Division / Business Unit: Engineering & Systems
Function: Operations
Document Type: Guideline

Network Information Book

Port Waratah

Islington & Port Waratah (inc) to Sandgate (exc)

OGW-30-14

Applicability

Hunter Valley

Publication Requirement

Internal / External

Primary Source

Local Appendices North Volume 2
Route Access Standard – Heavy Haul Network Section Pages H1

Document Status

Version #	Date Reviewed	Prepared by	Reviewed by	Endorsed	Approved
3.2	15 Jan 2024	Configuration Management Administrator	Corridor Assets & Operational Representative	Configuration Manager	Head of Operations Standards

Amendment Record

Amendment Version #	Date Reviewed	Clause	Description of Amendment
1.0	04 Aug 2016		Initial issue

2.0	24 Jan 2018	1.6, 1.14, 2.1 & 2.6	Level crossing table and drawing legend updated. Islington Junction yard limit and Port Waratah trailable points details updated. Additional siding details added to Port Waratah and Bullock Island diagrams, yard limits added on Warabrook diagram and Islington Junction signal corrections.
2.1	25 Jul 2018	2.6.1	Port Waratah trailable points details updated and Waratah, Islington Junction to Port Waratah, Port Waratah & Bullock Island diagrams updated.
2.2	10 Jan 2019	1.14	Lookout working exclusions details added to new section 1.14 and diagrams. Speed board and other corrections made to diagrams.
2.3	14 Feb 2019	1.14, 2.6.1	Lookout working information amended as detailed in safe notice 2-4164 in section 1.14 text and diagrams. Port Waratah STOP signs information updated as detailed in safe notice 2-4181.
2.4	30 Jun 2020	1.15, 2.6.3	Port Waratah control by two-way radio equipment details updated. Drawing legend updated. Islington Junction 1, Waratah, Islington Junction – Pt Waratah, Pt Waratah & Bullock Island diagrams updated.
2.5	27 Nov 2020	1.6, 2.6	Correction made to level crossings table. Port Waratah location text and Port Waratah and Bullock Island diagrams updated.
2.6	4 Jun 2021	Various	Level crossings table section 1.6 updated. Islington Junction 1, Waratah, Hanbury Junction, Warabrook, Islington Junction – Port Waratah, Port Waratah & Bullock Island diagrams updated.
2.7	19 Aug 2021	1.4, 1.7, 1.15, 2.1, 2.3, 2.5, 2.6	Adjacent Train Control details, Level Crossings table and Drawing Legend updated. Islington Junction diagrams, Waratah and Hanbury Junction locations and diagrams updated. Port Waratah diagram updated.
2.8	15 Oct 2021	2.1, 2.3, 2.4, 2.5, 2.6	Islington Junction, Down & Up Coal Lines & Hanbury Junction sections updated for Waratah to Sandgate signalling upgrade. Port Waratah 128 & 129 points removed.
2.9	15 Jun 2022	1.1, 2.1, 2.6	Board Extent, Port Waratah text and diagram updated. Islington Junction 2 and Bullock Island diagrams updated.
3.0	3 Nov 2022	1.6, 2.5, 2.6	Level Crossing table and Port Waratah location updated. Warabrook, Port Waratah & Bullock Island diagrams updated.
3.1	8 Jun 2023	Various	Level Crossing table updated. Work on Track Authorities added to Islington Junction location text. Adjacent Local Possession Authority details added to Port Waratah location text. Various diagrams updated.
3.2	15 Jan 2024	1.8, 2.6.6	Maximum Train Length and Port Waratah safety procedures updated.

Table of Contents

1 General Information

1.1 Board Extent

Islington exclusive Up Main signal HN12 (164.210), inclusive Down Main signal IJ21 (164.045), exclusive Up Islington Loop signal WJ20 (163.864), inclusive Down Islington Loop signal IJ5(164.007), inclusive Down Relief IJ9 (164.351).

South Fork exclusive signal SFD1 (169.815), inclusive signal HJ28 (169.056)

Sandgate exclusive Down Coal signal C105.5 (169.818), inclusive Up Coal signal HJ36 (170.127), exclusive Down Main signal M106.1 (170.860), inclusive Up Main signal HJ34 (170.117)

This area is controlled by Port Waratah Network Controller, Network Control Centre North (NCCN).

Contact Numbers:

Phone:	(02) 4902 7907
Train Transit Manager:	(02) 4902 9410
Emergency:	(02) 4902 7967

1.2 Safe Working System

Rail Vehicle Detection (RVD)

Uni-directional Signalling	Up / Down Main, Up / Down Coal roads, Kooragang south fork
	Port Waratah Arrival and Storage roads to PW42 / PW44
	Port Waratah 8, 9 & 10 Departure roads
Bi-directional Signalling	Main departure road between 100 points and PW79
	Morandoo Loop and between PW69 and PW61 / PW65
Yard Working	Non track circuited areas in Bullock Island, Morandoo, Carrington and Port Waratah

1.3 Applicable Rules

The ARTC Network Rules and Procedures apply to the sections covered by this Information Book.

1.4 Adjacent Train Control Boards / Centres

ARTC Terminal Co-ordinator	(02) 4979 7131	0408 616 692	Emergency (02) 4902 7974
ARTC Lower Hunter	(02) 4902 7909	Emergency	(02) 4902 7969
ARTC Kooragang	(02) 4902 7906	Emergency	(02) 4902 7966
Sydney Trains - North	(02) 9379 4519		
Sydney Trains Broadmeadow	(02) 4923 0990		

1.5 Section Operating Equipment

1.5.1 Motorised Point Machines

All motorised points have a fixed nose i.e. there are no Swingnose points between Islington Junction and Sandgate (exclusive), or in Port Waratah.

1.5.2 Interlockings and Sidings

Km	Interlocking, Station, Platform or Siding	Length of Passenger Platform in Metres
164.589	UGL (Goninans) siding	
165.964	Waratah	Up main No. 1, 117 Down main No. 2, 112
168.153	Up refuge	
168.680	Warabrook	Up main No. 1, 84 Down main No. 2, 84

1.6 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	Cerberus ID	Road Name	Line Segment	KM	Traffic Type	Access	Control Type
438	566	Clyde Street Islington Junction	Main North	164.650	Road	Public	Half Boom Flashing Lights
4363		Waratah Arrival Take Off	Waratah Arrival	164.970	Road	Private	No Control
4351		Scholey Street RSA Service Lxing	Port Waratah Branch	164.972	Road	Private	No Control
4352		Port Waratah Arrivals	Port Waratah Arrivals	166.541	Road	Private	No Control
4353		Morandoo Yard	Port Waratah - Morandoo	166.552	Road	Private	No Control
4354		Morandoo Yard	Port Waratah - Morandoo	167.072	Road	Private	No Control
4355		Morandoo Yard	Port Waratah - Morandoo	167.146	Road	Private	No Control
4356		Morandoo Yard	Port Waratah - Morandoo	167.168	Road	Private	Half Boom Flashing Lights
4357		Morandoo Yard	Port Waratah - Morandoo	167.226	Road	Private	No Control
3900		Port Waratah - Bullock Island Arrivals	Port Waratah - Bullock Island Balloon Loop	167.469	Road	Private	No Control

ALCAM ID	Cerberus ID	Road Name	Line Segment	KM	Traffic Type	Access	Control Type
3901	562	Port Waratah BX1 PWCS Parker Street	Port Waratah - Bullock Island Balloon Loop	168.137	Road	Private	Half Boom Flashing Lights
3902		Bullock Island Loop To Reception	Port Waratah - Bullock Island Balloon Loop	168.559	Road	Private	No Control
3903		Port Waratah Lxing	Port Waratah - Bullock Island Balloon Loop	169.334	Road	Private	No Control
3904		Bullock Island Lxing	Port Waratah - Bullock Island Balloon Loop	169.629	Road	Private	No Control
3905	565	Port Access Bullock Island Lxing	Port Waratah - Bullock Island Balloon Loop	169.761	Road	Private	Half Boom Flashing Lights
3906		Bullock Island Pedestrian Xing	Port Waratah - Bullock Island Balloon Loop	169.775	Pedestrian	Public	No defined Path
3907	563	Darling Street / Dockyard Access Road	Port Waratah - Bullock Island Balloon Loop	169.890	Road	Private	Primary Flashing Lights
3908		Bullock Island Pedestrian Xing (Darling St)	Port Waratah - Bullock Island Balloon Loop	169.904	Pedestrian	Public	No defined Path
1662	564	Robertson Street	Port Waratah - Bullock Island Balloon Loop	170.298	Road	Public	Primary Flashing Lights
1663		Darling Street	Port Waratah - Bullock Island Balloon Loop	170.333	Road	Public	Primary Flashing Lights
1664	561	Private - Port Waratah Coal Services No 1 Parker St	Port Waratah - Bullock Island Balloon Loop	171.255	Road	Private	Full Boom Flashing Lights
4364		Warabrook Take Off	Warabrook Coal Roads	168.020	Road	Private	No Control
4358		East End Yard Crossing	Port Waratah East End	168.535	Road	Private	No Control
4359		Port Waratah Fuel Facility	Port Waratah Yard	169.352	Road	Private	No Control

1.7 Maximum Permitted Speeds and Permanent Speed Restrictions

Refer the Route Access Standard - Heavy Haul Network Section Pages H3 for all speed information.

1.8 Maximum Train Length

The maximum train length is 1545m.

1.9 Structure Clearances

Refer Route Access Standards for Rolling Stock Outlines.

1.10 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 appropriate Network Control Centre (Broadmeadow or Junee) based on GPS location 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

Channel Name WB

Frequency: 450.050 MHz (UHF),

Bandwidth: 12.5 KHz,

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

Tx CTCSS: 173.8 Hz

Rx CTCSS: NA

Selcall: disabled

Channel Name Mountain Radio (WB)

Frequency: 450.050 MHz (UHF),

Bandwidth: 12.5 KHz,

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

Tx CTCSS: 103.5 Hz

Rx CTCSS: NA

Selcall: disabled

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

1.11 Wayside Equipment

Islington Weighbridge	Up Main 165.017 km
Port Waratah Arrival Road 1	166.029 km
Port Waratah Storage Road 1	166.063 km
Port Waratah Storage Road 2	166.018 km

1.12 Ruling Gradients

Down	1 in 70
Up	1 in 90

1.13 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

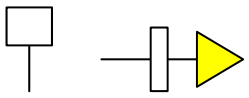
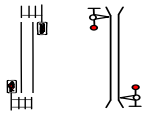
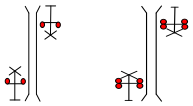
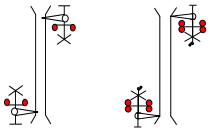
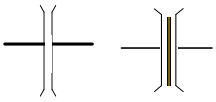
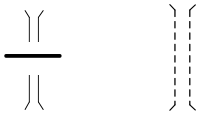
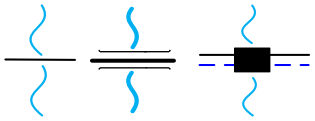
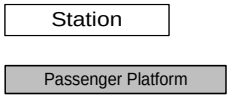
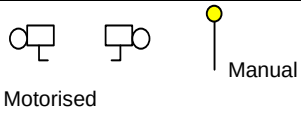
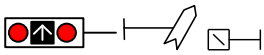
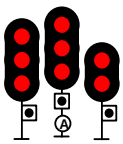
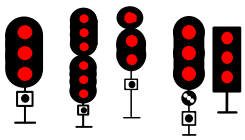
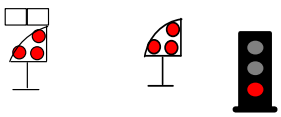
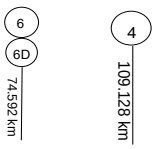
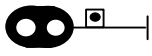
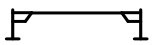
1.14 Lookout Working Hazardous Areas

The below list of locations are hazardous for Lookout Working and may require an additional Lookout or a higher level of protection to undertake work in these areas.

The Protection Officer is responsible for conducting a safety assessment and confirming that Lookout Working is suitable for the work to be performed at the location. This may require the use of an additional Lookout to ensure adequate minimum warning time to easily reach a Safe Place. If the safety assessment determines that Lookout Working is not suitable a higher level of protection must be applied.

Area	KM From	KM To	Line	Line Direction	Up/Down	Reason Unsuitable
Islington	163.920	165.000	Down Main	Uni-directional duplicated	Down	Insufficient sighting distance
Hanbury	165.800	170.500	Down Main	Uni-directional duplicated	Down	Insufficient sighting distance
Waratah	165.000	169.000	Up Main	Uni-directional duplicated	Up	Insufficient sighting distance
Islington	164.945	166.000	Down Coal	Uni-directional duplicated	Down	Sighting distance OK but no safe place
Waratah	166.000	166.800	Down Coal	Uni-directional duplicated	Down	Sighting obstruction
Warabrook	166.800	170.500	Down Coal	Uni-directional duplicated	Down	Insufficient sighting distance
Hanbury	166.750	170.500	Up Coal	Uni-directional duplicated	Up	Insufficient sighting distance

1.15 Drawing Legend

	Standard gauge track		Dual gauge track
	Advisory Sign or Location Sign		Speed sign
	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
	Tunnel		Crossover
	Turnout		Catchpoint
	Derail		Points Operating Mechanism
	Point Indicator		Mechanical Frame
	Automatic Signals		Controlled Signals
	Dwarf Signals		Signal number reference
	Distant Signal		Repeater Signal
	Overheight Detectors	>> <<	Wayside Equipment

2 Locations and Sections Information

2.1 Islington Junction (ISJ)

2.1.1 General Arrangements

Islington Junction is the boundary of the ARTC territory with Sydney Trains.

Up and Down Main lines run from Hamilton to Islington Junction.

Up and Down Main, and Down Relief lines run from Woodville to Islington Junction.

Up starting signal IJ24 is dual controlled by Newcastle panel signaller at Sydney Trains Broadmeadow signalling complex.

Islington Junction is a signalled location located within the Yard limits of Port Waratah.

Port Waratah Yard Limits

City End

Track	Direction	Km	Signal	Signage
Down Islington Loop	Down	164.007	IJ5	YL
Down Islington Loop	Up	164.007	IJ5	EYL
Down Relief	Down	164.351	IJ9	YL
Down Relief	Up	164.351	IJ9	EYL
Down Main	Down	164.045	IJ21	YL
Down Main	Up	164.045	IJ21	EYL
Up Main	Up	164.210	HN12	EYL
Up Main	Down	164.210	HN12	EYL
Up Islington Loop	Up	163.864	WJ20	EYL
Up Islington Loop	Down	163.864	WJ20	EYL

Country End

Track	Direction	Km	Signal	Signage
Down Coal		169.818	C105.5	
Up Coal	Up	170.127	HJ36	EYL/YL
Up Coal	Down	170.127	HJ36	YL/EYL
Down Main		170.860	M106.1	
Up Main	Up	170.117	HJ34	EYL/YL
Up Main	Down	170.117	HJ34	YL/EYL
Up South Fork	Up	169.056	HJ28	EYL/YL
Up South Fork	Down	169.056	HJ28	YL/EYL
Down South Fork	Down	169.851	SFD1	EYL/YL
Down South Fork	Up	169.851	SFD1	YL/EYL

2.1.2 Operation of Points and Signals

The points and signals at Islington Junction are operated from Network Control Centre North.

All indications are displayed on the control panel at Network Control Centre North.

All points worked from the Network Control Centre North are controlled by track circuit and cannot be moved unless the track(s) controlling the points is unoccupied.

Operation of Power Operated Points in an Emergency

All points worked from the Network Control Centre North are electrically power operated.

If these points fail to operate correctly, the Network Controller must try to restore the points to their previous position to allow trains to continue running. However, if it is necessary to alter the route, the points may be manually operated.

The Signals maintenance representative must be promptly advised of the circumstances.

2.1.3 Clyde Street Level Crossing

Type F flashing light highway signals, bells and half-boom barriers are provided at Clyde Street level crossing at 164.656km.

The half-boom barriers and highway signals are interlocked with the signals protecting the level crossing.

Control of Equipment in an Emergency

If there is a failure of the level crossing protection equipment, the instructions for failed level crossing equipment must be carried out.

During the time the boom barriers are secured in the raised position owing to a failure, the signals in the approach to the level crossing will remain at stop and must only be passed by trains in accordance with the instructions for that type of signal.

The Network Controller must promptly inform the Signals maintenance representative if there is a failure of the equipment at the level crossing.

2.1.4 Work on Track Authorities (includes special operational arrangements)

Local Possession Authority (LPA)

To allow infrastructure works to be undertaken at various times at or over the ARTC / Sydney Trains interface boundaries at Islington Junction, Hamilton and Woodville Junction, when ARTC and Sydney Trains have back-to-back Local Possession Authorities. To facilitate works at or over the interface boundaries, it will not be possible to place possession protection as described within ANWT 302 Local Possession Authority and ANPR 700 Using a Local Possession Authority.

Whilst work is being undertaken at or over the interface boundaries the following exception to ANWT 302 and ANPR 700 protecting the limits will apply:

Possession Protection Officer

The ARTC Possession Protection Officer (PPO) and the Sydney Trains PPO must confer and come to a clear understanding of the worksite protection to be established over the ARTC and Sydney Trains interface boundaries.

When the work at or over the interface boundaries is completed, the ARTC and Sydney Trains Possession Protection Officers must ensure that possession protection in accordance with ANWT 302 must be put in place as soon as the work is complete.

ARTC only LPA

Line	Limits
Down Relief	Islington Junction side of R101.69 Signal
Down Islington Loop	Islington Junction side of 455 Points
Up Islington Loop	Islington Junction side of WJ20 Signal

***NOTE**: Where the ARTC only LPA includes the Down Relief:*

- *ARTC Network Controller must request the Area Controller (Signaller) Broadmeadow to protect the possession limit by placing blocking facilities on B 263 signal, and*
- *R101.69 signal must be booked out of use for the duration of the possession.*

Sydney Trains only LPA

Line	Limits
Down Relief	Broadmeadow side of IJ9 Signal
Down Islington Loop	Broadmeadow side of 455 Points
Up Islington Loop	Broadmeadow side of WJ20 Signal

Track Occupancy Authority (TOA)

Down Relief line

The Port Waratah Network Controller is responsible for implementing a TOA when a worksite is established on the Islington Down Relief line on the countryside of IJ 9 signal. When a TOA worksite will extend beyond IJ 9 signal, separate TOA s must be issued by the Port Waratah Network Controller and the Area Controller (Signaller) Broadmeadow (Broadmeadow panel).

Down Islington Loop

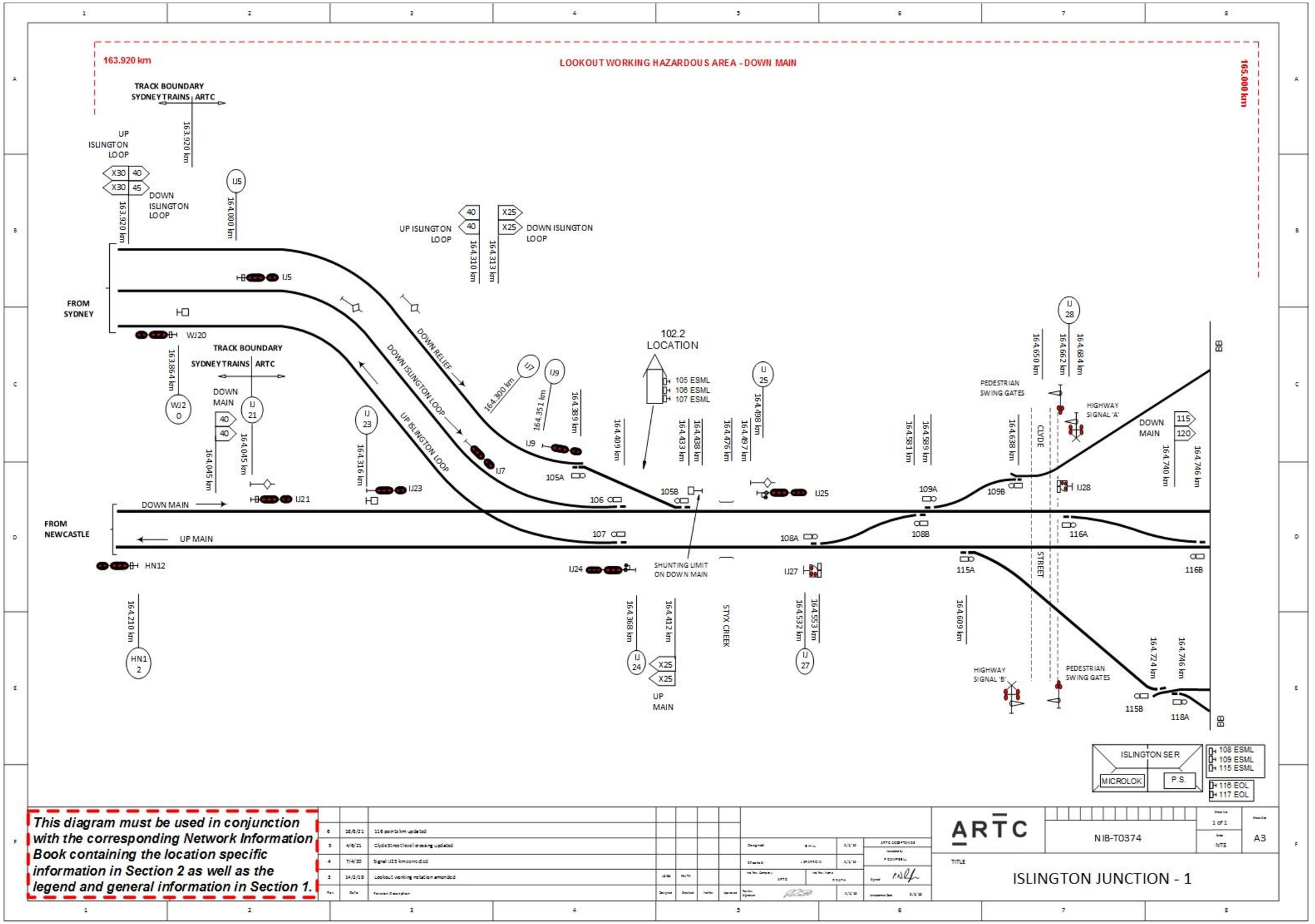
The Port Waratah Network Controller is responsible for implementing a TOA when a worksite is established on the Down Islington loop line on the Countryside of IJ 5 signal. When a TOA worksite will extend beyond IJ 5 signal, separate TOA s must be issued by the Port Waratah Network Controller and the Area Controller (Signaller) Broadmeadow (Newcastle panel).

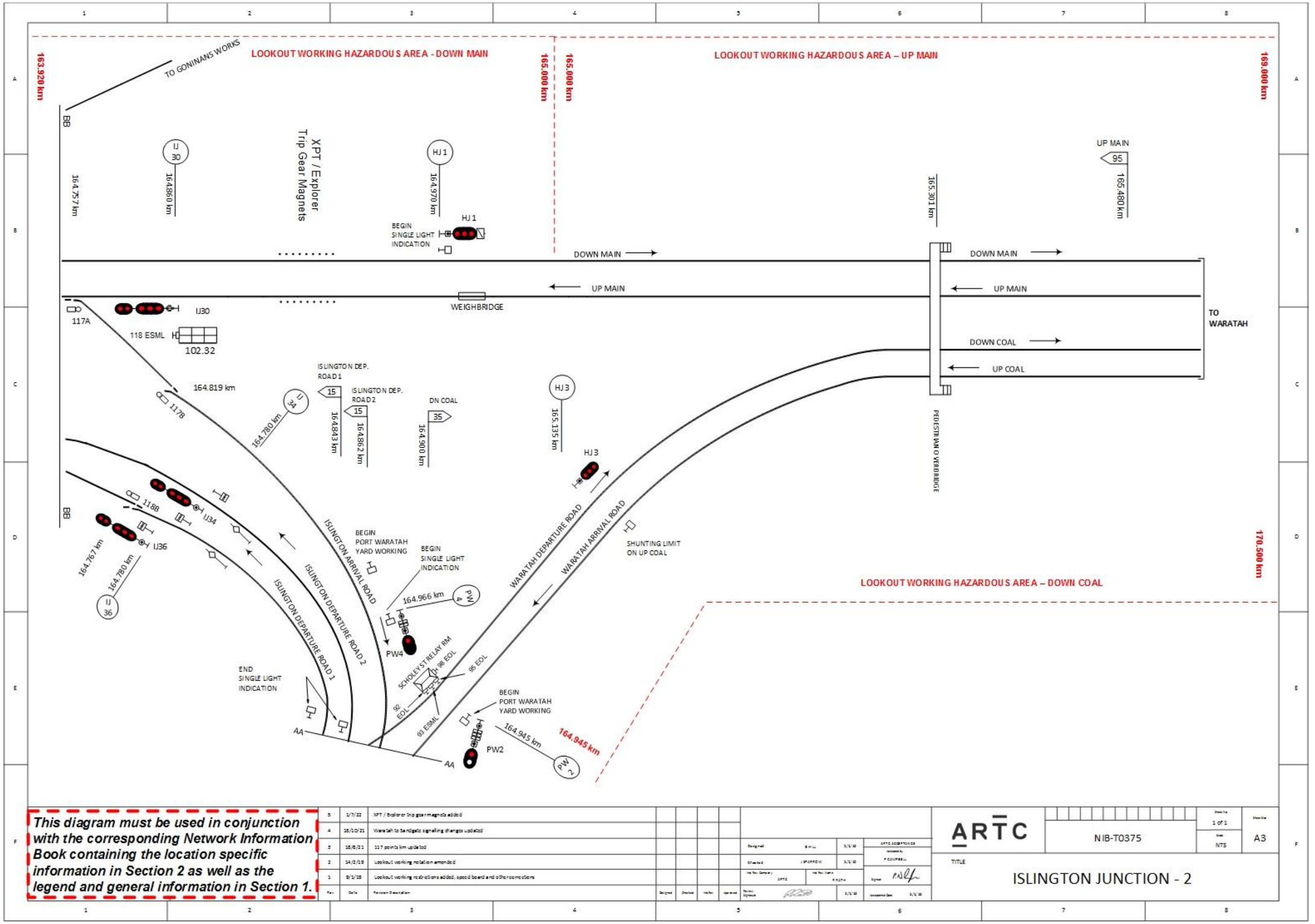
Up Islington Loop

The Port Waratah Network Controller is responsible for implementing a TOA when a worksite is established on the Up Islington Loop Countryside of WJ20 signal. When a TOA worksite extends beyond WJ20 signal, separate TOA s must be issued by the Port Waratah Network Controller and the Area Controller (Signaller) Broadmeadow (Newcastle panel).

Sydney Trains NLA 318 Broadmeadow to Woodville Junction & NLA 320 Broadmeadow – Newcastle Interchange is located on the internet at:
Sydney Trains – www.railsafe.org.au

NLA-318-Broadmeadow & Woodville Junction
NLA-320-Broadmeadow – Newcastle Interchange


163.920 km
LOOKOUT WORKING HAZARDOUS AREA - DOWN MAIN
165.000 km
TRACK BOUNDARY
SYDNEY TRAINS | ARTC
UP ISLINGTON LOOP
DOWN ISLINGTON LOOP
UP ISLINGTON LOOP
DOWN ISLINGTON LOOP
FROM SYDNEY
DOWN RELIEF
DOWN ISLINGTON LOOP
UP ISLINGTON LOOP
TRACK BOUNDARY
SYDNEY TRAINS | ARTC
DOWN MAIN
102.2 LOCATION
105 ESML
106 ESML
107 ESML
PEDESTRIAN SWING GATES
HIGHWAY SIGNAL 'A'
DOWN MAIN
CLYDE STREET
DOWN MAIN
FROM NEWCASTLE
UP MAIN
SHUNTING LIMIT ON DOWN MAIN
STYX CREEK
UP MAIN
HIGHWAY SIGNAL 'B'
PEDESTRIAN SWING GATES
ISLINGTON SER
MICROLOK
P.S.
108 ESML
109 ESML
115 ESML
116 EOL
117 EOL
This diagram must be used in conjunction with the corresponding Network Information Book containing the location specific information in Section 2 as well as the legend and general information in Section 1.
ARTC
NIB-T0374
ISLINGTON JUNCTION - 1
A3



This diagram must be used in conjunction with the corresponding Network Information Book containing the location specific information in Section 2 as well as the legend and general information in Section 1.

Rev	Date	Revision Description
5	1/7/22	XPT / Explorer trip gear magnets added
4	18/10/21	Waratah to Sandgate signalling changes updated
3	18/8/21	117 points km updated
2	14/2/19	Lookout working notation amended
1	9/1/19	Lookout working restrictions added, speed board and other corrections

ARTC

NIB-T0375

1 of 1

NTS

A3

TITLE

ISLINGTON JUNCTION - 2

2.2 UGL Rail (Goninan's) Siding

General Arrangements

UGL Rail (Goninan's) siding may be shunted to/from the mainline anytime, but shunting movements beyond the Clyde Street locked gate (near Georgetown Road) can only be carried out during daylight hours.

A security gate has been erected at the entrance to the siding. When closed, the gate obstructs Goninan's siding.

It is the responsibility of the Qualified Workers controlling the shunting movement to ensure that the gates are open for the passage of their train.

Stop sign at 164.777km must not be passed into UGL Rail's site without a UGL Rail qualified worker. UGL Rail is responsible for all rail traffic beyond the stop sign away from the ARTC main line.

Departing UGL Rail's Siding

Permission must be obtained from the Network Controller for Islington Junction, before passing the STOP sign to proceed to IJ28 signal. The clearing of IJ28 will allow rail traffic to proceed to the down or up main line.

When the Network Controller has cleared IJ28 signal, a crew member must push the driver's push button to activate the level crossing, before the signal will clear and rail traffic is able to proceed.

Shunt Limit Sign

Shunt Limit Sign installed at 164.438km on Down Main facing Up trains departing UGL Rail siding. There is only 60m between SLS and IJ25 signal.

Shunting UGL Rail's Siding

The Rolling stock operator must advise UGL Rail when a train is warned on for UGL Rail's sidings. UGL Rail will then arrange for Qualified Workers to meet the shunting trip at Clyde Street level crossing at Islington Junction and accompany the train to UGL Rail's siding.

On arrival at Islington Junction, the shunting trip will proceed to UGL Rail's sidings, as required. If the shunting trip is a propelling movement, discrete radio communication must be provided between the driver and the Qualified Worker controlling the movement.

Before passing through the various businesses and over the private road crossings, the Driver must sound the locomotive whistle and the Qualified Worker must ensure that all work activities on or near the line and all road traffic have stopped.

The Driver must then stop the train clear of the Clyde Street level crossing (on the sidings near Georgetown) until authorised to proceed to a point clear of Broadmeadow Road level crossing.

Shunting Trips that Consist of Electric Passenger Rolling Stock

When a train conveying electric passenger rolling stock arrives at the point clear of Broadmeadow Road level crossing, the Driver must secure the consist and obtain the assistance of a Qualified Worker certified in the operation of electric trains before detaching the locomotive.

Shunting Trips that DO NOT Consist of Electric Passenger Rolling Stock

When a train that is not conveying electric passenger rolling stock arrives at the point clear of Broadmeadow Road level crossing, the Qualified Worker must secure the vehicles before the locomotive is detached.

Catchpoints

Catchpoints are provided in Nos. 1 and 2 Works sidings on the UGL Rail works side of Broadmeadow Road level crossing. When not in use, these catchpoints must be secured by a chain and a private lock. When required to be used, the UGL Rail employee accompanying the train will unlock and operate the catchpoints.

Drivers of locomotives proceeding to the works must bring the locomotive to a stand clear of the catchpoints until the catchpoints are set in the correct position and the train is authorised to proceed.

When the locomotive departs the siding, the UGL Rail employee will secure the catchpoints with the chain and lock provided.

2.3 Waratah (WTH)

General Arrangements

Waratah has a passenger station located on the Up and Down main lines.

Up and Down coal lines pass on the Up side of Waratah passenger platform.

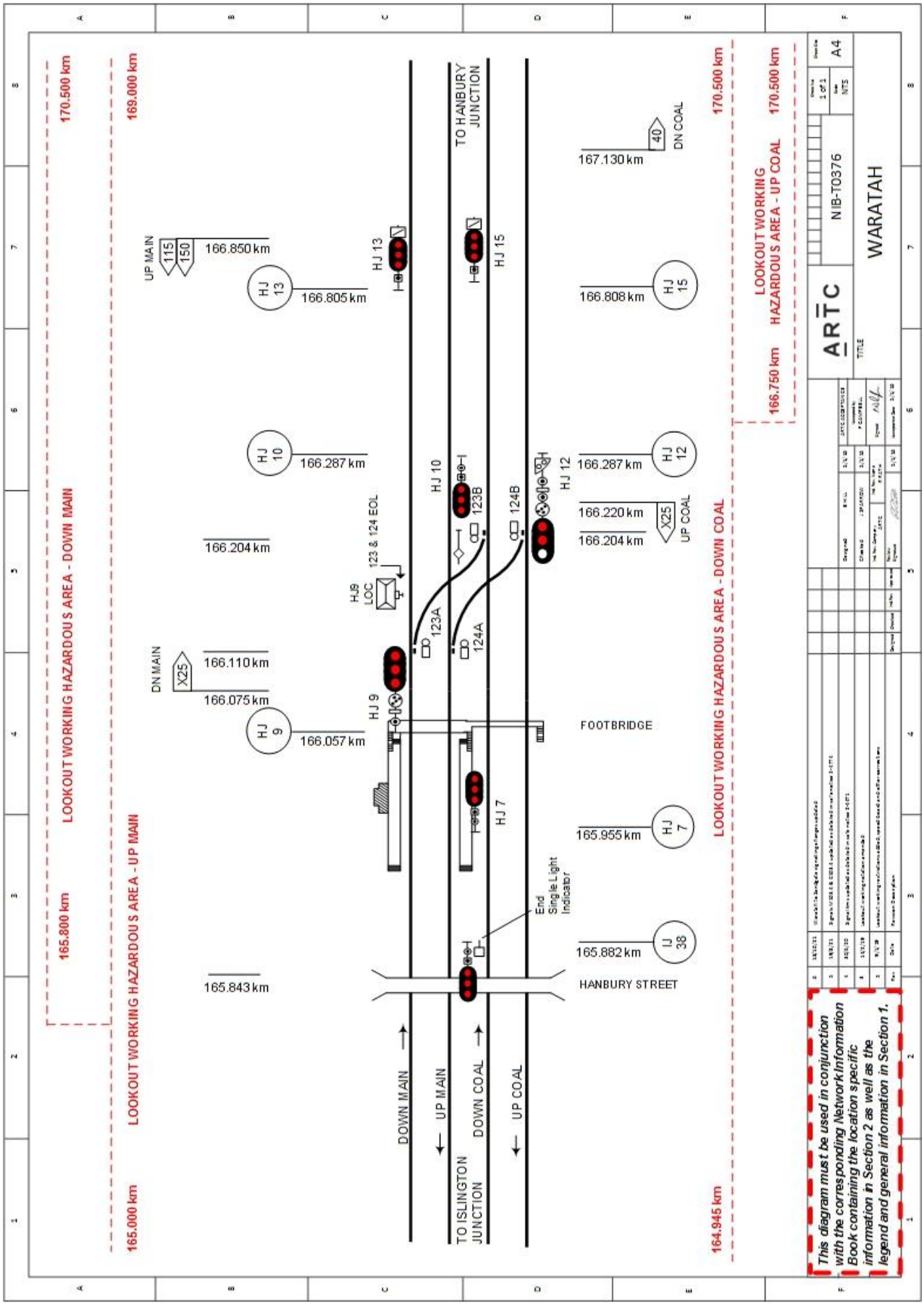
Points No.123 & No.124 crossovers between Down Main to Down Coal and Up Coal to Up Main.

EOL arrangements for 123 and 124 points are provided on a new signal location named HJ9 located adjacent to the Down Main line at 166.174km.

The EOL keys are interlocked to prevent parallel / simultaneous rail traffic movements through the points in the reverse position due to track gauge restrictions.

Only one set of EOL keys (either 123 OR 124) are able to be removed at any one time.

***WARNING**: No parallel / simultaneous train movements must be permitted while No. 123 or No. 124 points are in the reverse position due to out of gauge.*


LOOKOUT WORKING HAZARDOUS AREA - DOWN MAIN
LOOKOUT WORKING HAZARDOUS AREA - UP MAIN
LOOKOUT WORKING HAZARDOUS AREA - DOWN COAL
LOOKOUT WORKING HAZARDOUS AREA - UP COAL
170.500 km
169.000 km
165.800 km
165.000 km
166.750 km
164.945 km
UP MAIN
DN MAIN
DN COAL
UP COAL
166.850 km
166.805 km
166.808 km
167.130 km
166.287 km
166.204 km
166.220 km
166.110 km
166.075 km
166.057 km
165.955 km
165.882 km
165.843 km
HJ 13
HJ 15
HJ 10
HJ 12
HJ 9
HJ 7
IJ 38
X25
115
150
40
HJ9 LOC
123 & 124 EOL
123A
123B
124A
124B
FOOTBRIDGE
End Single Light Indicator
HANBURY STREET
TO HANBURY JUNCTION
TO ISLINGTON JUNCTION
DOWN MAIN
UP MAIN
DOWN COAL
UP COAL
ARTC
NIB-T0376
WARATAH
TITLE
A4
This diagram must be used in conjunction with the corresponding Network Information Book containing the location specific information in Section 2 as well as the legend and general information in Section 1.

2.4 Down & Up Coal Lines between Port Waratah & East Greta Junction

General Arrangements

Down and Up Coal lines are parallel to the Main lines and are located on the Up side from signal No. HJ3 via Islington Junction to Hanbury Junction, where they pass under the Main lines and then are located on the Down side to East Greta Junction via Maitland.

The passage of all trains over the coal lines is directed by the Network Control Centre North.

Crossovers are provided between the main lines and the coal lines at Waratah, Hanbury Junction and Sandgate interlockings.

Freight trains may be run on the Down and Up coal lines, if required, for train working purposes. However, passenger trains should not be run on these lines, except in cases of locomotive failure or other emergency which would cause serious delays to passenger services, or in cases of planned maintenance work when authorised by the operations manager. Care must be taken to ensure passenger services are routed back onto the Main as soon as possible, to minimise missed station stops.

Diversion of Passenger Trains from the Main Lines to the Coal Lines between Islington Junction - Thornton during Emergency or Planned Maintenance Work

Passenger trains may be diverted from the main lines to the coal lines when one or both of the main lines are obstructed, or at times when planned track maintenance work is being carried out. Care must be taken to ensure passenger services are routed back onto the Main as soon as possible, to minimise missed station stops.

Diversion of Traffic from the Main Lines to the Coal Lines and vice versa between Waratah - Thornton

Down and Up freight trains which do not require to shunt at intermediate interlockings between Waratah and Thornton inclusive may be diverted to the coal lines to advance them when the main lines are required for more important trains, provided that significant delays will not be caused to the running of coal trains, or when the main lines are obstructed for any reason.

2.5 Hanbury Junction (HBJ)

General Arrangements

Waratah, Hanbury Junction and Sandgate-South Fork locations are controlled from the Network Control Centre North.

The points and signals at these locations are all controlled by the Port Waratah Network Controller.

Hanbury Dive is where the Coal lines cross under the Main lines at 167.400km

There is a 483 metre refuge siding on the Up Main, facing Up traffic, with points located at approximately 168.110km.

Uni-directional crossovers from Down Coal to Down Main and Up Main to Up Coal are located from 168.470 to 168.580km.

Operation of Points and Signals

The points, signals and ground frame releases at Waratah, Hanbury Junction and Sandgate-South Fork are operated from Network Control Centre North.

All points worked from the Network Control Centre North are controlled by track circuit and cannot be moved unless the track(s) controlling the points is unoccupied.

EOL cabinets for 126 and 127 points are provided on posts located adjacent to the Up Main line at 168.092km.

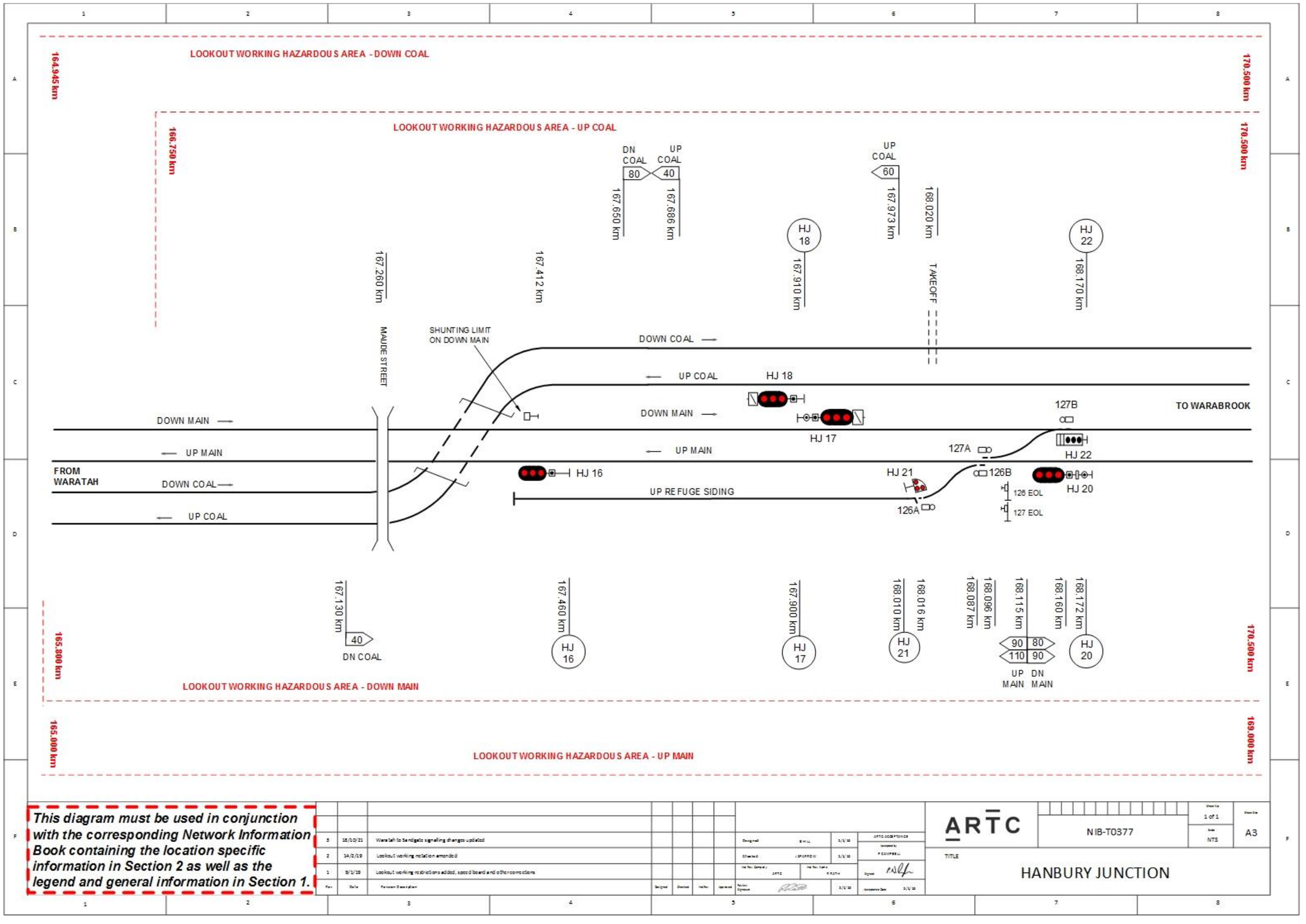
EOL cabinets for 134 and 135 points are provided on the signal location hut HJ25 located adjacent to the Down Coal line at 168.530km.

EOL cabinets for 136 and 137 points are provided on the signal location hut HJ28 located on the Up side adjacent to the Up South Fork line at 169.038km.

Shunting Limit Sign

A shunting limit sign is provided at Hanbury Junction. The sign is located on the Down side of the Down main line near the dive.

The sign is inscribed "Limit of Shunt on Down Main" and applies to shunting movements in the Up direction on the Down main line on the authority of the Set back on Down main signal No. HJ22.


LOOKOUT WORKING HAZARDOUS AREA - DOWN COAL
164.945 km
170.500 km
LOOKOUT WORKING HAZARDOUS AREA - UP COAL
166.750 km
170.500 km
DN COAL
UP COAL
80
40
167.650 km
167.686 km
UP COAL
60
167.973 km
168.020 km
TAKEOFF
HJ 18
167.910 km
HJ 22
168.170 km
167.260 km
MAUDE STREET
167.412 km
SHUNTING LIMIT ON DOWN MAIN
DOWN COAL
UP COAL
HJ 18
DOWN MAIN
DOWN MAIN
HJ 17
127B
TO WARABROOK
UP MAIN
UP MAIN
127A
HJ 22
FROM WARATAH
DOWN COAL
HJ 16
UP REFUGE SIDING
HJ 21
126B
HJ 20
126 EOL
126A
127 EOL
UP COAL
167.130 km
40
DN COAL
167.460 km
HJ 16
167.900 km
HJ 17
168.010 km
HJ 21
168.016 km
168.087 km
168.096 km
168.115 km
168.160 km
168.172 km
90
80
110
90
UP MAIN
DN MAIN
HJ 20
165.800 km
170.500 km
LOOKOUT WORKING HAZARDOUS AREA - DOWN MAIN
165.000 km
169.000 km
LOOKOUT WORKING HAZARDOUS AREA - UP MAIN
This diagram must be used in conjunction with the corresponding Network Information Book containing the location specific information in Section 2 as well as the legend and general information in Section 1.
5 18/10/21 Ware left to Sandgate signalling changes updated
2 14/2/19 Lookout working notation amended
1 9/1/19 Lookout working restrictions added, speed board and other corrections
ARTC
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1 of 1
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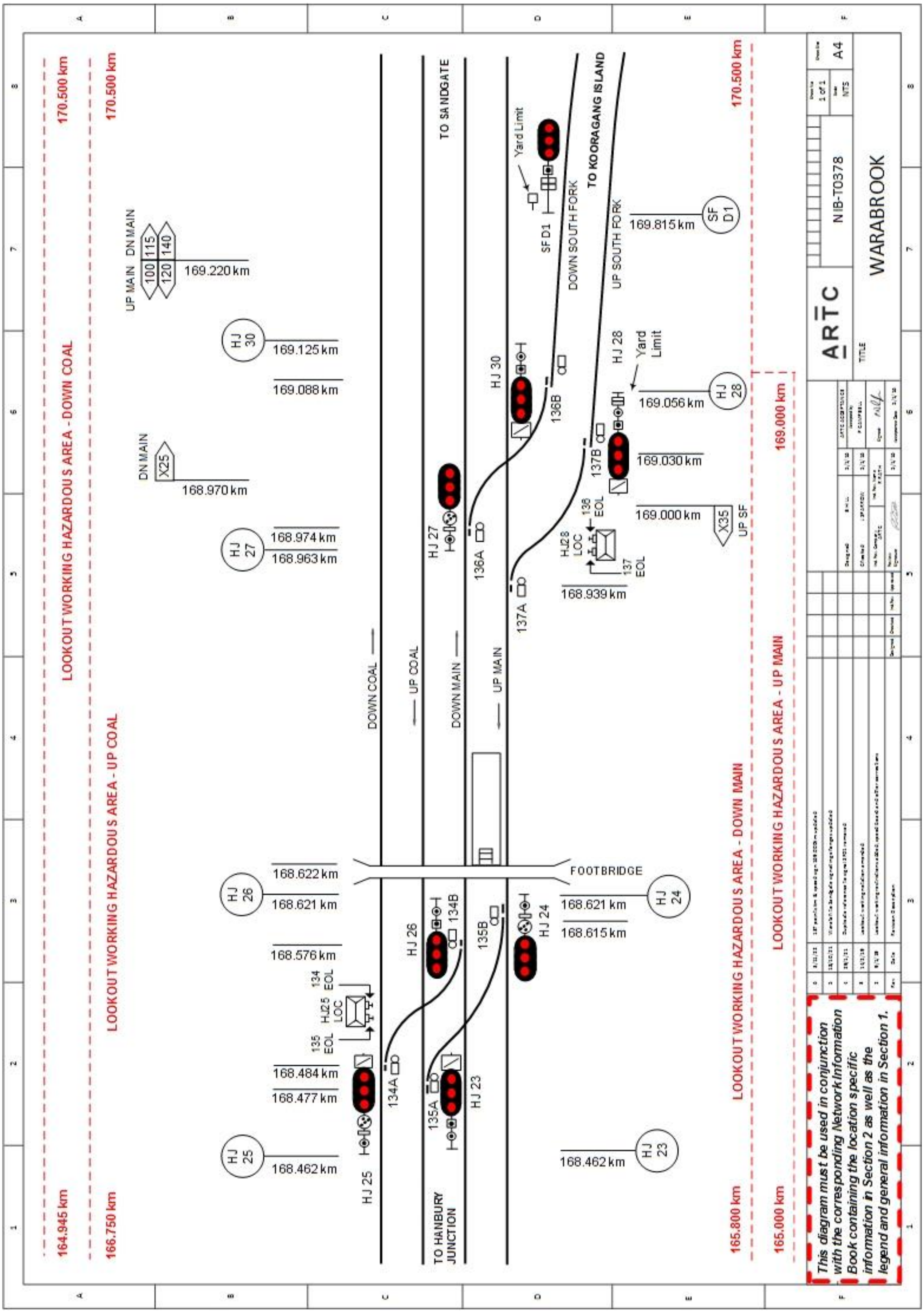
HANBURY JUNCTION


LOOKOUT WORKING HAZARDOUS AREA - DOWN COAL
LOOKOUT WORKING HAZARDOUS AREA - UP COAL
LOOKOUT WORKING HAZARDOUS AREA - DOWN MAIN
LOOKOUT WORKING HAZARDOUS AREA - UP MAIN
164.945 km
170.500 km
166.750 km
170.500 km
165.800 km
170.500 km
165.000 km
169.000 km
TO SANDGATE
TO HANBURY JUNCTION
TO KOORAGANG ISLAND
DOWN COAL
UP COAL
DOWN MAIN
UP MAIN
DOWN SOUTH FORK
UP SOUTH FORK
FOOTBRIDGE
UP MAIN
DN MAIN
100
115
120
140
169.220 km
DN MAIN
X25
168.970 km
HJ 30
169.125 km
169.088 km
HJ 27
168.974 km
168.963 km
HJ 26
168.622 km
168.621 km
168.576 km
HJ 25
168.484 km
168.477 km
168.462 km
HJ25 LOC
134 EOL
135 EOL
134A
134B
135A
135B
HJ 23
HJ 24
HJ 26
HJ 27
HJ 30
HJ 28
136A
136B
137A
137B
HJ28 LOC
136 EOL
137 EOL
168.939 km
X35
UP SF
169.000 km
169.030 km
169.056 km
Yard Limit
SF D1
169.815 km
168.621 km
168.615 km
168.462 km
This diagram must be used in conjunction with the corresponding Network Information Book containing the location specific information in Section 2 as well as the legend and general information in Section 1.
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WARABROOK
1 of 1
A4
NTS
TITLE

2.6 Port Waratah (PWY)

2.6.1 General Arrangements

Yard working is in operation in the Port Waratah area bounded by the notice signs.

Notice signs inscribed “Begin Port Waratah Yard working”, are provided near signals Nos. PW4 and PW2 to indicate the entrance to the Yard Working area.

Notice signs inscribed “End Port Waratah Yard working”, are provided near signals Nos. PW81 and PW82 to indicate the exit from the Yard Working area.

Km	Interlocking, Station, Platform or Siding
166.924	Morandoo Exchange sidings
166.994	Port Waratah
167.219	PWCS Discharge sidings
169.571	Bullock Island

Operation of Points and Signals

The interlocked points, signals and ground frame releases in the Port Waratah and Bullock Island areas are operated from Port Waratah board, Network Control Centre North (NCCN).

All points worked from the interlocking machine are controlled by track circuit and cannot be moved unless the track(s) controlling the points is unoccupied.

Signalling System

Point mechanisms

Some points in the yard are trailable but care must be taken to ensure that electric motor points are not trailed through.

The trailable points are numbered 117, 136 and 137.

Shunting signals

The movements of trains on the arrival and departure roads and the Bullock Island loop and to and from the sidings connecting with these roads are on the authority of shunt signals.

If it is necessary to signal a train onto an occupied section of track for shunting or closing-up purposes, the Network Controller must advise the Driver of the nature of the movement to be made. In this regard, Drivers of trains brought to a stand at a shunting signal at stop must contact the Network Controller if the signal is not cleared within 5 minutes.

Operation of Power Operated Points in an Emergency

All points worked from the Port Waratah board, Network Control Centre North (NCCN) are electrically power-operated.

If these points fail to operate correctly, the Network Controller must try to restore the points to their previous position to allow trains to continue running. However, if it is necessary to alter the route, the points may be manually operated.

The Signals maintenance representative must be promptly advised of the circumstances.

The emergency equipment cupboards are locked with ESML locks.

***NOTE**: Care must be taken to ensure that both ends of these points have been operated correctly before any train is permitted to move over the points.*

Operation of Frames F, G, H

For frames F & G request release from the Port Waratah Network Controller. Once the release is provided a white light will illuminate in the release switch pushbutton, press button and pull lever.

To obtain the Fortress key to unlock ground frame H, request the release from the Port Waratah Network Controller. Once the release is provided a white light will illuminate in the release switch pushbutton, press and hold the pushbutton whilst turning the Fortress key clockwise approximately 45 degrees, the key will then be released. The Fortress key can then be used to unlock the ground frame.

On completion of shunting operation, restore the ground frame to the normal position restore the Fortress key to the releasing switch (Frame H) and contact the Port Waratah Network Controller to confirm the ground frame release has been restored for normal operation.

Stop Signs

Numbered STOP signs are provided throughout Port Waratah and Bullock Island to indicate the point to which shunting movements are permitted to proceed. Numbering ensures that all parties can correctly identify the location of the signs.

All rail traffic movements must obtain permission from the applicable authority before passing these STOP signs. Contact either the Port Waratah Network Controller or the Hunter Bulk Terminal Co-ordinator as indicated on the sign. If there is no nominated contact on the sign, then contact the ARTC Terminal Co-ordinator.

Signage indicating End Signalled Authority is installed on the down side of;

- Grain Arrival Road 1 at 168.318km (STOP sign ID number 657) (#3 sign)
- Grain Arrival Road 2 at 168.379km (STOP sign ID number 658) (#3 sign)
- Bullock Island Siding (MSB) Number 1 at 168.438km (STOP sign ID number 1N) (#3 sign)
- Bullock Island Siding (MSB) Number 2 at 168.438km (STOP sign ID number 2N) (#3 sign)

Signage number 662 indicating End Signalled Authority is installed on the up side of;

- Bullock Island Departure Road at 171.260 km (#3 sign)

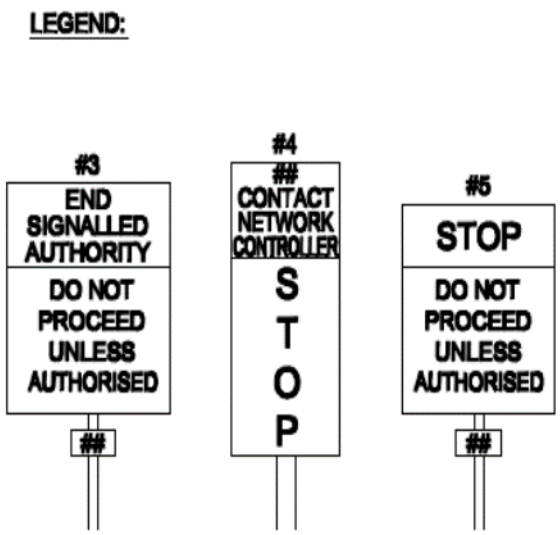
STOP signs are installed facing north bound rail traffic movements entering from the non-track circuited areas to the track circuited Network Control area as follows;

- Grain Arrival Road 1 at 168.318km (STOP sign ID number 580) (#4 sign)
- Grain Arrival Road 2 at 168.379km (STOP sign ID number 581) (#4 sign)
- Bullock Island Siding (MSB) Number 1 at 168.445km (STOP sign ID number 582) (#4 sign)
- Bullock Island Sidings (MSB) Numbers 2 & 3 at 168.461km (STOP sign ID number 583) (#4 sign).

Rail Traffic moving south from the Network Controller area to the Grain Arrival Road Number 1 or Number 2 (#3 sign) must obtain authorisation from the ARTC Terminal Co-ordinator before proceeding past the “End of Signal Authority” signs located at the end of the track circuited area.

Rail traffic signalled to proceed past shunt signal PW64 on the Bullock Island Departure Road must obtain authorisation from the ARTC Terminal Co-ordinator before passing the number 662 “End of Signalled Authority” (#3) sign.

Rail traffic departing Varley’s Siding must stop at the STOP sign and contact the Port Waratah Network Controller at the Network Control Centre North (NCCN) for authorisation to pass the STOP sign and enter the ARTC Network.



Adjacent Local Possession Authority

In exception to ARTC Network Rule ANWT 302 Local Possession Authority and Procedure ANPR 700 Using a Local Possession Authority, where worksites are located less than 500m from the end of limits of the Local Possession Authority within Port Waratah Terminal and a Work on Track Authority is required to adjoin the limits, it will be permissible to adjoin the limits as described in ANWT 300 Planning Work in the Rail Corridor - In Shunting Yards, Attended Yards.

If rail traffic needs to be excluded from a work area within a shunting yard, the Protection Officer must speak to the officer in charge of the yard. Where practicable, the Protection Officer must secure points to prevent unauthorised rail traffic entry into the work area.

2.6.2 Level Crossings

PWCS Level Crossings

A level crossing equipped with type F flashing lights and half-boom barriers is located at the lines forming the PWCS Nos. 1 and 2 track departures and the Morandoo balloon loop, and another level crossing is located between Bullock Island North end No. 9 Nest and the departure sidings.

To expedite the movement of road traffic over the level crossings, the Network Controller must not clear signals Nos. 66, 67 and 68 from the balloon loop until assured that the train will be able to proceed and minimise time obstructing the level crossing.

When it is required to despatch a train from Bullock Island No. 9 Nest to the departure sidings, signals Nos. 65 and 70 must not be cleared and a train must not obstruct the level crossing until the Network Controller is assured that the train will be able to proceed beyond frame F and so prevent them from having to stop and obstruct the level crossing.

Operator’s Switches

Operator’s pushbutton units are provided in boxes inscribed "Shunter's switch", attached to posts located on each side of the PWCS access road level crossing.

Before occupying the level crossing for a shunting movement, the Qualified Worker must carry out the instructions for shunting over a level crossing.

The warning indications will be cancelled automatically when the rear of the shunting movement has cleared the level crossing.

If the movement is not proceeded with, the warning indications must be cancelled by pressing the "Cancel" pushbutton in either operator’s pushbutton unit.

The operator’s pushbutton units must be kept closed and secured by SL locks when not in use.

***NOTE**: If the "Start" pushbutton is depressed immediately after the passage of a train on the Bullock Island departure road, the consequent operation of the equipment at the level crossing will be delayed for approximately 30 seconds.*

If a shunting movement to or from No. 9 Nest clears the level crossing, or if the "Cancel" pushbutton is depressed, while a train is approaching on the Bullock Island departure road, the warning indications will not be suppressed until the latter train clears the level crossing.

MSB Level Crossings

The equipment at each level crossing is automatically controlled by track circuit for normal direction train movements.

If any train or locomotive is required to proceed over either level crossing on the authority of a hand signal, the train or locomotive must be brought to a stand clear of the crossing before it fouls the crossing and then proceed forward cautiously until the protection equipment is automatically operated by the approach of the train on the track.

Dockyard Access Road Level Crossings

Type F flashing lights and bells and half-boom barriers are provided at the Dockyard access road level crossing at 169.940km.

The level crossing equipment must be manually operated by the operator’s pushbuttons provided every time a train movement is required to obstruct the level crossing.

Operator’s Switches

Operator’s pushbutton units are provided in boxes inscribed "Shunter's switch", attached to posts located on each side of the level crossing.

Before occupying the level crossing for a shunting movement, the Qualified Worker must carry out the instructions for shunting over a level crossing.

The warning indications will be cancelled automatically when the rear of the shunting movement has cleared the level crossing.

If the movement is not proceeded with, the warning indications must be cancelled by pressing the "Cancel" pushbutton in either operator’s pushbutton unit.

The operator’s pushbutton units must be kept closed and secured by SL locks when not in use.

2.6.3 Control by Two-way Radio Equipment

The ARTC Hunter Bulk Terminal Co-ordinator (HBTC) oversees the movement of trains within the dark territory of Port Waratah complex by two-way radio.

The area of operation for this two-way radio system is confined to the Port Waratah and Kooragang yard areas.

ARTC Terminal Co-ordinators are responsible for directing all train movements by two-way radio to and from all sidings and balloon loops.

Before permitting any train movements to commence in either Terminal, Rail Operators requiring to move any rollingstock must:

- Identify themselves to the HBTC
- Give details of the movement to take place including details of
    - Train/locomotive number
    - Destination
    - Intended route
    - Forecast for completion of movement
- Request a radio channel to be allocated to them for their movements
- Once movement has been approved the ARTC HBTC will allocate the movement a radio channel as per the list below:

HBT Terminal Radio Channels Port Waratah

PW Admin	ARTC Terminal Co-ordinator Safeworking Channel
PW Control	Dedicated Port Waratah Roll-by Channel (Roll-by Detector & Bin inspections)
PW SHT 1	Pacific National Coal Operations
PW SHT 2	
PW SHT 3	PN Morandoo
PW SHT 4	
PW SHT 5	GWA
PW SHT 6	
PW SHT 7	Aurizon
PW SHT 8	
PW SHT 9	SSR

HBT Terminal Radio Channels Kooragang

KCL Admin	ARTC Terminal Co-ordinator Safeworking Channel
KCL Control	Dedicated KCT Roll-by Channel (Roll-by Detector & Bin inspections)
KCL SHT 1	Pacific National Coal Operations
KCL SHT 2	
KCL SHT 3	NCIG
KCL SHT 4	
KCL SHT 5	
KCL SHT 6	

The above lists are the preferred allocations and are subject to change at the discretion of the HBTC.

- Before permitting any movement towards signalled territory to take place, the ARTC Terminal Coordinator must confer with the Network Controller about the movement

***NOTE**: All movements directed by two-way radio do not relieve Operators of their responsibility for ensuring that all points and signals are correctly set before commencing a shunting movement or a train movement.*

2.6.4 Port Waratah Automatic Electronic Weighbridge

An automatic electronic weighbridge has been installed on the 3 Arrival Roads around 166.030km for the automatic weighing of trains as they arrive at Morandoo, PWCS and MSB areas and Bullock Island.

Drivers must not stop or reverse their train during weighing operations except to act on any indication displayed by the position light shunting signals or the Operator's hand signals, or any verbal instructions.

2.6.5 Morandoo Exchange Sidings 166.924km

The Morandoo Exchange sidings are connected to No. 2 Arrival road at No. 109 points and No. 119 points on No. 1 Bullock Island Arrival road.

All Rail Operators need to be authorised by the ARTC Terminal Co-ordinator or the delegated Morandoo Terminal Operator prior to any shunting taking place within these sidings. This procedure is to ensure that no conflicting movements can occur.

Placing of Traffic in the Exchange Sidings

The Operator at the Exchange sidings must advise the Hunter Bulk ARTC Terminal Co-ordinator of the time of arrival of all trains and locomotives and also when trains are ready to depart.

Operators at Morandoo are responsible for the operation of frame C if trains depart / arrive from the Scholey Street end of the sidings.

Closing Facilities

Facilities are provided at No. 119 crossover to enable shunting movements to proceed in either direction over the sidings ends of the crossovers without the Network Controller being required to set a route for each movement. Shunt signals PW40 and PW41 apply.

2.6.6 Safety Procedures

PWCS Carrington Coal Terminal (CCT) is located within the Port Waratah Yard Limits; this location is designated as a Shunting Yard.

Where work is required to be undertaken on any track, excluding the Rail Discharge Bins RR1 and RR3 at PTW, the work must be undertaken as per ARTC Network Rules and Procedures.

PWCS employees / contractors working on or near the track in the CCT

For all work that requires PWCS employees / contractors, tools and / or equipment to be placed on or next to a track, the following instructions will apply.

The Network Controller must be notified by the Protection Officer of;

- your name, and the location of the work, and
- the type of work to be done, and
- the commencement time and the expected duration of the work, and
- the proposed protection arrangements to protect the workers, tools and equipment.

The Network Controller and Protection Officer must:

- agree with the protection arrangements, and
- implement the safety measures before work begins.

On completion of the work, the Network Controller must be advised by the Protection Officer of:

- the time when all workers, tools, equipment have been removed from or next to the track, and
- as required, protection has been removed.

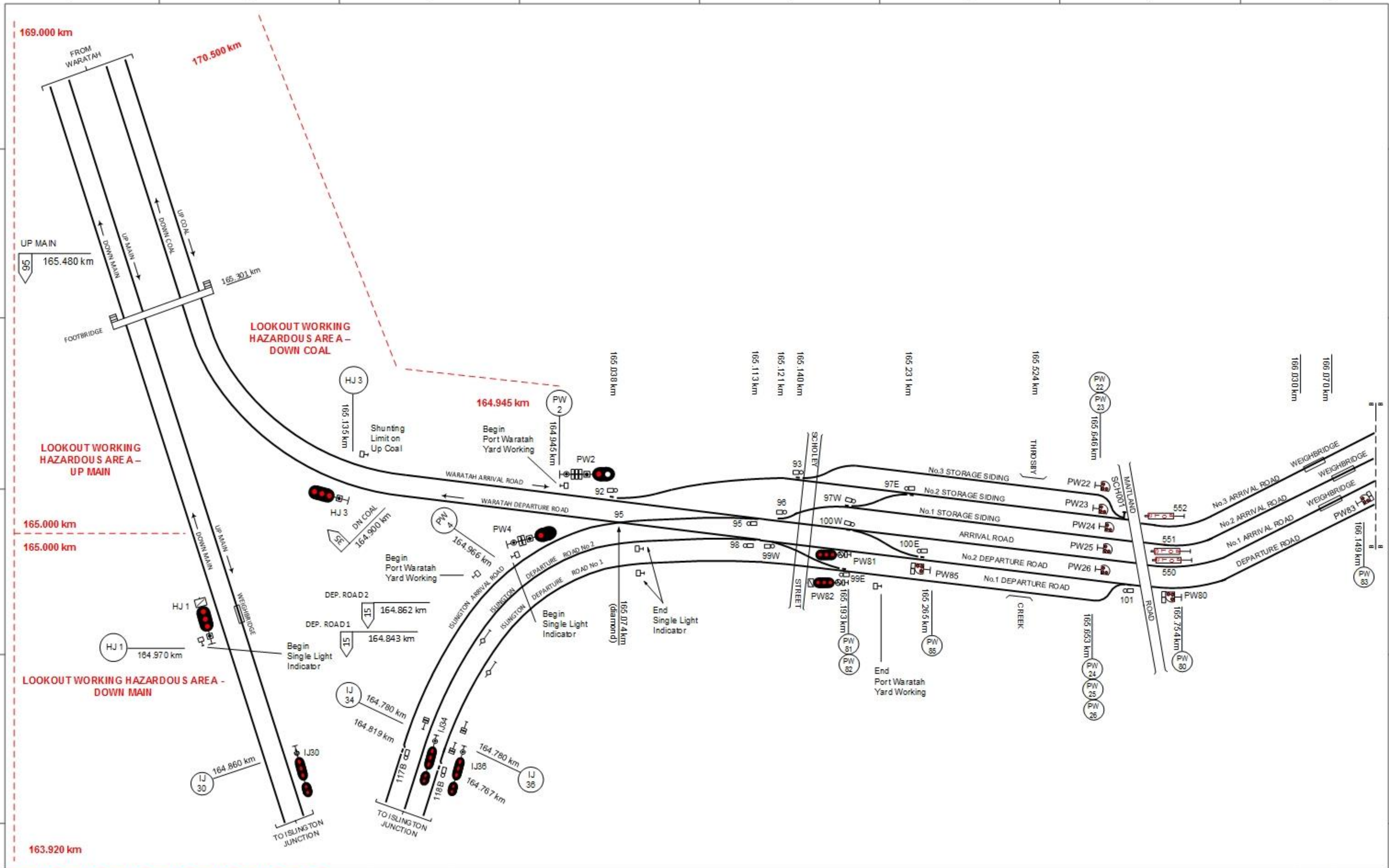
Working in the Rail Discharge Bins RR1 and RR3

When working in the Rail Discharge Bins RR1 and RR3, the following precautions should be taken:

- The PWCS employee / contractor is required to notify the Network Controller of intentions and request possession of the appropriate dump station rail corridor zone. The Network Controller will then apply blocking facilities and record details on the Train Control Diagram / Electronic Graph to prevent rail vehicle access to the required section of rail track.
- The PWCS employee / contractor must ask the Network Controller to repeat back details of the blocking facility applied. Once the PWCS employee / contractor has confirmed that the blocking facilities are correct, the PWCS employee / contractor will record their name, the name of the Network Controller and time of the conversation on the Rail Track Access Permit (RTAP) (not an ARTC document).
- Derails may be attached to the eastern and western side of the dump station in accordance with PWCS procedures.
- On completion of the work the PWCS employee / contractor must contact the Network Controller to advise them that works are completed, all personnel, tools, equipment and when used, derails are clear of the rail corridor, and request that the applicable blocking facilities be removed.

***NOTE**: Details of the above process must be recorded by the Network Controller on the Train Control Diagram/Electronic Graph in permanent form.*

WARNING:** PWCS employees must not weld or earth rail track without the authority of the Signal Engineer, Newcastle**.



This diagram must be used in conjunction with the corresponding Network Information Book containing the location specific information in Section 2 as well as the legend and general information in Section 1.

Rev	Date	Revision Description	Designed	Checked	Ind.Rev	Approved
7	2/3/23	95 diamond km and points kms added				
6	2/02/23	95 points kmcorrected from 164.806 to 165.074km				
5	18/10/21	Waratah to Sandgate signalling changes updated				
4	14/4/21	Stop board numbers added				
3	30/6/20	Signal kms added on Port Waratah roads				

Designed: B HILL 3/1/19
Checked: J SPARROW 3/1/19
Ind. Rev. Company: ARTC
Ind. Rev. Name: R RATH
Review Signature 3/1/19
ARTC ACCEPTANCE
Accepted by: P CAMPBELL
Signed
Acceptance Date 3/1/19

ARTC

NIB-T0379

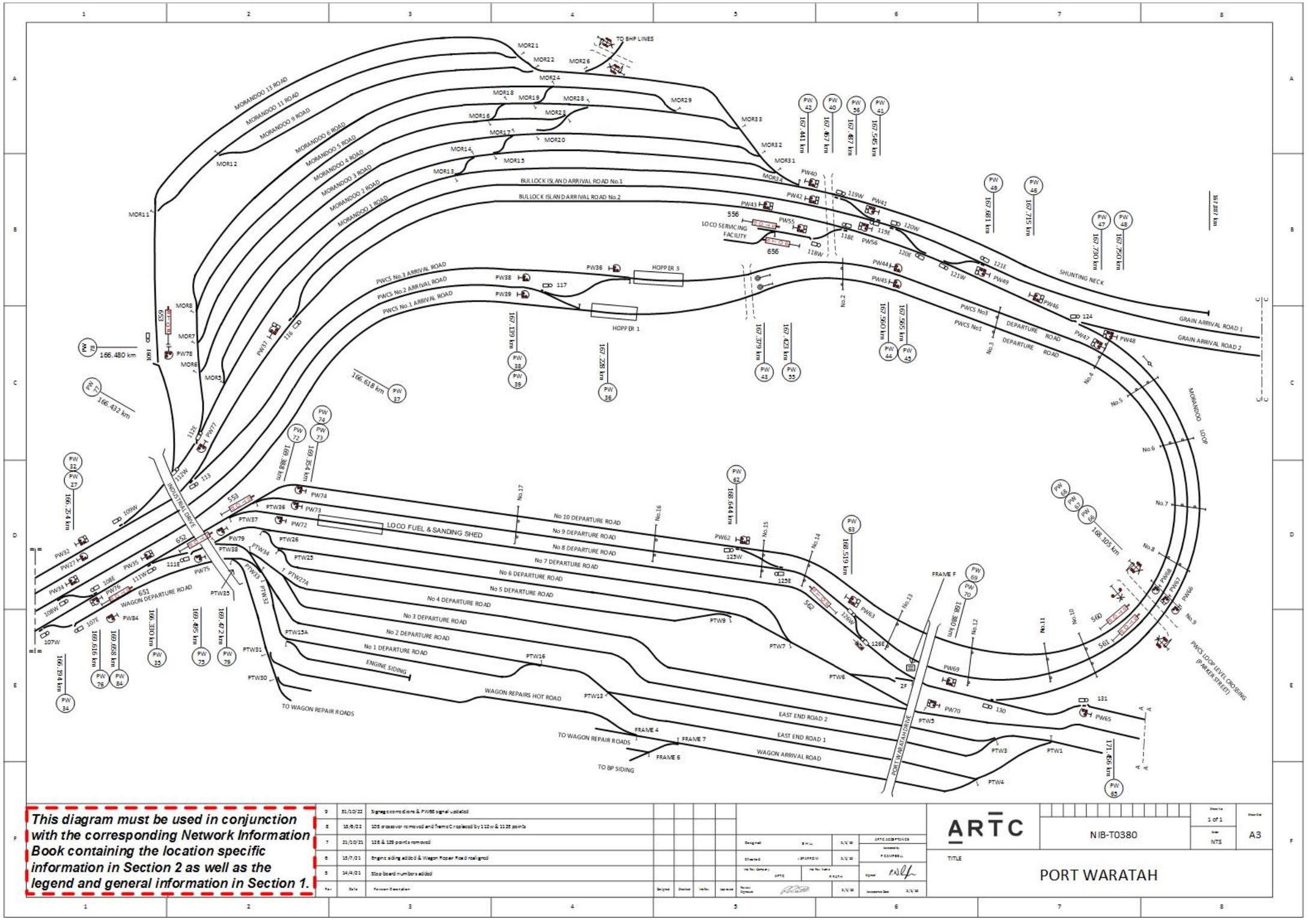
Sheet No: 1 of 1

Scale: NTS

Sheet Size: A3

TITLE

ISLINGTON JUNCTION – PORT WARATAH


TO BHP LINES
MOR21
MOR22
MOR26
MOR24
MOR18
MOR19
MOR28
MOR29
MOR16
MOR23
MOR17
MOR20
MOR14
MOR15
MOR13
MOR12
MOR11
MOR33
MOR32
MOR31
MOR34
MORANDOO 13 ROAD
MORANDOO 11 ROAD
MORANDOO 9 ROAD
MORANDOO 6 ROAD
MORANDOO 5 ROAD
MORANDOO 4 ROAD
MORANDOO 3 ROAD
MORANDOO 2 ROAD
MORANDOO 1 ROAD
BULLOCK ISLAND ARRIVAL ROAD No.1
BULLOCK ISLAND ARRIVAL ROAD No.2
LOCO SERVICING FACILITY
556
656
PWCS No.3 ARRIVAL ROAD
PWCS No.2 ARRIVAL ROAD
PWCS No.1 ARRIVAL ROAD
HOPPER 3
HOPPER 1
117
116
659
166.480 km
166.432 km
166.618 km
167.139 km
167.228 km
167.379 km
167.423 km
167.560 km
167.565 km
167.681 km
167.715 km
167.730 km
167.750 km
167.887 km
SHUNTING NECK
GRAIN ARRIVAL ROAD 1
GRAIN ARRIVAL ROAD 2
PWCS No3
PWCS No1
DEPARTURE ROAD
124
MORANDOO LOOP
No.2
No.3
No.4
No.5
No.6
No.7
No.8
No.9
No.10
No.11
No.12
No.13
No.14
No.15
No.16
No.17
PWCS LOOP LEVEL CROSSING (PARKER STREET)
INDUSTRIAL DRIVE
WAGON DEPARTURE ROAD
651
652
553
LOCO FUEL & SANDING SHED
No 10 DEPARTURE ROAD
No 9 DEPARTURE ROAD
No 8 DEPARTURE ROAD
No 7 DEPARTURE ROAD
No 6 DEPARTURE ROAD
No 5 DEPARTURE ROAD
No 4 DEPARTURE ROAD
No 3 DEPARTURE ROAD
No 2 DEPARTURE ROAD
No 1 DEPARTURE ROAD
ENGINE SIDING
WAGON REPAIRS HOT ROAD
TO WAGON REPAIR ROADS
TO WAGON REPAIR ROADS
TO BP SIDING
FRAME 4
FRAME 7
FRAME 6
FRAME F
2F
EAST END ROAD 2
EAST END ROAD 1
WAGON ARRIVAL ROAD
PORT WARATAH DRIVE
166.224 km
166.330 km
169.495 km
169.472 km
169.616 km
169.658 km
166.194 km
168.389 km
168.364 km
168.644 km
168.519 km
168.105 km
168.380 km
171.456 km
502
560
561
131
130
This diagram must be used in conjunction with the corresponding Network Information Book containing the location specific information in Section 2 as well as the legend and general information in Section 1.
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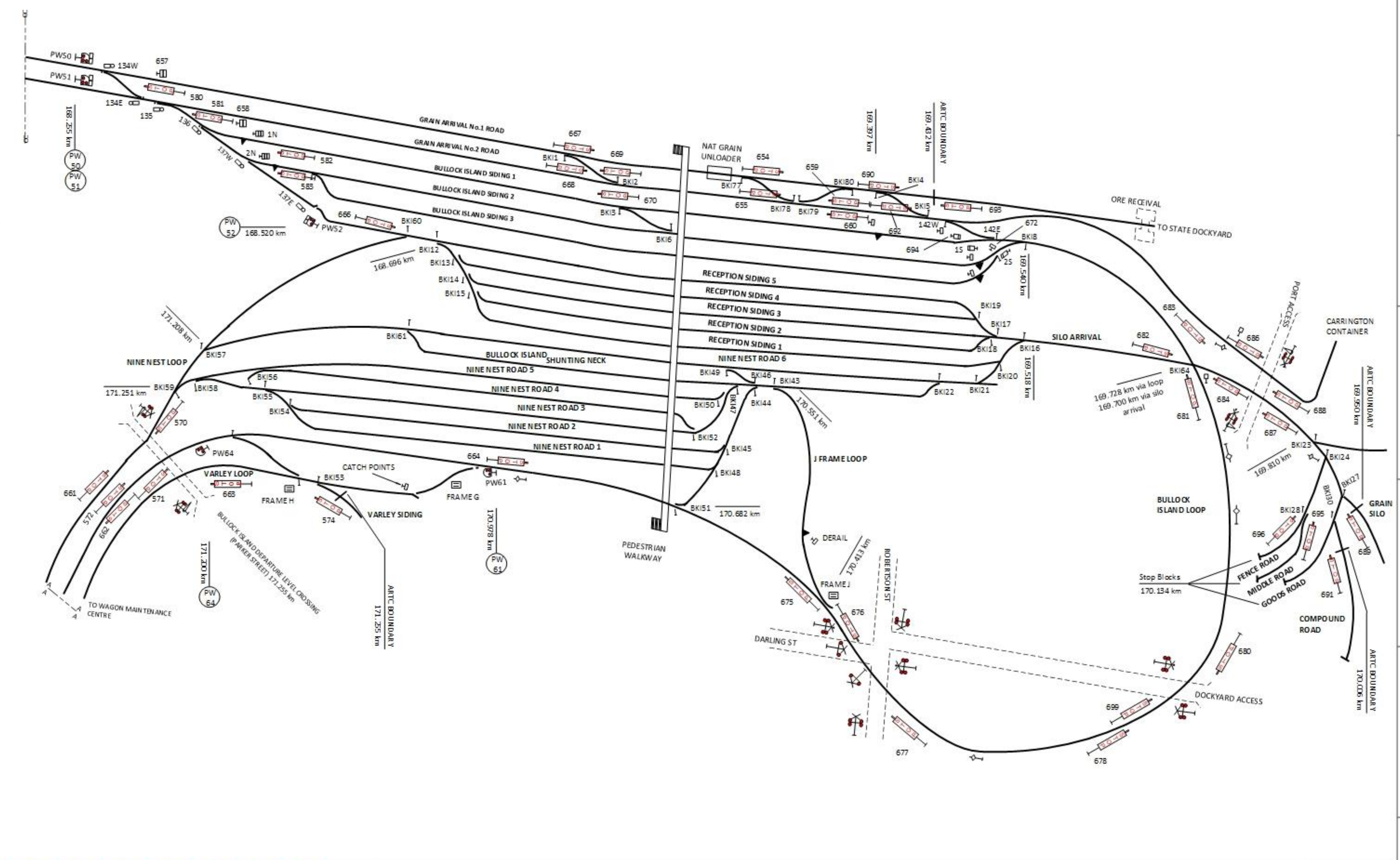
A3
NTS
PORT WARATAH



This diagram must be used in conjunction with the corresponding Network Information Book containing the location specific information in Section 2 as well as the legend and general information in Section 1.

Rev	Date	Revision Description
7	20/10/22	Signage corrections
6	4/7/22	ARTC boundary & points kms added
5	14/4/21	Stop board numbers added
4	9/11/20	Stop boards near Parker Street updated
3	30/6/20	Signal kms added

ARTC

NIB-T0565

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TITLE: BULLOCK ISLAND