

ATWS Worksite Protection for Cabramatta routine network maintenance activities

WORK DESCRIPTION	Routine Maintenance activities
WPP NUMBER	SW13BWS 14986
SCOPE	<p>Routine maintenance activities performed by Southwest maintenance teams.</p> <ul style="list-style-type: none"> on the Down main south line and Down Old Main South line between 27.200 km to 31.160 km that does not involve the use of tools or equipment, or using tools which can be easily and immediately removed from the track by one person and are light, non-powered hand tools, or light battery powered tools or devices.
AUTHORISATIONS	<p>Protection Officer, ATWS Operator (Operator) & ATWS Installer (Installer):</p> <ul style="list-style-type: none"> Protection Officer (PO) Level 1 – 4, and WATWS – Wireless Automatic Track Warning System <p>Dedicated Lookout: (PO) Level 1-4, or Handsignaller 1-2</p>
PERSONAL PROTECTIVE EQUIPMENT	<ul style="list-style-type: none"> High visibility vest, boots, high visibility lookout sleeve
SAFETY CONTROLS – Lookout Working (ATWS) arrangements:	<ul style="list-style-type: none"> Automatic Track Warning System (ATWS) - provides visual and audible warning for workers ATWS sensor for Down direction running on the Down main south line at 27.200 KM ATWS sensor for Down direction running on the Down Old Main South line at 31.160KM Dedicated lookout(s) at the worksite for unsignalled movements. <p>IMPORTANT!</p> <ul style="list-style-type: none"> This document must not be used to install or adjust the ATWS sensors All sensors in the plan and shown on the diagram must be connected to transmit a warning
PRESTART REQUIREMENTS:	<ul style="list-style-type: none"> Refer to D2015/45354 Wireless ATWS (Automatic Track Warning System) to install or remove sensors
FURTHER INFORMATION:	<p>Refer to “D2015-45354 Wireless ATWS (Automatic Track Warning System)” for detailed instructions to set-up, connect, test and operate the ATWS system with pre-installed ATWS sensors</p> <ul style="list-style-type: none"> NWT 310 Lookout Working NGE 200 Walking in the Danger Zone NPR 711 Using Lookouts NPR 751 Calculating Minimum Warning Time NPR 712 Protecting work from rail traffic on adjacent lines NPR 752 Using Wireless Automatic Warning Systems Lookout Working Prohibited Locations Register MWT 300 Planning working in the corridor NLA 500 Lidcombe - Campbelltown

Required ATWS Equipment		
Item	Description	Quantity
Aerial	Telescopic Aerial	3
Assembly Kit	Orange Bag with Tools	1
Battery ZA24-2.9	Small battery for Junction Box & Transmitter	6
Device Frame	Protective Frame	3
F500-AB Junction Box	Receiver Device	2
F500-SEN Train Sensor	Sensor	2
Housing for Aerial	Housing for Telescopic Aerial	3
KF5-5 Extension Cable	Extension Cable (5m) for F500-SEN to F500-AB	2
Mobile Backpack	Harness for Device	0
Pouch	Pouch for small battery	4
Tripod	Tripod for Device	3
ZFS Radio Transmitter	Radio Transmitter Device	2
ZPW Warning Unit	Control & Warning Device	1

Protection Officer/Operator assessment checklist		
Protection Officer's name:		Yes (Tick if Yes)
This document has not expired 12 months beyond the issue date.		
SWI details and protection arrangements have been reviewed and validated for the assessed worksite location, including: <ul style="list-style-type: none"> On-site safety assessment has been completed for relevancy of works being undertaken The required protection details, environment and tasks are unchanged from the details of this SWI All boxes have been ticked if applicable and crossed if not applicable All fields have been completed 		
Corridor Safety Number	Protection Officer Signature	Date

**Warning:**

If an above item does not apply, the Protection Officer must not use this Safe Work Instruction. A new worksite protection plan must be completed in accordance with NRF 014 Worksite Protection Pre-work briefing and NRF 015 Worksite Protection Plan.

Worksite Protection Pre-work Briefing

Briefing date:

/ /

Protection Officer details

name

signature

contact no.

Work location:

Scope of work:

Routine network maintenance activities

Worksite protection:

Lookout Working (ATWS)

Refer to Worksite Protection Plan for details

Hazards (e.g. environment, plant, equipment, human error)	Controls (to be implemented to eliminate or reduce the risk to the lowest practicable level)	Person responsible for Control
Crossing live lines	A qualified Protection Officer (PO) or Access Corridor Safety (ACS) must make a safety assessment to cross live lines in accordance with NGE200 and supervise workers who do not hold the PO or ACS qualification.	Qualified PO/ ACS
Accessing Danger Zone to conduct plate test	Use appropriate safety measures as validated by a PO. Refer to diagram for minimum safety assessment.	Qualified PO
Electricity	ATWS antennae not to encroach safe approach distance to overhead wiring	Operator
Slips, trips, falls carrying ATWS equipment	Use correct manual handling techniques, secure safety boots, clear obstacles for work area and agree a safe path.	All
Approaching rail traffic	<ul style="list-style-type: none"> Lookout Working using approved ATWS as assessed in the plan & diagram. All points of entry have been validated and ATWS safety measures (sensors) have been installed. Confirm with the Operator that the ATWS has been tested and is operational. Workers immediately move to the designated safe place when warned. Provide ALL CLEAR handsignal after workers and equipment are in a safe place. After the warning has been cancelled, confirm there is no approaching rail traffic between the sensors and the worksite before allowing work to resume. 	PO
Ineffective ATWS warnings / Adjoining / surrounding worksites	<ul style="list-style-type: none"> Test and confirm workers can see and hear the warning in the noisiest environment. Explain the emergency warnings. Workers to be within 50m of warning device. Workers to remain within sight and hearing of warning unit at all times. Radios not to be used near ATWS. 	PO
Train warning time longer than expected (stopping points or ATWS equipment fault)	<ul style="list-style-type: none"> Workers to remain in a safe place until confirmed the ATWS is working correctly. Contact the Signaller or visually confirm the line is clear between the sensors and the worksite. 	PO
Adjacent live lines	<ul style="list-style-type: none"> Remain within the tracks being protected by the ATWS Lookouts must provide warning to workers when rail traffic is approaching from the adjacent line in either direction. 	PO
Second train warning cancelled in error	<ul style="list-style-type: none"> Nominate a team member to confirm with the Operator when each rail traffic has completely passed the worksite. Tell the PO and workers about the second train warning. Cancel each warning after each train has completely passed the worksite. 	Operator / nominated team member
Distraction	Obtain permission from PO to use electronic devices in the Danger Zone.	All
Obstructions to safe place	Agree on paths to reach designated safe places from the worksite.	PO
Electrical storms	Stop work immediately	All
Cabramatta Station Platform 2 Down Main	ATWS protection is NOT to be used for working within platforms of Cabramatta Railway Station. NO safe place exists within the platforms	All

☐

A final site inspection has been conducted immediately before commencing work, and any new hazards and controls have been included.

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name	signature	contact No.
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Participant acknowledgement

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Worksite Protection Plan – Lookout Working

Signaller details

	Sefton panel	02 85683427
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protection Officer details

name	signature	contact no.
RSW or RIW No.	designation	Planned duration

Workplace Supervisor details:

Type of work: **Routine Maintenance Activities**

Worksite location

on the	Down Main South Line		<input type="checkbox"/>
between	LC 17.1 Accept Signal	and	S 20.3 Auto Signal
on the	Down Old Main south line		<input type="checkbox"/>
between	S 19.7 Home starting signal	and	S 20.3 Auto Signal

Worksite assessment

The Lookout Working Prohibited Locations Register been consulted? Yes "

Warning method

ATWS

Minimum Warning Time Calculations

Maximum track speed 100 km/h

Number of ATWS Sensors used 2 Position of ATWS Sensors 27.200km and 31.160km

Number of dedicated Lookouts used 1 28.048 km 32.100 km

Note - Lookouts are relocated to positions within these KMs as workers move along the worksite.

7 sec	+	3 sec	+	10 sec	= Minimum Warning Time (MWT)	20 sec	100 km/h	556 metres	Dn Main Sth line
7 sec	+	3 sec	+	10 sec		20 sec	80 km/h	445 metres	Dn Old Main Sth line
See Time (S)		Move Time (M)		Safe Time	(S+M+10 sec = MWT)		Track speed	Minimum Sighting Distance as calculated	

Dedicated Lookout

2 sec	+	3 sec	+	10 sec	= Minimum Warning Time (MWT)	15 sec	25 km/h	105 metres
See Time (S)		Move Time (M)		Safe Time	(S+M+10 sec = MWT)		Track speed	Minimum Sighting Distance as calculated

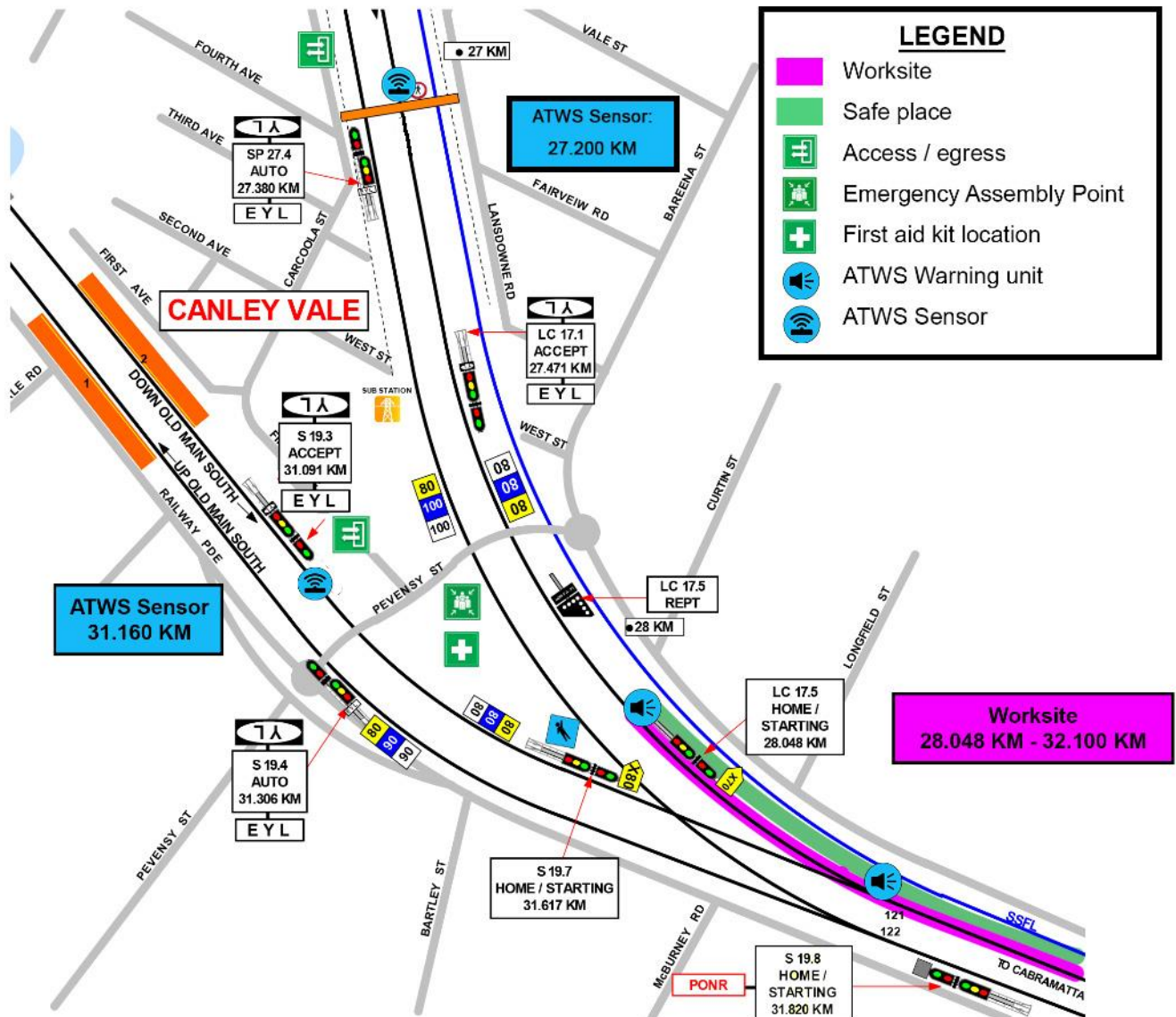
Where are the safe places identified for the ATWS Operator, Lookouts and workers?

Lookouts:	Up Cess and Down Cess or wide 6 foot
Workers:	Up Cess for Down Cess or Wide 6 foot.

Confirm mandatory first train tests were completed for all sensors Yes ☐Ensure the workers have been briefed about these work details Yes ☐

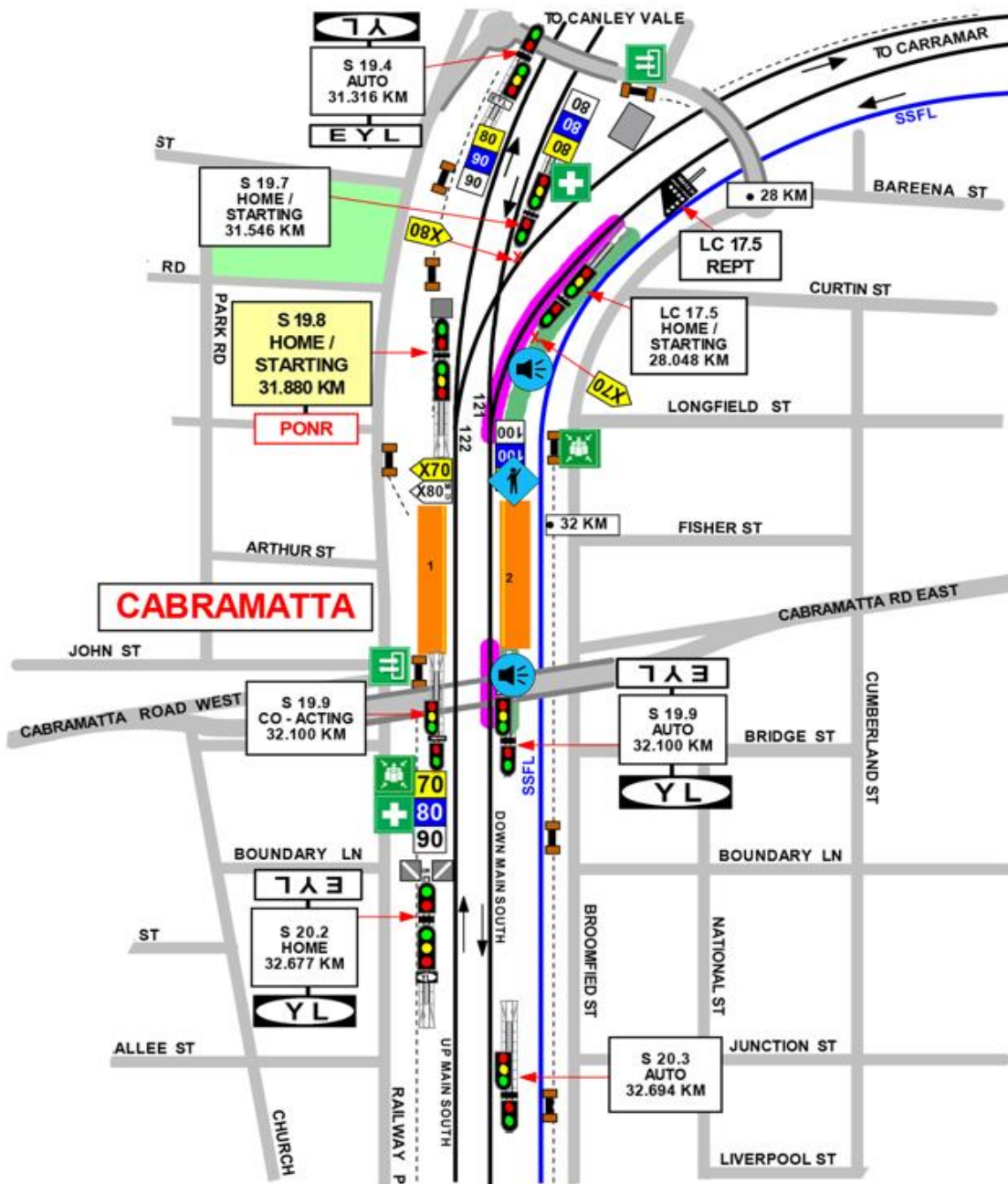
NOTE: Diagrams and instructions that follow form part of this worksite protection plan.

Tick if used ☐ **Worksite on Down Old Main South & Down Main South Lines**



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Tick if used ☐ Worksite on Down Old Main South & Down Main South Lines



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INSTRUCTIONS:	1. Workers enter the rail corridor via access gate (S00 32.116 U) OR (M16 31.733U) 2. Use assets to validate worksite location on Down Main South Line and Down old main south line between 27.200 km to 31.160 km 3. Conduct WP Pre-work briefing to set-up ATWS. 4. Tell Signaller at Sefton Panel about the use of lookout working with ATWS.
Tick if used <input type="checkbox"/>	5. Access Up Main South Line for Down Main South Line 27.200km, verify sensor label & connect to sensor cable, calibrate with test plate, connect, and turn on the transmitter.
Tick if used <input type="checkbox"/>	6. Access Up Cess 31.160km, Down Old Main South, verify sensor label, connect to sensor cable, calibrate with test plate, connect & turn on transmitter.
	7. Place warning system on same side of tracks if working on one track only within sight & hearing of workers, conduct siren & light self test, & connect to transmitter(s). 8. Record first rail traffic movement test for each sensor on ATWS Check-sheet. 9. Conduct WP Pre-work briefing for lookout working with ATWS and confirm workers have seen and heard the warning. 10. Start work when advised by the PO and move to the designated safe place when warned. 11. When work is complete, and workers and equipment are in a safe place, turn off and pack up warning unit
Tick if used <input type="checkbox"/>	12. Access Up Cess to turn off and pack up transmitter unit(s).
Tick if used <input type="checkbox"/>	13. Access Up Cess to turn off and pack up transmitter unit(s).
	14. Access Up Cess for all workers to leave the rail corridor via access gate (S00 32.116 U) OR (M16 31.733U) 15. Tell Signaller at Sefton Panel when work is completed and the workers and their equipment are clear of the Danger Zone.

Tick if used ☐ **Position of ATWS transmitter and sensor on Down Main South line at 46.850 KM**



Image 1: Transmitter and sensor installation location



Image 2: Sensor access using access gate **S00 46.947 D**



Image 3: worksite Access gate S00 47.505 D.



Image 4: Sensor access using access gate M16 31.172 D

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