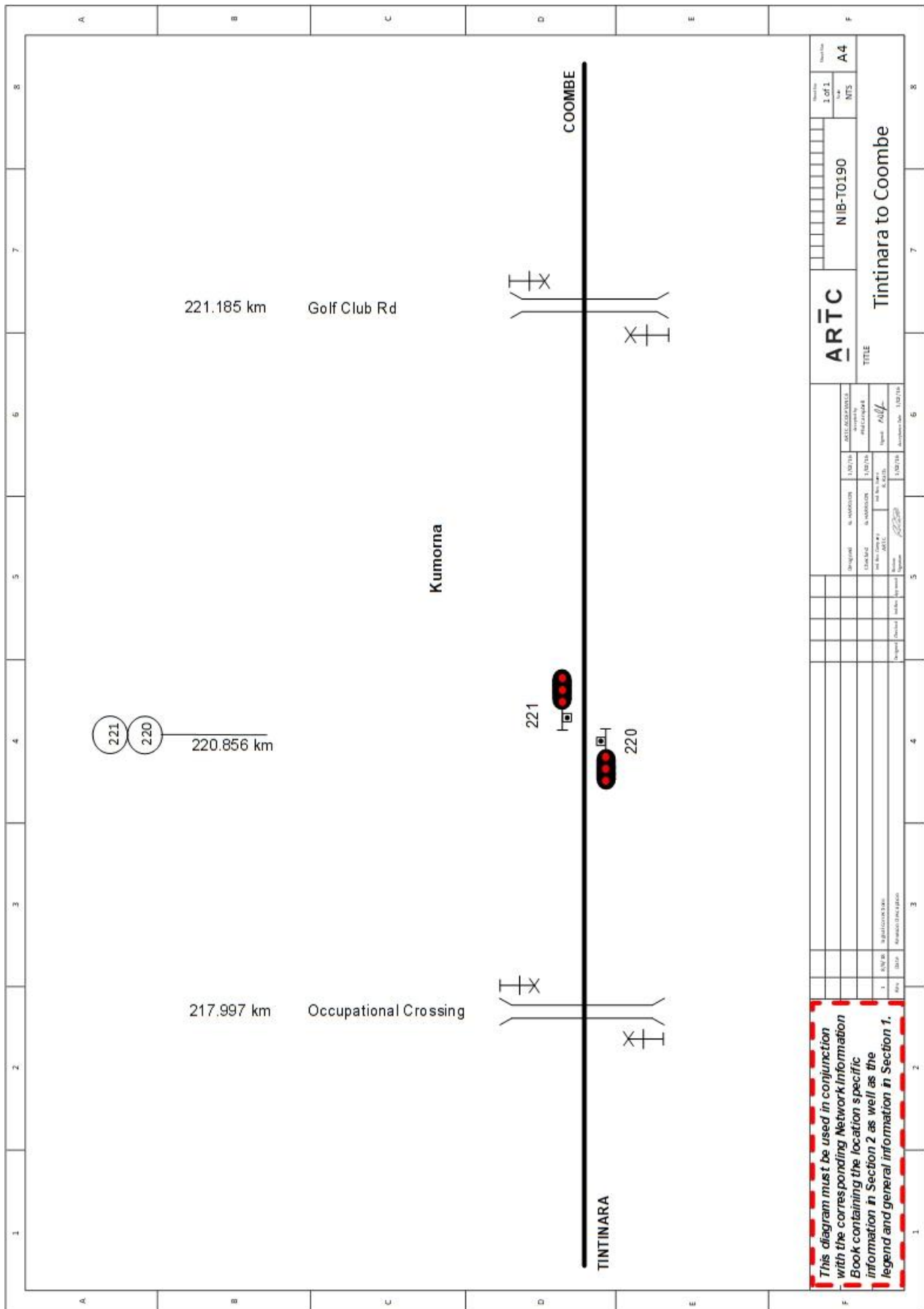
Set up grain hoppers Keith side of loading chutes or as per instructions from Grain Agent.  
Wagons load towards Coonalpyn.

Block 1 is Melbourne end, Block 2 is Adelaide end.

King Road level crossing at 212.590 Km has been upgraded and fitted with flashing lights and boom barriers.



## Locations and Sections Information



## 2.16 Coombe (CZE)

Standing Room:

- 1550m

Goods Siding:

- Yes. Single ended with access from Tintinara end. No Silos, usually used as an engineer's siding.

Local Control Panel:

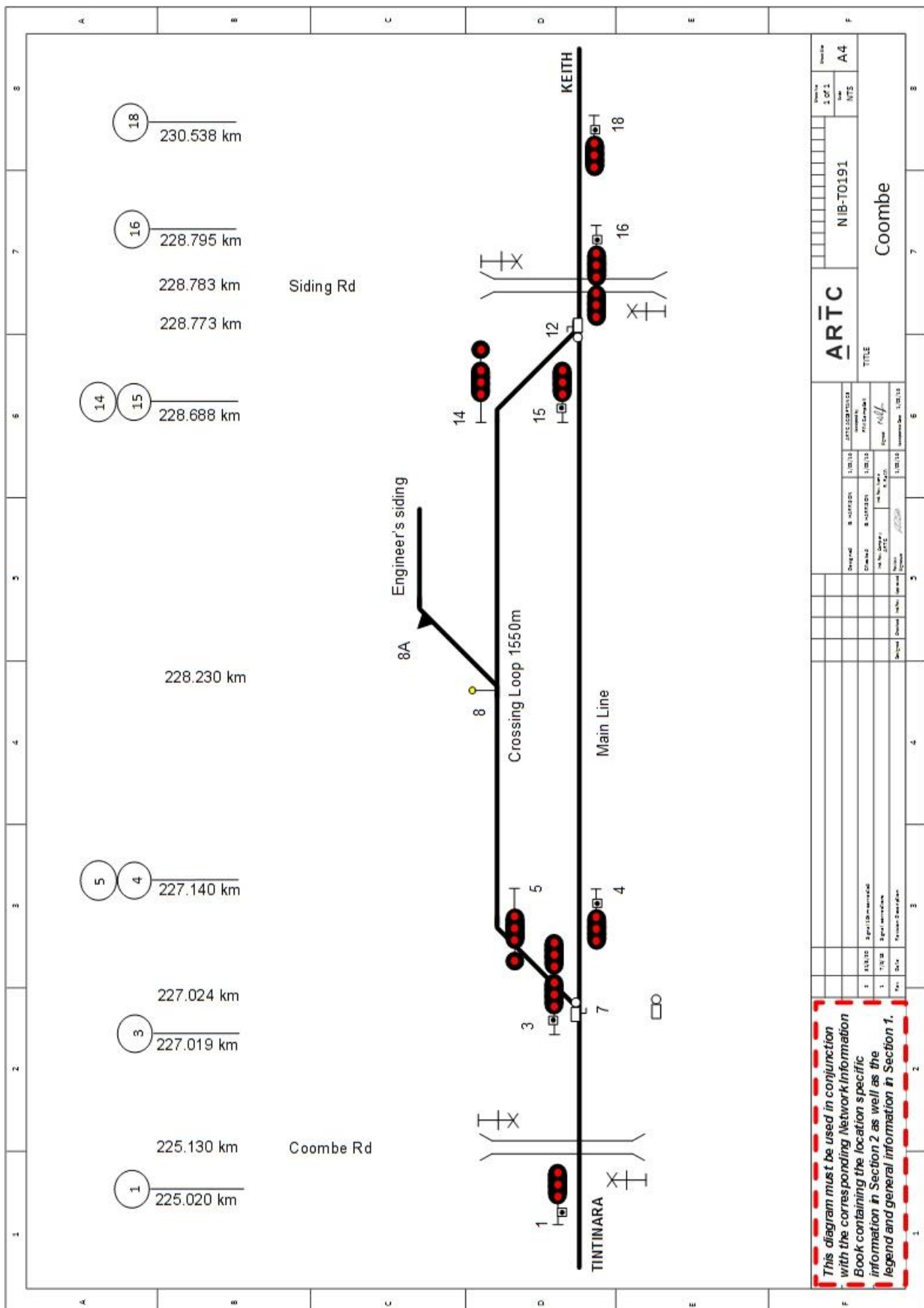
- No. Local Control via laptop only.

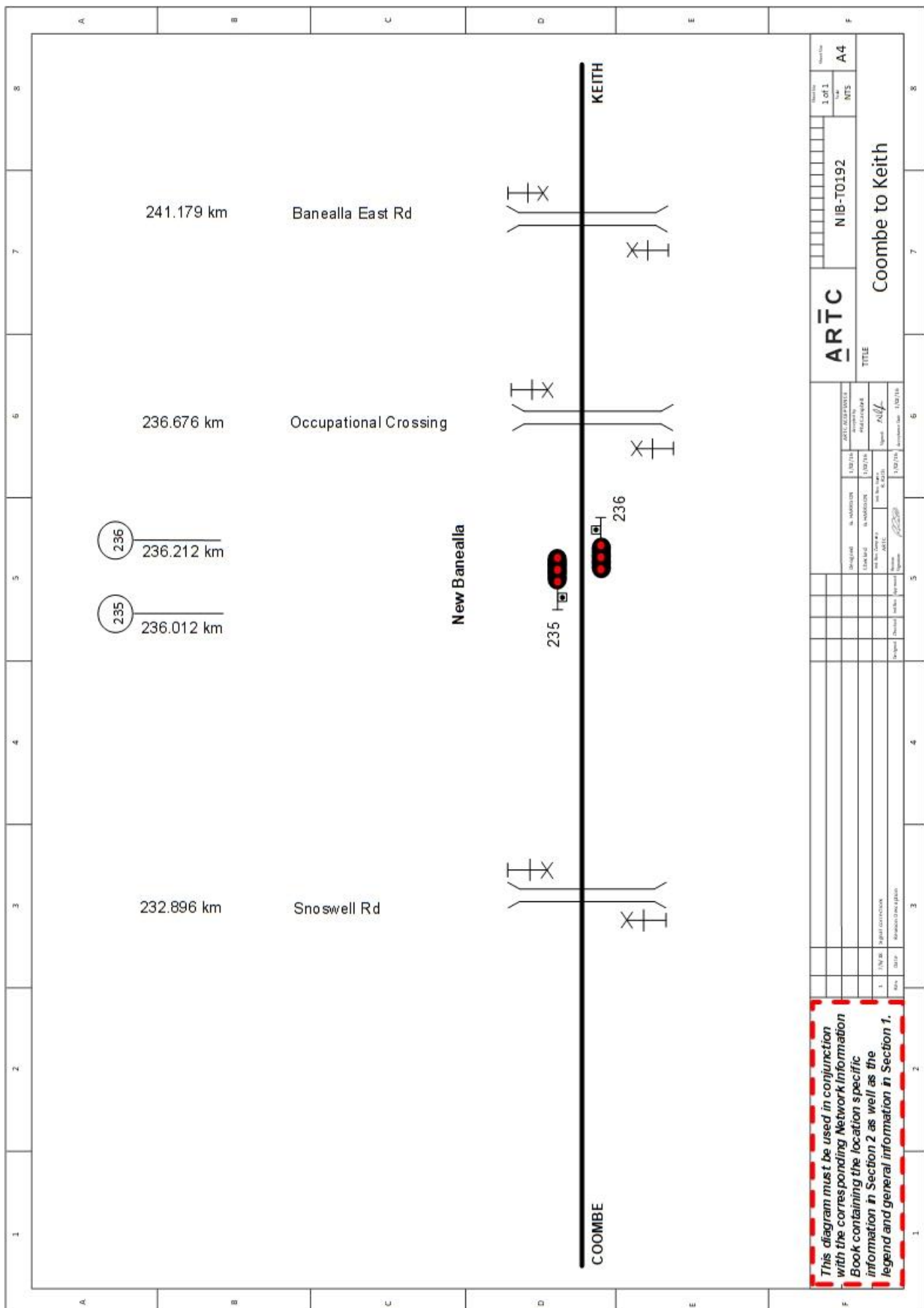
Crank Handles:

- No. Dual Control Point Machines.

Other Information:

OSL release is in box on the side of 16G cabinet adjacent to South end points.





## 2.17 Keith (KTH)

### Standing Room:

- 1871m

### Goods Siding:

- Accessible from the crossing loop on the Melbourne end. (Leased to Aurizon. See IA 31 for details).
- Goods Loop No. 1 (in clear) 431 metres
- Goods Loop No. 2 (in clear) 197 metres
- Silo road to eastern dead end 444 metres
- Block 1 to eastern derail (via goods loop 2) 611 metres
- Block 2 to eastern derail (via goods loop 2) 547 metres
- Block 3 to eastern derail (via goods loop 2) 678 metres
- Block 1 to western derail 285 metres
- Block 2 to western derail 349 metres
- Former crossing loop from Signal 18 to dead end 1285 metres

### Local Control Panel:

- No. Local Control via laptop only.

### Crank Handles:

- No. Dual Control Point Machines.

### Other Information:

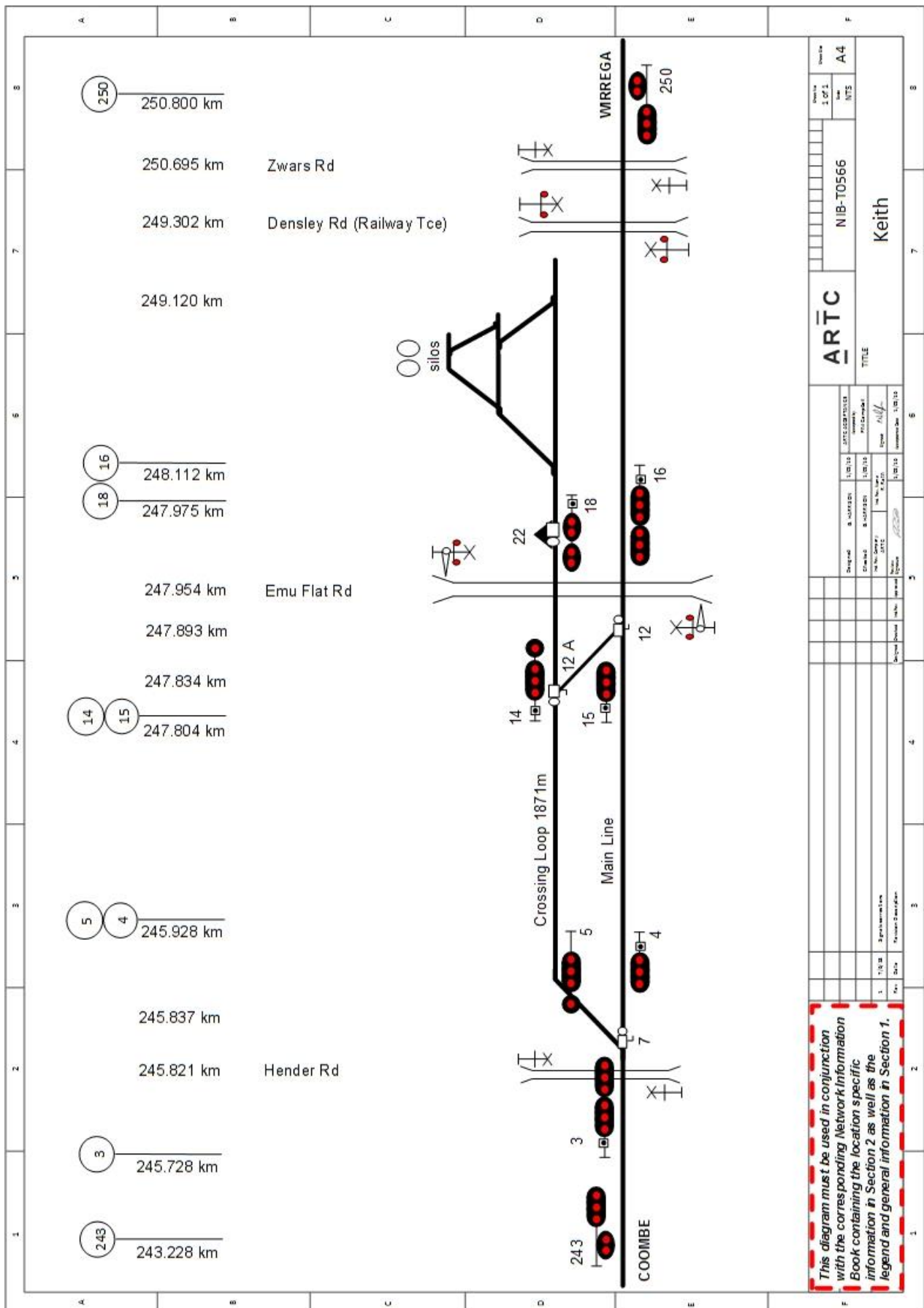
Intermediate signals have been relocated to 236.012km & 236.212km to split the section and become signals 235 & 236.

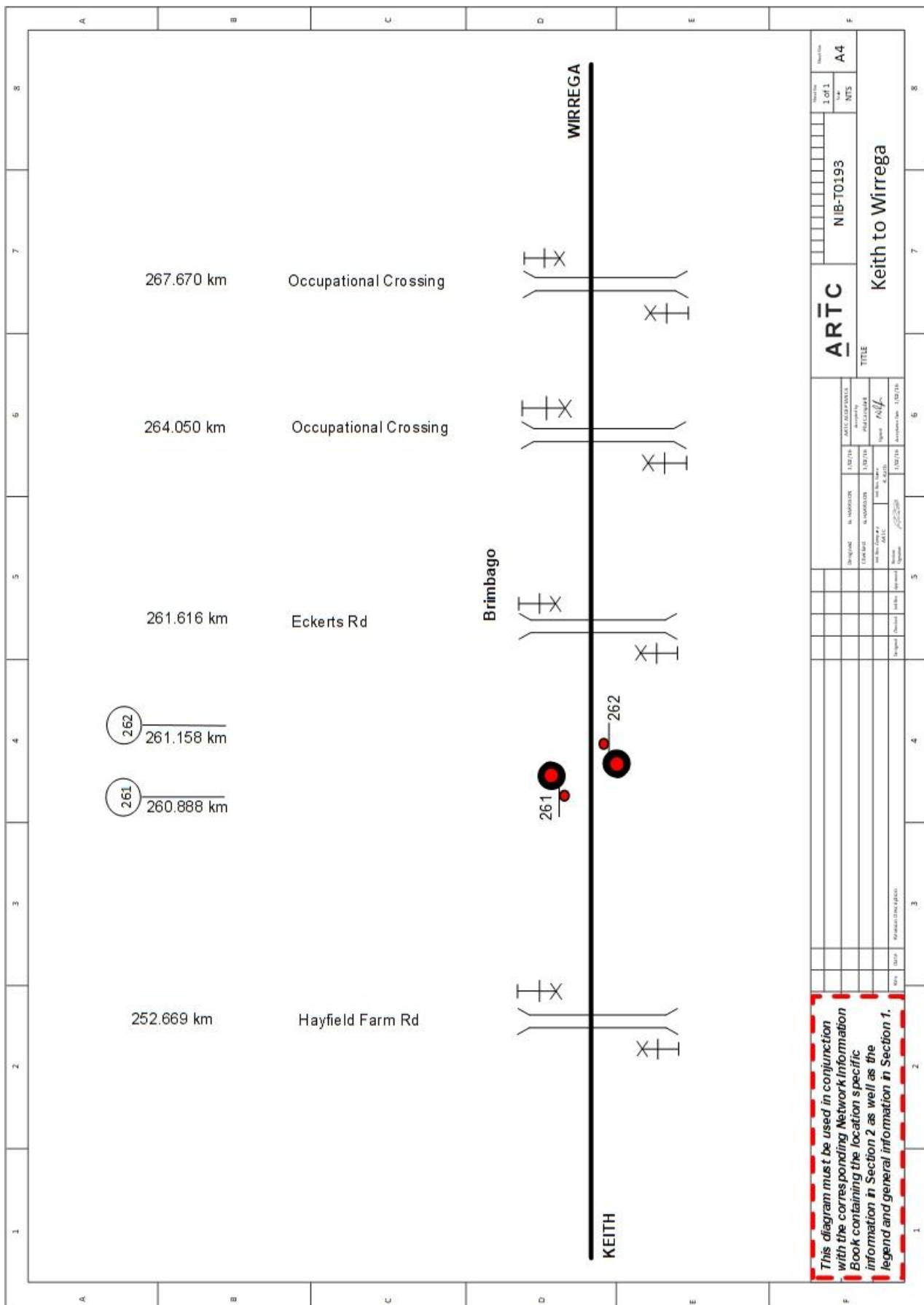
### Grain:

Set up grain hoppers Wirrega side of loading chutes or as per instructions from Grain Agent. Wagons load towards Coombe.

Block 1 is in the middle, Block 2 is Melbourne end and Block 3 is Adelaide end.

## Locations and Sections Information





## 2.18 Wirrega (WEG)

Standing Room:

- 1550m

Goods Siding:

- Yes. (Leased to Aurizon. See IA 31 for details).
- Goods Loop (in clear) 485 metres
- Block 1 to western derail 438 metres
- Block 2 to western derail 340 metres
- Block 1 to eastern dead end 166 metres
- Block 2 to eastern dead end 264 metres

Local Control Panel:

- No. Local Control via laptop only.

Crank Handles:

- No. Dual Control Point Machines

Other Information:

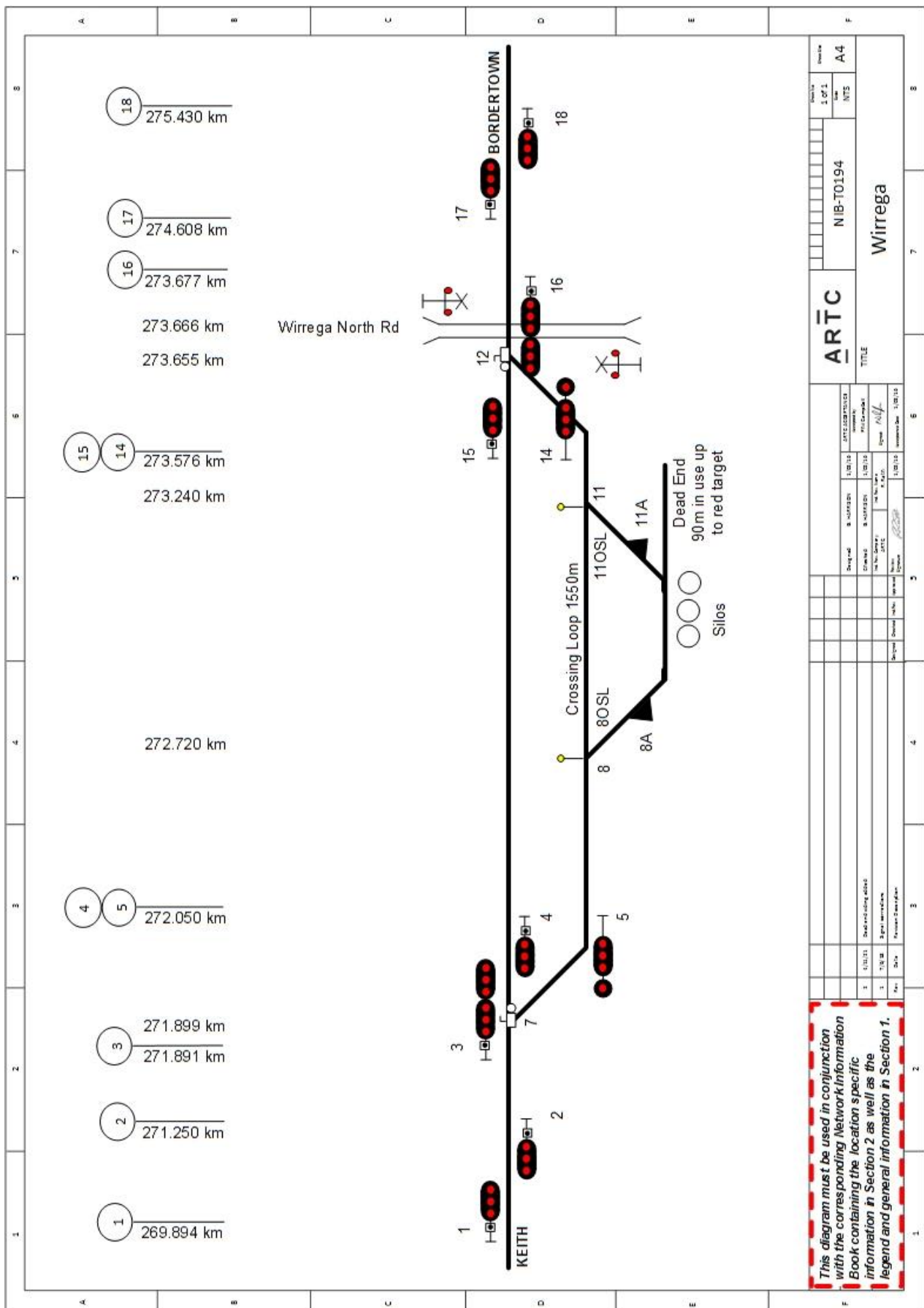
Emergency OSL release is in box on the side of 16G cabinet adjacent to South end points.

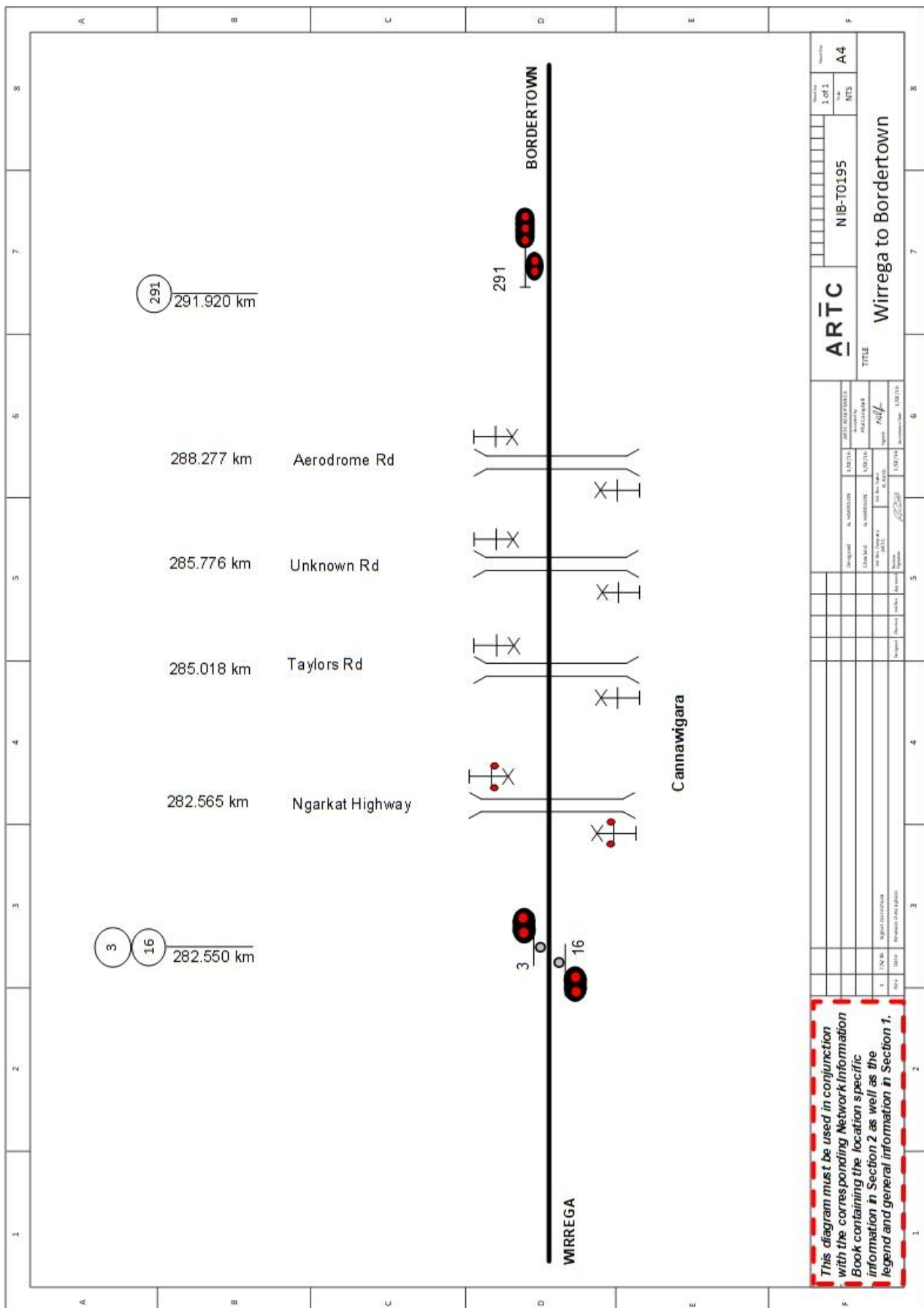
Grain:

Set up grain hoppers Keith side of loading chutes or as per instructions from Grain Agent.

Wagons load towards Dead End.

Block 1 is Melbourne end Block 2 is Adelaide end.





## 2.19 Bordertown (BOT)

Standing Room:

- 2180m

Goods Siding:

- Accessible from the crossing loop on the Adelaide end. (Leased to Shield)
- Goods Loop 1 or 2 (in clear) length and condition unknown, now dead ended and must be measured and inspected before use.
- Block 1 to eastern derail (either goods loop) 323 metres
- Block 2 to eastern derail 185 metres
- Block 3 to eastern derail 236 metres
- Block 4 to eastern derail 134 metres

Local Control Panel:

- No. Local Control via laptop only.

Crank Handles:

- No. Dual Control Point Machines

Grain:

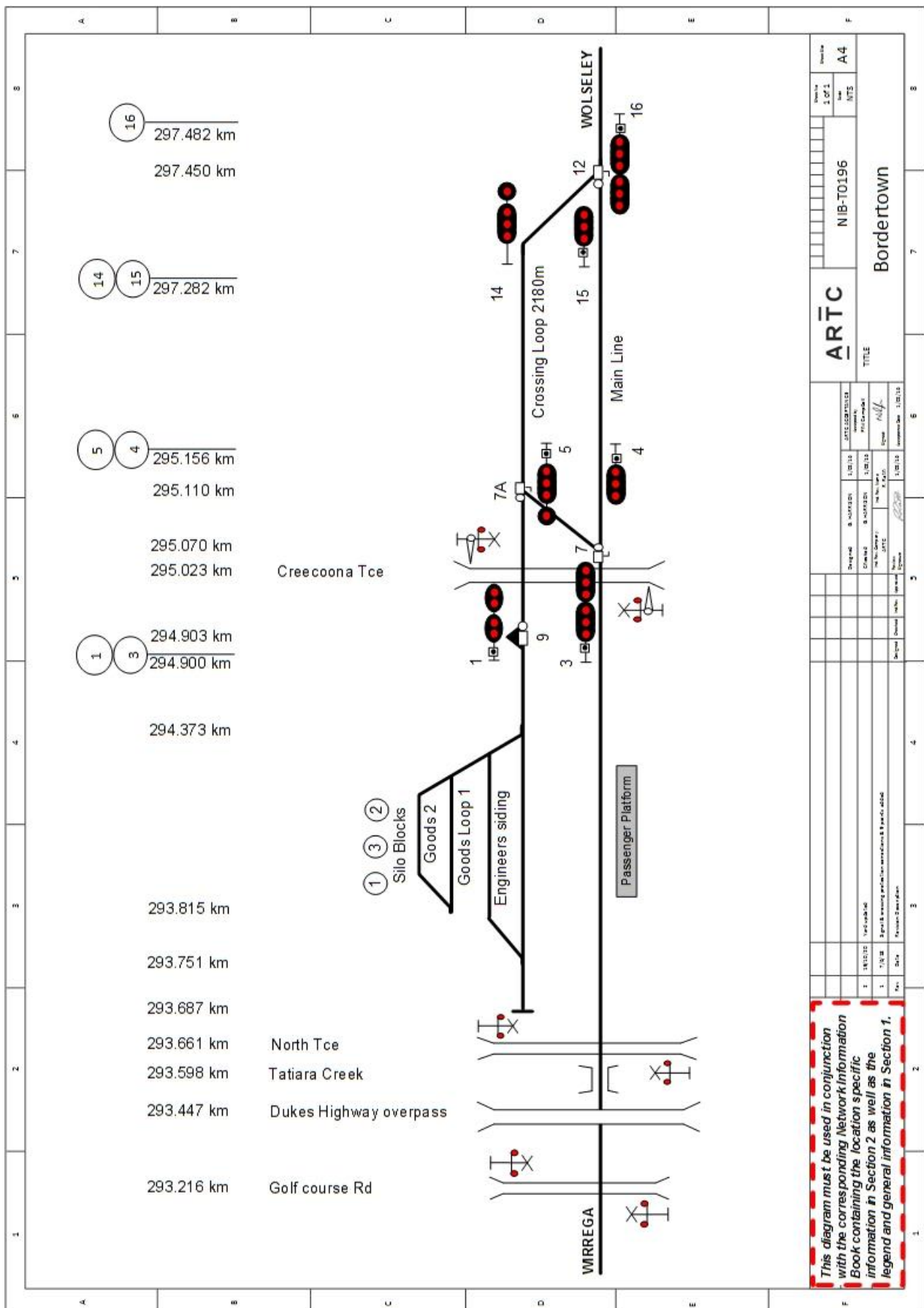
Set up grain hoppers Wolseley side of loading chutes or as per instructions from Grain Agent. Wagons load towards Wirrega.

Block 1 is Adelaide end, Block 2 is Melbourne end, Block 3 is in the middle Block 4 is opposite Block 3 in the middle of the yard.

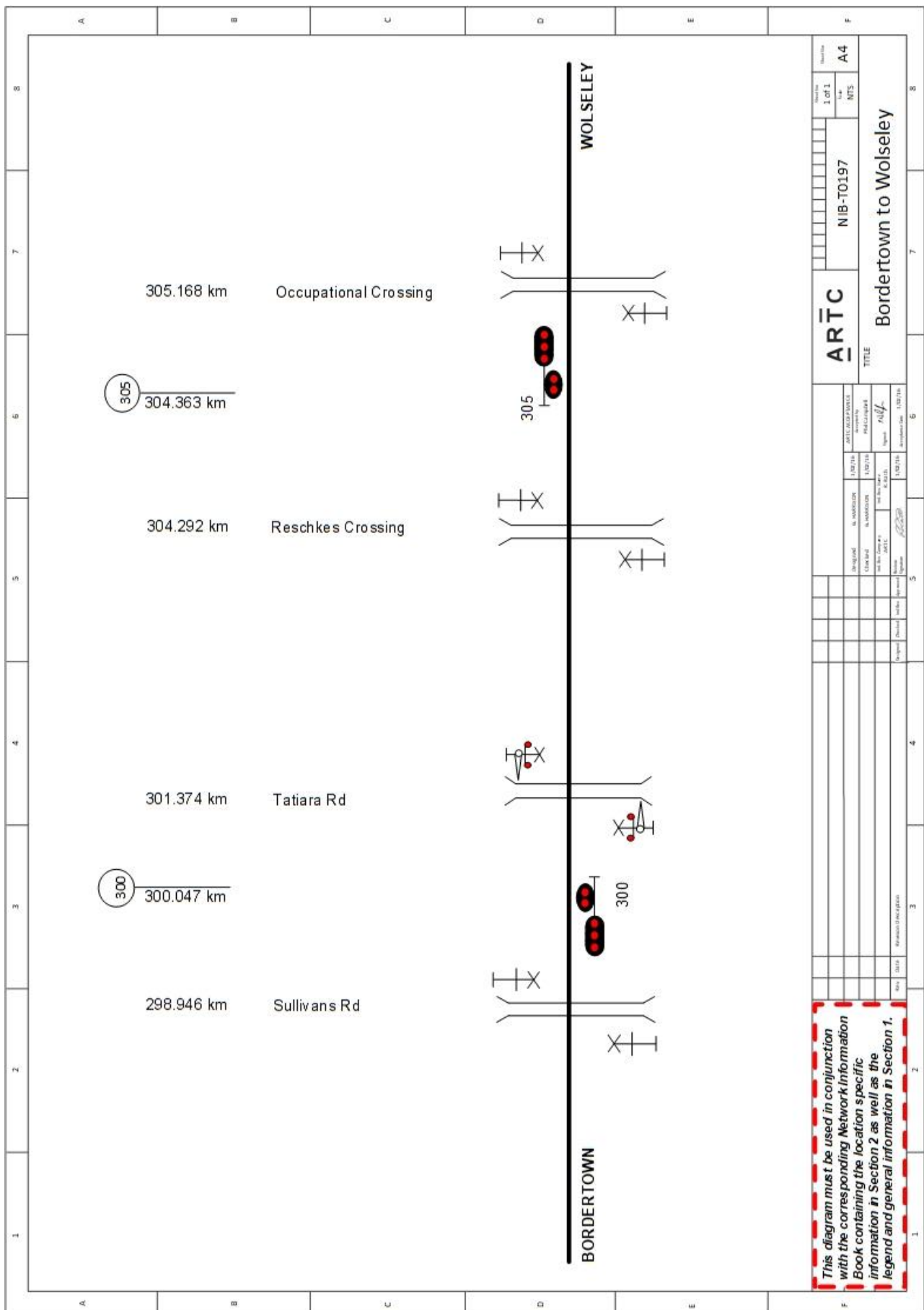
Bordertown Platform is on the main line in the Bordertown to Wirrega section.

Crecoona Terrace level Crossing has been fitted with Boom barriers.

Golf Course Road and North Terrace level crossings at Bordertown have become predictor controlled crossings.



## Locations and Sections Information



## 2.20 Wolseley (WSL)

Standing Room:

- 1005 m

Goods Siding:

- Yes. (Leased to Aurizon. See IA 31 for details).
- Goods Loop 1 (in clear) 249 metres
- Block 1 to eastern dead end 332 metres
- Block 2 to western dead end 366 metres
- Block 3 to western dead end 624 metres
- Block 4 to western dead end 228 metres
- Block 1 to level crossing 392 metres
- Block 2 to level crossing 359 metres
- Block 3 to level crossing 100 metres
- Block 4 to level crossing 463 metres

Crank Handles:

- No. Dual Control Point Machines.

Grain:

Set up grain hoppers Naracoorte side of loading chutes or as per instructions from Grain Agent. Wagons load towards Bordertown.

Block 1 is Adelaide end, Block 2 is Melbourne end, Block 3 is in the middle Block 4 is opposite Block 3 in the middle of the yard.

Wolseley Platform is on the main line in the Wolseley to Leeor Loop section.

Local Control Panel: in relay room at north side of station on platform. No access for train crews.

Access to the goods siding is controlled by network controller. Signals 16 and 16D are yard departure dwarf signals only and will not clear onto the crossing loop if it is occupied.

The dead end is the end of the Mt. Gambier line. The rest is still broad gauge.

Interface location for Victorian North West CTC.

