

ATWS Worksite Protection for Minto Condition Monitoring Equipment Maintenance

WORK DESCRIPTION	Routine Maintenance activities
WPP NUMBER	CMO10BWS 10047
SCOPE	Routine maintenance activities performed by Condition Monitoring Operations team. <ul style="list-style-type: none"> on the Up Main and Down Main South lines between 49.137 km to 49.212 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	Protection Officer, ATWS Operator (Operator) & ATWS Installer (Installer): <ul style="list-style-type: none"> Protection Officer (PO) Level 1 – 4, and WATWS – Wireless Automatic Track Warning System Dedicated Lookout: (PO) Level 1 - 4, or Handsignaller 1 - 2
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 48.268 km ATWS sensor for Up direction running on the Up Main South line at 49.860 km 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:	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 <ul style="list-style-type: none"> NLA 500 Lidcombe – Campbelltown


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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	8
Device Frame	Protective Frame	3



F500-AB Junction Box	Receiver Device	4
F500-SEN Train Sensor	Sensor	4
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.*

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Worksite Protection Pre-work Briefing

Briefing date:

Protection Officer details

Work location:

Scope of work:

Worksite protection: 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 and point clips) have been installed. On bi-directional lines the XYZ key has been removed. 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)	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. Potential stopping points: Up – Minto station platform 1, 30.8 auto signal Down – MO 1 Accept signal	PO
Adjacent live lines	Remain within the tracks being protected by the ATWS	PO
Unsignalled movements in Yard limits	Position lookout(s) in safe place. Confirm minimum sighting distance can be achieved. Test effective communication and be within sight and hearing of the workers.	PO / lookouts
Second train warning cancelled in error	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

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

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Worksite Protection Plan – Lookout Working

Signaller details

	Glenfield Panel	02 8568 3442
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Protection Officer details

name	signature	contact no.
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RSW or RIW No.	designation	Planned duration
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Workplace Supervisor details:

Type of work: **Routine Maintenance Activities**

Worksite location

on the	Up Main South line	<input type="checkbox"/>
between	30.8 Auto Signal and 30.2 Auto Signal	
on the	Down Main South line	<input type="checkbox"/>
between	MO 1 Accept Signal and MO 3 Home/starter Signal	

Worksite assessment

The Lookout Working Prohibited Locations Register been consulted? Yes

Warning method

ATWS

Minimum Warning Time Calculations

Maximum track speed

Number of ATWS Sensors used Position of ATWS Sensors and

Number of dedicated Lookouts used Position of Lookouts To

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	115 km/h	639 metres	Up Main line
7 sec	+	3 sec	+	10 sec		20 sec	115 km/h	639 metres	639 metres	Down Main line
<small>See Time (S)</small>		<small>Move Time (M)</small>		<small>Safe Time</small>		<small>(S+M+10 sec = MWT)</small>	<small>Track speed</small>		<small>Minimum Sighting Distance as calculated</small>	

Dedicated Lookout

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

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

Lookouts:

Workers:

Confirm mandatory first train tests were completed for all sensors Yes

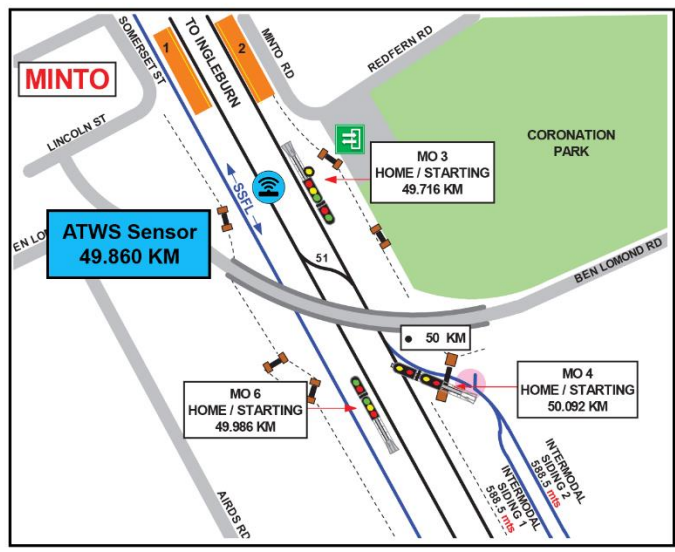
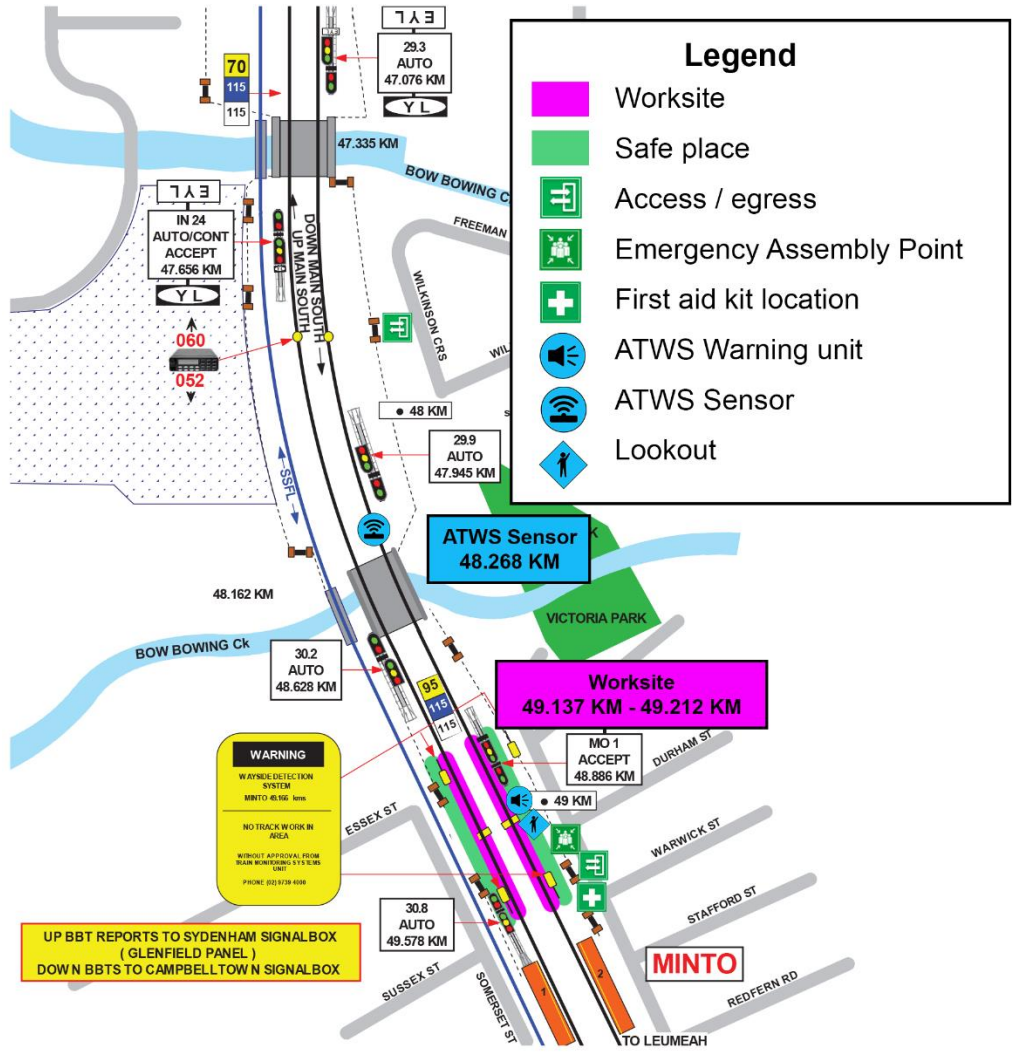
Ensure the workers have been briefed about these work details Yes

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

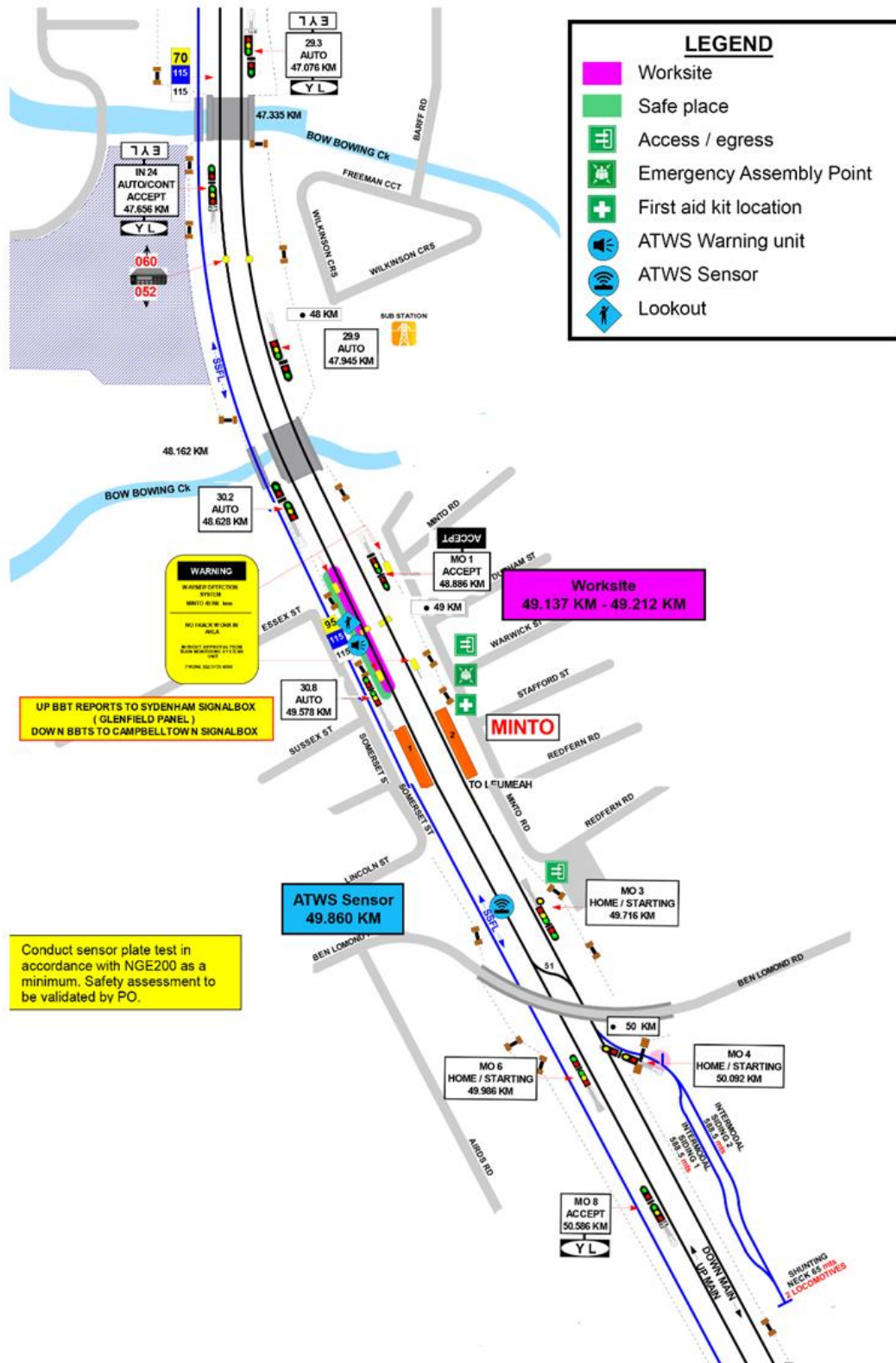
Tick if used Worksite on the **Up & Down Main South** lines



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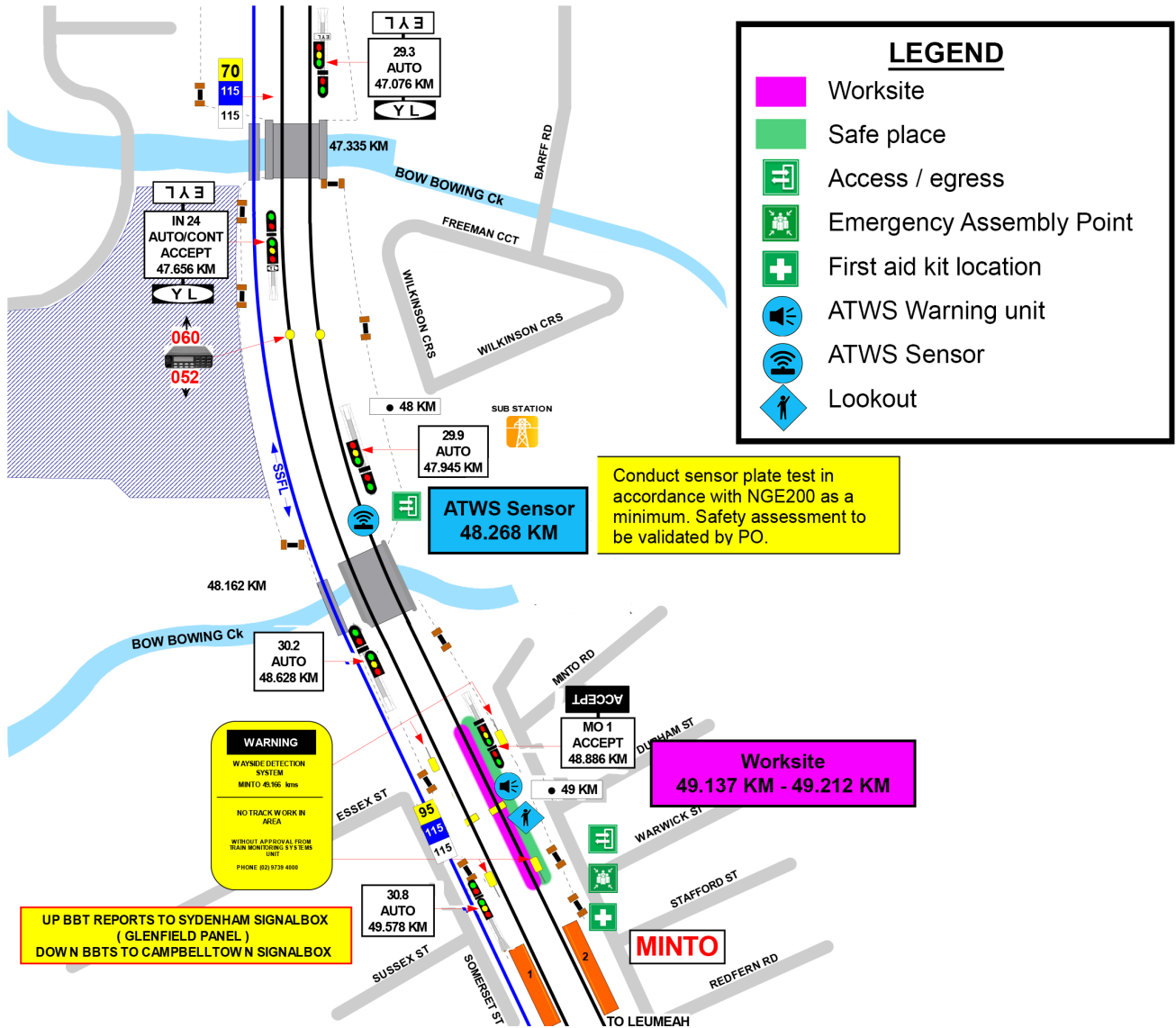
Tick if used

Worksite on the **Up Main** South line



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Tick if used Worksite on the **Down Main South** line



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INSTRUCTIONS:	<ol style="list-style-type: none"> 1. Workers enter the rail corridor via access gate S00 49.494 D. 2. Use assets to validate worksite location on Up and Down Main lines between 49.137 km to 49.212 km 3. Conduct WP Pre-work briefing to set-up ATWS. 4. Tell Signaller at Glenfield Panel about the use of lookout working with ATWS.
Tick if used <input type="checkbox"/>	<ol style="list-style-type: none"> 5. Access Up Cess 49.860 km, verify sensor label & connect to sensor cable, calibrate with test plate, connect and turn on the transmitter.
Tick if used <input type="checkbox"/>	<ol style="list-style-type: none"> 6. Access Down Cess 48.268 km, verify sensor label, connect to sensor cable, calibrate with test plate, connect & turn on transmitter.
	<ol style="list-style-type: none"> 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"/>	<ol style="list-style-type: none"> 12. Access Up Cess to turn off and pack up transmitter unit(s).
Tick if used <input type="checkbox"/>	<ol style="list-style-type: none"> 13. Access Up Cess to turn off and pack down transmitter unit(s).
	<ol style="list-style-type: none"> 14. Access Down Cess for all workers to leave the rail corridor via access gate S00 49.494 D. 15. Tell Signaller at Glenfield Panel when work is completed and the workers and their equipment are clear of the Danger Zone.

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Tick if used Position of ATWS transmitter and sensor on the **Down Main South** line at **48.268 KM**



Image 1: Transmitter and sensor installation location



Image 2: Sensor access using access gate **S00 47.505 D**

Tick if used Position of ATWS transmitter and sensor on the **Up Main South** line at **49.860 KM**



Image 1: Transmitter and sensor installation location



Image 2: Sensor access using access gate **N00 49.763 D**

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