

Rail Safeworking Procedure

Transfer of Test Trains MTS Network to SW Corridor – Marrickville Sydney Metro Southwest

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1 Introduction

This document describes the Rail Safeworking Procedure and processes for the transfer of train from Sydney Metro Train Facility-South (SMTF-S) Yard to the Southwest Corridor (SW) Marrickville and return. The transfer of the Train is to enable the Dynamic Testing and Commissioning (T&C) activities within the Sydney Metro Southwest (SW).

The movement of the Train from SMTF-S to Sydenham Terminations and from the Sydenham Terminations to SMTF-S will operate under the control of the MTS Sydenham Traffic Controller as a non-revenue service. During the train's transfer to SW, the movement will be governed under MTS's Safety Management System, MTS's Network Rules, and Procedures, including special instructions in the DTT Safe Notice. Any train movements south of the Sydenham Terminations (SWM Corridor) is controlled and managed as per the Rail Safeworking Procedure, Train Testing Zone (TTZ) for Testing and Commissioning Activities within the Southwest Corridor SMCSW-RS-PR-60022, SMA Rail Operating Conditions Standard SM-18-0058177 and Rail Operating Procedure SM-18-00058353.

2 Purpose

The purpose of this Rail Safeworking procedure is to set out the requirements to enable the transfer of the Dynamic Train Testing train from MTS controlled infrastructure to the S2B-PPO controlled SMLPA area where initially there is no provision for Computer Based Train Control (CBTC) function. This procedure is intended to ensure the safe, planned, and controlled movement from the MTS Computer-Based Train Control (CBTC) area to the Southwest (SW) section, which may operate under a test CBTC baseline subject to approval of the Project Safety Reports.

All personnel involved in the movement of the train from SMTF-S to Sydenham Terminations as identified in this procedure must hold the prescribed competency. It is the responsibility of each organisation involved in the transition of the test train to ensure that their rail safety workers hold the competency consistent with the Dynamic Train Test competency matrix prior to being rostered to perform the task. The Dynamic Test, rail safety workers competency matrix is attached as Appendix 2 to this document. This procedure outlines information on train transfer movements between Sydenham Station - Country end Train Docking Marker Boards and Marrickville Station.

3 Document Control

The custodian of this procedure is the MTR Head of HSEQ. Any amendments to this procedure and appendices must be recorded, and any major revision and/or amendments must be consulted with all the organisation stakeholders that are party to the signatory process of this document, and thereafter approved by the governance management process, before being distributed and implemented.

This procedure will be distributed to the following key personnel:

- Sydney Metro Rail Safety Manager, Director Health & Safety Project Delivery
- MTR staff including Head of HSEQ, Rail Safety & Governance Manager, Test Train Supervisor, Rail Operations Manager and Deputy Project Director TSOM.
- MTS staff including Safety & Systems Manager, Head of Network Control, Possession Planning Manager, GM Customer Service & Operation and GM SQREP
- S2B Rail Safety Manager and S2B Possession Protection Officer
- Alstom Test Engineer and Operations Manager
- Possession Protection Officer (MTS)
- Train Testing Personnel, including Protection Staff, Test Train Pilot and Train Operator (CJCT).

4 Abbreviations and References

4.1 Abbreviations / Acronyms

Table 1 Abbreviations / Acronyms

Code	Description
ATC	Automatic Train Control (ATC) The Automatic Train Control system is sub-system of the CBTC Signalling System, comprises of the following: • Automatic Train Operation (ATO) • Automatic Train Protection (ATP)
CBTC	Computer Based Train Control
CJCT	Customer Journey Coordinator – Trains: An MTS Qualified Worker responsible to operate the train as per this procedure
DDU	Drivers Display Unit
Down	Train traveling from Central to Tallawong and from Central to Sydenham.
DTT	Dynamic Train Testing
DTT Safe Notice	Dynamic Train Trestin Safe Notice
EB	Energisation bulletin
EH	Engineering Hours
EMU	Electric Multiple Unit
FTR	Functional Test Report
GM	General Manager
HSEQ	Health, Safety, Environment, & Quality
ITP	Inspection and Test Plan
LV	Low Voltage
MNW	Metro Northwest
MTR	Mass Transit Railway Corporation
MTS	Metro Trains Sydney
MTS PPO	Possession Protection Officer – The Qualified Worker responsible for coordinating protection of worksites under a Local Possession Authority (LPA) within MTS area of control
NOE	Notification of Energisation
NWRL	Northwest Rail Link
OCC	MTS Operations Control Centre
OHW	Overhead Wire
PO	Protection Officer – The Qualified Worker responsible for managing the rail safety component of worksite protection.
Project Safety Report	The purpose of this project safety report is to identify and manage: • The project, system design and sub-system configuration. • The list of authorised trains • V&V report results of system design and subsystem including the CC I&V and FIVP result. • Installation Reports. • T&C Reports. • Analyse all the NOKs from Global V&V report and see if any restriction to be provided due to safety impact. • Include the CR analysis and see if any safety impact for the open CRs. • Restrictions of use. • Conclusion.
RM-ATC Bypass	Restricted Manual (RM) mode – ATC Bypass (Bypass of Automatic Train Control (ATC) Restricted Manual mode of EMU operation allows a Train Operator to manually control the movement of a train in the forward or reverse direction, with speed limitation controlled to a maximum of 25 km/hour. ATC Bypass – bypass of The Automatic Train Control system is sub-system of the CBTC Signalling System, comprises of the following: • Automatic Train Operation (ATO) • Automatic Train Protection (ATP)
RTC	Risk Triggered Commentary

S2B	Design & Construct Joint venture partners (John Hollands / Laing O’ Rouke) part of the Sydenham to Bankstown Metro Project delivery team
S2B-PPO	Sydenham to Bankstown Possession Protection Officer – The Qualified Worker responsible for coordinating and managing protection of worksites under a Sydney Metro Local Possession Authority (SMLPA) within SW area of control.
SMA	Sydney Metro Authority
SMLPA	Sydney Metro Local Possession Authority
SMS	Safety Management System
SMTF-S	Sydney Metro Train Facility South
MTS -TC	MTS Traffic Controller - Qualified to establish and authorise train movements in MTS controlled areas only, based in Tallawong
S -TC	(MTS) Sydenham Traffic Controller - Qualified to establish and authorise train movements in MTS controlled SMTF-S areas only, based in Tallawong or can be based within SMTF-S
SW	Southwest
SWMS	Safe Work Method Statement
Test Train	Testing and Commissioning Electric Multiple Unit (EMU) – a Metropolis unit, certified by Alstom to operate on the MTS Network and SW Network
Test Train Pilot	A Qualified Worker, who must always accompany the CJC-T when the train is under the control of the PPO in the TOCC, relaying all Safety Critical Communications directly to the CJC-T.
TOCC	Temporary Operations Control Centre – located at SMTF South
TOCC-TC	Qualified Traffic Controller Qualified to establish and authorise train movements within the Train Testing Zone (TTZ) controlled areas only, based in Campsie TOCC
TTZ	Train Testing Zone – an area of the alignment that will be excluded for Trains and Systems testing
UP	Train traveling from Tallawong to Central and from Sydenham to Central

5 Train and Signalling Systems

The train used for the SW Dynamic Train Testing will be a commissioned Metro MTS Electric Multiple Unit (EMU). The train will be a non-revenue service. The train will operate in UTO or PM mode from SMTF-S Yard to Sydenham Station operating under the MTS CBTC System. Where any additional equipment, device and/or material/s are installed on the test train for the purpose of Train Testing, the Alstom Rollingstock Engineer must provide the assurance to MTS that the train is fit for purpose and is prepared to commence travelling on the MTS Network.

The Alstom Rollingstock Engineer must:

- Ensure any amendments to the train is secured and safe,
- Ensure the train is fit for purpose to travel prior to departing SMTF-S Yard and provide the assurance to the MTS Traffic Controller,
- Ensure the train is fit for travel prior to departing the Marrickville within the SMPLA towards MTS Network and provide assurance to S2B-PPO.

All Rail Traffic movements between Sydenham Station Train Docking Marker Board and the Marrickville within the SMLPA will operate in restricted speed as noted in the applicable DTT Safe Notice and in Restricted Manual (RM) mode and Automatic Train Supervision (ATS) Bypass under the manual control of the CJC-T. Once the CBTC function has been enabled within the SW section, the movement of the train from Sydenham Station Train Docking Marker Board and the SW will be reviewed, and any amendments to the procedure will be detailed in a DTT Safe Notice.

6 Roles and Responsibilities

The roles and responsibilities mentioned below define and communicate the expectations, duties, and accountabilities of each member responsible to control the movement of the train from the MTS Network to SW safely. All rail safety workers associated with this procedure must be competent and have a full understanding of the limits of authority and responsibilities of each party for the train transfer process.

6.1 Alstom Rolling Stock Engineer.

The Alstom Rolling Stock Engineer ensures before the train departs, SMTF-S Yard, that the train is fit for purpose, windows are clean for a clear and unobstructive view. The test train is to operate with no known faults or issues that will impact the train movement and subsequent T&C activities in the SWM area.

6.2 Sydenham to Bankstown Possession Protection Officer (S2B- PPO)

The Sydenham to Bankstown Possession Protection Officer (S2B-PPO) is accountable for coordinating worksite protection resources, including SafeWorking and Worksite Protection personnel, to establish and manage the SM-LPA. This responsibility involves ensuring the removal of all protection boards, such as the Possession Limit Marker Stop Board, Stop Blocks, RIM boundary fence and Worksite Marker Boards to facilitate the movement of trains through the transition area. Once the train has passed through the transition area, the protection arrangements are to be reinstated.

The S2B-PPO has the authority to grant and authorise the Train Testing Zone (TTZ) to the Train Coordinator within the SM-LPA. When a TTZ has been implemented within the Southwest Corridor, no personnel will be permitted within the Rail Corridor (fence-to-fence/ PSD is considered a fence) whilst the train is in motion.

6.3 Train Coordinator

Once granted, the Train Coordinator confirms that all worksite protection for the TTZ is established as per the S2B-PPO requirements & DTT Safe Notice.

The Train Coordinator coordinates and communicates with other in-field trains testing and commissioning staff, project managers, and other stakeholders to ensure that all testing and commissioning activities are being conducted effectively, efficiently, and safely.

6.4 Trains Testing Protection Officer (PO)

The Train Testing Protection Officer, with authority from the S2B-PPO, MTS-PPO, or Sydenham Traffic Controller, is responsible for the physical removal and reinstatement of Possession Protection Limit Marker stop boards and stop blocks. This includes unlocking, locking, opening, closing, and securing the Temporary Termination fence gates to enable the commencement of Train Transfer.

Upon the establishment of the TTZ, the Train Testing Possession Officer (PO) must contact the S2B-PPO to confirm that worksite protection has been properly implemented. This includes ensuring that the points have been secured, set, and clipped to accommodate rail traffic movements and that the TTZ is fit for its intended purpose.

The Train Testing Protection Officer must also verify that no other work will interfere with their primary duty. A safety assessment must be conducted in accordance with MWT 300, "Planning Work in the Rail Corridor." Additionally, work on track authorities and methods must be arranged and implemented in compliance with the MTS Network Rules & Procedures, SMA Network Rules & Procedures or any relevant Safe Notice.

Brief rail safety workers about the:

- Locations of safe places and worksite protection arrangements
- Key safety risks and controls
- Nature and extent of the area protected, which includes both Up MSW and Down MSW, in parallel.
- Any changes to the protection arrangements
- Emergency and incident reporting and response protocols
- Keep accurate information about protection arrangements and diary notes of all tasks and activities relevant to the work.
- Any other hazards or controls associated with working in or adjacent to the rail corridor.

Once the Train Testing Protection Officer has completed these tasks, the S2B-PPO will communicate to the Trains Coordinator that the Train Testing Zone (TTZ) has been established within the SM-LPA and is ready for Train Transfer to proceed. The primary responsibility of the Train Testing Protection Officer in this process is to ensure the safety of the worksite and workers by implementing and managing the necessary protection measures.

6.5 Test Train Pilot

The Test Train Pilot is responsible for the Pre-Start brief before any transition movement commences and that CJCT and themselves have the relevant Safety Notice to hand. This may also incorporate other Pre-Start Briefing responsibilities as prescribed in the Rail Safeworking Procedure, Train Testing Zone (TTZ) for Testing and Commissioning Activities within the Southwest Corridor (SMCSW-RS-PR-60022 version 4)

- responsible for the safety and management of all testing personnel on-board the train.
- ensuring that all Personnel that are required for test train activities are on-board prior to departure.
- responsible for relaying Control and Command messages from the S2B-PPO to the CJC-T from Sydenham Station Train Docking Marker Board and the Southwest Corridor at the RIM boundary (Sydenham Terminations where the train will transition to the TTZ)
- responsible for ensuring that the CJC-T has understood and repeat back all Safety Critical Communications, Risk Triggered Commentary Driving, known as Risk Triggered Commentary (RTC).
- responsible for ensuring that the CJC-T is acting on all the instructions given to move the train safely within the TTZ.
- responsible to take immediate, and decisive corrective action if the commands are not adhered to by the CJCT, including the application of the emergency brake to stop the train safely.
- must follow all safety procedures, including those related to signalling, speed limits, position of points being secured for the intended movement and emergency response procedures.
- must communicate effectively with the testing personnel, including the Trains Coordinator, Protection Officer's, CJCT, Testing Engineers, Supervisors, and other personnel, to ensure that all tasks are completed safely and efficiently to ensure the safety of all onboard.
- must also provide clear un-ambiguous instructions to the CJCT regarding safe operation of the Test Train during the transition when under the control of the S2B-PPO. As a minimum this must include max speed, tests being undertaken and limit of movement authority.

6.6 Sydenham MTS Traffic Controller (S -TC)

Sydenham MTS Traffic Controller is responsible for the control and movement of all the trains between SMTF-S Yard and Sydenham Station inclusively and in accordance with the relevant safe notice. Further details are provided in Section 7 below.

6.7 MTS CJC-T

The CJCT is responsible for operating the train as per the directions provided. The Test Train shall operate in UTO or PM mode from SMTF-S Yard to Sydenham Station (MTS signalling control), as directed by the Sydenham MTS Traffic Controller or special instructions contained in the DTT Safe Notice.

The CJCT must only manually operate the Train in RM with no Southwest Metro signalling, control and communication systems from the Sydenham Station Train Docking Marker Board into the Southwest Metro Corridor, SMLPA – to Marrickville Station Platform.

Beyond Marrickville Station Platform, the CJC-T must comply with the requirements outlined in the Rail Safeworking Procedure – Train Testing Zone (TTZ) for Testing and Commissioning Activities within the Southwest Corridor (SMCSW-RS-PR-60022, Version 4).

MTS CJCT must adhere to the instructions from the Test Train Pilot when transferring the train from the Sydenham Station into the SM-LPA.

MTS CJCT must ensure that safety procedures are always followed during the transfer of train from Sydenham Station into the SM-LPA.

The applicable DTT Safe Notice and instructions contained within this procedure must be strictly observed and followed.

MTS CJC-T key responsibilities include:

- reporting faults & defects to the S-TC while in MTS Network and to the Test Train Pilot when in SW
- during the transition from SMTF -S to Sydenham, conduct train fault finding, and rectification as instructed by the TC and Alstom Rollingstock Engineer
- when operating outside of the MTS network report all defects to the Test Train Pilot, who shall inform the relevant parties. (Note: The Alstom Rollingstock Engineer will undertake fault finding and fault rectification).
- safe operation of the train consistent with this procedure
- have a clear understanding of the directions issued by the Test Train Pilot and must not exceed limits of movement authority, if in doubt, stop the Test Train and ask the Test Train Pilot for clear instructions.
- exchanging safety critical communication with the Test Train Pilot and engage in Risk Triggered Commentary Driving / Aspect Calling when moving under the authority given by the Test Train Pilot.

6.8 DTT Safe Notice

MTS is responsible for reviewing and endorsing any Safe Notice required for the transfer of train(s) from MTS Network into the SMLPA. Where a delegate from SMA will review and approve the DTT Safe Notice.

7 Infrastructure Booking Out Authority – Southwest (SW) – Dynamic Train Testing

The S2B Infrastructure Booking Authority (S2B IBA) is used to identify to the Sydenham to Bankstown Possession Protection Officer (S2B-PPO) that all required infrastructure and systems are certified and are ready to be used in Train Transfers and Dynamic Train Testing (DTT) for the Southwest Section between Sydenham Stop Block and Bankstown Buffer Stop.

The S2B IBA form will advise the S2B-PPO of which infrastructure is booked in, and which is booked out and the applicable certified status of that infrastructure during a train test or movement activity. The S2B IBA will also provide Constraints / Operational Limitations for each of the System/Infrastructure to support the S2B IBA.

This approved set of certifications will provide the assurance that the S2B-PPO requires to set the limits of authority and implement the SMLPA required for Train Transfers and DTT. The S2B-PPO will use the S2B IBA form to approve the limits of authority for the SMLPA after the certifications have been approved.

The S2B-PPO must follow the S2B IBA procedure prior to establishing the SMLPA, which is required to transfer the Test Train from Sydenham Station into the SMLPA.

8 Safe working Arrangements (UP) – Sydenham Station to Southwest SMLPA

8.1 Transition Area

The diagram below shows the transition area between MTS and SW.

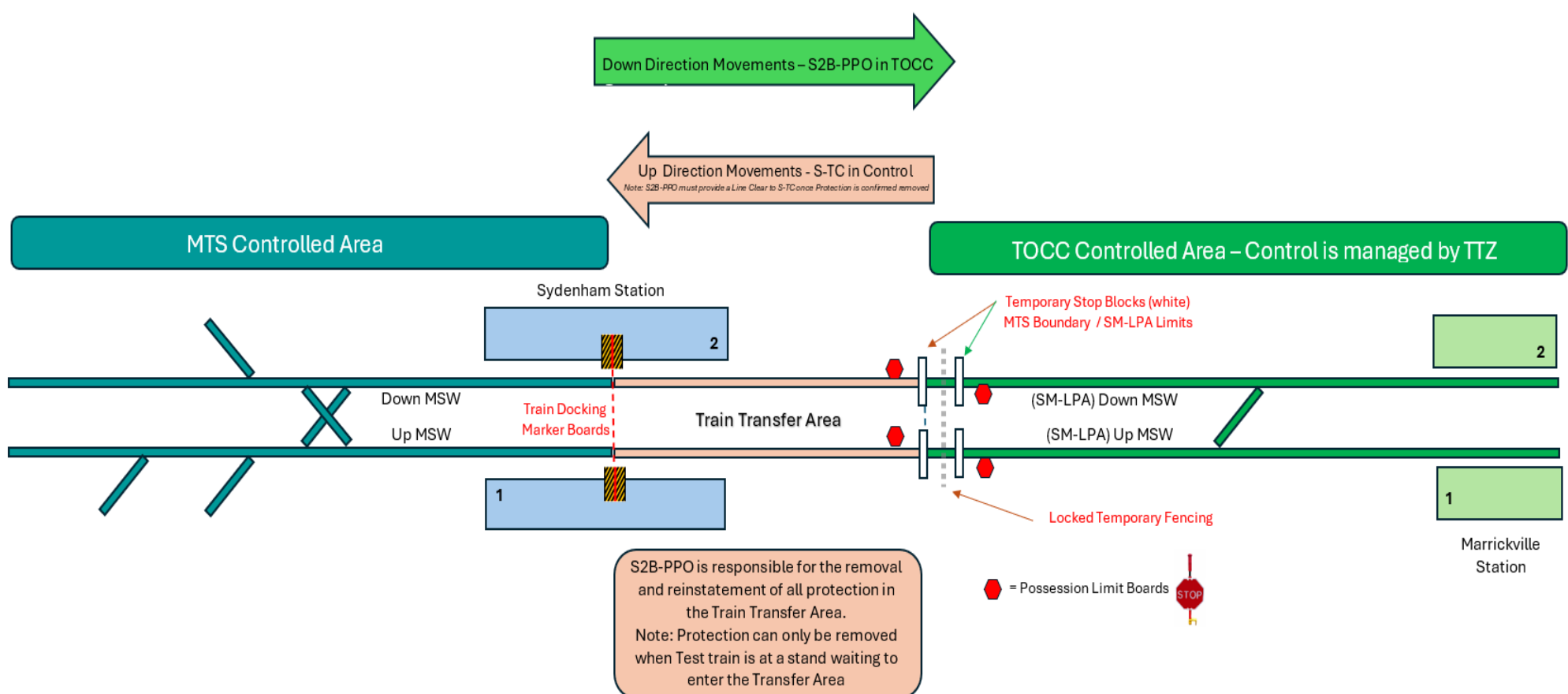


Figure 1 Transition area between MTS and SW

8.2 SMTF-S pre movement

The train transfer activity should be planned to avoid delays to MTS Operations or impact MTS LPA's.

MTS shall make available a designated Test Train for the purposes of Dynamic train testing (SMLPA - Southwest, Sydenham to Bankstown). An Alstom representative is to provide assurance to MTS Sydenham TC that the train (non-revenue) has been prepared and ready for service as a test train.

The Test Train Pilot shall undertake an external unit check to ensure that no other rolling stock is attached to the train, or any wheel chocks applied. Whilst undertaking this task they will be accompanied by the CJCT. The CJCT will also check the operator windows to ensure that they are clean and will test the PA system to see that it is functioning correctly.

Prior to the Test Train departing SMTF-S Yard, all testing personnel must complete their pre-start briefing, conducted by the Trains Supervisor. The Trains Supervisor is responsible for the pre-movement validations as mentioned below. The pre-start brief should include the following as a minimum:

- All staff have a copy of the DTT Safe Notice and have read and understood the requirements,
- All staff have attended the briefing, pre-start, tool-box briefings,
- All staff are in rail compliant PPE,
- All staff have the required competencies, inductions, job roles, associated with MTR in the RIW system and fit to work,
- All staff must have an MTR Rail Safety Worker Card
- All staff have swiped onto the MTR RIW Kiosk against their role and acknowledge that they are fit to work,
- Any visitors have a Test Train Permit and have the required authority to be present,
- Safety brief reminder on Safety Critical Communications, testing safely and no distraction with the Pilot or CJCT when the test train is in motion.

All test personnel shall be on board the train prior to the train departing SMTF-S. This shall be confirmed by the Pilot to the CJC-T.

Just prior to the official departure time, the CJC-T must confirm with the MTS Sydenham TC, that the test train is ready to depart. The MTS Sydenham TC shall ensure that the train is ready to depart in UTO mode, towards Sydenham Station.

8.3 SMTF-S to Sydenham Station (MTS Sydenham Traffic Controller Control)

- The S-TC must check the details of the DTT Safe Notice in case there are any special instructions to those listed in this document. The instructions within the DTT Safe Notice will supersede instructions provided in this procedure and must be strictly observed and followed. The nominated test train will operate from SMTF-S to Sydenham Station in UTO or PM (non-revenue service), under the control of the S-TC.
- The S-TC will contact the CJCT for any communication between SMTF-S and Sydenham Station,
- Once the test train has come to a stop at Sydenham Station the MTS S-TC must apply blocking facilities at the Sydenham Terminations and inform the S2B-PPO.

8.4 Obtaining a Track Occupancy Authority:

In addition to the requirements in the Rail Safeworking Procedure, Train Testing Zone (TTZ) for Testing and Commissioning Activities within the Southwest Corridor (Document SMCSW-RS-PR-60022)

- When the nominated Test Train has arrived and comes to a stand on Sydenham Platform, the Train Testing Protection Officer must obtain a Track Occupancy Authority (TOA) as outlined in MWT 304 Track Occupancy Authority from the MTS Traffic Controller (TC).
- The purpose of the TOA is to provide protection arrangements for the workers to remove the Temporary Stop Blocks and the Possession Limit Boards and to manage the movement of the test trains between the MTS Network and the Southwest SM-LPA.
- The TOA limits will be from Signal SI_2305 on the Down MSW and SI_2307 on the Up MSW to the current MTS Boundary (terminations) at Sydenham Station
- The Train Testing Protection Officer must ensure that the Sydenham Traffic Controller (S-TC) has electronically/remotely secured points SYD07, SYD02, SYD03, and SYD01 in the Normal Position.
- As it is not possible to apply blocking facilities to prevent a train entering the work limits of the Track Occupancy Authority from the SW Network, prior to authorising the TOA, the MTS S-TC must obtain an assurance from the S2B-PPO that any Trains in SW are stabled and will not move.
- The Train Testing PO will advise MTS S-TC and S2B-PPO when the train is ready to enter the SW Network Section.
- S-TC will authorise the train to depart Sydenham Platform towards Marrickville in Restricted Manual (RM) mode,
- Once the Train enters the SMLPA the train will be under the control and management of the S2B-PPO.

8.5 Sydenham to Marrickville (TOCC Control)

- The Pilot confirms with the S2B-PPO that the test train is stationary at the Train Docking Marker Board on the country end of Sydenham Station and will remain in place until further instructions are given by the S2B-PPO.
- The S2B-PPO must ensure that the S2B IBA has been completed and verified and the TTZ is implemented as per the TTZ Procedure,
- Once the MTS TOA has been confirmed as implemented, the S2B-PPO grants the train testing PO authority to access the track and remove RIM boundary protection including stop blocks and fencing at the Sydenham Terminations (MTS Network / Southwest, Sydenham to Bankstown SMLPA).
- The S2B-PPO must obtain assurance that OHW power is energised through the Sydenham – Marrickville interconnector and beyond by the Southwest Electrical Controller in OCC
- The Train Testing PO is to ensure the temporary stop blocks are clear of the kinetic envelope (structure gauge) and advise the S2B-PPO that all workers and equipment are clear of the track.
- The S2B-PPO authorises the Test Train Pilot to instruct the CJCT to select RM Mode and proceed passed the stop board to Marrickville Station and await further instructions,
- The Test Train Pilot must relay all the instructions received by the S2B-PPO to the CJC-T,
- Once the test train has departed Sydenham Station (due to the train movements creating system faults) the MTS S-TC must coordinate with the Alstom resources in the Signalling Equipment Room in Sydenham and at SMTF-S Central Equipment Room 3, to manage any system resets that are required,
- When the test train has entered the Southwest (Sydenham to Bankstown) section and is clear of the MKV21 and MKV11 points, the Test Train Pilot must notify the S2B-PPO.
- The test train must come to a complete stop at Marrickville Station, at which point the Test Train Pilot must inform the S2B-PPO.
- The S2B-PPO will then instruct the Test Train Pilot to notify when the park brakes are applied on the test train and the pantographs are lowered.
- Once the Test Train Pilot confirms that the park brakes are applied and the pantographs are lowered, the S2B-PPO will authorise the Test Train Protection Officer (PO) to replace the stop blocks, stop marker boards, and close and secure the Temporary Termination fence gates. The S2B-PPO will also request that the overhead wiring (OHW) is de-energised within the Sydenham to Marrickville interconnector.
- Once all actions are confirmed to the S2B-PPO, the S2B-PPO will inform the MTS S-TC that all RIM boundary protection has been reinstated.
- The test train is then under the manual control of the Train Coordinator, and all subsequent train movements towards Bankstown must adhere to the TTZ procedure.
- The Train Testing Protection Officer may remove any TOA protection, ensuring that all personnel are clear of the Danger Zone and fulfill the TOA granted for the Train Transfer.

8.6 Sydenham to Bankstown SMLPA to Sydenham Station (MTS Network)

The train transfer from the SMLPA (SMA Network) to Sydenham Station (MTS Network) should be planned to take place immediately after the last MTS revenue train of the evening has departed Sydenham Station to avoid delays to any MTS passenger service and/or planned maintenance. If the move is required to take place during MTS Engineering hours, agreements will need to be reached between MTR and MTS, noting the train must be stabled in SMTF-S before the end of engineering hours.

The S2B-PPO must liaise with the MTS Sydenham Traffic Controller to ensure they are ready to accept the transitioning train and expected time for transition to occur,

- The Test Train Pilot must inform the S2B-PPO that the train is stopped at Marrickville Station, with Park Brakes applied and Pantographs lowered,
- S2B-PPO must liaise with MTS Sydenham Traffic Controller to confirm, the last service has departed Sydenham Station,
- The MTS Sydenham Traffic Controller is to place a block on both the Up and Down MSW Lines – Sydenham and confirm this to the S2B-PPO,
- The S2B-PPO requests that the Train Testing PO either books onto the MTS LPA or takes a MTS Work on Track Authority such as a MTS TOA.
- Once the Train Testing PO has adequately protected the MTS Sydenham area from any rail traffic, the Train Testing PO advises the S2B-PPO.
- S2B-PPO provides authority to the Test Train PO to access the track and remove temporary stop blocks and stop signs from track at the Sydenham, MTS Network – SMLPA Sydenham to Bankstown RIM boundary,
- The Train Testing PO to remove RIM boundary protection and advise S2B-PPO that all workers and equipment are clear of the Danger Zone.
- The S2B-PPO confirms with the Southwest Electrical Controller that the OHW is energised within the Sydenham to Bankstown interconnector.
- The S2B-PPO must give assurances to the MTS TC that all the RIM boundary protection has been removed, and the line is clear of all workers and obstructions.

- The Test Train Pilot provides movement authority to the CJCT,
- Once the test train has stopped at the PPI at the end of the Sydenham Station, the test train is under the full control of the MTS Sydenham Traffic Controller and CJCT only,
- The MTS Sydenham Traffic Controller is responsible for managing the safe movement of the train from Sydenham Station to the designated Stabling Road – SMTF-S, in accordance with MTS Network Rules.
- Please note that the route within the MTS Network may not be available for setting via MTS OCC ATS, or the SI may not be set to proceed.
- Once the train is at Sydenham Station (due to the train movements creating system faults) the MTS Sydenham Traffic Controller must coordinate with the Alstom resources in the Signalling Equipment Room in Sydenham and at SMTF-S Central Equipment Room 3 and the CJCT to manage any system resets that are required, prior to the MTS Sydenham Traffic Controller applying the Train ID.

9 Control and Command (C&C) Structure (Train Movements)

9.1 C&C arrangement for the transfer of train from MTS Network to SW, SMLPA (Down Direction).

The train movement from the SMTF-S Yard onto the MSW Main Line at Sydenham Boundary is managed by the MTS Sydenham Traffic Controller.

Whilst the test train is in the MTS network (MSW Lines) the:

- MTS Sydenham Traffic Controller is in control of the train movement,
- CJCT is responsible for the safe operation of the train,
- The Test Train Pilot is responsible for the safety of the test crew on board.

Train movements from Sydenham SMLPA limits to Marrickville Station (inside the SMLPA):

- S2B-PPO is responsible for the removal and reinstatement of all protection arrangements (via the PO) and is in manages train movements by communication to the Pilot,
- The Test Train Pilot is responsible for the safe operation of the test train, relaying the safety critical instructions from the S2B-PPO to the CJCT
- CJCT is responsible for following all instructions received by the Test Train Pilot and the safe control of the train.

For Consistency, the TTZ will always commence at the Sydenham Boundary during Train Transfers.

The control of the test train will transition to the Train Coordinator as per the TTZ instructions.

9.2 C&C arrangement for the transfer of train from SW to MTS Network (Up Direction).

The test train will arrive at Marrickville Station Platform under the control of the Train Coordinator as per Rail Safeworking Procedure, Train Testing Zone (TTZ) for Testing and Commissioning Activities within the Southwest Corridor SMCSW-RS-PR-60022.

The S2B-PPO is responsible for the removal and reinstatement of all protection arrangements (via the PO).

The S2B-PPO will confirm 'Line Clear' to the MTS TC – technically handing over control of the train to MTS Sydenham Traffic Controller.

Test train movement from the Marrickville Station to Sydenham Boundary and onto the MTS MSW Main Line (Sydenham Station to SMTF-S Yard):

- The MTS Sydenham Traffic Controller is in control of the train movement.
- CJCT is responsible for the safe operation of the train and following all instructions from the TC.
- The Test Train Pilot is responsible for the test crew on board.
- Alstom Engineer is responsible for resetting the Axle Counter and Zone Controller in coordination with the MTS Sydenham Traffic Controller.

The diagram within 9.3 articulates the safety critical working relationship, of the organisations, to deploy dynamic train testing.

9.3 Control and Command of Safety Critical Communication

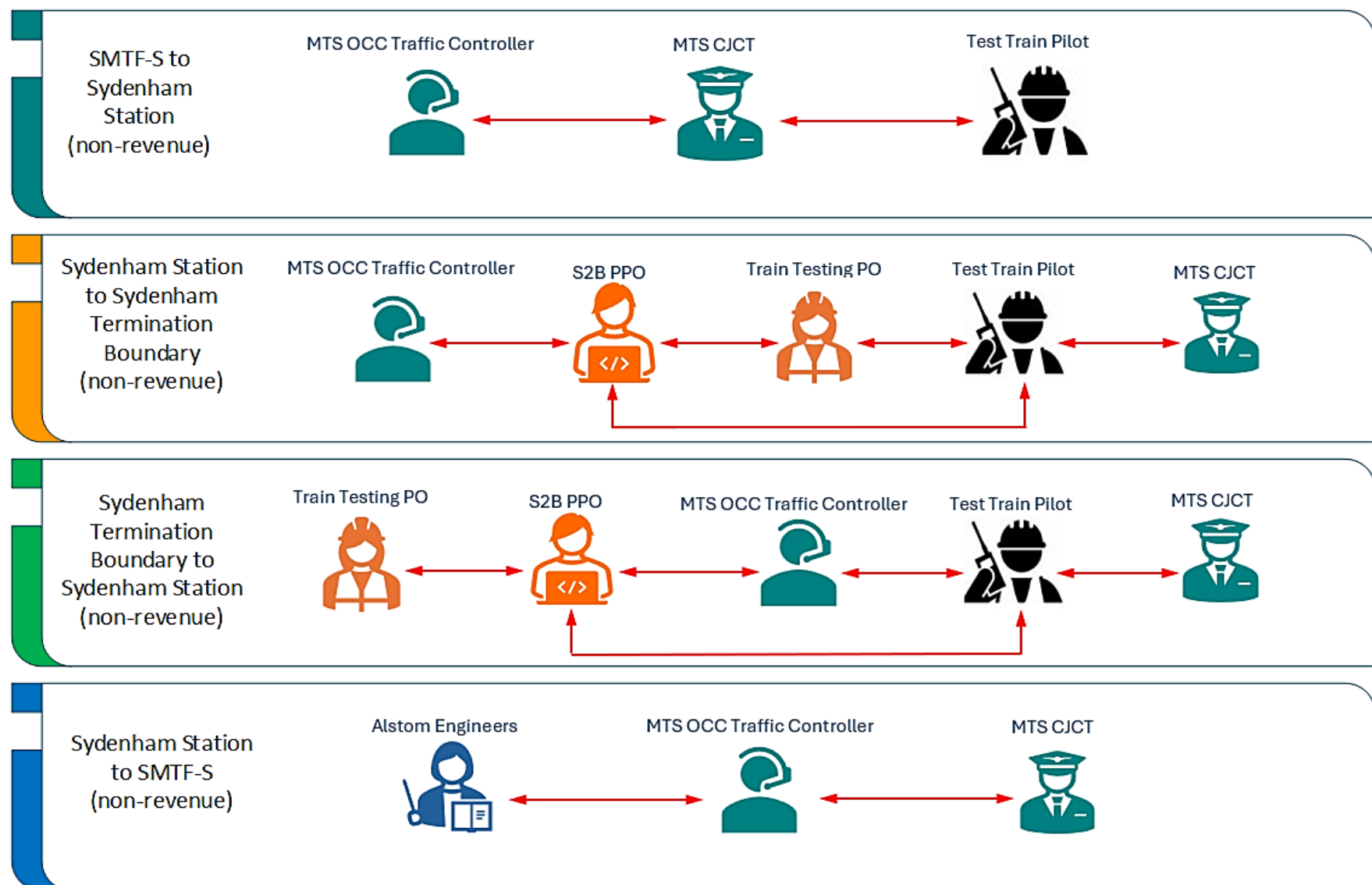


Figure 2 and Command of Safety Critical Communication

9.4 Minimising Distraction to Test Pilot & CJC-T

To effectively manage the potential risk of distracting the CJC-T from the safety Critical task of manually driving the train in RM Bypass mode, the test train crew on board are not permitted within 3 meters of the lead vehicle. The CJC-T is under the direction of the Test Train Pilot, and any communication to the CJC-T is undertaken by communicating with the Test Train Pilot. The only time anyone should approach the operator's console is to stop the train in an emergency. If anyone does approach the operators console and it is not part of a test procedure the CJC-T must stop the train immediately.

If the CJC-T encounters any Train Faults whilst the train is under the direct supervision of the Test Train Pilot and TOCC, the test train should be brought to a stand immediately.

NB: The Alstom Test Engineer must place safety tape on the train set floor, creating a clear three-meter delineation and exclusion zone between the train crew and testing staff. Placing of the delineation strip to be a minimum of three meters from CJC-T control desk.

10 DTT Safe Notice – Principles

DTT Safe Notice's which are issued for the purpose of Train Transfers will be reviewed and endorsed by MTS, produced, reviewed and approved by SMA, using the information provided by the MTR Rail Operations Team.

DTT Safe Notices are produced to inform all parties involved regarding the transfer of the train from MTS to SW and return from SW to MTS.

The DTT Safe Notice must contain details of any changes to the instructions outlined in this procedure to ensure all involved staff are aware of the changes. The DTT Safe Notice will be issued once MTS & SMA receives the approved scope of work. The scope of work must be provided with the approved Work Access Request (WAR). To ensure involved staff can read and ask for clarification, the DTT Safe Notice must be issued at least 5 days prior to the commencement of work. The DTT Safe Notice must be issued to all personnel mentioned in this procedure and relevant staff required to follow the instructions outlined in the DTT Safe Notice.

The DTT Safe Notice must form part of the Pre-Work brief prior to the movement of the train under the control of this procedure. The DTT Safe Notice must be provided to all Train Testing staff by the Trains Coordinator, prior to work commencing.

10.1 Incident Management

Incidents within the MTS Network will be managed according to the MTS Incident Management Procedure. Incidents within the SW area will be managed as per the S2B, SMCSWSW8-JHL-WBK-HS-PLN-000006 Bankstown to Sydenham Incident Emergency and Crisis plan. The Incident Management Flow Chart outlines management of incident reporting and classification within the SW area.

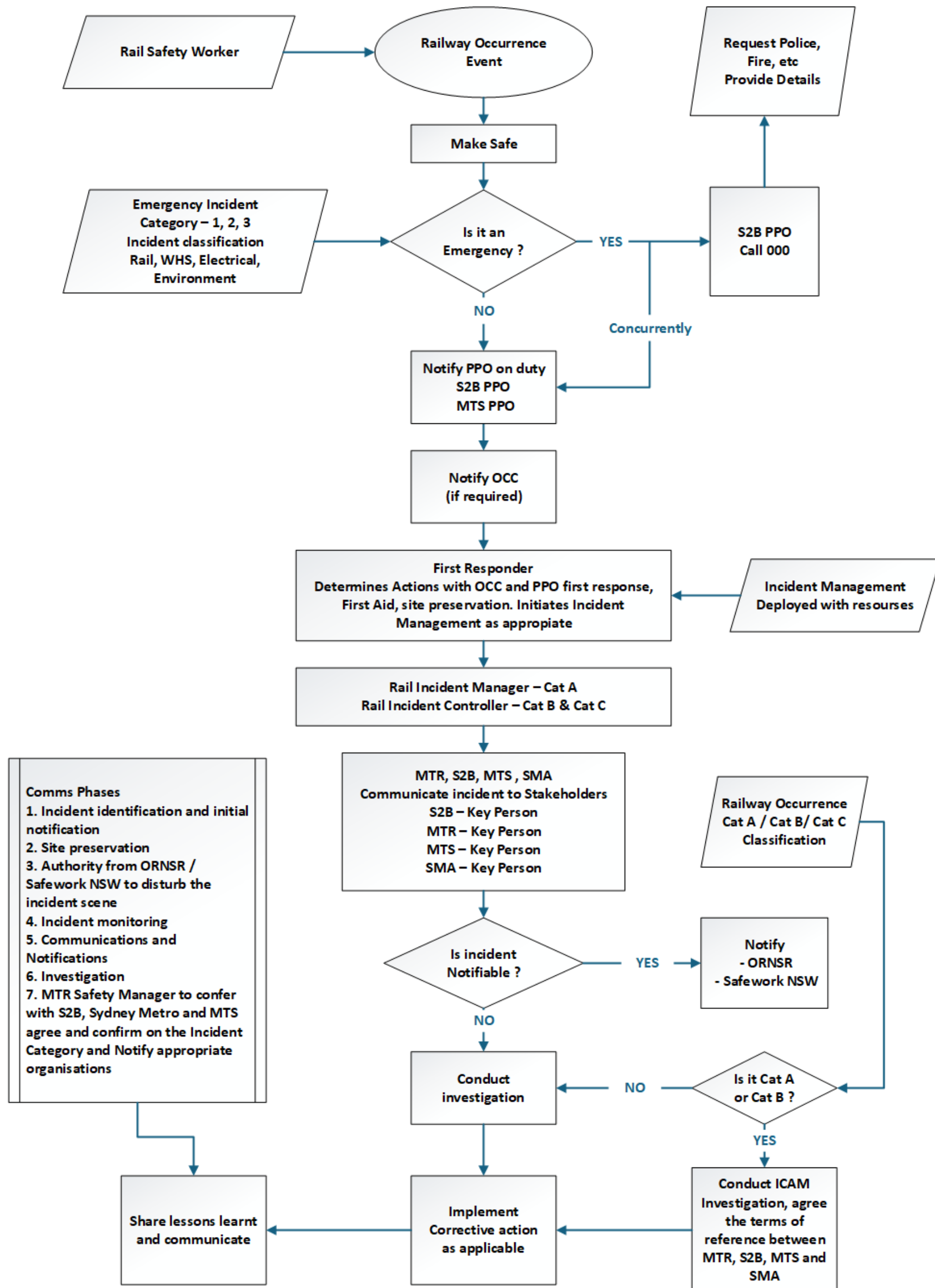
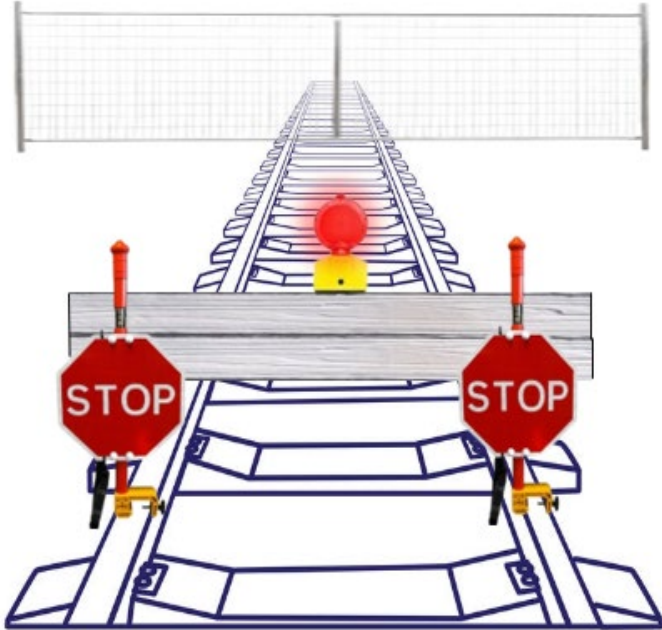
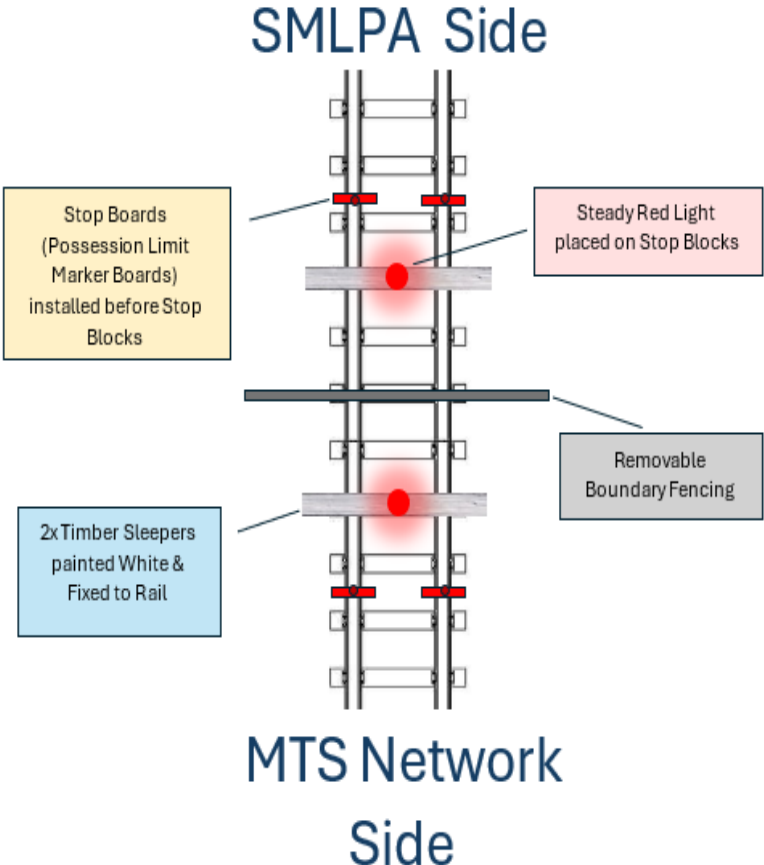


Figure 3 Incident Management Flowchart

10.2 MTR Risk Register

All Risk Control measures applicable to the Transition of units into and out of the SW test area are incorporated into this safeworking procedure. The MTR Safety Assurance Manager is responsible for mapping these against this document to ensure all controls are managed accordingly.

10.3 On Track Protection

Temporary Stop Block		Stop Block consists of 2 x Timber Sleepers – Painted White Laid horizontally across the railheads and fixed by 2 x threaded M20 rodding bolted through rail fishplates. Battery operated Steady Red Light placed on Stop Block with STOP sign situated on the approach side of the Stop Block
Possession Limit Board		Possession Limit Board, Placed over the Railhead and secured by wingnut to Rail web includes Led, flashing light day and night
Double Stop Blocks MTS Terminations and SMLPA city end limits		A Double Stop Block arrangement will be installed between the terminal end of the MTS Network at Sydenham and the city-end limits of the SMLPA. Additionally, a removable boundary fence will be erected between the Double Stop Blocks.

11 Appendixes

Appendix 1 Reference Documents

Table 2 Referenced Documents

#	Document Reference Number	Title
1.	SMCSW-RS-PR-60022 version 3	Introducing a Train Testing Zone (TTZ) Southwest Corridor for Train Testing and Commissioning Activities for DTT Stage 1 (Limited)
2.	SMCSW-HS-PR-60060 revision B.	Transfer of Test Trains MTS Network to SWM Corridor – Marrickville for DTT Stage 1 (Limited) - SMCSW-HS-PR-60060 revision B.
3.	SMCSWTS2-MTR-CSW-TC-MAN-026626. Rev 05	Temporary Control Centre (TOCC) Testing and Commissioning Ops & Coms Procedure – Rev 05
4.	A-HS-PR-60079	MTR Effective Safety Critical Communication
5.	A-HS-FM-00678	MTR Incident Management Responsibility Matrix
6.	SMCSW-RS-FM-60149	MTR DTT Southwest - Incident management flow chart
7.	A-HS-GU-60042	Limited use of Mobile Phones during Trains Testing and Commissioning
8.	Alstom BLIM000020176_EN1_Coupling	Operation Manual Rescue Operation
9.	Alstom EHS-WMS-005	Rail Vehicle Movement Procedure
10.	Alstom 0000168033 _Rev 7	Train movement checklist
11.	MTS SWD-OP-MAN-720121-C-ROM	Rail Operations Manual
12.	SMCSWSW8-JHL-WBK-HS-PLN-000006	S2B Bankstown Incident Emergency and Crisis Management Plan
13.	SMCSWSW8-JHL-WBK-HS-PLN-000004	S2B Sydenham to Bankstown – SWM3 Security Management Plan
14.	SMCSWSSJ-JHL-WSS-PC-PLN-000125	S2B – JHLORJV Possession Management Plan
15.	SMCSW-RS-RG-60148	Testing & Commissioning Competency Matrix
16.		SMA Application of SARC Waiver Form
17.	Infrastructure Booking Authority (City) MTR-ARS-PR-71207	Sydney Metro Infrastructure Booking Authority (City IBA)
18.	NWRLOTS-NRT-SWD-SF-FRW-726001	MTS Electrical Safety Rules
19.	SM-18-00058353	Sydney Metro Rail Operating Conditions Procedure
20.	SM-18-00058177	Sydney Metro Rail Operating Conditions Standard
21.	SM-24-00230239	Sydney Metro Minimum Rolling Stock Requirements Standard for Infrastructure / Construction Vehicles (Southwest Section)
22.	SM-20-00046300	Sydney Metro Rolling Stock Acceptance Procedure
23.	MTS MPR 721	Spoken and written communication
24.	MTS MRF 003	Infrastructure Booking Authority Form
25.	MTS MWT 312	Infrastructure Booking Authority
26.	MTS MWT 302	Local Possession Authority
27.	MTS MPR 700	Using a Local Possession Authority

Appendix 2 Testing and Commissioning Competency Matrix

TESTING & COMMISSIONING COMPETENCY MATRIX (SOUTHWEST)

[illegible]

M	Mandatory Requirements
N/A	Not applicable competency to role

Rail Safeworking Procedure Transfer of Test Trains_ MTS Network to SW Corridor - Marrickville. SMCSW-HS-PR-60060 Revision C

Final Audit Report

2025-06-12

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"Rail Safeworking Procedure Transfer of Test Trains_ MTS Network to SW Corridor - Marrickville. SMCSW-HS-PR-60060 Revision C" History

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