

# Assessing a proposal to use Wireless ATWS in yard limits

## 1. Purpose

This standard provides guidance to the nominated reviewing group when assessing a proposal for the installation and use of Wireless Automatic Track Warning System (ATWS) in yard limits.

The nominated reviewing group must include at least one representative from:

- Network Rules Specialist
- Rail Safety Coach
- Signal Box Operations representative.

## 2. Scope

This standard applies to the temporary and permanent installation of ATWS, where all or some of the equipment may be installed or used within designated yard limits.

## 3. References

*NWT 310 Lookout Working*

*NPR 751 Calculating Minimum Warning Time*

*NPR 752 Using Automatic Track Warning System*

*SMS-02-OP-3155 Routine Network Maintenance Worksite Protection Plans*

*D2015/45354 Wireless ATWS (Automatic Track Warning System)*

## Assessing a proposal to use Wireless ATWS in yard limits

### 4. General

A proposal for the temporary and permanent installation of ATWS wheel sensors within yard limits should be considered only if the proposal satisfies the following criteria:

- a genuine operational need can be demonstrated
- the installation of ATWS wheel sensors or use of warning equipment at a location, does not introduce any new or novel workplace health and safety (WHS) hazards
- the installation of ATWS wheel sensors or use of warning equipment at a location, does not introduce any new or novel rail safety risks
- the location and use of ATWS equipment does not present an unacceptable increase in the potential for human error, by the operator or installer, in comparison to ATWS use outside yard limits
- a proposal must include the following information:
  - the name of the lines on which the proposed worksite is to be established
  - the identification of the proposed worksite location using signals and the worksite kilometrage
  - if the worksite be over an extended area
  - the identification of all potential points of signalled entry to the worksite
  - the identification of potential unsignalled movements and intermediate points of entry
  - the number of wheel sensors and their proposed kilometrage location

## Assessing a proposal to use Wireless ATWS in yard limits

- the proposed methods of worksite protection that will be used to install or test the wheel sensors
  - the intention to permanently install wheel sensors, or use markers to designate the installation locations
  - a demonstration of the safety or operational benefit for using ATWS, in comparison with using another work on track method or authority.
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### 5. Operational needs

A proposal to install or use ATWS equipment in yard limits must have a demonstrable safety or operational benefit.

Factors that might influence the assessment of a proposed installation of ATWS equipment within yard limits:

- the availability of safe places at the worksite location
  - the frequency and type of on track activities
  - if the worksite will be over an extended area
  - the ability to achieve minimum warning time based on worksite locations and sensor placement
  - the difficulty of implementing other work on track protection methods or authorities
  - the ability to obtain another work on track method or authority to allow for safe sensor installation.
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## Assessing a proposal to use Wireless ATWS in yard limits

### 6. Rail safety considerations

The installation and use of ATWS equipment in yard limits must be considered only if the proposal demonstrates that:

- the proposal does not introduce any new or novel rail safety risks or any identified rail safety risks will be effectively controlled
  - wheel sensors can be installed to provide warning at all potential points of entry to the worksite or alternate controls such as clipping and locking points can be used
  - unsignalled or unusual movements have been considered and controls nominated
  - intermediate points of entry to the worksite such as sidings have been identified and controls nominated
  - not more than four ATWS wheel sensors will be required to provide warning
  - minimum warning time requirements can be achieved for all points of entry where wheel sensors are installed
  - an easily reached safe place is available for workers and their equipment
  - wheel sensors can be permanently installed, or markers can be permanently placed to designate correct sensor locations
  - a work on track method or authority will be available for the installation, or testing of wheel sensors.
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## Assessing a proposal to use Wireless ATWS in yard limits

### 7. WHS considerations

The installation and use of ATWS equipment in yard limits must be considered only if the proposal demonstrates that:

- the location of the sensors and warning equipment does not introduce any new or novel WHS risks, or any identified WHS risks will be effectively controlled
  - examples of WHS considerations include, but are not limited to:
    - is there potential for workers to be struck by rail traffic during access to and egress from sensor locations
    - is there potential for workers to slip, trip or fall during access to and use of installed ATWS equipment
    - is there level ground to safely install and operate the warning equipment, in a location where the ALL CLEAR handsignal by the operator can be seen by Drivers and Track Vehicle Operators.
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## Assessing a proposal to use Wireless ATWS in yard limits

### 8. Approval

A decision to allow the use of ATWS in yard limits will be based upon the outcome of the proposal assessment.

Approval will be given only if the proposal review has identified that there is a demonstrable operational or safety benefit and that adequate controls have been nominated to manage the identified rail safety and WHS risks.

Approval must be documented in *NRFM-0922 Proposal to use ATWS in yard limits assessment* Form by the Director Safety and Standards, Sydney Trains.

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### 9. Authorisation and documentation

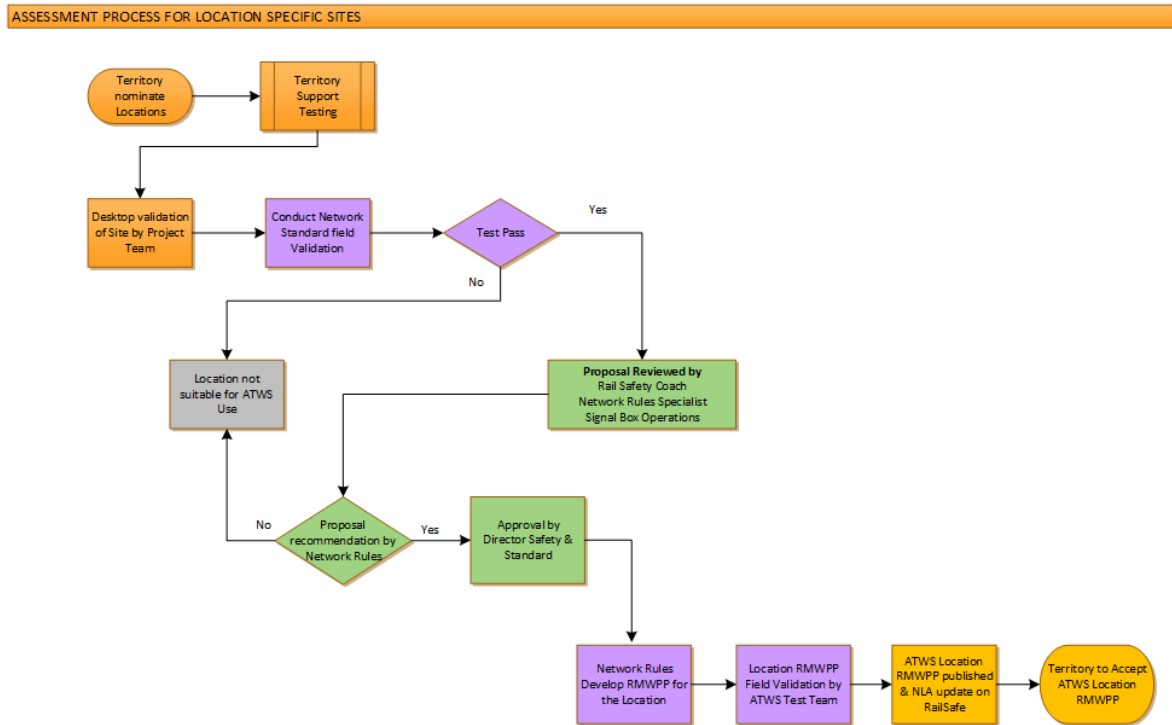
The use of ATWS in yard limits must be authorised in the Network Local Appendix unit for the proposed location.

A Routine Network Maintenance Worksite Protection Plan (RNMWPP) must be developed and published for the use of ATWS at the authorised locations. In addition to all other worksite protection planning requirements, the RNMWPP must detail:

- the approved location for the worksite and installation of the wheel sensors
  - the work on track methods or authorities to be used for installing or testing the wheel sensors.
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# Assessing a proposal to use Wireless ATWS in yard limits

## 10. Process



## 11. Effective date

20 August 2021

## 12. Appendix

*NRFM-0922 Proposal to use ATWS in yard limits assessment Form*

# RailSafe Proposal to use ATWS in yard limits assesment

## 1 Worksite location

Worksite start limit:  Worksite end limit:

Line name:

Nearest location:

Will the worksite cover an extended area:

## 2 Entry points

Potential signalled points of entry into the worksite are identified:

Potential of unsignalled points of entry into the worksite are identified:

Comments (include details of any potential entry points including sidings and if any alternate controls such as clipping and locking points can be applied)

## 3 Sensor location (Maximum four allowed)

	Sensor one	Sensor two	Sensor three	Sensor four
Line name				
Location				
Sensor can be installed permanently Yes/No				
Marker plates can be installed permanently Yes/No				

## 4 Safety or Operational need Briefly summarise the benefits that installing and operating ATWS at this location would bring



# RailSafe Proposal to use ATWS in yard limits assesment

## 5 Operational risks

Tick or cross each item

- An easily reached safe place is available for workers and their equipment
- A work on track method or authority will be available for the installation or testing of sensors
- Minimum Warning Time can be achieved to warn workers of an approaching rail traffic
- Maximum 4 sensors will be installed to provide warning at all potential points of entry to the worksite
- Sensors can be installed to provide warning for all potential points of entry to the worksite
- Intermediate points of entry to the worksite have been identified and controls nominated in item 2
- Unsignalled or unusual movements have been considered and controls nominated
- Radio frequency is adequate to provide train warnings from the sensor location to the worksite
- Sensors can be permanently installed, or markers can be permanently placed to designate the correct sensor locations

Comments

## 6 Work, Health and Safety hazards

Tick or cross each item

- Workers have access to and egress from sensor and worksite location
- There are no significant slip, trip or fall hazards during the installation of sensor & operation of the ATWS equipment at the location
- There is sufficient room to safely install the control unit connected to the sensor
- There is level ground to safely install and operate the warning equipment in a location where the ALL CLEAR handsignal by the Operator can be seen by Drivers and Track Vehicle Operators

Comments (Document any additional WHS risks introduced and its controls)

# RailSafe Proposal to use ATWS in yard limits assesment

## 7 Sensor location restrictions Tick or cross each item. If crossed, attach details of additional assessment

- The sensor and/or worksite location is not within a tunnel
- The sensor installation is not within a tuned loop, traction return bond or wayside equipment
- The sensors installation is not within a station platform or car markers for the longest train if located beyond the platform
- The sensor installation is not within 200 metres on the approach side of a fixed signal
- The sensor installation is not within points, turnouts, check rails, guard rails or ATP Ballises

## 8 Attached documentation Tick item if attached

- Worksite Protection Plan and marked diagram completed for the assessment
- Pictures e.g. sensor location, worksite location, access pathway, gate
- Additional risk assessment notes

## 9 Reviewed

	Name	Signature	Date
Network Rules Specialist	<input type="text"/>	<input type="text"/>	<input type="text"/>
Rail Safety Coach	<input type="text"/>	<input type="text"/>	<input type="text"/>
Signal Box Operations Representative	<input type="text"/>	<input type="text"/>	<input type="text"/>

## 10 Recommendation Tick or cross each item

The use of ATWS at this location has been assessed in accordance with Network Standard *NS-0922 Assessing a proposal to use Wireless ATWS in yard limits* and recommend that:

- Routine Network Maintenance Worksite Protection Plan to be developed and published for the location
- The location not suitable for the use of ATWS for Worksite Protection

	Name	Signature	Date
Manager, Network Rules Sydney Trains	<input type="text"/>	<input type="text"/>	<input type="text"/>

## 11 Approval

	Name	Signature	Date
Director, Safety & Standards Sydney Trains	<input type="text"/>	<input type="text"/>	<input type="text"/>