Engineering Standard

Signals

L1-CHE-MAN-003

SIGNALS RAIL SAFETY WORKER COMPETENCE

Version: 3

Issued: February 2018

Owner: Engineering

Approved By:

Phil Ellingworth

Chief Engineer

PRINTOUT MAY NOT BE UP-TO-DATE; REFER TO METRO INTRANET FOR THE LATEST VERSION

Approval

	Name	Position	Signature
Document Author	Glenn Miller	Signal Engineer	
Document Endorser	Rob Raic	Head of Engineering-OCS	
	Peter Rimkevicus	Signals Delivery Manager	
	Ian Roulstone	Head of Engineering-Signals	
Approving Manager	Phil Ellingworth	Chief Engineer	31/1/18

Amendment Record

Approval Date	Version	Description
01/03/2013	1	Initial release.
30/08/2013	2	Mid-year review.
01/02/2018	3	Document ownership changed from P&P to Engineering. Document number and Title amended previously L0-HMR-MAN-002. Document reviewed and updated to include the added roles of Signal Project Manager and Signal Project Engineer, additional forms created to assist RSW and assessors and capturing transfer of competencies. Enhanced information and guidance for RSW, assessors, SME and mentors

Table of Contents

1. Introduction 7
1.1 Purpose 7
1.2 Scope 7
1.3 Definitions and Responsibilities 7
1.4 Responsibilities 13
1.4.1 Chief Engineer 13
1.4.2 Head of Engineering -Signals 13
1.4.3 General Manager-Safety, Environment and Quality Systems 13
1.4.4 Card Issuing Body 13
1.4.5 RSW 13
1.4.6 Signalling and Rail Systems Contracting Companies 13
1.4.7 Assessors 13
1.4.8 Subject Matter Experts 13
1.4.9 Alliance Partners and Projects 14
2. Reference Documents 14
3. Working in Metro's Rail Corridor 14
4. Identifying and Determining Competence 14
5. How to Apply 15
5.1 RIW Card Process Flow 15
5.2 Evidence Requirements – Process Flow Steps 1-3 15
5.3 The Assessment Process – Process Flow Steps 4-6 15
5.4 Metro Validation and Card Issue – Process Flow Steps 7-8 16
6. Roles and Classifications 17
6.1 Signals, CS&C Roles and Classifications 17
6.2 Company Position Descriptors versus RSW Roles 18
6.3 Role & Classification Descriptors 18
6.4 Signal Design 18
6.4.1 Signal Principles Design Engineer 18
6.4.2 Signal Senior Design Engineer 18
6.4.3 Signal Design Engineer 19
6.4.4 Signal Designer 19
6.4.5 Signal Assistant Designer 19
6.5 Signal Construction 19
6.5.1 Signal Senior Construction Engineer 19
6.5.2 Signal Construction Engineer 20
6.5.3 Signal Construction Supervisor / Signal Construction Team Leader 20
6.5.4 Signal Constructor 20
6.5.5 Signal Assistant Constructor 20
6.6 Signal Maintenance 21

6.6.1 Signal Maintenance Senior Engineer 21
6.6.2 Signal Maintenance Engineer 21
6.6.3 Signal Maintenance Supervisor / Signal Maintenance Team Leader/ Signal Maintenance Officer in Charge 21
6.6.4 Signal Maintainer / Technician 21
6.6.5 Signal Assistant Maintainer /Signals Maintenance Works Assistant 22
6.7 Signal Test 22
6.7.1 Signal Principles Test Engineer 22
6.7.2 Signal Senior Test Engineer 22
6.7.3 Signal Test Engineer 22
6.7.4 Signal Tester 23
6.7.5 Signal Assistant Tester 23
6.8 Control Systems & Communications 23
6.8.1 CS&C Senior Engineer 23
6.8.2 CS&C Engineer 23
6.8.3 CS&C Technician 24
6.8.4 CS&C Assistant Technician 24
6.9 Signal Project Management and Signal Project Engineering 24
6.9.1 Signal Project Manager 24
6.9.2 Signal Project Engineer 24
6.10 Note 1. Recognised Equivalents 25
6.11 Note 2. TIC Requirements 25
7. Assessment of RSW 26
7.1 Assessment 26
7.2 Reassessment of a RSW 26
7.3 Documentation and Requirements 26
7.4 Metro Signals Competency Management Forms 27
7.4.1 Statement of Competency-SoC 27
7.4.2 Signals Competency Assessment Request 27
7.4.3 Signals Competency Work Experience Record (WER) 28
7.4.4 Signals Education and Training Record 28
7.4.5 Signals Competency Training Qualification Equivalence 28
7.4.6 Signals Competency Upgrade Request 28
7.4.7 Signals Work Based Training Assessment 29
7.4.8 Signals Alternate Training Certificate 29
7.4.9 Signals Transfer of Competency Assessment Checklist 29
7.4.10 Signals Assessment Checklist 29
7.4.11 Metro Letter of Authorisation 29
8. Education, Training and Experience 30
8.1 Education & Training Records 30
8.1.1 Education Record 30
8.1.2 Industry Training Record 30

8.1.3 Work Based Training Record 30
8.1.4 Training Certificates 31
8.2 Training - Qualification Equivalence/ Predecessor Qualifications 31
8.3 Assessment and Capture of Work Experience and Training 31
8.4 Capturing Work Based Training 31
8.4.1 Non AQF Skill or Competency 32
8.4.2 Work Based Training and Assessment 32
8.4.3 Alternate Assessment for Technically Difficult Skills 32
8.5 Work Experience Records 33
8.5.1 Supervised Higher Level Work Experience 33
8.5.2 Relevant Past Experience 33
8.6 Transfer of RSW competencies 33
8.7 Upgrading of Competencies 34
8.8 Recording Assessments 35
8.9 Statement of Competency 35
9. Competency Proficiency Levels 36
9.1 Level 0 Proficiency 36
9.2 Level 1 Proficiency 36
9.3 Level 2 Proficiency 37
9.4 Level 3 Proficiency 37
9.5 Complex Tasks and Skill Levels demonstrated 38
9.5.1 Complex Tasks Definition 38
9.5.2 Examples of Complex Skill and Tasks 38
10. Maintaining Competence 39
11. Head of Engineering -Signals Issued Mentoring Role 39
12. Assessors and Subject Matter Experts 40
12.1 Assessors 40
12.2 Obligations of External Assessors during the Assessment Process 40
12.3 External Assessor Re-certification 41
12.4 Subject Matter Experts 41
13. Auditing 41
13.1 In-Field Auditing 41
13.2 Off-Site Auditing 41
14. Safeworking Breach and Competency Management 42
14.1 Introduction 42
14.2 Safeworking Breach 42
15. Dispute Resolution 42
16. Appendices 43
16.1 Appendix 1: Signalling, Control Systems & Communications Roles Matrix 43

16.2 Appendix 2: Levels of Supervision 43
16.3 Appendix 3: Process Flow for a Signals RSW applying for Metro Assessment..... 44
16.4 Appendix 4: Process flow for a RSW applying to be a Signals Assessor/SME/TIC/ Mentor 45
16.5 Appendix 5: Supporting Documents and Filenames 46
16.6 Appendix 6: Work Experience Record Requirement and example 47
16.7 Appendix 7: Assessor Competencies..... 49
16.8 Appendix 8: Project Management and Project Engineering..... 50

List of Tables

Table 1- Design skills for Signal Design Engineer or Signal Designer 51
Table 2- Maintenance skills for Signal Technician 51
Table 3- Maintenance skills for Signal Maintenance Engineer 52
Table 4- Construction skills for Signal Constructor 52
Table 5- Construction and Testing skills for Signal Construction Engineer 53
Table 6- Signals Project Manager skills.....53
Table 7- Signals Project Engineer skills.....54
Table 8: List of Metro Forms.....55

1. Introduction

1.1 Purpose

The purpose of this manual is to detail the signals, control systems and communications competency management system requirements; a subset of Metro competency requirements for all rail safety workers governed by L0-HMR-MAN-001 Business Rules Manual for the Contracting Rail Safety Worker.

1.2 Scope

This manual covers the competence of all signal, control systems and communications contractors, subcontractors, consultants and advisors who carry out any form of rail safety work in support of Metro's signalling, control systems, communications and related Infrastructure; including includes project management, project and rail systems engineering, design, construction, testing, commissioning and maintenance of this infrastructure.

This includes providing or undertaking any form of signal, control systems and communications, engineering advice or activities related to these areas, guidance, direction, consultation during the various life cycle and phases of rail signalling and allied areas of engineering, rail systems, control systems and communications and associated areas.

The Act requires that competence should be assessed with reference to the AQF which has requirements for obtaining qualifications through an approved course. It is Metro's responsibility to record and determine the competencies gained through the AQF as well as the competencies required for those areas outside the AQF.

1.3 Definitions and Responsibilities

The following terms and acronyms are used within this document:

Term or acronym	Description
Academic Transcript	Is an official, comprehensive verifiable copy of a student's record of courses relating to their qualification
Act or 'the Act'	Refers to the Victorian Rail Safety Act 2013. Rail Safety (Local Operations) Act 2006
AMIRSE	Associate Member of the Institution of Railway Signal Engineers (IRSE) See http://www.irse.org
ARA	Australasian Railways Association. See https://ara.net.au
ARTO	Accredited Rail Transport Operator
ARTC	Australian Rail Track Corporation
Assessor	Is the qualified person responsible for assessing a RSW's evidence against the assessment criteria and ensuring all Metro processes are followed, and completing the final and signed SOC.
AQF	Australian Qualifications Framework. The national policy for regulated qualifications in Australian education and training. See https://www.aqf.edu.au

Term or acronym	Description
Card Issuing Body	Refers to Onsite – the ARA and Metro approved external provider of the RIW Card.
CBI	Computer or processor based type interlocking
Certified Documents	Documents which are confirmed as true copies of the originals, by a person authorised to do so.
Checklist	Checklist form used to capture the evidence required by the RSW for assessment within one document. It captures the RSW's work experience records and training records, then the draft and final agreed assessed competency level of the RSW. It directly relates to the SoC for the Role. The competency level as defined within the Checklist is then transferred to the SoC. Additional types of infrastructure can be added to the checklist by the RSW or Assessor to better reflect the skills of the RSW
Competency Assurance Framework (CAF)	The framework that governs the CMS.
Competence	Is the ability of an individual to do a task well or correctly, a competency is a set of defined behaviours that provide a structured guide enabling the identification, evaluation and development of the skills in individual employees. May be a combination of a number of skills
Competency Management System (CMS)	A system of capturing the competencies of all RSW to meet the requirements of the Act. Metro uses Onsite CMS to manage the competencies of contracting RSW's.
Complex Task	Any task or skill requirement that requires the use of non-generic or special skills to perform.
Contractor, Consultant	A company or individual engaged by Metro or Others to undertake signalling work in accordance with an agreement. A contractor or consultant may be a sole trader or an employee of a parent signal contracting company. For the purpose of this manual; Metro staff, contractors, consultants, subcontractors and others are referred to as RSW.
CS&C	Control Systems & Communications
CSR	Combined Service Route
CWP	Commissioning Work Package
DMS	Document Management System. Captures all drawings, CAD files, standards pertaining to drawing and other standards. See https://dms.ptv.vic.gov.au
Forms	Forms required for use within the competency process and available from the Metro Academy website http://www.Metrotrains.com.au/academy/

Term or acronym	Description
IRSE	Institution of Railway Signal Engineers is an engineering institution representing signal engineers and others internationally. See http://www.irse.org
ID	Identification
Matrix	Reference related to Appendix one, Metro Matrix of Signalling, Control Systems & Communications Roles
Mentor, Mentoring	For the purpose of this document shall mean to provide guidance, help and support in the learning process of a RSW or others.
Mentor Role	A role that can be applied for and issued to a RSW for the purposes of providing mentoring activities only. No rail safety related work can be undertaken.
Metro	Metro Trains Melbourne. See http://www.metrotrains.com.au
Metro Academy website	The website where all required information and forms can be obtained for competencies required when working within the Metro network. http://www.Metrotrains.com.au/academy/
Metro Letter of Authorisation	The Metro Letter of Authorisation (form L4-CHE-FOR-088) is the form of approval issued by Metro Head of Engineering-Signals for approving the roles of TIC, Signals Assessor, Signals Mentor, SME, and captured within Onsite.
ONRSR	Office of the National Rail Safety Regulator. See https://www.onrsr.com.au
Onsite CMS	The Onsite CMS is the system behind the RIW Card program. Found at http://railindustryworker.com.au/pegasus-powered-by-onsite/
PM	Project Manager
Project	A task requiring the allocation of resources outside of normal maintenance, operations or contract administration activities. A Project has a start and finish date. Alternatively a Project can be defined as “a temporary organisation that is created for the purpose of delivering one or more business products according to a specified business case”.
PTV	Public Transport Victoria
Rail Corridor	Fence to fence either side of the nearest track. If no fence, 15 metres either side of the outermost rail.
Rail Safety Work	Refers to work carried out specific to Metro’s accreditation with ONRSR.

Term or acronym	Description
Rail Safety Worker (RSW)	Refers to those carrying out rail safety work under one or more of Metro's Functional Categories.
Registered Training Organisation (or RTO)	A vocational education and training organisation registered to deliver training in accordance with the AQF.
Responsible Competent Person	A person whom is assessed as a RSW and competent in a Role to confirm that work is correct. Is able to Mentor others in a activity or Role.
RIW	Rail Industry Worker. See http://railindustryworker.com.au
Risk	Effect of uncertainty on objectives
Risk Management	Coordinated activities to direct and control an organisation with regard to risk
RORE	Record of Relevant Experience related to Signal Project Management and Signal Project Engineering roles and capture of evidence
RSW Card / Rail Industry Worker (RIW) Card	The smart card used to identify each RIW and the roles which the RSW is authorised to undertake.
Relevant Experience	Any experience presented for assessment needs to be directly related, directly connected or directly pertinent to the role.
SAP	Signal Arrangement Plan
Signals	For the purpose of this manual relates to rail signalling, rail systems, control systems, communications, project management, engineering and all related areas.
Signal Assessor	An individual approved by Metro to review evidence pertaining to a Signal's RSW and issue authorising documents to Onsite in support of this manual.
Signal Competence Roles	The signal and communications functional roles – Design, Construction, Test, Maintenance and Control Systems & Communications, Project Management and Project Engineering.
Signals Competence Class	Within the signals competency roles there are competency classes(classifications)
Signals Proficiency Skills	Within each Signals Competence Class there are a range of skills that are separately identified on the statement of competency.

Term or acronym	Description
Signals Proficiency Level	Within each Signals Competency skill there may be a range of signals Proficiency Levels. These levels 0, 1, 2, 3 cover the level of proficiency achieved by the RSW. The RSW must only undertake work for which they have the appropriate and assessed proficiency level.
Signal Project Manager	A senior person who is specifically responsible for the non-technical and management function of the signalling works within a project. This individual would work under the direction of the overall Project Manager. In some Projects this individual may carry out dual roles and fulfil the overall Project Manager role as well.
Signal Project Engineer	The person who is responsible for specific signalling technical components of the project. The role at times can also perform some duties of a Signalling Project Manager and should hold an engineering degree and be AMIRSE.
Skill	The required knowledge and training and the ability to complete a task to meet a defined performance measure. A number of skills combine to form a competency (A singular skill can form a competency)
Statement of Competence (SoC)	This is the document which details the signals classification, skills, range and levels of the RSW. Additional types of infrastructure can be added to the SoC by the Assessor to better reflect the skills of the RSW.
Standards	For the purpose of this manual can comprise documents, plans used for technical and related references and information, VRIOG standards, ARTO design practice notes, guidelines, procedures, instructions, specifications, manuals, National and International documents
Subject Matter Expert (SME)	SME are RSW who have met the Metro evidence requirements associated with a Proficiency Level 3 within a given role classification. Once endorsed by Metro the SME provides expert guidance to the Assessor during the assessment process.
Systems Engineering	Systems Engineering is an interdisciplinary field of engineering and engineering management that focuses on how to design and manage complex systems over their life cycles.
TIC	Tester in Charge
Upload	Sending documents from a computer to another system using the internet.

Term or acronym	Description
VET Quality Framework	It sets the nationally agreed standards for the Australian vocational education and training system. This replaced the Australian Quality Training Framework. See https://www.asqa.gov.au/about/australias-vet-sector/vet-quality-framework
Victorian Rail Industry Standards	Standards specific to Victoria and inclusive of VRIOGS, Metro, PTV, Victrack, DMS
VRIOGS	Victorian Railway Industry Operators Group Standards. All standards and documents are stored within the DMS
Work Experience Record(WER)/ Log Book	This is the record of work undertaken by the RSW involving the application of the signalling competencies. It ; • Shows the extent of tasks performed, responsibilities in undertaking the tasks and the technology applied • Includes information in the referenced form which is part of this procedure • Is verified by an appropriate supervisor or manager

1.4 Responsibilities

1.4.1 Chief Engineer

- Is the owner of this manual

1.4.2 Head of Engineering -Signals

Or the delegated representative of the Head of Signals

- Is responsible for providing signal expertise in the implementation of this manual.
- Is the Metro approver of all RIW card applications for signalling, control systems and communications roles and classifications
- Is responsible for the auditing of RSW competencies
- Is the Metro approver of all Metro signalling, control and communication systems competencies for all RSW in all signals and C.S&C roles and classifications inclusive of Assessor, SME, TIC, Mentors, etc.
- Is able to make decisions on RSW competency whilst awaiting formal approval(s)

1.4.3 General Manager-Safety, Environment and Quality Systems

- Is responsible for managing the process of ensuring all RSW's are in compliance with this manual.

1.4.4 Card Issuing Body

- Is responsible for verifying RSW competencies and issuing the RIW Card.

1.4.5 RSW

- Shall ensure the competencies required to work for Metro are valid, current and relevant to the work they undertake;
- Shall not undertake rail safety work for which they have not been deemed competent under this manual; and
- Shall provide and maintain all evidence requirements used in assessing competence in accordance with this manual.

1.4.6 Signalling and Rail Systems Contracting Companies

- Shall ensure compliance with this manual; and
- Are responsible for ensuring subcontracting RSW's, engaged by the parent contracting company are compliant with this manual.

1.4.7 Assessors

- Are responsible for assessing a RSW evidence against the assessment criteria and ensuring all Metro processes are followed, and completing the final and signed SOC, in a format acceptable for uploading to the card issuing body.

1.4.8 Subject Matter Experts

- Are responsible for providing assessors with expert technical knowledge in their assessed areas of expertise against all the roles and skills being assessed.

1.4.9 Alliance Partners and Projects

- Shall ensure all RSW engaged by the alliance or projects are compliant with this manual.

2. Reference Documents

The following documents support this manual:

- L0-SQE-PRO-014 – Safety and Environmental Requirements for Contractors Working on Metro Premises
- L0-HMR-MAN-001 – Business Rules Manual for the Contracting Rail Safety Worker
- L1-SQE-PRO-057 Competency Management Following a Safeworking Breach
- L1-SQE-PRO-005 Incident Reporting and Investigation Procedure

3. Working in Metro's Rail Corridor

Where a role or classification requires a RSW to work within Metro's rail corridor the RSW must select and comply with the competency requirements of the Around the Track Person role.

The minimum requirements shall be:

- Category 3 Health Assessment,
- Train Track Safety Awareness,
- Metro Safety & Environmental Induction, and
- Construction Industry Induction.

Note; RSW that are not working within the Metro rail corridor do not require the roles within Onsite for "around track", or Metro Rail Operator or the directly related Health Assessment requirement (includes RSW working off-site, Overseas and not within the rail corridor)

4. Identifying and Determining Competence

As an accredited rail operator under the Act, Metro must have a CMS that ensures RSWs are competent to carry out their rail safety work and the CMS maintains the competency records for all RSWs.

Further details on the generic process for ensuring the RSW user profile has been created in Onsite and can be found in the L0-HMR-MAN-001.

5. How to Apply

5.1 RIW Card Process Flow

This manual and process assumes the RSW has a profile within the Onsite website found at http://railindustryworker.com.au/pegasus-powered-by-onsite.

If this is not the case, refer to the L0-HMR-MAN-001for the Contracting Rail Safety Worker to be in this position and then return to this paragraph.

The following should be read in conjunction with process flow chart. Refer to Section 16.3 or appendix 3.

Note; RSW that are not working within the Metro rail corridor, although undertaking Metro work, are located Overseas, and require the mandatory identity verification to obtain a RIW profile, can apply and have their identity validated by an approved certifier of documents in their own Country of Origin, as are acceptable to Pegasus (Onsite track easy).

5.2 Evidence Requirements – Process Flow Steps 1-3

Applicants should refer to Appendix 1, Signals, Control Systems and Communications matrix to view the specific evidence requirements associated with each role and classification.

Once the individual has selected the role and classification(s), the requirements identified on the matrix will now appear against the individual's profile within Onsite.

Evidence must now be uploaded by the RSW to satisfy each requirement.

Part of this evidence includes downloading and completing a self-assessment on the Metro SoC associated with that role and classification from the Metro Academy website www.Metrotrains.com.au/academy.

Note; in completing the SoC, refer to section 9 for assistance in determining what constitutes each proficiency level.

5.3 The Assessment Process – Process Flow Steps 4-6

This commences with the RSW uploading all their evidence required for the assessment, then selecting an Assessor within Onsite from the list provided within Onsite. The Assessor is notified by Onsite and the assessment process commences.

The assessor will review the RSW's evidence and determine whether the evidence is valid, current, sufficient, and authentic and therefore substantiates the RSW self-assessed proficiency level.

Depending on the evidence provided by the RSW, the assessor can:

- Assess them as competent to carry out the classification to the levels applied for; or
- Request further evidence if the evidence provided is deemed insufficient.

Where the RSW disputes the assessment the RSW is encouraged to elect to follow Metro's dispute process and seek resolution in accordance with section14.

When the assessment is complete the assessor completes the SoC. This step involves the completed SoC being signed by the assessor, the engaged SME and the RSW in question, then being scanned and uploaded into Onsite.

Note. Where an assessor is not a Metro endorsed SME, the assessor shall engage an SME from within the corresponding signal role as the SME to assist with the assessment.

5.4 Metro Validation and Card Issue – Process Flow Steps 7-8

Once the completed SoC has been uploaded, a member of the Metro CMS team will receive notification from Onsite that validation can commence.

If the Metro representative is satisfied with the evidence and approves the application, the process is complete and the RSW receives an email from Onsite and their RIW Card generally within 48 hours.

If the Metro CMS team believe there is an error with the application, e.g.; the evidence does not support the classification and/or proficiency, Metro will reject the application.

Rejection results in the individual receiving an email notification from Onsite and the CMS team; with the latter providing information on the areas requiring rectification so the RSW can recommence the process at step 3.

6. Roles and Classifications

6.1 Signals, CS&C Roles and Classifications

The roles below are based on the typical grouping within the Australian rail industry. RSW should first identify the role they undertake and then the classification. Roles are Design, Construct, Test, Maintain, CS&C, and Project Manage. Classification examples are; principles design engineer, senior design engineer, designer, constructor, technician, tester, signal project manager, etc.

Where a RSW cannot identify a role or classification that aligns to the work that they undertake and perform in their company position, they should contact the Metro competencies team to seek clarification via the competencies@metrotrains.com.au email address.

ROLES						
	Design	**Construct**	**Test**	**Maintain**	**Control Systems and Communication (CS&C)**	**Project Manager**
CLASSIFICATIONS	Signal Principles Design Engineer		Signal Principles Test Engineer			
	Signal Senior Design Engineer	Signal Senior Construction Engineer	Signal Senior Test Engineer	Signal Senior Maintenance Engineer	Senior CS&C Engineer	
						Signal Project Manager
	Signal Design Engineer	Signal Construction Engineer	Signal Test Engineer	Signal Maintenance Engineer	CS&C Engineer	Signal Project Engineer
		Signal Construction Supervisor / Signal Team Leader		Signal Maintenance Supervisor / Signal Team Leader		
	Signal Designer	Signal Constructor	Signal Tester	Signal Maintainer	CS&C Technician	
	Signal Assistant Designer	Signal Assistant Constructor	Signal Assistant Tester	Signal Assistant Maintainer	CS&C Assistant Technician	

6.2 Company Position Descriptors versus RSW Roles

Individual company position descriptors for RSW may or may not align in title or function with the RSW role classifications listed above. In both cases the question remains:

What rail safety work does the individual undertake for Metro as a function of their position within the company?'

In many cases the company position might actually involve multiple signal roles and classifications. In this case, the difference is simply the amount of evidence required to support all classifications, e.g. a RSW might hold a Bachelor of Engineering and hold the position of Signals Superintendent within their company. The rail safety work they actually undertake and perform however falls under the classification of Test Engineer and Maintenance Engineer.

In this example both roles should be selected and all evidence requirements for both role classifications provided for assessment.

The identification of the role and tasks undertaken by the RSW shall determine the classification that the RSW shall apply for competency.

Note; this applies similarly to graduates, cadets, trainees, apprentices and the role selected within Onsite should reflect the actual rail safety work being undertaken and performed by the RSW.

6.3 Role & Classification Descriptors

Role and classification descriptors are captured in the following sections.

Role classifications are explained below; however, the RSW should refer to Appendix 1, Signals, Control Systems and Communications matrix for all requirements associated with each role and classification.

6.4 Signal Design

6.4.1 Signal Principles Design Engineer

This covers the role of the Principles Design Engineer who will typically be responsible for interpreting and complying with Standards, Book of Rules and Operating Procedures and Operational Requirements, train control systems and capable of producing and final sign-off on signalling principles with a proficiency of level 3, in the required design activity. The RSW will have an in-depth knowledge of all systems that interface to signalling such as, rolling stock, power, communications, track and civil, etc. And understand systems approach to signalling principles activities. This includes independent principles verification function. This classification would typically be the signal industry eminent person, with over ten years of senior responsible roles and activities, and hold formal qualifications from a university.

See **Note 1** at the end of this section for a recognised equivalent pathway.

6.4.2 Signal Senior Design Engineer

This covers the senior design engineer who will typically be responsible for checking / verification including the final sign-off of designs with a typical proficiency of level 3, in

the required design activity. The skills of checking / verification should not be undertaken unless the skills in design are a minimum level 2, (practitioner level). Checkers under mentorship of a responsible competent person shall hold a minimum competency of Level 2 in design and Level 1 in checking for the task(s) they are being mentored to check. Mentoring of independent verifiers is not permitted. The RSW typically has greater than ten years engineering experience in railway signalling with at least 5 years in a responsible signal engineering design position and holds a relevant degree from a university.

See **Note 1** at the end of this section for a recognised equivalent pathway.

6.4.3 Signal Design Engineer

This covers the general signal design and checking area of the works. The person typically has greater than 5 years engineering experience in railway signalling and holds a formal qualification e.g. being a Bachelor degree from a university.

As a Signal Design Engineer the person will typically be responsible for production of signal designs and final checking by interpreting signalling principles / standards and functional design documentation to proficiency level 2, in the required design activity. This can also include independent design review function. The skills of checking / verification should not be undertaken unless the skills in design are a minimum level 2 (Practitioner level). Checkers under mentorship of a responsible competent person shall hold a minimum competency of Level 2 in design and Level 1 in checking for the task(s) they are being mentored to check. Mentoring of independent verifiers is not permitted.

See **Note 1** for a recognised equivalent pathway.

6.4.4 Signal Designer

This covers the signal design area for design and initial / minor works checking. The RSW typically has greater than 3 years engineering experience in railway signalling and holds a formal qualification, e.g. a Certificate IV through to Advanced Diploma in a relevant field, but not a recognised degree.

As a Signal Designer the RSW will typically be responsible for production of signal designs by interpreting signalling principles / standards and functional design documentation to a minimum proficiency of level 2, in the required design activity.

6.4.5 Signal Assistant Designer

This covers the training / entry level signal design area for drafting and design. The RSW typically has less than 3 years engineering experience in railway signalling and holds a formal qualification, e.g. a Certificate IV through to Advanced Diploma in a relevant field.

As a Signal Assistant Designer the RSW will typically be capable of drafting and initial production of signal designs under supervision to a proficiency of level 1.

6.5 Signal Construction

6.5.1 Signal Senior Construction Engineer

This covers the signal construction area predominantly at a senior level. The RSW typically has greater than 10 years engineering experience in railway signalling with at least 5 years in a responsible signal construction management position and holds formal qualification from a university.

As a Senior Construction Engineer the RSW will typically be responsible for interpretation of signalling requirements and the final sign off for construction of the signalling works with a typical proficiency of level 3, in the required signal construction activity.

See **Note 1** at the end of this section for a recognised equivalent pathway.

6.5.2 Signal Construction Engineer

This covers the general signal discipline area for construction. The RSW typically has greater than 5 years engineering experience in railway signalling and holds a formal qualification from a university.

As a Signal Construction Engineer the RSW will typically be responsible for coordination of construction works by interpreting signalling design plans, construction standards and functional construction documentation to a proficiency of level 2, in the required construction activity.

See **Note 1** at the end of this section for a recognised equivalent pathway.

6.5.3 Signal Construction Supervisor / Signal Construction Team Leader

This covers the signal trade / site construction area of the works. The RSW typically has greater than 5 years engineering experience in railway signalling and holds a formal qualification e.g. a Certificate IV through to Advanced Diploma in a relevant field.

As a Signal Construction Supervisor / Team Leader the RSW will typically be responsible for overseeing and leading the physical construction activities by interpreting signalling documentation and functional construction documentation to a minimum proficiency of level 2, in the required construction activity. The construction activity may require supervision of 'set to work' activities as required.

6.5.4 Signal Constructor

This covers the signal trade / site construction area of the works. The RSW typically has greater than 3 years engineering experience in railway signalling and holds a formal qualification e.g. a Certificate III through to Advanced Diploma in a relevant field.

As a Signal Constructor the RSW will typically be responsible for undertaking the physical construction activities by interpreting signalling documentation, functional construction documentation and 'set to work' activities as required to a minimum proficiency of level 2, in the required construction activity. This would also include such activities as mechanical signals and point construction activities.

6.5.5 Signal Assistant Constructor

This covers the training / entry level in signal construction area undertaking the physical signal construction activities. The RSW typically has less than 3 years engineering experience in railway signalling and holds a formal qualification e.g. a Certificate III through to Advanced Diploma in a relevant field.

As an Assistant Signal Constructor the RSW will typically be capable of assisting the signal constructor under supervision in the physical works and has a basic understanding of signalling construction drawings and construction standards to a proficiency of level 1.

6.6 Signal Maintenance

6.6.1 Signal Maintenance Senior Engineer

This covers the signal maintenance area predominantly at a senior level. The RSW typically has greater than 10 years engineering experience in railway signalling with at least 5 years in a responsible signal maintenance management position and holds a formal qualification from a university.

As a Senior Maintenance Engineer the RSW will typically be responsible for maintenance of the signalling system and sign off for signalling maintenance documentation or works with a typical proficiency of level 3, in the required signal maintenance activity.

See **Note 1** at the end of this section for a recognised equivalent pathway.

See **Note 2** for TIC requirements.

6.6.2 Signal Maintenance Engineer

This covers the general signal maintenance area. The RSW typically has greater than 5 years engineering experience in railway signalling and holds a formal qualification from a university.

As a Signal Maintenance Engineer the RSW will typically be responsible for production and management of signal technical maintenance plan documentation by interpreting signalling documentation and functional maintenance documentation to a proficiency of level 2, in the required maintenance activity. This can also include 'minor works' TIC activities.

See **Note 1** at the end of this section for a recognised equivalent pathway.

See **Note 2** for TIC requirements.

6.6.3 Signal Maintenance Supervisor / Signal Maintenance Team Leader/ Signal Maintenance Officer in Charge

This covers the signal trade / site signal maintenance area of the signalling system. The RSW typically has greater than 5 years' experience in railway signalling and holds a minimum of Certificate IV in Rail Signalling. As a Signal Maintenance Supervisor / Team Leader the RSW will typically be responsible for overseeing, leading and signing off the signal maintenance activities by interpreting signalling documentation, including maintenance instructions and technical maintenance plans and functional signal maintenance documentation to a minimum proficiency of level 2, in the required signal maintenance activity. This can also include 'minor works' TIC activities.

See **Note 2** for TIC requirements.

6.6.4 Signal Maintainer / Technician

This covers the signal trade / site signal maintenance area of the system. The RSW typically has greater than 3 years engineering experience in railway signalling and holds a Certificate IV in Rail Signalling.

As a Signal Maintainer the RSW will typically be responsible for undertaking the physical maintenance activities by interpreting signalling documentation and functional maintenance documentation to a minimum proficiency of level 2, in the required signal maintenance activity.

6.6.5 Signal Assistant Maintainer /Signals Maintenance Works Assistant

This covers the training / entry level in the signal maintenance area undertaking the physical signal maintenance activities. The RSW typically has less than 3 years' experience and holds a formal qualification, e.g. a Certificate III through to Advanced Diploma in a relevant field.

As an Assistant Signal Maintainer the RSW will typically be capable of assisting the signal maintainer under supervision in signal maintenance works and has a basic understanding of signal maintenance procedures and documentation to proficiency of level 1.

6.7 Signal Test

6.7.1 Signal Principles Test Engineer

This covers the role of the Principles Test Engineer who will typically be responsible for interpreting and ensuring compliance with Standards, Book of Rules and Operating Procedures and Operational Requirements, train control systems and capable of principles testing and final sign-off on signalling principles with a proficiency of level 3, in the required testing activity.

The RSW will have an in-depth knowledge of all systems that interface to signalling such as, rolling stock, power, communications, and track and civil, etc. They will understand systems approach to signalling principles activities. This includes independent principles validation applicable to the TIC activities. This classification would be the signal industry eminent person, with over ten years of senior responsible roles and activities, holds a formal qualification from a university.

See **Note 1** at the end of this section for a recognised equivalent pathway

See **Note 2** for TIC requirements.

6.7.2 Signal Senior Test Engineer

This covers the senior test engineer who will typically be responsible for validation and the final sign-off of testing activities with a typical proficiency of level 3, in the required testing activity. This can also include factory acceptance testing.

Testing should not be undertaken unless the skills of the RSW in testing are a minimum level 2(Practitioner level). The RSW typically has greater than ten years engineering experience in railway signalling with at least 5 years in a responsible signal engineering testing position and holds a formal qualification from a university.

See **Note 1** at the end of this section for a recognised equivalent pathway.

See **Note 2** for TIC requirements.

6.7.3 Signal Test Engineer

This covers the general Signal Testing area of the works. The person typically has greater than 5 years engineering experience in railway signalling and holds a formal qualification from a university.

As a Signal Test Engineer the person will typically be responsible for performing testing, producing documents such as; Signalling Test and Commission documentation, testing methodology and testing charts by interpreting the signalling functional documentation to a proficiency of level 2, in the required Signal Testing activity.

See **Note 1** at the end of this section for a recognised equivalent pathway.

See **Note 2** for TIC requirements.

6.7.4 Signal Tester

This covers the signal test area of the works. The RSW typically has greater than 3 years engineering experience in railway signalling and holds a formal qualification, e.g. a Certificate IV through to Advanced Diploma in a relevant field.

As a Signal Tester the RSW will typically be responsible for undertaking the tester activities by interpreting signalling documentation and functional test documentation to a minimum proficiency of level 2, in the required test activity.

See **Note 2** for TIC requirements.

6.7.5 Signal Assistant Tester

This covers the training / entry level in signal test area undertaking the signalling testing role. The RSW typically has less than 3 years engineering experience in railway signalling and holds a formal qualification, e.g. a Certificate IV through to Advanced Diploma in a relevant field.

As an Assistant Signal Tester the RSW will typically be capable of assisting the signal tester under supervision in the testing works and has a basic understanding of signal test procedures and test documentation at a proficiency of level 1.

6.8 Control Systems & Communications

6.8.1 CS&C Senior Engineer

This covers the CS&C area predominantly at a senior level. The RSW typically has greater than 10 years' experience in railway control systems and communications with at least 5 years' experience in a CS&C management and systems engineering position and holds a formal qualification from a university.

It is expected that this RSW will be able to work at system architect level and engineer, deliver, new and novel communications solutions in a complex rail signalling and communication environment.

As a Senior CS&C Engineer the RSW will typically be responsible for verification and final sign off of CS&C designs and commissioning works with a typical proficiency of level 3, in the required CS&C design and checking area of the works activity.

See **Note 1** at the end of this section for a recognised equivalent pathway.

6.8.2 CS&C Engineer

This covers the general Signal CS&C design and checking area of the works. The RSW typically has greater than 5 years engineering experience in railway control systems and communications and holds a formal qualification from a university.

As a CS&C Engineer the RSW will typically be responsible for production of CS&C designs and final checking by interpreting control systems rail standards and communication principles / standards / protocol and addressing along with a full understanding of the functional CS&C design documentation to a proficiency of level 2, in the required CS&C activity.

See **Note 1** at the end of this section for a recognised equivalent pathway.

6.8.3 CS&C Technician

This covers the CS&C trade area of the system. The RSW typically has greater than 3 years engineering experience in railway control systems and communications and holds a formal qualification, e.g. a Certificate IV through to Advanced Diploma in a relevant field.

As a CS&C Technician the RSW will typically be responsible for undertaking the physical activities by interpreting signalling and functional CS&C documentation to a minimum proficiency of level 2, in the required CS&C activity.

6.8.4 CS&C Assistant Technician

This covers the CS&C assistant trade area of the works. The RSW typically has less than 3 years engineering experience in railway control systems and communications and holds a formal qualification, e.g. a Certificate IV through to Advanced Diploma in a relevant field.

As an Assistant CS&C Technician the RSW will typically be capable of assisting the CS&C Technician under supervision in CS&C works and has a basic understanding of standard CS&C procedures, documentation and standards to a proficiency of level 1.

6.9 Signal Project Management and Signal Project Engineering

6.9.1 Signal Project Manager

The RSW typically has greater than 5 years in a responsible railway signal management position and holds formal qualifications. The RSW shall hold a minimum IRSE membership grade of AMIRSE.

As a Signal Project Manager the RSW will typically be responsible for the management of signal project activities and the interpretation of signalling requirements and integration into a Project with a typical proficiency of level 2, in the required signal project management activity within the Metro SoC.

The Signal Project Manager competency requirements are captured within the Signal Project Manager SoC, with descriptors for the Project Manager area further defined in section 16.8. Also refer to Appendix 1. Metro Matrix of Signalling, Control Systems and Communications Roles.

6.9.2 Signal Project Engineer

The RSW typically has greater than 5 years in a responsible railway engineering position and typically holds formal qualifications from a university. The RSW shall hold a minimum IRSE membership grade of AMIRSE.

As a Signal Project Engineer the RSW will typically be responsible for the engineering associated within signal project activities and the interpretation of signalling system requirements and the engineering associated with integration into a Project with a typical proficiency of level 2, in the required signal project engineering activity within the SoC.

The Signal Project Engineer competency requirements are captured within the Signal Project Engineer SoC, with descriptors for the Project Engineering area being further defined in section 16.8.

Also refer to Appendix 1. Metro Matrix of Signalling, Control Systems and Communications Roles.

6.10 Note 1. Recognised Equivalents

An alternate path to a recognised degree will be considered on a case-by-case basis by Metro providing the RSW has 10 years of relevant signal experience coupled with the below;

- Membership to the IRSE,
- Current and relevant IRSE licence equivalent to the role being applied for
- Completion of IRSE professional exam and formal industry training

The Metro Head of Engineering-Signals will review the evidence supplied with the SoC submission and approve if appropriate at their discretion.

6.11 Note 2. TIC Requirements

If the RSW is being assessed as a TIC the following evidence will generally be accepted:

- The RSW shall have a Metro Test SoC with a typical of level 3 in all the testing areas of the SoC, with all other areas of the SoC being assessed as level 2.
- Three or more Metro Certificates of Signalling that are signed by the TIC, or
- The RSW has previously held a Metro TIC approval - written evidence will be required to support this.

For the purposes of a RSW gaining experience and working under mentorship, of a Responsible Competent Person the TIC shall have a assessed SoC with minimum of level 2 in all areas related to the work being undertaken.

The Role of TIC is required to be selected within Onsite and upon approval by Metro, a Metro letter of authorisation (form L4-CHE-FOR-088) will be provided to the RSW. The list of all Metro approved TIC persons will be available from Metro.

7. Assessment of RSW

7.1 Assessment

This manual defines what evidence is required by a RSW for assessment of competency of the applicable role classification as identified in the Signals, Control Systems & Communications matrix.

The simplified flow chart described in Appendix 3 identifies the steps for a RSW to be assessed as competent for a specific role or classification.

Where a copy of any record is provided it shall be a certified copy made as a statutory declaration and witnessed by an appropriate person. (See Department of Justice Website for list of approved witnesses)

Where the original is shown and a copy is provided, then the record will be noted as a copy and signed by the assessor.

Education certificates, training records and work experience records are an important part of the competency assessment process. It is important that this information is correct. The Competency Assessor must ensure that copies of these documents are valid.

7.2 Reassessment of a RSW

Where the RSW is undertaking a reassessment upon the expiry of a previous Metro SoC, then a lesser amount of work experience in a given skill will be acceptable. This is for the Assessor and the RSW to agree upon based on criteria such as;

- rail safety work undertaken in the 4 to 8 years previous,
- the training that has been undertaken and for what technology,
- if there have been any changes to the technology in the period prior to reassessment,
- any infrastructure or work practices changed within the period prior to reassessment,
- previous levels of competency,
- competencies gained for other organisations,
- continuing professional development and learning gained over the period prior to the reassessment.

Note: If required the Assessor may need to seek further guidance from Metro.

7.3 Documentation and Requirements

All Metro signalling, control systems and communications roles and classifications require the following evidence to be submitted

- Current SoC (and previous SoC where applicable),
- Draft SoC signed by RSW and completed for the Role,
- Metro Checklist completed for the Role,
- Current Curriculum Vitae (CV)

- Completed and signed Education and Training Record form L4-CHE-FOR-071(2F-26) that shall include training & education and copies of qualifications, statements of attainment, licenses, tickets etc.
- Work Experience Record (WER) form L4-CHE-FOR-070(2F-25) / Log Book / or Metro agreed equivalent document with verification signature(s) by applicable supervisor / mentor for each record;
- Completed and assessed by assessor the Metro Standards Induction with questions specific for each role (induction questions are available from Metro Academy website),
- Signals competency assessment request form L4-CHE-FOR-073(2F-21),
- Work Based Training Assessment form L4-CHE-FOR-067(2F-22B) if required,
- Signals competency training qualification equivalence Form L4-CHE-FOR-074(2F-22A) if required,
- Alternate Training Certificate form L4-CHE-FOR-068(2F-22D0 if required and
- Transfer of Competency Assessment form L4-CHE-FOR-072(2F-30) if required.

Note: All files shall be submitted to Onsite by RSW for competency assessment and shall be named in accordance with the Metro file naming convention shown in section 16.5.

7.4 Metro Signals Competency Management Forms

The following are the Metro forms for use within this manual and their intended use and application. For the complete list of all forms with relevant Metro document numbers refer to table 8 of this manual.

7.4.1 Statement of Competency-SoC

The Statement of Competency (SoC) form(s) L4-LED-FOR-XXX (where XXX denotes the number relevant to the classification) is used to capture the role and the classification for the RSW, and the agreed and assessed levels of competence for each of the asset classes and areas within the SoC.

A self-assessed draft version of the SoC for the Role is required to be completed by the RSW and submitted to the Assessor for assessment. The final assessed version of the SoC is then required to be signed by the Assessor and SME along with the RSW being assessed. On completion it is loaded into Onsite and kept there.

There is a SoC for every Signal and C.S&C classification. The SoC is not valid until endorsed by Metro within Onsite.

7.4.2 Signals Competency Assessment Request

The Signals Competency Assessment Request form L4-CHE-FOR-073(2F-21) is the initial request by the RSW for assessment. It captures the RSW information is a declaration by the RSW that all information has been provided and the RSW is ready for assessment in the role and classification. It is required to be signed by the RSW and witnessed. It is provided to the Assessor and retained on completion.

7.4.3 Signals Competency Work Experience Record (WER)

The Signals Competency Work Experience Record (WER) L4-CHE-FOR-070 (2F-25) is a critical element in demonstrating experience of signalling staff. The form also incorporates the sign off and verification by supervisor of the RSW for all works undertaken and completed by the RSW.

The WER captures all work activities, roles and tasks undertaken by the RSW with full details of the location of work, in what domain area, in what role, the specific works undertaken by the RSW, details of equipment and systems worked upon, dates of the works, specific identification number for each task undertaken and signed verification of works performed by the RSW and supervisor. On completion it is loaded onto Onsite and kept there.

The WER should be completed monthly and at no longer than three month intervals.

7.4.4 Signals Education and Training Record

The Signals Education and Training Record L4-CHE-FOR-071(2F-26) is used to capture the RSW's education and training. All training shall be captured such as, formal education, industry training, work based training with copies of all certificates provided.

The signature sheet within the form is used to capture all details of the training and is to be signed and verified. The form should be reviewed and updated at least every 3 months. On completion it is loaded onto Onsite and kept there.

7.4.5 Signals Competency Training Qualification Equivalence

The Signals Competency Training Qualification Equivalence form L4-CHE-FOR-074 (2F-22A) is used where evidence is provided by the RSW to Metro as an equivalence to Metro required training, such as alternative training or qualifications gained elsewhere. If acceptable to Metro the form is signed and endorsed by the Metro Head of Engineering-Signals or nominated representative.

For example in the cases where an IRSE licence has been used to gain competencies and the licence is or has expired, then this form may be used to gain a Qualification Equivalence Certificate. It is provided to the RSW upon endorsement by Metro and then captured with all other training records of the RSW and loaded onto Onsite.

7.4.6 Signals Competency Upgrade Request

The Signals Competency Upgrade Request form L4-CHE-FOR-069(2F-24) is used where a RSW seeks an upgrade of assessed competencies to their current SoC. This can be performed at any time during the currency of the SoC for the role and classification, and retains the original date of expiry of the current SoC.

The form is used for an applicant applying for an upgrade for up to 10 skills and the options associated with those skills. If more than 10 skills are to be upgraded, then a full assessment is required. An applicant will normally request an upgrade of one level for each submission.

However it is permissible to upgrade from level 0 to level 2. This form shall not be used to upgrade from level 0 to level 3 or level 1 to level 3.

The form captures the RSW's details and information required for the assessment for an upgrade in the required areas. References to training and work experience are required to be captured within this form to allow an assessment of the RSW competences to be undertaken. It is provided to the Assessor and retained on completion.

7.4.7 Signals Work Based Training Assessment

The Signals Work Based Training Assessment Form L4-CHE-FOR-067(2F-22B) can be used to demonstrate Work Based Training to achieve Level 1 in a specific skill that is listed in the Statement of Competency for the Role where it is not covered by formal training courses. It is provided to the Assessor and retained on completion. Refer to the form for further details on use and application.

7.4.8 Signals Alternate Training Certificate

The Signals Alternate Training Certificate L4-CHE-FOR-068(2F-22D) can be used to capture and recognise the proficiencies and competency of a RSW for a nominated subject, system, asset or other. If acceptable to Metro the form is signed and endorsed by the Metro Head of Engineering-Signals or nominated representative.

It is provided to the RSW upon endorsement by Metro and then captured with all other training records of the RSW and loaded onto Onsite.

7.4.9 Signals Transfer of Competency Assessment Checklist

The Signals Transfer of Competency Assessment Checklist L4-CHE-FOR-072 (2F-30) can be used to capture and recognise the competencies gained and held by a RSW from elsewhere.

The form captures work experience records and training to allow for assessment of the competencies and capture within a Metro SoC. It is provided to the Assessor and retained on completion.

7.4.10 Signals Assessment Checklist

The Signals Assessment Checklist L4-CHE-FOR-XXX (where XXX relates to the role and classification of the SoC being assessed against) captures the training evidence and work experience evidence utilised for the assessment of the RSW.

It is initially completed by the RSW, along with a draft SoC for the role and classification, and then used within the assessment for competency. Individually numbered items for training and work experience records are captured within this checklist. It is provided to the Assessor and retained on completion.

7.4.11 Metro Letter of Authorisation

The Metro Letter of Authorisation form L4-CHE-FOR-088 is the authority given by the Metro Head of Engineering–Signals to a RSW. The Metro Rail Authorisation Letter that was previously issued by Metro to authorise signalling qualifications is now replaced by a Qualification Equivalence Certificate.

The Metro Rail Authorisation Letter will be issued to the RSW to provide Metro authority for the classification(s) of signals assessor, tester in charge (TIC), mentor and also subject matter expert (SME). On completion it is loaded onto Onsite by Metro and kept there.

Note; To obtain this authority to perform the roles of Signals Assessor, Tester in Charge (TIC), Subject Matter Expert (SME) and Signals Mentor the RSW is to provide all Metro required evidence and then apply within Onsite.

8. Education, Training and Experience

8.1 Education & Training Records

The Metro Education and Training Record form L4-CHE-FOR-071(2F-26) shall be completed and will form part of the assessment for competency.

8.1.1 Education Record

The record shall capture all formal tertiary education, training recognised under AQF. The description of the training course or subject shall be specifically referenced along with the results, qualification or competencies gained. It is important to indicate when and for how long the course was undertaken.

The course or subject details shall be verified by a supervisor for the training. This verification shall also confirm the qualification or competencies gained.

Identify and label the certificates as T1, T2, T3 etc. ("T1" represents training record number 1), and continue counting in sequence. Scan all certificates into one file, with the certificates placed behind the Metro Education and Training Record form, and all pages within the document orientated to be able to be viewed on screen without need for any page rotation. Include all courses and qualifications completed as part of formal education.

Note: It is recommended that the record is reviewed and updated on a regular basis. Candidates and Assessors shall keep a scanned copy of all certificates for completed training and provide to Metro when requested.

8.1.2 Industry Training Record

Include all training and courses undertaken which are for signalling and rail systems equipment and systems. Provide;

- The month/year when the course started and month/year when the course was completed.
- The name of the training organisation (may be the signalling or equipment supplier) and where the course was undertaken,
- A copy of the Certificate gained at the end of the course or the course units completed. This can be a certified copy of the original.

8.1.3 Work Based Training Record

Include all training skills that the RSW has learnt on the job to attain a level 1 in a competency. Provide,

- Details of the workplace assessor or supervisor who certified the RSW with the competency. The skills assessed must be included and the date of certification.
- Dates or period when the work episodes were undertaken.
- A detailed description of work based training requirements and form L4-CHE-FOR-067(2F-22B) is located in section 8.4.

8.1.4 Training Certificates

Scanned copies of training certificates (in colour) should be included in the file with this record. The verification signature confirms that the original has been sighted by the verifier.

In cases where the original is not available, the verifier shall take reasonable steps to confirm that the training has been undertaken and qualification or competency gained.

8.2 Training - Qualification Equivalence/ Predecessor Qualifications

An applicant may have successfully completed recognised training for a role before the current AQF training and qualifications were formalised. This may also be represented by a 'Certificate of Proficiency' from a Vocational Training Tribune. This Certificate is awarded to persons who have demonstrated they are adequately trained to work in a trade, through evidence of past employment and experience in the trade and successful completion of a relevant Australian qualification.

A 'Craft Certificate' is not accepted for the purposes of this process for assessment of Predecessor Qualifications. A Craft certificate is granted to persons who have demonstrated they are adequately trained to work in a trade, through evidence of past employment and experience but have not completed a relevant Australian qualification.

In some cases a license to perform a particular type of work can be used as evidence of attainment of the qualification. For example an electrical license can be used to demonstrate completion of the Electrical Trade Qualification if the 'Certificate of Proficiency' or equivalent is not available.

In the same way an electrical license can be used, an IRSE license can demonstrate completion of the competencies of the license, for example, Design Tester etc. These areas are captured on form L4-CHE-FOR-074(2F-22A) Qualification Equivalence.

Metro can be contacted for further guidance in the understanding and acceptance of predecessor qualifications gained by a RSW.

8.3 Assessment and Capture of Work Experience and Training

Evidence or records of work experience and evidence of training shall be captured within a Metro Signals Assessment Checklist L4-CHE-FOR-XXX (where XXX relates to the role and classification).It shall capture the individually numbered references to evidence of both training and work experience against each skill (each line on the SoC) being assessed.

Comments from both the RSW being assessed and the assessor are captured within this document, and the agreed levels of competence in the individual skills are then transferred directly to the SoC for the classification.

8.4 Capturing Work Based Training

Much of the skills and knowledge obtained in the rail industry is work based and non-accredited, including pre-work briefs, on track plant and equipment operations and minor equipment assessments.

All work based training is to be documented in a Work Experience Record/Log Book and Work Place Assessments on form L4-CHE-FOR-067(2F-22B) and must be validated by the supervisor at the time of the event.

8.4.1 Non AQF Skill or Competency

If any individual competencies on a SoC are not covered by an AQF training unit or an Industry based training course, the competency may be assessed to Level 1 following Work Based Training.

8.4.2 Work Based Training and Assessment

This generally involves the supervisor firstly demonstrating the performance of the competency or skill. This is then followed by guidance from the supervisor as the RSW trainee undertakes the tasks one or more times. These training sessions are not counted as part of the assessed work experiences.

In some cases the applicant may have gained sufficient knowledge of the subject, practical proficiency on the tasks and completed Work Based Training. This assessment process may be used for those applicants who have previously gained the competency and hold a SoC with a level of competency above one (1).

8.4.3 Alternate Assessment for Technically Difficult Skills

Technically difficult subjects covering specific equipment or technology that are not covered by an AQF course require the trainee to attend an industry based course or a supplier course.

The assessment requirements are determined from the industry or supplier training courses if available or a Subject Matter Expert (SME) will determine the requirements.

The assessment requirements are subject to approval by the Head of Engineering Signals or a nominated representative. The applicant shall have one (1) opportunity to be assessed for a specific competency by this method.

If the applicant is successful an Alternate Training Certificate (Form number L4-CHE-FOR-068, 2F-22D) is issued by the Metro Head of Engineering Signals or nominated representative. If the applicant fails to be assessed as competent, they must then undertake the course.

8.5 Work Experience Records

The signalling Work Experience Record (WER) Form L4-CHE-FOR-070(2F-25) captures all work experience undertaken by the RSW. The first page provides detail of the verification supervisors; this includes supervisors name, RSW number or unique identification number and specimen signature. The remaining pages contain details of the work performed by the RSW and supervisor's verification signature and name.

Work experience records can also be in the form of the IRSE logbook, company logbook with acceptance and compliance to Metro requirements.

Work experience records shall capture the following areas as a minimum; role being undertaken, location of works, specific signalling work location identification, works being performed, full details of equipment or infrastructure being worked upon, level of complexity of the works being performed, if under any form of mentorship, along with any other details relevant to the works being undertaken and role performed.

It is recommended that the Record is updated on a monthly basis. RSW and Assessors shall keep a scanned copy of the completed WER as it is a vital component of the assessment.

All work experience on the WER shall be individually identified and numbered sequentially with no repetitions. Identify each work experience as W1, W2, W3, etc. and continue counting in sequence with no repetitions. WER shall be in one file, orientated to be able to be viewed on screen without need for rotation of any pages.

Refer to section 16.6 for further WER requirements and example of a completed work experience record.

8.5.1 Supervised Higher Level Work Experience

Where an individual is undertaking work experience to gain a higher competency level, they must work under the direction and mentorship of a person who has the higher competency level or an approved Metro mentor

8.5.2 Relevant Past Experience

Past experience in signals or signals related tasks under the supervision and mentorship of suitably experienced Metro endorsed SME is taken into account when considering applications for proficiency upgrades. The work experience record must confirm that it was undertaken and performed satisfactorily.

8.6 Transfer of RSW competencies

This section applies to Signal Design, Testing, Construction, Maintenance and Project Management/Engineering areas.

This process is applied to a RSW who holds a SoC for another network and applies for a Metro SoC and applies to maintain the existing level of competency up to level 2 (Note that level 3 cannot be gained without verified complex Metro network work experience, and Metro domain knowledge).

A transferring RSW will require the new Metro role classification to be assigned to their profile within Onsite, evidence gaps rectified and a corresponding Metro SoC submitted. The transferring RSW now joins step 3 in section 5.2. Also see reference within section 16.3.

The experience and competency level of the other network operator's SoC shall be considered in determining the proficiency level for Metro.

The appendices also contain information on the process of transferring RSWs from other networks.

To assist with this process the RSW should ensure:

- All work experience records / log books are current and verified;
- All training records and certificates are current, certified and available to be part of the assessment
- Then complete a Transfer of Competency Assessment Form L4-CHE-FOR-072 (2F-30);
- Any known gaps have been documented and differences listed in supporting documentation to allow an SME to make suitable assessment on; and
- SoC for the Metro role is complete and has been assessed.

8.7 Upgrading of Competencies

The procedure in this section is to be applied when a RSW applies for a competency upgrade and shall complete form L4-CHE-FOR-069(2F-24). This can be applied for at any time during the 4 years life of the SoC to capture additional skills or training relative to the role and class of the current SoC.

The RSW (applicant) is to update their Work Experience Records and have them endorsed by an appropriate supervisor.

This supervisor must have a higher competency level of the competency being assessed for the upgrade.

The Training and Education record must also be updated and the supervisor/mentor must update and sign the Verification Supervisors Declaration of the Work experience Record.

The applicant nominates the competency or competencies that are proposed for upgrade. The applicant checks this manual for skills that require formal training or industry based training.

On form L4-CHE-FOR-069 (F2-24) the applicant shall use a separate line for each competency requested to be upgraded.

The applicant completes each item by adding references to the Education and Training Record and the Work Experience Record.

The applicant ensures that they have provided the appropriate number and type of Work Experience references for the nominated competency level.

Note: The upgraded Metro SoC shall retain the same expiry date of the original SoC.

8.8 Recording Assessments

All assessments shall be recorded. This includes assessments that are failed and assessments that are only partly successful.

The Levels of competency for each skill of the RSW are captured within the checklist L4-CHE-FOR-XXX (XXX denotes the checklist required for the role and classification) by the capture of a combination of training and work experience and then translated to the SoC.

Note. Work Experience Record / Log Book entries are to be cross referenced to the Metro Signals Assessment Checklist L4-CHE-FOR-XXX (XXX denotes the checklist required for the role and classification)

Explanatory notes and examples of a Work Experience Record / Log Book are provided in the appendices in section 16.6.

8.9 Statement of Competency

The SoC captures all skills defined as being required to undertake the classifications within the roles. Where a system or a technology has emerged and not listed within the current Metro SoC it can be captured as an additional skill on both the checklist and also the SoC.

The SoC shall be completed as the final part of the assessment, capturing all skills being assessed and agreed upon within the checklist.

On finalisation of the SoC it shall be signed and dated by the assessor, SME and the RSW. It is then uploaded into Onsite with all other required assessment evidence for Metro to endorse.

Note; the date Metro endorse the SoC will be the date used for identification of the endorsement of the SoC, and also use to define the expiry dates and need for recertification of the RSW. This is captured within Onsite.

9. Competency Proficiency Levels

Proficiency required to work on signalling and associated infrastructure is dependent upon the complexity and range of work, and therefore the acquired proficiency levels will vary according to training and experience.

The knowledge, understanding and experience in each of these may vary within the same signals class. These competencies are assessed individually and are separately identified on the respective SoC.

Competencies may be attained through either formal training, industry based or on-the-job training and work experience, or combinations of these.

The following proficiency levels are to be used in assessing a signals and C.S&C RSW;

Level 0	No certified knowledge on the subject. The RSW is not permitted to perform signalling related tasks on the Metro Network.
Level 1	Training exposure. Basic skill level attained, basic knowledge and understanding of the procedures. RSW performing the task must be under supervision.
Level 2	Certified as being able to perform the identified task in routine or simple activities independently and without supervision. Also competent to perform complex activities only under direct mentorship of a Level 3 supervisor.
Level 3	Certified as being able to perform the identified task independently and without supervision in all activities. Can mentor/coach others and be a team leader.

9.1 Level 0 Proficiency

At a proficiency level of 0, where there is no certified knowledge or evidence of training within the skill or activity, then no work shall be undertaken by the RSW in the Metro Network.

9.2 Level 1 Proficiency

Proficiency Level 1 requires supervision of the RSW by suitably qualified signals staff. The level of supervision is determined according to the skills, experience and proficiency of the RSW and the task being performed.

This proficiency level is demonstrated in two ways:

- Successful completion of training in the activity, proven by a Statement of Attainment; and/or
- Verified work experience records showing on-the-job training covering as much supervised experience as would be gained by attending a training course.

9.3 Level 2 Proficiency

To attain a Level 2 competence an individual must be able to demonstrate by means of verified work experience that they have carried out the activity regularly and independently.

A routine or simple activities skill/task; can be defined as a four or more times or in a single design if the skill/task is repeated a number of times and there is a difference in the design/work activity.

An example would be in a design of a re-signalling of an interlocking where headway change requirements varies the design of the circuits and or signal equipment rooms.

Where a competence is a broadening of a similar well experienced activity, then it is acceptable to gain a level 2 by providing evidence of carrying out the activity a minimum of **two** times, independently, in a simple or routine task.

An example would be where an individual has 4 verified experiences in Audio Frequency track circuits and has 2 verified experiences on HVI track circuits. The individual would be able to gain a Level 2 in both activities due to the similarity in technologies.

Note 1: Supervision may vary depending upon the type of task, and the existing proficiency and experience of the RSW.

Note 2: There are a number of activities related to level 2 competence that require detailed “principles” understanding of the Metro relevant standards, procedures, types of rail traffic, Network Rules, Operating Procedures and the manner in which work is performed on the Metro network. Such as design of signal control tables, signal arrangement plans, bonding and signal equipment layout, train control systems, etc.

9.4 Level 3 Proficiency

Level 3 shall only be gained through verified complex work experience, with a number of these gained within the Metro Network.

Level 3 requires a detailed understanding of the relevant standards and procedures which can have both a direct and indirect impact on the Metro network, and comprehensive understanding of the types of rail traffic, the Network Rules and Operating Procedures and the manner in which work is performed on the Metro network.

To attain a Level 3 competence an individual must be able to demonstrate by means of verified work experience, that they have carried out the complex activity regularly. Regularly shall be a minimum of five times independently.

Where a competence is a broadening of a similar well experienced activity, then it is acceptable to gain a level 3 by providing evidence of carrying out the activity a minimum of three times, independently, in a complex task. An example would be where an individual has 5 verified experiences in AC track circuits and has three verified experiences on HVI track circuits. The individual would be able to gain a Level 3 in both activities due to the similarity in technologies.

Greater than half of these work experience activities to be performed on the Metro network in accordance with Metro Signalling Standards clearly demonstrate the high level of understanding of Metro standards, practices and domain knowledge.

Notes; Additional guidance on levels of supervision is provided in section 16

See also section 12.4 for details on SME requirements

9.5 Complex Tasks and Skill Levels demonstrated

9.5.1 Complex Tasks Definition

A complex task is defined as “any task requirement that requires the use of non-generic or special skills to perform”. The complexity may arise from the type of technical issue, the number and interrelationship of the technical issues or the technical issue being without general precedent.

The Work Experience Record by the applicant shall provide a detailed description of the task to identify it as a complex task

9.5.2 Examples of Complex Skill and Tasks

If an applicant has a work experience task, that in general does not meet the requirements of the table below, then it will not be considered as a complex skill/task.

An example would be where a complex signal interlocking design may incorporate a number of interlocking or signal equipment rooms with variance of the design of the interlocking such as one location contains a double line junction and the adjacent location includes automatic signalling with conditional clearing and 4 aspect signalling interfacing with a relay interlocking.

Further information on simple and complex tasks can be found in appendices section 16. If the skill/task is not listed then the Assessor shall consider whether the work experience is adequate for the work to be considered as a complex task/skill during the assessment.

Technically Difficult Competencies may include the following skills.

Design	Maintenance	Construction
Computer Based Interlocking incorporated as part of a level crossing	Computer Based Interlocking with a level crossing within the interlocking control	Computer Based Interlocking incorporating a level crossing, eg; construction, installation, set to work, pre-test related to design plans, systems and architecture configurations
Computer based Interlocking-data design; data load, network configuration associated with the CBI and system	Installing software updates to equipment, down loading log files, interpreting CBI log files, interpreting network configuration	Undertake initial installation and configuration of CBI, network components and equipment
Axle Counters-design of system and network configuration	Axle Counters-maintenance and fault rectification of components and network configuration	Axle Counters –interpret plans for component installation, network configuration, set to work and certify
Train Control and associated System(s)-data and network configuration	Control System-fault rectification, down load log files, interpreting log files, reconfigure system	Control System-install, configure, and initial certify system(s)

10. Maintaining Competence

All RSW are required to undertake a full assessment of all classifications, with reassessments held every 4 years. This also includes Signal Assessors.

The Metro business rules set up within Onsite will ensure the RIW Cards will expire at this anniversary if assessments have not been completed. An expired role shall prevent the RSW from undertaking rail safety work for Metro until the deficiencies have been rectified.

All RSW are required to undertake an annual self-assessment of their own competency to ensure they maintain or improve their proficiency levels. This also allows the RSW to look to performing works on infrastructure not previously encountered in the previous year. All skills identified on the SoC where possible will have been undertaken over that previous 4 year period to ensure the RSW maintains the proficiency.

Relevant work experience records and training are accepted for longer periods prior to the renewal of the RSW's SoC. In many cases refresher courses and training updates are either mandatory or required for understanding of ongoing updates and changes with technology, operating rules and procedures, domain knowledge, safety, standards, legislation, regulations, licensing and similar.

Metro uses Onsite to record all evidence requirements for each of its role classifications. Therefore, Metro has full traceability of all RSW's competencies to the rail safety work being undertaking. This provides Metro with the ability to undertake audits of RSW, whether periodically to maintain quality, as a result of an alleged incident/breach or when Metro has reason to suspect the RSW's competence is called into question.

11. Head of Engineering -Signals Issued Mentoring Role

In cases when senior signal engineers or others have held a SoC and due to a variety of reasons (moved to management roles, semi-retired, etc.) and have not renewed their SoC, or competencies have been reduced due to not being able to demonstrate current work experience and are unable to maintain the high level of competency, a Mentoring role may be applied for, and a Metro Rail Authorisation Letter issued for the role of Mentor within the signals and C.S&C role.

This shall not entitle the Mentor to undertake any design, check or verify design or carry out any rail safety or signalling related work on the Metro network. Refer to section 16.4 for flow chart and process within Onsite.

Note; The Mentor role is processed within Onsite in the same manner as all other roles. A Metro Rail Authorisation Letter (form L4-CHE-FOR-088) will be issued upon endorsement by Metro.

12. Assessors and Subject Matter Experts

12.1 Assessors

Assessments are completed by individuals who hold the requisite training and assessment requirements and have a general knowledge and understanding of the Metro signalling infrastructure, standards, network rules, operating procedures and practices.

Applicants wishing to become a Metro approved assessor must hold a RIW Card with the role of 'Signals Assessor' assigned to their individual profile within Onsite. A process flow supporting how to become an Assessor is provided in section 16.4. Once approved by Metro as a signals assessor a Metro Letter of Authorisation (form L4-CHE-FOR-088) will be completed by Metro and captured within Onsite.

12.2 Obligations of External Assessors during the Assessment Process

Metro expects external assessors shall:

- Apply Metro's competency standards and procedures;
- Promptly advise the Metro CMS team where competency standards cannot be applied and seek resolution;
- Engage a Metro endorsed SME during all assessments (where the assessor is not an SME);
- Create and always maintain full and accurate records in support of the judgements made during assessment;
- Keep up to date with advances and changes in signal knowledge, and where appropriate advise the Metro CMS team of any likely impact upon Metro job tasks;
- Maintain the integrity and security of Metro documents or information;
- Promptly notify Metro of any suspicious assessment practices or any persons wilfully attempting to circumvent and / or evade their obligations under the Metro CMS;
- Ensure all assessments are countersigned by a Metro endorsed SME from the same role as the RSW application; and
- Attend a minimum of one Metro moderation session per year with attendance captured by Onsite.
- Retain all evidence and documentation utilised for the assessment(s)

Notes

1. External assessors should be aware that they will be held accountable if they do comply with this manual and Metro requirements.
2. List of Metro assessors is available within Onsite

12.3 External Assessor Re-certification

Assessors are subject to reaccreditation every 4 years. It is expected that at least 4 Metro assessments have been undertaken in the 4 year period prior to reaccreditation.

12.4 Subject Matter Experts

SMEs are RSWs who have met the evidence requirements associated with a role and classification, hold a current Metro SoC with a Proficiency level of 3 in most of the categories on the RSW SoC, and whom have applied to Metro and been endorsed as an SME in the classifications, e.g. Senior Signal Maintenance Engineer, etc.

Therefore, like all other classifications, in order to become a SME, the RSW must have gone through the Metro competency assessment process. RSW's who wish to be considered as a Metro SME in a given role and classification is required to meet requirements for an SME and then apply to Metro within Onsite for a Metro Signals Subject Matter Expert role. Upon approval by Metro a Rail Authorisation Letter (form L4-CHE-FOR-088) will be issued to the RSW.

For further details refer to Appendix 1. Signals Rail Safety Worker Competence, Signalling, Control Systems & Communications Roles Matrix

Note; Metro SME list for all roles is available from Metro

13. Auditing

13.1 In-Field Auditing

It is mandatory for all RSWs to hold a RIW Card on their person whilst undertaking rail safety work for Metro. When approached by a Metro authorised person or ONRSR Rail Safety Officer, the RSW must present their RIW Card. Where a RSW is found to not hold the necessary competencies/authorisations for the work being undertaken, they will be escorted from the worksite. This will initiate an investigation by Metro and may result in a suspension against the RSW for that or all roles the RSW holds and prevent the RSW from undertaking rail safety work for Metro.

Where the audit is a result of an incident and/or breach the action shall be in accordance with parent L0-HMR-MAN-001 – Business Rules Manual for the Contracting Rail Safety Worker.

13.2 Off-Site Auditing

In conjunction with a Metro assessor, the Metro CMS team may undertake an audit of any or all evidence in support of a RSW's classification. The assessor may request further information from the RSW with regard to the audit. Where deficiencies are identified, the RSW will be required to provide additional information within a reasonable time. In support of this requirement, Metro reserves the right to suspend or place a 'hold' against the individual's profile in Onsite until such deficiencies are rectified. This will prevent the RSW from undertaking rail safety work for Metro specific to that classification.

14. Safeworking Breach and Competency Management

14.1 Introduction

The Metro procedure L1-SQE-PRO-057 Competency Management provides information on the Metro process following a Safeworking breach in relation to the CMS. This procedure provides a consistent process and a uniform approach for both the person/persons involved and the engineer/manager in deciding upon an outcome and action.

14.2 Safeworking Breach

A safeworking breach includes any breach of, or non–compliance to, a signalling standard, policy, process or instruction.

15. Dispute Resolution

Where a RSW disputes an assessment made by an assessor and/or SME, the RSW shall provide details of the dispute or grievance to the CMS team via the competencies@Metrotrains.com.au email address.

The CMS team, along with relevant internal SME will review the dispute and alert the applicant, the assessor and Onsite if applicable.

The outcome from this process is final.

16. Appendices

16.1 Appendix 1: Signalling, Control Systems & Communications Roles Matrix

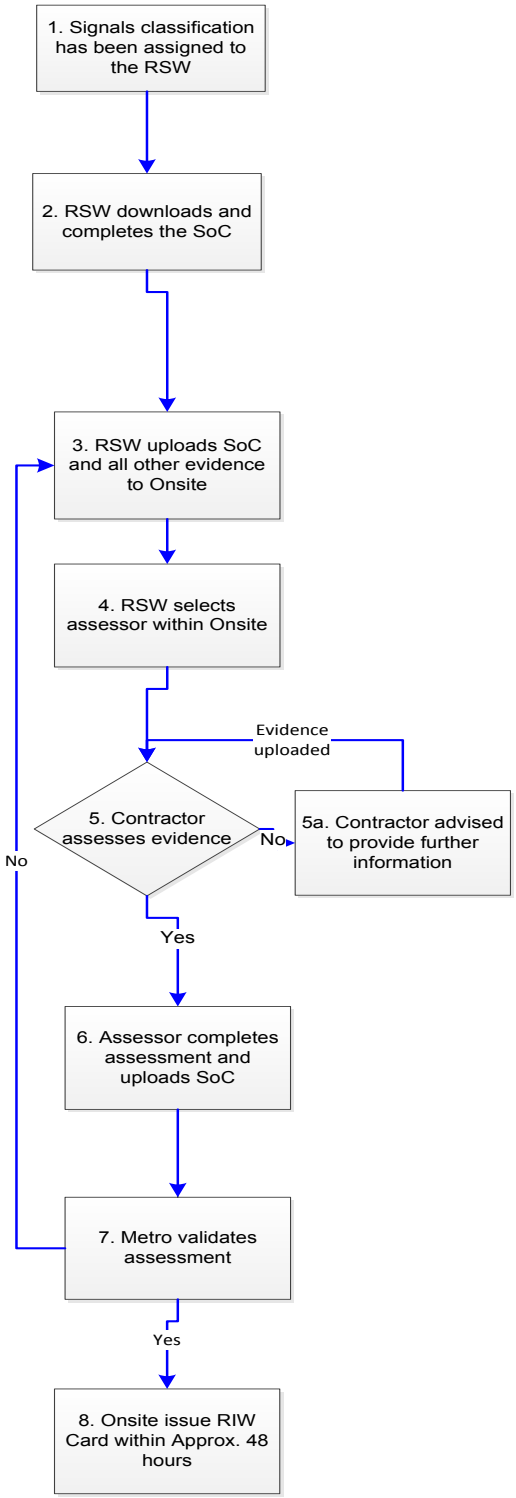
This matrix captures the roles and requirements for the Signals Rail Safety Worker and is a separate document and available with all other Metro CMS forms and documents on the Metro website at, http://www.Metrotrains.com.au/academy

16.2 Appendix 2: Levels of Supervision

Direct Supervision	The RSW is supervised by a competent supervisor/mentor who is at the same equipment location (or position where the activity is performed) as the RSW and checks the work at least once per day.
Indirect Supervision	The RSW is supervised as part of a team which is under the control of a supervisor/mentor. The supervisor/mentor is in the same general location as the RSW but may be at a different equipment position - for example at two adjacent train stations. The supervisor provides a pre-work briefing to the RSW, communicates with them at the start and at end of the shift, and is available at all times via communications link.
Remote Supervision	The RSW is at a remote location performing the task under the supervision of the supervisor at a different location. Communication is by radio or phone. The supervisor will discuss the task with the RSW prior to commencement, and a review will be undertaken after completion and prior to the end of a shift of work.
Mentor	This would generally apply for roles of design, construction, testing and commissioning activities where the results of the activities are not in service. The mentor is available for advice and mentoring during the undertaking of the work. The mentor will hold a mentoring Metro Rail Authorisation Letter for the role. Refer to definitions and responsibilities section of this manual for clarification of the Mentor role 1.3

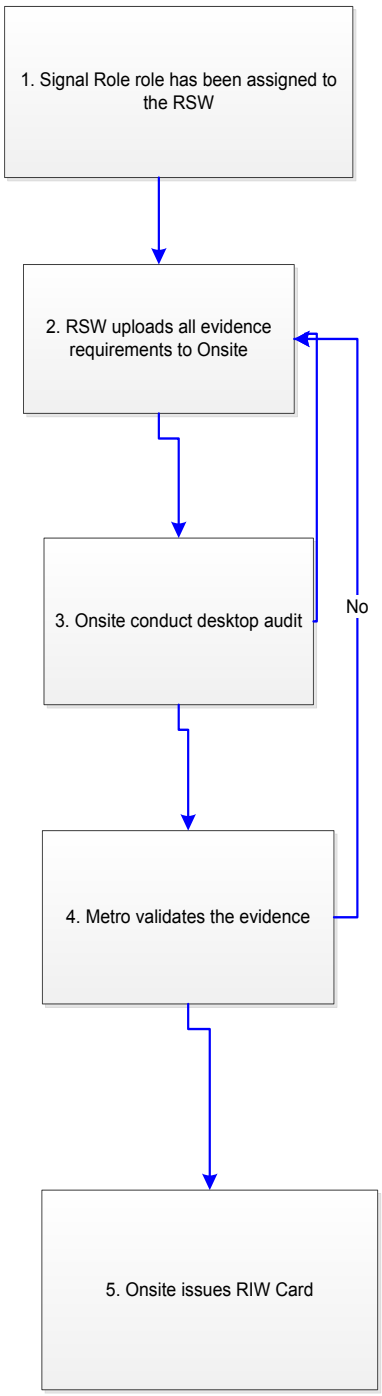
16.3 Appendix 3: Process Flow for a Signals RSW applying for Metro Assessment

1.	Within Onsite, the role classification(s) is selected and assigned to the RSW, example, Signal Constructor, Signal Maintenance Engineer. Signal Project Manager, etc
2	RSW downloads and completes Self Assessed SoC. Although not mandatory within Onsite, this step is seen as important in ensuring the RSW gathers and updates all necessary evidence to expedite the assessment process. **Note.** As this is a self-assessment, RSW's are required to sign the applicant's signature block only.
3	RSW uploads SoC and all other evidence to Onsite
4.	Within Onsite the RSW selects assessor from list provided.
5.	Assessor undertakes assessment of evidence and determines if evidence is valid, current, sufficient and authentic.
5a.	Where any of these requirements cannot be met, the assessor advises the RSW further evidence is required to satisfy the minimum requirements. This must be uploaded into Onsite for the assessor to continue the assessment.
6.	Once the application is complete, the assessor ensures the SoC is signed by all parties prior to scanning and uploading into Onsite.
7.	Metro validates the assessor's assessment. Where there are identified issues, omissions or deficiencies the RSW will be required to address the deficiency or issue, upload the evidence and have the assessment reassessed by the same assessor. If successful validation is selected in Onsite.
8.	Onsite issues card to RSW within approximately 48 hours.



16.4 Appendix 4: Process flow for a RSW applying to be a Signals Assessor/SME/TIC/ Mentor

1.	Within Onsite, the Signal Role is selected and assigned to the RSW.
2.	RSW uploads all evidence requirements in accordance with the matrix.
3.	Once Onsite are satisfied with desktop audit Onsite notifies Metro that the application is awaiting validation.
4.	Metro validates the evidence. Where there are identified issues, omissions or deficiencies the RSW will be required to address the deficiency or issue, upload the evidence and have the evidence validated. When successful, Metro will issue a Metro letter of authorisation to Onsite. Validation is complete in Onsite
5.	Onsite approves the Role and notifies the RSW generally within 48 hours.



16.5 Appendix 5: Supporting Documents and Filenames

The documents uploaded into Onsite are to be in accordance with the following file naming convention and format:

- <RIW ID>-<first name>-<surname>-file type.pdf e.g. 000 123 456 Fred Tester – cv.pdf.
- Scanned files shall be in .pdf format in the correct portrait or landscape orientation;
- Black and White scanned files shall be 400dpi;
- Colour scanned files shall be 300dpi;
- General files such as CV, training, education and training records, certificates, work experience records shall not exceed 2 MB in size;
- Files of a larger size where required, such as detailed work experience records (WER) scanned documents, can be uploaded via the assessor area up to a maximum size of 10 MB,

The following files as a minimum are to be uploaded:

- CV - Black and White scanned .pdf files.<RIW ID>-<first name>-<surname>-CV.pdf
- Qualifications, training and education certificates – colour scanned .pdf files. <RIW ID>-<first name>-<surname>-training certificates.pdf
- Work Experience record / Log Book – Black and White scanned .pdf file. <RIW ID>-<first name>-<surname>-work experience record.pdf
- Copies of inductions, signals standards induction and site specific inductions – Colour scanned .pdf file. <RIW ID> first name>-<surname>-induction certificates.pdf
- Metro Forms XXX to XXX – (select appropriate form) assessment checklists – Black and White scanned .pdf file. <RIW ID>-<first name>-<surname>-assessment checklist.pdf
- Current SoC and previous SoC for signalling skills from Metro or other accredited rail operator request – colour scanned .pdf file. <RIW ID>-<first name>-<surname>-SoC <ddmmyyyy of issue>.pdf.

16.6 Appendix 6: Work Experience Record Requirement and example

The work experience record (WER) form L4-CHE-FOR-070 has the first page providing detail of the verification supervisors; this includes supervisors name, RIW number or unique identification number and specimen signature. Refer to the following for the requirements and also sample of a completed work experience record

The remaining pages contain details of the work performed by the RSW. This includes the following items:

- Dates – Provide the month and year for the start of the work and the finish of the work. Records are organised in order of start dates.
- Employer/client, infrastructure owner & project or role – These three details to be included e.g. world consultants for Metro – design project.
- Description of task – This must firstly detail the role of the RSW. This should indicate if a major role or a support role e.g. test team leader or design team member. Details of the project to provide context and technical complexity e.g. new crossover and interlocking changes at Flinders Street, Number 2 Relay Room.
- Reference- This is numbered from one onwards without repeating. May provide separate numbers for separate tasks within a project. For example level crossing drafting, TIC, design document up date to as-built could have three reference numbers.
- Equipment or system – This detail the technology used on the works e.g. types of track circuits, types of CBI, types of power supplies.
- Verification signature, name & RIW Card ID. The verifier to sign against each entry that is verified. Verifier to print name and RIW ID. Work experience from the past or on other networks does not require the RIW ID but requires position title of the verifier. Where the RSW has a RIW ID this should be listed.
- Supervisor may make comments regarding the work performance of the RSW.

Example. A completed WER

SIGNALS COMPETENCY WORK EXPERIENCE RECORD

METRO | Form number: 2F-25 | L4-CHE-FOR-070 | Version: 1 | Effective from: 1st February 2018

Name: JOE BLOGGS | **Identification Competency Ref:** 000123456 | **Page No.** 1

Dates From/To	Employer/Client & Infrastructure Owner	Description of Task: Description of Role(s) in terms of Competencies, levels and complexity	Ref	Equipment or System Types	Verification Signature and Name & ID or Ref from page 1.	Supervisor Observations (Assessment / Follow-up / Competence Cross Reference)
1/03/16 to 15/08/16	Rail Signals R US Main Rails Network Level Crossing upgrades at Frankston	**RESPONSIBLE PERSON FOR- Signalling Design** Double track level crossing at junction Detailed the Scope and Operations Requirements Set up design team of 3 people Design Manager and Checker Designed Signal Arrangement Plan	1	Axle counters XXX type 2,200Volt power supply Relay interlocking ABC LX monitor CBI type XXXX Lights, booms, bells, pedestrian crossing mechanisms	Signed by Bill Poster 000 666 451	PERFORMED WORK COMPETENTLY Design completed without need for re-work. Project commissioned on time without difficulty
20/08/16 to 20/12/16	Rail Signals R US Main Rails Network Level Crossing upgrades at Laverton	**RESPONSIBLE PERSON FOR- Tester in Charge** Commissioning double track level crossing Drafted Inspection & Test Plan Drafted Commissioning Work Package Tester in Charge Test Team Leader for Predictor and train detection systems	2	Predictor ABC LX monitor ABC Axle counters ABC AC track circuits Electrified and non electrified areas Relay interlocking 6,600volt power supply	Signed by Bill Poster 000 666 451	PERFORMED WORK COMPETENTLY Test and Commissioning plan accepted by Client and commissioning on time
10/01/17 to 15/10/17	Rail Signals R US Main Rails Network Signal Maintenance Supervisor at Newport	**RESPONSIBLE PERSON FOR- Signal Maintenance Supervisor** Managed maintenance work schedules for team of 6 signal maintenance technicians Undertook investigation report for SPADs and operational issues with Level crossing, risk assessments for changes to maintenance Activities. Drafted Waivers for signal activities	3	CBI LED Signals M23A point motors HVI, UM71 track circuits 1,000 volt power supply and distribution systems	Signed by Bill Poster 000 666 451	PERFORMED WORK COMPETENTLY Signalling defects minimal and no wrong side failures
from to	insert employer insert client railway insert project	**RESPONSIBLE PERSON FOR- insert role** insert description of project complexity insert task details performed by person	#	Describe equipment and systems in detail, types,etc	Signed by- insert name insert RIW ID	PERFORMED WORK COMPETENTLY insert comments

16.7 Appendix 7: Assessor Competencies

The following table summarises the requirements for RSWs undertaking the Signal Assessor role.

Metro Assessor Competencies	Comments
Hold formal recognition of competence in the following units. All assessor applications will require the assessor to hold the following units of competence: • TAE ASS 401B – Plan assessment activities and processes, • TAE ASS 402B – Assess competence • TAE ASS 403B-Participate in assessment validation	**Note.** • Assessors undertaking assessments within Metro's rail corridor are required to comply with the requirements for the role in the Appendix One, Signals, Control Systems & Communications matrix.
Demonstrate domain and current knowledge of the Metro network, industry, industry practices, and the classification or role against which performance is being assessed.	• Relevant work experience in the Metro areas being assessed. • If relevant, attendance at professional development/training and education activities focusing on good practice in the relevant industry competencies. • If relevant, participation in professional/industry networks.
Demonstrate current knowledge and skill in conducting assessments in a range of contexts.	• Familiarity with the competency standards in the training package to be used by the applicant as a basis of assessment. • Have conducted or reviewed an equivalent assessment in the previous 12 months. • Make available to the moderation session, 10 percent (to a maximum of 5) of all assessments made during the previous year; this includes all data used to undertake the assessment. **Note.** The Metro CMS team will notify each assessor prior to the moderation session in order to provide sufficient time for the assessor to gather and submit evidence back to the Metro CMS prior to the session.
Demonstrate the necessary interpersonal and communication skills required in the assessment process.	• Participate in one professional development activity with a group in the previous 12 months.
Licensing and registration requirements.	• All required and relevant licences, registrations, competencies shall be current.

16.8 Appendix 8: Project Management and Project Engineering Example Documents

Skills	Sample Evidence
1. Provide evidence of interpreting and scoping project requirements.	• Meeting minutes with relevant comments • Project Feasibility Report • Product Description • Project Management Plan • Project Progress Report • Network Alteration Notice • Tender Evaluation Criteria and Grid
2. Provide evidence of the management of timing and progress of a project.	• Project Management Plan • Project Progress Report • Phase/Stage/Exception Plan • Team Status Report
3. Discuss when you have managed cost and budget issues for a project.	• Project Progress Report • Phase/Stage/Exception Plan • Team Status Report • Forecast Movement Reports • New Equipment and Systems Approval Proforma • Tender Evaluation Criteria and Grid
4. Provide evidence of when you have managed quality aspects of a project.	• Project Management Plan • Issue Log • Work Method Statements • Meeting minutes with relevant comments
5. Discuss situations when you have managed project staffing	• Project Management Plan • Project Progress Report • Phase/Stage/Exception Plan • Team Status Report • Authorisation to Recruit and Appoint • Minutes of discussion of project scope and objectives with stakeholders
6. Provide evidence of the management of communication within a project.	• Project Management Plan • Meeting minutes with relevant comments • Consultation Comment Form • Emails with relevant information • Project Progress
7. Provide evidence of when you have managed project risk.	• OHS and Environmental Control Management Plans • Asset Management Plans • Risk Assessments • Work Method Statements • Safety Notices • Issue Log
8. Discuss when you have managed contractual issues including procurement.	• Project Management Plan • New Equipment and Systems Approval Proforma • Asset Management Plans • Purchase Order • Inventory Issues/Transfer/Adjustment Forms • Tender Evaluation Criteria and Grid
9. Provide evidence of the integration of all functions of project management.	• Project Management Plan • Project Progress Report • End Stage Report • Lessons Learned Report • Meeting minutes with relevant comments

Table 1- Design skills for Signal Design Engineer or Signal Designer

	Routine Task (level 2)	Complex Task (level 3)
A	Signal design for two single lines without Bi-directional working	Signal design for two lines and both with bidirectional working
B	Design of an active level crossing on a single line section of track	Design of an active level crossing with double lines and bidirectional working
C	Signal Design of automatic 3 aspect signalling	Signal Design of automatic signalling with 3 minute headway and combination of 3 and 4 aspect signalling
D	Design of a CBI interlocking with a reduced number of signals and turnouts, and track circuits as train detection	Design of CBI with an active level crossing with pedestrian crossing incorporated, within an interlocking with axle counter train detection, a large number of signals and a number of turnout points
E	Design of Automatic 3 aspect signalling with no conditions	Design of Automatic 3 and 4 aspect signalling with a number of conditions for clearing of aspects
F	Signalling design for a single line track section incorporating a turnout with electric point machines, signals and train detection	Signalling design for a double line track section incorporating a crossover with in bearer type electric point machines, signals and train detection

Table 2- Maintenance skills for Signal Technician

	Routine Task (level 2)	Complex Task (level 3)
A	Maintenance of 2 turnouts or a crossover	Fault finding on a crossover type point detection circuit with differing type point machines within the crossover
B	Maintenance type service of an active level crossing	Downloading of log files for an active level crossing, and interpretation of files for use as maintenance, incident or accident investigation purposes. Replay of log files and recording results
C	Routine inspection of a track circuit, with recording of results on track survey sheet	Inspection of a track circuit upon completion of new track works/derailment where cabling, track connections, rail with insulated rail joints have been replaced, and set up, testing of all new components, set to work and commission back into service, along with CTC sheets and Metro processes followed
D	All maintenance services as per TMP	Undertake a number of maintenance services at multiple locations within the course of work, and where projects works are in place that might impact on infrastructure to be maintained with regards service intervals and removal/additions of equipment.

Table 3- Maintenance skills for Signal Maintenance Engineer

	Routine Task (level 2)	Complex Task (level 3)
A	Fault finding on a turnout detection circuit	Investigation of a signal passed at danger -SPAD and create a report and recommendation
B	Condition assessment of an active level crossing on a single line section of track.	Fault finding for signal circuit failure within an interlocking area where a number of signals, points, and train detection systems are in place.
C	Produce a scope of works for signal equipment maintenance renewal	Plan, then undertake and provide a condition assessment report for an CBI or other type interlocking
D	Undertake the role of Test Team leader for reinstatement of signalling infrastructure after renewal works	Undertake the role of tester in charge or commissioning manager for the commissioning of new signalling works or infrastructure.

Table 4- Construction skills for Signal Constructor

	Routine Task (level 2)	Complex Task (level 3)
A	Wiring of a single or double width size signal location equipment box or housing	Wiring of a signal equipment and power room
B	Installation of an automatic signal on a fixed type mast, complete with ladders, landing and cabling	Installation of a signal gantry with home signals, complete with various speed and route indicators with cabling
C	Installation of a single ended point motor, complete with cabling	Installation of a crossover with in bearer point machines, and cabling
D	Installation of a track circuit on a single line section of track	Installation of axle counters for use as train detection over a section of track with cross over points, and multiple tracks
E	Testing of a single or double width size signals location box or housing	Testing of an interlocking, cabling, connections,
F	Set to work of a point motor or track circuit	Undertake the role of test team leader for set to work for an interlocking, and signal equipment

Table 5- Construction and Testing skills for Signal Construction Engineer

	Routine Task (level 2)	Complex Task (level 3)
A	Undertake and create a scope of works for an active level crossing project	Undertake and create a scope of works for a medium sized interlocking of 15 signalling objects
B	Create a commissioning work package-CWP for a active level crossing or similar small project	Create a commissioning work package-CWP for an interlocking or double track section with an active level crossing
C	Direct site works for a level crossing project	Direct site works for an interlocking or for a double track active level crossing activity
D	Undertake tester in charge role for a single track active level crossing project	Undertake tester in charge role for a double track active level crossing project

Table 6- Signals Project Manager skills

	Routine Task (level 2)	Complex Task (level 3)
A	Project manages a minor signalling project for a pedestrian crossing upgrade from passive to active.	Project manage a medium signalling project for a new level crossing incorporating pedestrian crossing for two tracks or more.
B	Create a scope of works for a new signal location on one track incorporating signal, track circuits, cabling and equipment housing, capturing resources, materials, costs and timing for the work	Create a scope of works for a new signal interlocking over an extended area of works with two tracks, points and crossings, signals, train detection, signal equipment and power rooms, with capturing all resources, materials, labour hire, plant, and costs, along with project program.
C	Project manage small signal project within a defined work area, with limited resources to assist in the role.	Project manage medium to large project (size and cost) with multiple resources to assist in the role, hire of contractors and consultants, resources to manage for activities such as programming, commercial, financial, materials and procurement, reporting to management, creating of reports and other detailed information on project status, over a large geographical area.
D	Develop project management plans and integration plans for implementation on size and scope signalling projects.	Develop project management plans and integration plans, for implementation on size and scope signalling projects, and capture all disciplines within the plans and then implement onto the project.

Table 7- Signals Project Engineer skills

	Routine Task (level 2)	Complex Task (level 3)
A	Develop signal technical and defined scope requirements for minor signalling works where upgrading a section of track, and replacing existing signalling, cabling, train detection with existing power supplies and signal equipment housings	Develop signal technical and defined scope requirements, and functional operational requirements for medium to large signalling works where a large section of signalling is being completely renewed over many kilometres of track.
B	Interprets signalling plans such as the following, to enable signalling infrastructure to be site managed and installed/constructed on a minor sized and minor cost project; SAP, CSR, typical and standard plans, other	Similar to routine task but interprets plans on a much larger scale where a larger geographic area is involved, possibly areas controlled from multiple locations and CBI systems are involved, train control system, and more interaction with other disciplines and their related systems, much larger costs, more resources.
C	Interprets signal design, understands the engineering design management aspect for minor works, understands the requirements within the design, and then able to capture, implement and monitor the project works.	Similar to routine task but on a very much larger scale where a larger geographic area is involved, and significant more designs are undertaken at the same time, with larger project works being undertaken, is able to capture into a program and monitor.
D	Organises project meeting with a small number of attendees, generates meeting agenda and meeting minutes, and coordinates the correspondence and actions from within the meeting.	Organises, chairs site project meetings with a large number of attendees, diverse group with representatives from design, project management, construction, as consultants, contractors, staff, generates meeting agenda and meeting minutes, coordinates the correspondence and actions from within the meeting. Delegation of project works via the meeting, records progress, costs, resources, materials, risks, safety and other as part of the meeting.

Table 8: List of Metro Forms

Title	Metro Form Number	ARTC Equivalent Form Number
Signals Competency Assessment Request	L4-CHE-FOR-073	2F-21
Education and Training Record	L4-CHE-FOR-071	2F-26
Signals Competency Work Experience Record	L4-CHE-FOR-070	2F-25
Signals Competency Training Qualification Equivalence	L4-CHE-FOR-074	2F-22A
Signals Competency Upgrade Request	L4-CHE-FOR-069	2F-24
Work Based Training Assessment Form	L4-CHE-FOR-067	2F-22B
Alternate Training Certificate	L4-CHE-FOR-068	2F-22D
Transfer of Competency Assessment Checklist	L4-CHE-FOR-072	2F-30
Certificate Control Systems Competency Assessment Checklist	L4-CHE-FOR-086	NA
Certificate Signal Constructions Competency Assessment Checklist	L4-CHE-FOR-079	NA
Certificate Signal Design Competency Assessment Checklist	L4-CHE-FOR-080	NA
Certificate Signal Maintenance Competency Assessment Checklist	L4-CHE-FOR-081	NA
Certificate Signal Test Competency Assessment Checklist	L4-CHE-FOR-082	NA
Certificate Signal Project Management and Project Engineering Competency Assessment Checklist	L4-CHE-FOR-083	NA
Statement of Competency Signal Project Engineer	L4-CHE-FOR-078	NA
Statement of Competency Signal Project Manager	L4-CHE-FOR-077	NA
Statement of Competency Signal Assistant Constructor	L4-LED-FOR-060	NA
Statement of Competency Signal Constructor	L4-LED-FOR-065	NA
Statement of Competency Signal Constructor Supervisor / Team Leader	L4-LED-FOR-064	NA
Statement of Competency Signal Construction Engineer	L4-LED-FOR-063	NA
Statement of Competency Signal Construction Senior Engineer	L4-LED-FOR-062	NA

Title	Metro Form Number	ARTC Equivalent Form Number
Statement of Competency Control System & Communications Assistant Technician	L4-LED-FOR-059	NA
Statement of Competency Control System & Communications Technician	L4-LED-FOR-071	NA
Statement of Competency Control System & Communications Engineer	L4-LED-FOR-061	NA
Statement of Competency Control System & Communications Senior Engineer	L4-LED-FOR-070	NA
Statement of Competency Signal Assistant Designer	L4-LED-FOR-057	NA
Statement of Competency Signal Designer	L4-LED-FOR-056	NA
Statement of Competency Signal Design Engineer	L4-LED-FOR-055	NA
Statement of Competency Signal Senior Design Engineer	L4-LED-FOR-072	NA
Statement of Competency Signal Principles Design Engineer	L4-LED-FOR-005	NA
Statement of Competency Signal Assistant Maintainer	L4-LED-FOR-069	NA
Statement of Competency Signal Maintainer	L4-LED-FOR-068	NA
Signal Maintenance Supervisor / Team Leader	L4-LED-FOR-067	NA
Statement of Competency Signal Maintenance Engineer	L4-LED-FOR-066	NA
Statement of Competency Signal Senior Maintenance Engineer	L4-LED-FOR-007	NA
Statement of Competency Signal Assistant Tester	L4-LED-FOR-054	NA
Statement of Competency Signal Tester	L4-LED-FOR-008	NA
Statement of Competency Signal Test Engineer	L4-LED-FOR-053	NA
Statement of Competency Signal Senior Test Engineer	L4-LED-FOR-073	NA
Statement of Competency Signal Principles Test Engineer	L4-LED-FOR-006	NA
Metro Letter of Authorisation (TIC/SME/Assessor/Mentor/other)	L4-CHE-FOR-088	NA