

## Procedures

# NPR 752 Using Automatic Track Warning Systems

## Description

This document describes the procedure for using Wireless Automatic Track Warning Systems (ATWS).

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## Introduction

A Wireless Automatic Track Warning System (ATWS) is an automated system that provides warning to workers of approaching rail traffic.

Wireless ATWS must not be used where a work on track authority is in place.

## Equipment

The Protection Officer or ATWS Operator must wear a high visibility sleeve on the arm used to give the ALL CLEAR handsignal.

An ATWS consists of three main components:

- track-mounted sensors to detect rail traffic
- a transmitter unit
- a warning unit.

## Installation

### Outside yard limits

#### Protection Officer

- 1 Identify all possible points of entry into the worksite.
- 2 For each route leading to the worksite, calculate the Minimum Warning Time (MWT) in accordance with [NPR 751 Calculating Minimum Warning Time](#).
- 3 Identify the sensor locations that will provide the MWT required to warn workers of approaching rail traffic.

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### ATWS Operator

- 4 Install the sensors at the required locations.
- 5 Calibrate each sensor unit.
- 6 Test each sensor with an approved test plate.
- 7 Synchronise the transmitter unit with the warning unit.
- 8 Make sure that each sensor is activated by a rail traffic movement.

### Protection Officer

- 9 Verify that the sensor location is correct by:
  - making sure there is a direct line of sight from the sensor to the worksite and visually confirming that the sensor is placed on the correct tracks, or
  - travelling from the sensor location to the worksite location on the same side of the track, or
  - recording the identification number of the rail traffic used to test the sensor and confirming that the same rail traffic passes the worksite.

## Inside yard limits

### Protection Officer

- 1 Make sure the worksite is specified in the Network Local Appendices.

### Warning

Sensors must only be placed for worksites specified in the Network Local Appendices.

### ATWS Operator

- 2 If required, install the sensors at the specified locations.

### Protection Officer

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- 3 If required, clip and lock points to reduce the number of entry points.

### ATWS Operator

- 4 Calibrate each sensor unit.
- 5 Test each sensor with an approved test plate.
- 6 Synchronise the transmitter unit with the warning unit.

### Protection Officer

- 7 Visually verify the sensors are placed on the correct tracks as specified in the Network Local Appendices.

## Using ATWS

### Protection Officer

- 1 Before entering the Danger Zone, make sure that:
  - there is no approaching rail traffic between the sensors and the worksite
  - workers will remain within sight and hearing of the warning unit at all times.

## Responding to a warning

When approaching rail traffic passes a sensor, the warning unit will sound an audible warning, warning lights will flash and **1 WARNING** will be displayed on the screen.

### Protection Officer

- 1 Only if workers and their equipment are in safe places, face the approaching rail traffic and give the **ALL CLEAR** handsignal to the Driver or Track Vehicle Operator.

### ATWS Operator

- 2 After rail traffic has completely passed the worksite, cancel the warning on the warning unit.

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### Warning

Be alert for following rail traffic movements.

#### Protection Officer

- 3 After the warning has been cancelled, confirm that there is no approaching rail traffic between the sensor and the worksite before allowing work to resume.

### Responding to a second warning

The warning unit screen will display **2 WARNINGS** if a second rail traffic movement is detected:

- before the first rail traffic movement has passed beyond the worksite
- before the first warning is cancelled.

#### ATWS Operator

- 1 When a second warning is activated, tell the Protection Officer about the warning.
- 2 Cancel the first warning only when the first rail traffic movement has completely passed the worksite.
- 3 Cancel the second warning only when the second rail traffic movement has completely passed the worksite.

#### Protection Officer

- 4 Tell the workers about the second rail traffic movement and to remain in a safe place.
- 5 Only if workers and their equipment are in safe places, face the approaching rail traffic and give the **ALL CLEAR** handsignal to the Driver or Track Vehicle Operator.
- 6 After the warning has been cancelled, confirm that there is no approaching rail traffic between the sensor and the worksite before allowing work to resume.

### False activation

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If a false activation occurs, the warning unit will sound an audible warning, warning lights will flash and the screen will display a warning or a fault indication.

 **Warning**

If a false activation occurs, workers must not enter the Danger Zone until the Protection Officer has established:

- that the ATWS equipment is working correctly
- that there is no approaching rail traffic between the sensors and the worksite.

**Protection Officer**

- 1 Make sure that workers remain in a safe place.
- 2 Make sure there is no approaching rail traffic between the sensors and the worksite by:
  - visually confirming that the line is clear between the sensors and the worksite, or
  - contacting the Signaller to confirm if there is rail traffic between the sensors and the worksite.

**ATWS Operator**

- 3 If there is no rail traffic between the sensors and the worksite, cancel all warnings on the warning unit.

**Protection Officer**

- 4 Make sure the warning has been cancelled before allowing work to resume.

## Related Documents

**NPR 751 Calculating Minimum Warning Time**