# Rail Operating Conditions Procedure

## Element # -

## SM-18-00058353

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| **Role / Title:** | Acting Executive Director, Health and Safety |
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# 1. Introduction

## 1.1. Who is this Document for?

This Procedure applies to permanent, temporary, and casual staff; staff seconded from another organisation; and contingent workers, including labour hire, professional services contractors and consultants of Sydney Metro.

This Procedure does not apply to Principal Contractors (PCs) or their sub-contractors. Requirements for PCs are provided in contractual documentation and, more specifically, in the Principal Contractor Health & Safety Standard. However, it does apply to how Sydney Metro manages incidents reported to Sydney Metro by PCs under the PC Health and Safety Standard.

## 1.2.

This Procedure defines leaders' Health and Safety requirements under Element # of the Health and Safety Management System (HSMS). This procedure describes safe rail working arrangements on rail sites for which Sydney Metro is the accredited Rail Infrastructure Manager (RIM). This Procedure supports the Rail Operating Conditions Standard.

Work on brownfield sites is conducted under the rules and procedures of the RIM for the operating network.

# 2. Definitions

All terminology in this Procedure is considered the generally accepted or dictionary definition. Other terms and jargon specific to this Procedure are defined within the Sydney Metro Glossary. Acronyms specific to this Procedure are listed below.

| | Definitions |
|---|---|
| **Brownfield rail site** | A site where works are undertaken within the rail corridor of another RTO's operating railway. |
| **Construction Site** | A site under construction with no track laid, and there is no potential for the movement of rail-mounted vehicles. |
| **Greenfield rail site** | A site where a new railway is under construction has no connection to another RTO's operating railway. |
| **Other RTO rail site** | A rail site managed and controlled by another accredited RTO where the Safety Management System of the other RTO applies. |
| **Pilot** | A Qualified Worker whose primary role is to direct or guide Drivers and Track Vehicle Operators and tell them about local conditions and operating restrictions on running lines and at worksites. |
| **Possession Protection Officer (PPO)** | The Qualified Worker responsible for coordinating the protection of worksites under a Sydney Metro Local Possession Authority (SMLPA) |
| **Protection Officer (PO)** | The Qualified Worker responsible for managing the rail safety component of worksite protection |
| **Rail Corridor** | From fence-line to fence-line, or if there are no fences, everywhere within 15 metres of the outer rails. |
| **Rail Site** | A construction site becomes a rail site when rails are fixed in position, and there is potential for rail-mounted vehicles to operate. |

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| **Rail Traffic** | Trains, track vehicles, road-rail vehicles and other rail-mounted vehicles. |
| **Rail Transport Operator (RTO)** | As defined under the Rail Safety National Law (NSW):<br>• A rail infrastructure manager (RIM), or<br>• A rolling stock operator (RSO), or<br>• A person who is both a rail infrastructure manager and a rolling stock operator. |
| **Railway Track Signals (RTS)** | A device that explodes on impact is used to attract drivers' attention and track vehicle operators. RTS's are also known as detonators and audible track warning devices. |
| **Rolling Stock Free Zone** | A greenfield rail site where controls have been placed to prevent the placement or movement of rolling stock. Workers may not be required to hold a SARC qualification at these sites. |
| **SARC Exempt Area (not in glossary)** | A site within the Rail Corridor with controls in place to prevent the potential for workers to enter the danger zone. Workers may not be required to hold a SARC qualification at these sites, and a PO may not be required. |
| **Sydney Metro rail site** | A Sydney Metro-managed and controlled rail site without interface access with another RTO's network.<br>Interface access is considered removed if points that allow entry and exit to the site are secured, and a physical barrier is established at the limits of the Sydney Metro rail site.<br>**Note:** Should a Sydney Metro rail site encroach on the Danger Zone of another RTO's network, adjacent line protection must be implemented and managed per the rules of the adjoining RTO. |
| **SMLPA** | Sydney Metro Local Possession Authority (see Appendix A). |
| **WAA** | Sydney Metro Work Activity Advice |

## 2.1. Accountabilities

The Executive Director of Health and Safety is accountable for this document, including approving it, monitoring its effectiveness and performing a formal document review.

Direct Reports to the Chief Executive are accountable for ensuring the requirements of this procedure are implemented within their area of responsibility.

Direct Reports to the Chief Executive who is accountable for specific projects/programs are accountable for ensuring associated contractors (excluding Principal Contractors) comply with the requirements of this documented procedure.

# 3. Rail Operating Procedure

## 3.1. Sydney Metro Safe Working Principles

Sydney Metro safe working procedures are based on the following principles:

- Access to the rail corridor should be planned;
- Work planned for the Rail Corridor must be assessed by a Protection Officer (PO) for safety and its potential to intrude on the Danger Zone;
- The highest level of worksite protection possible shall be implemented to protect people working on track;
- Persons shall not walk in the Danger Zone unless there is a work track Authority in place;
- SARC exempt areas are to be implemented wherever possible;
- People must have a safe place immediately available when on track;
- People and rolling stock must be separated at all times;

- A PO must brief all workers entering the rail corridor before entering and follow the instructions of the PO at all times;
- Workers must hold all current competencies required for their role and the site in which they are working;
- All workers must be “Fit for Work”, i.e. not affected by fatigue, no drugs and alcohol and meet the National Standards for Health Assessment of Rail Safety workers;
- People must be warned about the hazards within the rail corridor and the associated controls in place;
- Rail traffic must meet technical and operational standards;
- Safe routes must be established for all rail traffic.

## 3.2. Rail Safe Working

### 3.2.1. Planning work

All work within the rail corridor must be assessed by a Protection Officer (PO) for safety, including its potential to intrude on the Danger Zone. All work in the danger Zone will be undertaken within a Sydney Metro Local Possession Authority (SMLPA).

Principal Contractors are required to prepare the Work Activity Advice (WAA) in accordance with this procedure for work on brownfield rail sites to address risks that can impact worker safety or the safety of rail infrastructure or operations.

The WAA identifies the scope of works and the associated risk controls to be implemented, including worksite protection and electrical isolation arrangements. It also includes a list of Safe Work Method Statements (SWMS) applicable to the proposed work.

The completed WAA assures Sydney Metro that rail safety risks have been adequately considered and appropriate controls identified to manage the risks SFAIRP.

### 3.2.2. The Danger Zone

The Danger Zone is everywhere within 3 metres horizontally of the nearest rail and any distance above or below this 3 metres unless a safe place exists or has been created.

Work must not be carried out in the Danger Zone unless an SMLPA has been implemented.

### 3.2.3. Safe place

A safe place is where people or equipment cannot be struck by rail traffic.

### 3.2.4. Possession Protection Officers

Each SMLPA must be coordinated and managed by a Possession Protection Officer (PPO). The PPO must be PO 4 qualified and manage all rail safety aspects of the SMLPA. This includes:

- Liaising with electrical isolation authority and ensuring required electrical permits are obtained;
- Issuing the SMLPA and authorises the placement of associated protection;

- Authorising the entry and exit of rail traffic into or out of the SMLPA;
- Coordinating the movement of rail traffic within the SMLPA;
- Approving the establishment of individual worksites within the SMLPA;
- Maintaining communication with the PO associated with each worksite;
- Managing interfaces within worksites;
- Recording and reporting incident and response information;
- Ensuring correct handover processes are followed;
- Recording the condition of rail assets (booked in/booked out) within the SMLPA.

### 3.2.5. Protection Officers

Each Sydney Metro rail site must be coordinated and managed by a Protection Officer (PO) Level 2, 3 or 4. The PO is responsible for the rail safety requirements at the work site, including managing rolling stock movements to and from and within their rail site.

A PO's primary responsibility and duty are to keep the rail site and workers safe, where the PO must:

- Complete a risk assessment in conjunction with the job Supervisor and agree on the protection arrangements to be applied;
- Ensure protection is in place before people access the danger zone;
- Make sure that the rail safety component of the work is done safely;
- Keep records about protection arrangements;
- Brief all workers about the protection arrangements before they enter the worksite;
- Check that worker's cards are current and contain the required competencies;
- Ensure that they do not undertake any other activities that interfere with their primary role to protect the worksite;
- Monitor conditions for any change, ensuring work continues to be carried out safely;
- Contact the PPO before establishing a worksite and again on completion;
- Advise the PPO of any incidents or changes to agreed arrangements.

### 3.2.6. Assessing Safety

When making a rail safety assessment, a PO, in conjunction with the Supervisor, must consider, amongst other factors, if:

- The appropriate number of qualified workers are available to protect the work;
- The requirement for an easily-reached safe place for workers can be met;
- There will be rail traffic on adjacent lines;
- There will be rail traffic between or within rail sites;
- Other work on track will affect the rail sites;
- There is a safe route to and from rail sites;
- The work will intrude on level crossings;
- The line is electrified;
- Effective communication is available;
- Equipment used in work will intrude into the Danger Zone;

- Other groups need to be told about or involved in the work;
- Reassess risks when conditions change (e.g. weather) and implement additional controls where required.

### 3.2.7. Protecting Worksites

All rail sites must be protected to prevent the unauthorised movement of rolling stock into, out of or within the work site.

The limits of the SMLPA must be protected, and individual worksite limits must be protected to prevent rolling stock from entering areas where workers may be on track. The limits of new track construction must also be protected to prevent rolling stock from derailing.

Suitable protection methods may include Railway Track Signals, Stop blocks, temporary buffer stops, rail clamps, portable derailers, jersey kerb and water-filled barriers etc.

Railway Track Signals (RTS) warn rail traffic crews at the limits of a SMLPA. 3 RTS must be placed with a red flag or red light at the entry and exit points. Rail traffic crews must stop immediately and contact the PPO if RTS is exploded.

**Table 1: Placing Railway Track Signals**

| **Warning** |
|---|
| Except in emergencies, do not place Railway Track Signals:<br>• Underground<br>• In tunnels<br>• In steep-sided cuttings<br>• Within 20 metres of workers or a platform. |
| **Note** |
| In tunnels and steep-sided cuttings on Sydney Metro Rail sites, an alternative safe method (not RTS) of preventing unauthorised entry or exit to/from the rail site must be implemented. |

Stop Blocks may be used at the limit of track construction or any other location requiring a physical barrier to prevent the movement of rolling stock. Stop blocks consist of a timber sleeper painted white and fitted with a red flag and a red light fixed to the track to prevent its movement.

NOTE: Where a physical barrier (such as a Stop Block, jersey kerb barrier or temporary buffer stop) is required at the limits of track construction, these must be installed at least 50 metres from the rail end.

When it is necessary for a track vehicle or rail-mounted plant to proceed past the barrier, it will be permissible to remove the barrier to allow movement after gaining approval from the PPO. Immediately after the track vehicle or rail-mounted plant has proceeded past the protected location, the barrier must be re-secured to the line.

## 3.3. Rail Safe Working Requirements for Sydney Metro Worksites

### 3.3.1. Construction Zone Classifications

Sydney Metro worksites can be classified into one of three Zones to determine the appropriate rail safe working requirements to be applied. These are:

1. Construction Site – any Sydney Metro construction site where a rail track has not been constructed.

2. Rail Site – a Sydney Metro work site with rails fastened in position, and there is potential for rail-mounted vehicles to be used. These include both greenfield and brownfield sites.
3. Rolling Stock free Zone – a worksite with track constructed, but additional controls have been placed to prevent the potential for rolling stock to be used.

### 3.3.2. Work methods

The primary work-on-track methods for working safely in each Zone are summarised as follows.

**Table 2: Work methods**

| Type of Zone | Method of Rail Safe working |
|---|---|
| **Construction Site** | Rail Safe working is not required |
| **Rail Site (RIMs other than Sydney Metro)** | The Network Rules of the relevant RIM are to be followed |
| **Sydney Metro Rail Site** | Work that does not have the potential to encroach on the Danger Zone can be performed without worksite protection. A PO must conduct an assessment must also supervise the work. Some demarcation barriers should be installed wherever possible to separate the workers from the Danger Zone. |
| | Work within or with the potential to impact the Danger Zone must be protected using a Sydney Metro Local Possession Authority (SMLPA). |
| **Rolling stock-free Zone** | Work in the Danger Zone can be performed with modified protection requirements if the potential for rolling stock movements has been effectively eliminated. The work must be planned within the SMLPA framework, and a PO must be on site; however, workers will not be required to hold a SARC competency.<br>NOTE: Rolling stock-free zones can only be implemented where no OHW is in place. |

### 3.3.3. Sydney Metro Local Possession Authority

The Sydney Metro Local Possession Authority is based on the principles of the Sydney Trains Railsafe NWT302 Local Possession Authority (LPA). The primary difference between the Sydney Metro LPA and the Sydney Trains LPA is the absence of a 'Network Controller' for Sydney Metro rail sites.

For all Sydney Metro rail sites, the Principal Contractor is responsible for managing the SMLPAs, including planning and coordinating all parties requirements, scheduling and controlling the movement of all rolling stock into and within the SMLPA and managing the PPO function. This process is to be documented in the Principal Contractor's Possession Planning Manual.

Each worksite Contractor is responsible for providing their worksite protection and other safe working resources required for their work.

A Sydney Metro LPA is the only work-on-track authority used on greenfield Sydney Metro rail sites unless a rolling stock-free zone has been established.

The dynamic testing of passenger rolling stock on the Sydney Metro network must be planned and carried out using the SMLPA method of protection.

The rules for applying the Sydney Metro LPA are provided in Appendix A of this document.

### 3.3.4. Rolling Stock-Free Zone

Some Sydney Metro rail sites may be suitable to be established as Rolling Stock-Free Zones. These worksites must have additional controls to remove the potential for rolling stock to enter the site. The procedure for establishing a Rolling Stock-Free Zone is provided in Appendix B.

Workers within a Rolling Stock-Free Zone will not be required to hold a current SARC qualification but must follow all directions the PO gives on-site.

## 3.4. Rail traffic

Pilots may accompany drivers and track machine operators to direct rail traffic movements. Drivers and track vehicle operators are responsible for safely operating piloted rolling stock.

The PPO or delegate must authorise the movement of all rail traffic into and out of and within the SMLPA, including determining if a pilot is required.

All items of rolling stock must be approved for use by Sydney Metro as the RIM in accordance with the Rolling Stock Acceptance Procedure and Minimum Rolling Stock Requirements Standard. All approved rolling stock must be listed on the Sydney Metro Rolling Stock Register with all applicable restrictions and limitations unless an Operating Waiver has been approved.

Testing of passenger rolling stock must be carried out in accordance with the approved Train Testing Plan.

## 3.5. Fencing

A physical barrier must be erected to separate workers working adjacent to the Danger Zone.

Selection of the type of fencing must follow general risk management principles and the hierarchy of controls.

### 3.5.1. Construction fencing

Construction fencing is a solid barrier used to isolate the identified risks associated with construction work adjacent to the Danger Zone, thereby controlling those risks.

Construction fencing must be erected to establish a SARC-exempt area within the Rail Corridor. The construction fencing must be a continuous solid barrier covering the entire SARC-exempt area to prevent workers and equipment from entering the Danger Zone. The barrier must allow access and egress to and from the site without entering the Danger Zone. Approvals for establishing a SARC exempt area must be sought in accordance with Establishing a SARC Exempt Area Procedure.

Construction fencing is designed to withstand wind load and the suction force of passing trains. The barrier design and associated risk assessment also consider the ground's stability.

### 3.5.2. Demarcation fencing

Demarcation fencing, such as Vortok fencing, is an easily-seen, continuous boundary marker. It does not stop workers from entering the Danger Zone but provides a visual reminder of the need to remain safe.

#### 4.5.2.1. Using demarcation fencing

- Demarcation fencing installed within 3 metres of the near rail can only be erected and dismantled during an SMLPA;

- Demarcation fencing should be established before starting other work;
- Make sure demarcation fencing can withstand disturbances caused by passing rail traffic;
- Keep workers and equipment on the safe side of the demarcation fencing. If necessary, place spotters to assist compliance;
- Make sure the demarcation fencing is inspected regularly and maintained in good condition throughout the work;
- Star pickets or similar must NOT be used for temporary or demarcation fencing due to the risk of striking underground services.

Construction plant working close to the track must comply with the requirements for mobile plant in the rail corridor specified in the relevant version of SM PS-ST-221 Principal Contractor Health & Safety Standard.

### 3.5.3. Construction Fencing on Station Platforms

At stations being constructed under Sydney Metro's RIM accreditation, once the track has been laid through the platform areas, a barrier must be erected to separate the station construction site from the rail site. The barrier must prevent the potential for workers without SARC, plant and materials to enter the Danger Zone.

The minimum requirements for barriers on platforms are:

- The Associate Executive Director of Engineering must approve any components that extend beyond the edge of the platform;
- All materials used must be non-combustible;
- Proximity to electrical infrastructure must be considered, and there must be no encroachment within the Safe Approach Distances;
- Access points must be incorporated into the rail/non-rail separation barrier to allow the controlled movement of workers from one side to the other, preferably including a swipe card reader for RIW cards;
- All barriers/fences must consider the interface with Platform Screen Door installation works.
- Height of fence to be at least 1 metre;
- Fully enclosed with mesh from the top rail to the platform (i.e. steel or scaffold mesh).

A barrier to effectively manage the falling from height risk at the platform edge may also be required. If required, this shall also comply with the above requirements.

## 3.6. Communications

### 3.6.1. General

Communication in the Network must be:

- Clear, brief and unambiguous;
- Relevant to the task at hand;
- Agreed to its meaning before being acted upon.

Safe working communication must use the following:

- 24-hour clock to give the time of day;
- Phonetic alphabet and spoken numbers to identify rail vehicles, points, signals and other safety-critical information.

Communication equipment used for rail traffic operation or work on track must be tested and checked for its intended operation at the start of each shift.

The receiver must confirm the content of a message by repeating the message back to the sender if the communication is about:

- An instruction to proceed;
- An instruction not to proceed;
- Work on track authority;
- Work on track vehicle movement Information;
- Other safety arrangements.

As far as practicable, communication must be completed without interruption once commenced.

If communication is interrupted, the sender must restart the communication from the beginning, repeating items already sent.

The receiver must not act on the communication until the sender confirms the message has been repeated correctly.

### 3.6.2. Emergency communication

Other channel users must stop transmission immediately if an emergency message is on an open-channel radio. Emergency communications must:

- Start with the words “emergency, emergency, emergency”;
- Be given priority;
- Be answered immediately.

### 3.6.3. Spoken communication

Senders and receivers of communications must identify the receiver first and the sender second.

Communications from an attended location must include the sender’s name and location.

Communications from a rail vehicle must include the sender’s rail vehicle number.

Communications from a worksite must include the sender’s:

- Name;
- Safe working designation;
- Location.

Verbal communication must be promptly acknowledged.

If the meaning or intent of spoken communication is not understood, is incomplete, or ambiguous:

- The receiver must ask that it be repeated;
- The sender and receiver must use the phonetic alphabet and spoken numbers to clarify and confirm the message.

The receiver must try again as soon as practicable or arrange alternative means to communicate with the sender if the:

- Receiver cannot understand the message, or  Sender cannot hear or understand the reply.

### 3.6.4. Written safe working communication

Qualified Workers compiling forms, authorities, and records must:

- Record numbers in numerals, not words, using “12” instead of “twelve.”
- Unless completing an electronic form:
  - Write clearly in ink;
  - Draw a single line through errors, and if required, print the corrections above them;
  - Initial corrections in the margin beside the correction.

If forms include items that have a box before them, qualified workers must:

- Tick the box if it applies, and complete the item; or
- Place a cross in the box if the item does not apply.

Qualified Workers must complete all other items on the form.

Unless otherwise specified, forms and records must be kept for at least 90 days.

## 3.7. Working around electrical infrastructure

**Table 3: Working around electrical infrastructure**

| **Warning** |
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| Workers *must* keep themselves, tools, equipment and materials as far as possible from exposed electrical equipment and wires and never closer than 3 meters to 1500V overhead wiring without authority. |
| **Note** |
| There are Codes of Practice that require specific measures to be complied with. These include safe approach distances (SADs), earth leakage protection, testing and tagging, electrical equipment elevation, and generators' use and management. These Regulations and Codes of Practice must be referred to and complied with when working in or around electrical installations on Sydney Metro rail sites. |

### 3.7.1. General

Workers near exposed electrical equipment and wires must remain outside nominated Safe Approach Distances (SADs). Unless written advice is received to the contrary, workers must treat as live:

- Electrical equipment;
- Fallen electrical wires;
- Vehicles, equipment or objects within the SAD of electrical infrastructure;
- Water or fires within the SAD of electrical infrastructure.

Workers must treat objects caught in or touching overhead wiring as live. Only Electrical Representatives may remove these objects.

### 3.7.2. Electrical infrastructure

Electrical infrastructure includes:

- High-voltage and low-voltage wires, and electrical equipment, on poles;

- 1500V DC overhead wiring and associated equipment;
- Electrical conductors carried in above-ground troughs, return bonds, or buried in the ground;
- Low-voltage electrical switch rooms;
- Substations.

### 3.7.3. Working near electrical equipment

Unless authorised, workers must not climb above the normal floor level of rail vehicles on an electrified track.

### 3.7.4. Working above electrical equipment

Workers must not cause water or debris to fall onto 1500V overhead wiring.

### 3.7.5. Work tools and equipment

Workers must not bring or use metal or metal reinforced ladders or tape measures into the electrified Sydney Metro rail corridor.

**Table 4: Working tools and equipment**

| **Metallic Tapes – Warning** |
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| When working around electrical equipment, use only non-conductive tapes and sticks that have been electrically tested, approved and branded.<br>Steel tapes, metal reinforced linen tapes and long steel rules can be dangerous as they do conduct electricity and are not to be used when:<br>• Taking measurements near live exposed electrical equipment; or<br>• There is any likelihood that the metal tape/rule might bridge between metal objects at different potentials, for example, between: ○ Overhead wiring structures and rail (or vehicles on rail); ○ Structures and fencing or metallic electrical equipment troughing. |
| **Note** |
| Workers must take extra care when handling long objects near overhead electrical equipment. |

### 3.7.6. Underground services

Before the location of buried services and underground cables is known, workers must not dig, break the ground or drive anything into the ground.

Dial before you dig procedures shall be followed at all times.

The Detailed Site Survey (DSS) process must be followed for work in or adjacent to the Sydney trains network.

### 3.7.7. Faults in electrical infrastructure

Workers who see or suspect faults, fallen wires or fires in the electrical infrastructure must immediately tell the PO or PPO in charge of worksite protection. The PPO shall advise the Electrical Controller of the infrastructure and the Senior Project Manager.

## 3.8. Worksite protection plan

The PO must prepare a Worksite Protection Plan (WPP) before commencing work within the Sydney Metro rail corridor.

A WPP describes the work to be undertaken and the worksite protection arrangements in place for the duration of the work. There is a provision in the WPP for all workers to sign on to confirm they have been briefed and understand the safety arrangements.

SM-21-00036222 Worksite Protection Plan Template is to be used on all Sydney Metro rail sites.

# 4. Related documents and references

| Related documents and references |
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| • SM-18-00058177 Rail Operating Conditions Standard<br>• SM-20-00046618 Minimum Rolling Stock Requirements Standard<br>• SM-21-00036221 Worksite Protection Pre-work Briefing Template<br>• SM-21-00036222 Worksite Protection Plan Template<br>• SM-21-00036223 Protection Officer (PO) Diary Template<br>• SM-17-00000203 Sydney Metro Glossary<br>• SM-20-00046300 Rolling Stock Acceptance Procedure<br>• SM-18-00090009 Work Activity Advice Procedure<br>• SM-18-00054654 Establishing a SARC Exempt Area Procedure<br>• SM-17-00000047 Principal Contractor Health & Safety Standard<br>• Systems Connect Greenfield Possession Planning Manual |

# 5. Superseded documents

| Superseded documents |
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| There are no documents superseded as a result of this document. |

# 6. Document history

| Version | Date of approval | Notes |
|---|---|---|
| 1.0 | 8 June 2018 | New IMS document. |
| 2.0 | 23 February 2021 | Reviewed and updated. |
| 3.0 | 6 September 2021 | Reviewed and updated |
| 4.0 | 9 September 2021 | Minor changes and updates. |

# Appendix A: Sydney Metro Local Possession Authority

| Sydney Metro Local Possession Authority | |
|---|---|
| **Purpose** | To prescribe the rules and procedures for authorising, issuing and using a Sydney Metro Local Possession Authority (SMLPA). |
| **General** | An SMLPA is a formal authority that allows work on a defined portion of track for a specified period. An SMLPA gives exclusive occupancy for the defined portion of the track for rail construction, commissioning, and rolling stock testing purposes.<br>Where multiple SMLPAs exist, they must be individually identified and managed.<br>All works within an SMLPA on the CSW project must be planned under the Systems Connect Greenfield Possession Planning Manual.<br>An SMLPA is issued exclusively by a PPO.<br>Several separate work groups and their associated rail traffic and equipment may occupy the track portion defined by an SMLPA.<br>Work within the portion of track included in the SMLPA limits must only be commenced with the agreement of the PPO. |
| **Authorisation and Issue** | The PPO can only issue an SMLPA after the WAA related to the work has been approved by Sydney Metro. This provides the authority for the SMLPA to proceed.<br>• Before implementing the SMLPA, the PPO must record the SMLPA authority in the Protection Officer Diary.<br>• Immediately before an SMLPA is due to begin, the PPO must speak to the POs responsible for the work sites within the limits of the SMLPA and confirm that they have recorded details of the following:<br>○ SMLPA limits<br>○ individual worksites established ○ separation/delineation of worksites<br>○ planned movement of rail vehicles ○ electrical isolations and permits ○ infrastructure booked out of use<br>○ handovers<br>○ duration of the SMLPA<br>○ details of the PPO<br>○ details of POs on adjacent worksites<br>○ time and date of issue.<br>• Details of the SMLPA will be communicated to other RTOs who may be affected by the planned work.<br>• The limits of the SMLPA are protected (see below)<br>• If an interface access exists with another rail network, points are secured, and a physical barrier is provided to prevent entry to or exit from that rail network.<br>• Confirm with the POs that the SMLPA is authorised, and record the current time. |
| **Possession Protection Officer** | At all times, there must be a nominated PPO for each SMLPA. The PPO must:<br>• Be responsible for the protection of workers from rail traffic.<br>• Make sure that the limits of the SMLPA are protected against the entry or exit of unauthorised rail traffic.<br>• Make sure that each work site under the SMLPA has a PO.<br>• Make sure POs keep the tracks between worksites clear of obstructions.<br>• Coordinate the protection of all work sites within the limits of the SMLPA.<br>• Provide authority, when safe, for the movement of rolling stock into, out of and within the SMLPA. |

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| | **Keeping records**<br>The PPO must keep permanent written records about the following:<br>• The SMLPA in the Protection Officer Diary.<br>• SMLPA and any adjacent line protection arrangements.<br>• Communications with the Protection Officers about changes to the SMLPA and any adjacent line protection arrangements. |
| | **Other duties**<br>A PPO's primary duty is to keep the work sites and workers safe. A PPO must be satisfied that other work will not interfere with protection duties. |
| **Protecting Sydney Metro LPA limits** | **Possession Protection Officer (PPO)**<br>The PPO must apply work site protection to prevent unauthorised rail traffic from entering or exiting the limits of the SMLPA.<br>The following must be placed at the entry and exit ends of the limits of the SMLPA:<br>• STOP sign or red flag /red light<br>• Three Railway Track Signals or another approved device (in tunnels)<br>• In tunnels, approved devices include stop blocks painted white with a red flag/light, portable buffer stop, approved rail/wheel clamp etc<br>• If an interface access exists with another rail network, ensure points are secured and a physical barrier is provided to prevent entry to or exit from that rail network<br>• Ensure all points of entry into the SMLPA limits are protected against unauthorised rail traffic movements<br>If necessary, protect the work sites from rail traffic on other lines, including any adjacent tracks of another RTO. |
| **Multiple work sites** | **Protection Officers (PO)**<br>If the SMLPA includes more than one work site, each site must have a PO and the PO must be on duty at each site when work is being done.<br>POs must act under the instruction of the PPO.<br>A PO's primary duty is to keep the work site and workers safe. The PPO must be satisfied that other work the PO is required to do at the work site will not interfere with protection duties.<br>POs:<br>• They are responsible for the protection of workers from rail traffic<br>• and must make sure that tracks between work sites and protecting locations remain unobstructed.<br>**Protection requirements**<br>Fixed work sites must be protected by:<br>• Approved devices, including stop blocks, painted white with a red flag/light, portable buffer stop, approved rail/wheel clamp etc<br>• Worksite Protection markers or STOP signs placed at least 500m from the work site on both sides<br>• Outside tunnels 3 Railway Track Signals may be used in some locations<br>**Separate worksites within 500 metres of each other**<br>Fixed work sites less than 500m apart must be treated as one work site and managed by one PO. Where the PO cannot effectively manage the works within a single worksite, the worksite may be protected as a coordinated worksite.<br>A coordinated worksite must have delineation markers placed midway between worksites.<br>If fixed work sites are more than 500m but less than 1000m apart:<br>• An approved device and a red flag/red light must be placed midway between the work sites, and<br>• Where several work groups are operating within 500 metres of one another and cannot be effectively managed by a single PO, separate worksites may be established<br>• the intention to establish separate worksites within 500 metres of one another must be identified during pre-possession planning and documented in the pre-possession notes<br>• where separate worksites are established within 500 metres of each other, a protection device between the separate worksites will not be required<br>• each separate worksite must have a protection officer (PO)<br>• a worksite delineation marker must be attached to the rail or placed in the "4 foot" on a dedicated base between the worksites<br>• the worksite delineation marker must indicate the contact details of the PO or POs (where the delineation marker is placed midway between work sites, the contact details of the PO must be placed on the respective side |

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| | • worksites can only be established or removed with the agreement of the PPO<br>• the PPO will be responsible for arranging all rail traffic movements between worksites<br>• the PPO must coordinate with the POs of each worksite before authorising any movement that will encroach into worksite limits<br>• the POs for each site will be responsible for coordinating any rail traffic movements within the worksite limits with the PPO<br>• The worksites closest to the limits of the SMLPA must be protected by placing a Stop block or other approved device 500m from the work site towards the limit of the SMLPA, and red flags/red lights or STOP signs placed in the middle of the track. |
| **Rail Traffic** | Only rail traffic associated with the SMLPA may occupy the limits of the SMLPA.<br>The PPO must authorise the entry of all rolling stock into the SMLPA and the exit of all rolling stock. The PPO (or the competent person delegated by the PPO to perform the task) must manage the placement, removal and movement of all rail traffic within the SMLPA. |
| | **Adjacent lines**<br>Workers within the limits of the SMLPA may be required to be protected from rail traffic on the adjacent lines.<br>If work within the limits of the SMLPA has the potential to impact adjacent lines, those adjacent lines require protection in accordance with the rules of the RIM for the adjacent network. |
| | **Piloting**<br>The PPO or a delegate must act as the Pilot for all rail traffic passing through worksites within the limits of the SMLPA. |
| **Liaison** | **Possession Protection Officer**<br>The PPO must be the only point of contact between work parties for matters of worksite protection.<br>The PPO must:<br>• Identify a nominated contact person for each of the other affected rail networks.<br>• Tell the nominated contacted person of other affected rail networks about protection applied to other lines adjacent to the SMLPA.<br>• Tell the nominated contacted person of other affected rail networks about work progress.<br>• Arrange for the movement of rail traffic associated with the SMLPA. |
| | **Change of Possession Protection Officer**<br>An outgoing PPO provides the incoming PPO with all information relevant to the SMLPA needed to effectively manage the Possession's safety. This should include the following:<br>• SMLPA protection arrangements<br>• Worksite locations and their PO details<br>• Details of rolling stock within possession limits<br>• Details of rail infrastructure booked out of use, including electrical isolations. The incoming PPO must:<br>• Tell the nominated contact position of other affected RTOs about the changed contact arrangements.<br>• Make a permanent record of the handover of the SMLPA. |
| **Fulfilling the Sydney Metro LPA and returning the track to service** | The SMLPA may be fulfilled only when the PPO has ensured that the following:<br>• All work on the portion of the track included in the SMLPA has been completed<br>• rail infrastructure has been certified by a competent person as being fit for use, along with any restrictions, and all Permits returned<br>• all workers, plant and equipment are clear of the Danger Zone<br>• worksite protection has been removed<br>• all adjacent line worksite protection arrangements have been fulfilled or removed, or the SMLPA must be fulfilled when the status of the rail line changes from a Sydney Metro rail site to a rail site controlled and managed by another accredited RTO. |
| | **Possession Protection Officer**<br>• When the above requirements have been met, advise the nominated officer of any adjoining rail networks.<br>• Fulfil the SMLPA by advising the Sydney Metro Senior Project Manager or delegate. |
| **Keeping Sydney Metro LPA details** | The PPO and Sydney Metro Rail Safety Manager (or delegate) must keep details about the SMLPA and information about protection arrangements. |

# Appendix B: Rolling Stock-Free Zone

| Sydney Metro Rolling Stock Free Zone | |
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| **Purpose** | To prescribe the rules and procedures for authorising, establishing and using a Rolling Stock-Free Zone to work within a Sydney Metro rail site where workers may not have rail safety competencies. |
| **General** | A Rolling Stock Free Zone is an arrangement that can be implemented within an SMLPA that allows nonrail-qualified workers to enter and work in the rail corridor. This can only be established for a defined portion of the track when sufficient controls are in place to prevent the potential for rolling stock to enter or be placed on that section of the track and controls are in place to prevent workers from entering the adjacent live rail site.<br>Work within the portion of track included in the limits of the Rolling Stock Free Zone must only be done with the agreement of the PPO and under the control of a PO.<br>Stabled rolling stock, including trolleys, will not be permitted in an established Rolling Stock Free Zone.<br>Workers are not required to hold Safely Access the Rail Corridor (SARC) qualifications when working in a Rolling Stock Free Zone. |
| **Planning to establish a Rolling Stock Free Zone** | The person who requires a Rolling Stock Free Zone to be established to undertake work must submit a Rail Worksite Access Request Form to the Possession Manager seeking to have the site included as part of the SMLPA.<br>Planning must be undertaken in accordance with the Systems Connect Greenfield Possession Planning Manual.<br>Only works approved by the Possession Manager and included on the Possession Scope and Resources Sheet will be allowed to commence.<br>A plan for each site must show protection arrangements, including location and type of barriers to stop rolling stock from entering and workers from exiting the Rolling Stock Free Zone.<br>Each Rolling Stock Free Zone must have a PO responsible for the safety of the workers and the worksite.<br>Suitable barriers to prevent the entry of rolling stock may include:<br>• Temporary buffer stops<br>• Stop blocks ( sleepers, painted white and chained to the track with a red light/flag on top)  Rail clamps<br>• Concrete jersey kerb barriers or water-filled barriers |
| **Implementing and Cancelling a Rolling Stock Free Zone** | <u>Implementing a Rolling Stock Free Zone</u><br>Before allowing workers to enter a Rolling Stock Free Zone, the PO must:<br>• Confirm with the PPO that rolling stock movements for the nominated portion of the track have ceased<br>• Arrange the installation of suitable barriers in accordance with Worksite Protection Plan. These must be positioned 50 metres before each potential entry point to the worksite with double protection on approach grades steeper than 1 in 40.<br>• Arrange installation of temporary fencing in required locations to prevent workers from accessing the live rail site. Fencing to include signage warning of live rail beyond.<br>• Verify that track protection and fencing are correctly placed<br>• Communicate with PPO and advise of commencement of works.<br>• Brief workers of rail hazards and controls before work commencing<br>PO must document arrangements, including a checklist for restoring the site as a rail site.<br><br><u>Cancelling a Rolling Stock Free Zone</u><br>Before reinstating a site as a rail site in readiness for rolling stock, the PO must:<br>• Ensure all workers are clear of the site and in a safe place, and all equipment has been moved clear of the track;<br>• Verify that the site is clear and that rail infrastructure is fit for rolling stock to resume. Arrange track certification if required;<br>• Remove all worksite protection, barriers, fencing etc.;<br>• Communicate with the PPO to reinstate as a live rail site. |