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| DOCUMENT NO. | *(provided by SMS document controller)* |
| WORK DESCRIPTION | …………….. |
| WPP Number | *(provided by NR specialist)* |
| SCOPE: | This SWI is applicable for the worksite protection arrangements using ATWS for routine ………. performed by ……..  Work activities include: |
| AUTHORISATIONS: | **Protection Officer/Operator:**   * Protection Officer Level 1 or higher, and * WATWS – Automatic Track Warning System   Installer:   * Protection Officer Level 1 or higher, and * WATWS – Automatic Track Warning System |
| SAFETY CONTROLS – Lookout Working (ATWS) arrangements: | The work is performed at a defined worksite inside yard limits, protected using Lookout Working arrangements with Automatic Track Warning System (ATWS) equipment:   * Installed ATWS sensors for Down direction running on the **………. line** at **…….. KM** * Installed ATWS sensors for Up direction running on the on **………… line** at **……… KM** |
| PRESTART REQUIREMENTS: | Protection Officer/Operator assessment checklist must be completed before instructions in this SWI are followed.  Tools and equipment required:   * Protection Officer/Operator requires a phone to contact the Signaller. * ATWS equipment (see Required ATWS equipment checklist) |
| FURTHER INFORMATION: | *NWT 300 Planning work in the Rail Corridor*  *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*  *NLA XXX XXXXXX* |

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| Protection Officer/Operator assessment checklist | | | |
| Protection Officer/Operator’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:   * 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 | | |  |
| The Protection Officer and Qualified Workers deploying the ATWS equipment and protecting the worksite hold the WATWS qualification. | | |  |
| **Corridor Safety Number** | **Protection Officer Signature** | **Date** | |
|  |  |  | |

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|  | 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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| **Required ATWS Equipment** | | |
| **Item** | **Description** | **Quantity** |
| Aerial | Telescopic Aerial | 3 |
| Assembly Kit | Orange Bag with Tools | 2 |
| Battery ZA24-2.9 | Small battery for Junction Box and Transmitter | 8 |
| 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 | 0 |
| 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 and Warning Device | 1 |

**Worksite Protection** **Pre-work Briefing**

|  |  |
| --- | --- |
| Briefing date: | / / |

**Protection Officer details**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| name |  | signature |  | contact No. |

|  |  |
| --- | --- |
| Work location: |  |

|  |  |
| --- | --- |
| Scope of work: |  |

|  |  |  |
| --- | --- | --- |
| Worksite protection: | **Lookout Working (ATWS)** | Refer to Worksite Protection Plan for details |

|  |  |  |
| --- | --- | --- |
| **Hazards** (e.g. Site specific hazards identified, including physical environment, human errors, plant and equipment) | **Controls** (to be implemented to eliminate or reduce the risk to the lowest practicable level) | **Person responsible for Control** |
| **Approaching rail traffic** | Lookout Working using ATWS  Workers must remain within worksite limits.  Workers must within 50m of a warning device | Protection Officer/Operator |
| **Unidirectional running / Two-way running** | ATWS sensors placed for all entry points into the worksite | Protection Officer/Operator |
| **Unsignalled rail traffic movements** | Dedicated Lookouts placed watching for unsignalled movements in both directions | Lookout |
| **Miscount of multiple train warnings** | Protection Officer/Operator must call out to workers the:   * number of train warnings, and * clearing of each train warning.   Dedicated Lookouts must confirm with the Protection Officer/Operator when rail traffic has cleared the worksite and which train warning that rail traffic belonged to. | Protection Officer/Operator and Workplace Supervisor |
| **Electric shock** | Operators must make sure ATWS antennae length does not breach Safe Approach Distance (SAD) to overhead wiring. | All |
| **Mobile phone distraction** | Mobile phone usage is not allowed in the Danger Zone.  Mobile phones may be used only in a safe place after informing the Protection Officer. | All |
| **Slips, trips, falls and hazards carrying ATWS equipment** | Areas of cafterrn are marked and/or identified to all workers. Designated work areas to be established and kept free of hazards. Established walk areas to be utilised where established. | All |
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**Workplace Supervisor details**

|  |  |  |
| --- | --- | --- |
| name |  | contact No. |

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| --- | --- | --- | --- |
| Emergency assembly point: | **Access Gate** | SWMS/SWI Ref #: |  |

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| --- | --- | --- | --- |
| First aid kit location: | **Sydney Trains work vehicle** | First aider: |  |

**Workplace Supervisor acknowledgement**

|  |  |  |
| --- | --- | --- |
| The Workplace Supervisor acknowledges that all identified WHS and rail safety hazards have the appropriate controls in place to manage and/or eliminate the hazards. | Yes 🞎 | **signature** |

**Participant Acknowledgement**

|  |  |  |  |
| --- | --- | --- | --- |
| **NOTE**: Recipients of the briefing are to question the Briefer if they don’t understand any part of this briefing. | | | |
| All workers listed below acknowledge that they: | | | |
| 1. have been inducted to the site  2. are free from alcohol and drugs  3. are free from the effects of fatigue  4. hold the applicable and current Rail Safety Worker Authorisation, trade licence and/or induction record e.g. Construction Industry Induction  5. must wear the appropriate Personal Protective Equipment (PPE) | | 6. have been briefed on the contents of the Worksite Protection Plan  7. have been shown the Worksite Protection Plan diagram  8. understand the kinds and limits of worksite protection in place  9. have been briefed about any new hazards and controls identified during the final site inspection (*final site inspection must be conducted immediately before commencing work*) | |
| *Mark each check box below with a tick* 🗹 *if the item applies or a cross* 🗷 *if the item does not apply.* | | | |
| 🞎 have been informed of the requirements of the electrical permit (if required)  🞎 have been briefed on the SWMS/SWIs/documented safe work practice for the job  🞎 have been instructed in the controls recorded in this document and SWMS/SWIs | | 🞎 have been made aware of any hazardous materials/substances on site  🞎 have been briefed on Safety Data Sheets (SDS)  🞎 have been briefed on the WHS Management plan  🞎 have been briefed on the hazards of adjoining worksites/processes. | |
| **Name** | **Signature** | **Time of briefing:** hh:mm | **Amendment briefing:** hh:mm and initial |
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**Worksite Protection Plan – Lookout Working**

**Signaller Details**

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| --- | --- | --- | --- | --- |
|  |  | **Panel** |  | **02 XXXX XXXX** |

**Protection Officer Details**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| name |  | signature |  | contact No. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| RSW or RIW No. |  | designation | Planned duration |  |

|  |  |
| --- | --- |
| Workplace Supervisor details: |  |

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| Type of work: |  |

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| --- | --- | --- | --- | --- |
| **Worksite location** | | | |  |
| On the |  | | |  |
|  |  | | |  |
| **between** |  | **and** |  |  |
|  | | | | |
| On the |  | | |  |
|  | | | | |
| **between** |  | **and** |  |  |
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**Worksite Assessment**

Has the Lookout Working Prohibited Locations Register been consulted? Yes 🞎

**Warning method**

|  |  |  |  |
| --- | --- | --- | --- |
| ATWS |  | Voice/Touch |  |

**Minimum Warning Time Calculations**

|  |  |
| --- | --- |
| Maximum track speed | km/h |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Number of ATWS Sensors used | X | Position of ATWS Sensors | km | and | km | |
|  |  |  |  |  |  | |
| Number of dedicated Lookouts used | X | Position of Lookouts | km | to | km | |
| **Note** - Lookouts are relocated to positions within these KMs as workers move along the worksite. | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 sec | + | 3 sec | + | 10 sec | ­ | sec |  | km/h |  | metres |
| 7 sec | + | 3 sec | + | 10 sec | **= Minimum Warning Time (MWT)** | sec |  | km/h |  | metres |
|
| sec | + | sec | + | 10 sec |  | sec |  | km/h |  | metres |
| *See Time (S)* |  | *Move Time (M)* |  | *Safe Time* | *(S+M+10 sec = MWT)* |  |  | *Track speed* |  | *Minimum Sighting Distance as calculated* |

**Dedicated Lookout**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 sec | + | sec | + | 10 sec | **= Minimum Warning Time (MWT)** | sec |  | km/h |  | 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 Lookouts and the workers?**

|  |  |
| --- | --- |
| Lookouts: |  |

|  |  |
| --- | --- |
| Workers: |  |

**Ensure the workers have been briefed about these work details Yes** 🞎

Diagrams, notes and detailed instructions of worksite protection arrangements are over the next pages. These are to be read and followed as part of this worksite protection plan for Lookout Working with ATWS.

|  |  |
| --- | --- |
| INSTRUCTIONS: | 1. Workers enter the rail corridor via access gate **………...** 2. Protection Officer conducts the pre-work briefing. 3. Protection Officer contacts …………. Panel to tell the Signaller about the use of ATWS. 4. Setup ATWS Worksite Warning System as per installation instructions 5. Install/calibrate/verify Up ATWS sensor at **……… KM** on the **…………. line.** 6. Install /calibrate/verify Down ATWS sensor at **………. KM** on the **………… line.** 7. Test ATWS equipment. 8. Establish dedicated Lookout. 9. Workers start work. 10. After work is completed, workers move into a safe place. 11. Turn off ATWS Warning unit. 12. Turn off and remove all ATWS transmitter units. 13. All workers egress the rail corridor via access gate **…………** 14. Protection Officer contacts the Signaller at …………… Panel to end ATWS. |
| ADDITIONAL DETAILS | ATWS Sensor plate test calibration  Whilst performing the plate test calibration, make sure to look for rail traffic approach. |

|  |  |  |
| --- | --- | --- |
| **Setup checklist for ATWS worksite warning unit on the ………… line at ……….. KM** | | |
| **Installer name** |  | |
| **Step** | **Task Description** | **Installer Initials** |
| 1 | Verify Worksite Start Location with Kilometres |  |
| 2 | Confirm Audible Level |  |
| 3 | Confirm and Set Radio Channel for Warning Unit |  |
| 4 | Book in ATWS sensor 1 |  |
| 5 | Book in ATWS sensor 2 |  |
| 6 | Perform Worksite Warning Test with all ATWS sensors |  |
| 7 | Ensure the workers have seen the visual warning and heard the audible warning |  |
| 8 | Select and Confirm Channel for the Radio Transmitter |  |
| 9 | Confirm worksite warning unit is operational with Installers and advise them to lock devices and remove key |  |
| 10 | Lock device and remove key |  |

**Diagram**

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| --- |
| *Insert diagram* |

**Protection Officer’s diary**

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| --- | --- | --- |
| **Date** | **Time** | **Notes** |
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*(This page can be separated from the worksite protection plan to be given to the assigned installer)*

|  |  |  |  |
| --- | --- | --- | --- |
| **Installation checklist for ATWS transmitter and sensor on …………. line at ………… KM** | | | |
| **Installer name** |  | | |
| **Step** | **Task Description** | | **Installer Initials** |
| 1 | Verify Track Label for Location of Sensor as per the Protection Diagram and Photos in this document | |  |
| 2 | Sensor clamp (SK150) pre-adjusted according to the rail profile as per the Worksite Protection Diagram | |  |
| 3 | Sensor Direction is Installed as per Worksite Protection Diagram and Photos in this document | |  |
| 4 | Connect Sensor Cable to Junction Box | |  |
| 5 | Confirm all batteries are fully charged | |  |
| 6 | Connect Junction Box to ZFS using Channel T1 –T4 | |  |
| 7 | Commence calibration and automatic self-test | |  |
| 8 | Perform function test using Test Plate (Strike In) | |  |
| 9 | Confirm Transmitter booked in to correct T-channel (T1-T4) | |  |
| 10 | Select and Confirm Channel for the Radio Transmitter | |  |
| 11 | Perform Worksite Warning Test using Test Plate | |  |
| 12 | Lock Device and Remove Key | |  |
| *Insert image*  **Image 1:** Transmitter and sensor installation location | | *Insert image*  **Image 2:** Sensor access gate **………** | |

*(This page can be separated from the worksite protection plan to be given to the assigned installer)*

|  |  |  |  |
| --- | --- | --- | --- |
| **Installation checklist for ATWS transmitter and sensor on …………. line at ………… KM** | | | |
| **Installer name** |  | | |
| **Step** | **Task Description** | | **Installer Initials** |
| 1 | Verify Track Label for Location of Sensor as per the Protection Diagram and Photos in this document | |  |
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| 9 | Confirm Transmitter booked in to correct T-channel (T1-T4) | |  |
| 10 | Select and Confirm Channel for the Radio Transmitter | |  |
| 11 | Perform Worksite Warning Test using Test Plate | |  |
| 12 | Lock Device and Remove Key | |  |
| *Insert image*  **Image 1:** Transmitter and sensor installation location | | *Insert image*  **Image 2:** Sensor access gate **………** | |