Sydney Trains

Engineering System Integrity Engineering Procedure Signalling and Control Systems



PR S 43011

Assist in and/or Perform Inspection and Testing of Signalling Works (SCP11, 12 & 13)

Version 1.1

Date in Force: 13 December 2022

Approved	Professional Head
by:	Signalling and Control Systems
	Engineering System Integrity

Authorised by: Engineering Technical Publications Manager System Integrity

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Document control

Version	Date	Author/Prin. Eng.	Summary of change
1.0	17 September 2018	Mark Albrecht	First issue as a Sydney Trains document
1.1	13 December 2022	David Mulley	3 year review: no changes to technical content. Date and version number updated.

Summary of changes from previous version

Summary of change	
UEENEEN111A updated to UEERS0012 to reflect latest version	
UEENEEN104A updated to UEERS0019 to reflect latest version	

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PR S 43011A Assist in and/or Perform Inspection and Testing of Signalling Works (SCP11A, SCP12A & SCP13A)

This unit covers the assessment procedures and the current requirements for the competency of personnel to Assist in Inspection and Testing, Perform Inspection and Circuit Testing, and Perform Circuit Function Testing of Signalling Works.

1.1 Item	1.2 Details
SCP11 - Assist in Testing and Inspection of Signalling Works: (ST S 43011)	Candidate will have satisfied the following prerequisites, or approved equivalents: Rail Industry Safety Induction card
 Prerequisites Entry Requirements Training Course 	 (RISI) WHS General Construction Induction Training Card (GIT Card)
Competency	 Rail Safety Worker Category 2 Health, Qualification
2. Competency Requirements	 Design Checking Competencies in Signal Design or
3. Training Requirements	 IRSE Licence 1.3.150 – Signalling Test Assistant
4. Licensing Requirements	 Nil Sydney Trains Engineering Standard Signalling & Control Systems Competency Standard ST S 43002 Work Safely in a Live Signal Location UEERS0012 Install and maintain trackside Signal and train protection Be assessed as competent in Sydney Trains Engineering Standard Signalling & Control Systems Competency Standard ST S 43011 Assist in Inspection and Testing of Signalling Works using Sydney Trains Engineering Manual Competency Assessment Tool PR S 43011 Assist in Inspection and Testing of Signalling Works
	 TfNSW EI40 Signalling Safeworking Procedures (Certificate of Attendance) TfNSW ST46 Signalling Inspection and Testing (Certificate of Attendance) Assistant Tester competency requires a Sydney Trains Authorisation as described in MN S 41412 Process for Signalling Personnel – Authorisations & Licensing Section 6.1

1.1 Item	1.2 Details
SCP12 - Perform Inspection and Circuit	Candidate will have satisfied the following
Testing of Signalling Works: (ST S 43012)	prerequisites, or approved equivalents:
	 Rail Industry Safety Induction card (RISI)
1. Prerequisites	 WHS General Construction Induction Training Card (GIT Card)
Entry Requirements Training Course	 Rail Safety Worker Category 1 health
Competency	Electrical Trades Certificate, or Relevant Tertiary Qualification
 Competency Requirements Training Requirements 	Minimum of Signal electrical Work
	Group Leader (or supervisor equivalent) or
4. Licensing Requirements	 Demonstrated experience as an Assistant Tester and either Signal Electrical Installer Authorisations, or Design Checking Competencies in Signal Design or
	 Demonstrated experience of the use of IRSE Licence 1.3.155 – Signalling Verification Tester
	TfNSW EI40 Signalling Safeworking Procedures
	 TfNSW ST46 Signalling Inspection and Testing
	 TfNSW EJ11 Signalling Equipment and Electrical Installation Standards and Practices for Sydney Trains
	UEERS0019 Test Copper rail Signalling cable
	Be assessed as competent in Sydney Trains Engineering Standard Signalling & Control Systems Competency Standard ST S 43012 Perform Inspection and Circuit Testing of Signalling Works using Sydney Trains Engineering Manual Competency Assessment Tool MN S 43012 Perform Inspection and Circuit Testing of Signalling Works
	TfNSW EJ05 Signal Principles 1
	Circuit Tester competency requires a Sydney Trains Authorisation as described in MN S 41412 process for Signalling Personnel – Authorisations & Licensing Section 6.1

1.1 Item	1.2 Details	
SCP13 - Perform Circuit Function	Candidate will have satisfied the following	
Testing of Signalling Works: (ST S 43013)	prerequisites, or approved equivalents:	
1. Prerequisites	Rail Industry Safety Induction card (RISI)	
Entry Requirements	WHS General Construction Induction	
Training Courses	Training Card (GIT Card).	
Competency	Rail Safety Worker Category 1 Health	
2. Competency Requirements	 Electrical Trades Certificate or Relevant Tertiary Qualification, and 	
	Demonstrated experience in either	
3. Training Requirements	Circuit Tester Authorisation of IRSE License 1.3.170 – Signalling Functional Tester	
4. Licensing Requirements		
	TfNSW EI40 Signalling Safeworking Procedures	
	 TfNSW ST46 Signalling Inspection and Testing 	
	 TfNSW EJ11 Electrical Installation Standards and Practices for Sydney Trains Signalling Equipment 	
	• Nil	
	Be assessed as competent in Sydney Trains Engineering Standard Signalling & Control Systems Competency Standard ST S 43013 Perform Circuit Function Testing of Signalling Works using Sydney Trains Engineering Manual Competency Assessment Tool MN S 430013 Perform Circuit Function Testing of Signalling Works • TfNSW EJ06 Signal Principles 2	
	Circuit Function Tester competency requires a Sydney Trains Authorisation as described in MN S 41412 Process for Signalling Personnel – Authorisations & Licensing Section 6.1	
5. Tools and equipment	Candidate presents for the assessment fully equipped to carry out the required level of either:	
	Assist in Inspection and Testing	
	Perform Inspection and Circuit Testing	
	 Perform Circuit Function Testing of Signalling Works 	
6. Competence Assessor	Shall have the requisite technical and assessment competencies	

1.1 Item	1.2 Details
7. Assessment Outcomes	 Based on the evidence provided in the documentary materials provided, the desktop assessment and the hands-on assessment, the candidate is assessed to be: Not ready for assessment The candidate was not adequately prepared for the assessment, lacks prerequisites or requires significant additional training and experience. These deficits should be addressed before reapplying for assessment Not yet competent The candidate may be reassessed on the missing elements as soon as they can be prepared Not yet competent to work independently, but competent to work under supervision The candidate has demonstrated all prerequisites and skills at a basic level, but has not shown a sufficient level of mastery to be able to perform effectively without guidance Unrestricted competence can be granted on the basis of a satisfactory supervisor's report, following a period of work under supervision Competent The candidate has satisfied all requirements
8. Candidate debriefing	Assessor debriefs the candidate on the outcomes of the assessment, the elements (if any) in which they were found to be not yet competent, and their options for reassessment after completing further development, or appealing the outcome
9. Reporting & records	Assessor notifies candidate and candidate's supervisor by forwarding to each a copy of the Competency Assessment Record Sheet, which is part of the Assessment Tool and, if the candidate was assessed competent, a copy of the Record Sheet to the Principal Engineer Signalling Integrity for updating of RG S 41415

1.1 Item	1.2 Details
10.Reference Documents	 ST S 43011 Competency Standard Assist in Testing and Inspection of Signalling Works ST S 43012 Competency Standard Perform Inspection and Circuit Testing of Signalling Works ST S 43013 Competency Standard Perform Circuit Function Testing of Signalling Works MN S 43011 Competency Assessment Tool - Assist in Testing and Inspection of Signalling Works (with appropriate question set) MN S 43012 Competency Assessment Tool - Perform Inspection and Circuit Testing of Signalling Works (with appropriate question set) MN S 43013 Competency Assessment Tool - Perform Inspection and Circuit Testing of Signalling Works (with appropriate question set) MN S 43013 Competency Assessment Tool - Perform Circuit Function Testing of Signalling Works (with appropriate question set) SPG0711 - Inspection and Testing of Signalling Sydney Trains Health Assessment Categories of Rail Safety Workers Version 1.3

2 PR S 43011B – Behavioural Competency Assessment (SCP11B, SCP12B, SCP13B)

The behavioural competency assessment process is to be used in conjunction with the Technical competency assessment process for Assist in Inspection and Testing, Perform Inspection and Circuit Testing, and Perform Circuit Function Testing of Signalling Works PR S 43011A.

3 Behavioural Competencies

The behavioural competency requirements for ST S 43011 are as follows:

Competency	Descriptor	Benchmarked Score
Adhering to Principles and Values SCP11, 12 & 13	 Upholds ethics and values Demonstrates integrity Promotes and defends equal opportunities, builds diverse teams Encourages organisational and individual responsibility towards the community and the environment 	3 or higher

Competency	Descriptor	Benchmarked Score
Planning and Organising SCP11, 12 & 13		3 or higher
Following Instructions and Procedures SCP11, 12 & 13	 Appropriately follows instructions from others without unnecessarily challenging authority Follows procedures and policies Keeps to schedules Arrives punctually for work and meetings Demonstrates commitment to the organisation Complies with legal obligations and safety requirements of the role 	3 or higher
Adapting and Responding to Change SCP11 only	 Adapts to changing circumstances Accepts interpersonal style to suit different people or situations Shows respect and sensitivity towards cultural and religious differences Deals with ambiguity, making positive use of the opportunities it presents 	3 or higher
Coping with Pressures and Setbacks SCP11, 12 & 13	 Works productively in a high pressure environment Keeps emotions under control during difficult situations Balances the demands of a work life and personal life Maintains a positive outlook at work Handles criticism well and learns from it 	3 or higher
Working with People SCP12 & 13 only	 Demonstrates an interest in understanding of others Adapts to the team and builds team spirit Recognises and rewards the contribution of others Listens, consults others and communicates proactively Supports and cares for others Develops and openly communicates self-insight such as an awareness of own strengths and weaknesses 	3 or higher
Deciding and Initiating Action SCP13 only	 Makes prompt, clear decisions which may involve tough choices or considered risks Takes responsibility for actions, projects and people Takes imitative, acts with confidence and works under own direction Initiates and generates activity 	3 or higher

Competency	Descriptor	Benchmarked Score
Analysing SCP13 only	 Analyses numerical data, verbal data and all other sources of information 	3 or higher
	 Breaks information into component parts, patterns and relationships 	
	 Probes for further information or greater understanding of a problem 	
	 Makes rational judgements from the available information and analysis 	
	 Produces workable solutions to a range of problems 	
	 Demonstrates an understanding of how one issue may be part of a much larger system 	

4 Competency Rating Scale

A five point rating scale is used for the assessment of behavioural competencies.

1	2	3	4	5
Significantly lower than required benchmark	Lower than Benchmark	Meets Benchmark	Exceeds Benchmark to be a strength	Significantly exceeds benchmark to be a strength
Not likely to be a strength	Less likely to be a strength	Likely to be a strength	Quite likely to be a strength	Very likely to be a strength

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Assessment Methodology

Assessment in this competency is undertaken using one, or a combination of the following methods:

- a. Candidate completion of Occupational Personality Questionnaire (OPQ). This questionnaire is used throughout the world and has been designed to identify an individual's most likely patterns of behaviour. (see the use of OPQ in behavioural assessment background document).
- b. Behavioural Interview conducted with candidates supervisor.
- c. Behavioural interview conducted with candidate.

6 Behavioural Assessment Process

6.1 Process Stages

- a. Candidate completes the on line OPQ.
- b. Normative data is analysed and indicative benchmarks recorded.
- c. Indicators that are not consistent with profile benchmarks are explored further with the candidates' current or recent supervisor and data is evaluated accordingly.
- d. Where inconsistencies still exist, behavioural interview is conducted with the candidate and results evaluated.
- e. Behavioural competencies are rated and assessment process finalised.
- f. If the candidate does not meet the profile benchmarks, a development plan is put in place and the candidate is re-assessed quarterly using supervisor report mechanism.
- g. If the candidate meets the profile benchmarks a Behavioural Competency Assessment report is produced and included in portfolio of evidence. (PR S 43002 Behavioural Competency Assessment Report).

Behavioural Competencies and corresponding questions for Assist in Inspection and Testing, Perform Inspection and Circuit Testing, and Perform Circuit Function Testing of Signalling Works (ST S 43011, 12 and 13)

Competency	Descriptor	Supervisor Questions	Candidate Questions
Working with People SCP12 & 13 only	Demonstrates an interest in understanding of others	Contact ESI Signalling Integrity for OPQ questions	Contact ESI Signalling Integrity for OPQ questions
	Adapts to the team and builds team spirit		
	Recognises and rewards the contribution of others		
	Listens, consults others and communicates proactively		
	Supports and cares for others		
	• Develops and openly communicates self-insight such as an awareness of own strengths and weaknesses		
Adhering to Principles and Values SCP11, 12 & 13	Upholds ethics and valuesDemonstrates integrity	Contact ESI Signalling Integrity for OPQ questions	Contact ESI Signalling Integrity for OPQ questions
	 Promotes and defends equal opportunities, builds diverse teams 		
	• Encourages organisational and individual responsibility towards the community and the environment		

Competency	Descriptor	Supervisor Questions	Candidate Questions
Planning and Organising SCP11, 12 & 13	 Sets clearly defined objectives Plans activities and projects well in advance and takes account of possible changing circumstances 	Contact ESI Signalling Integrity for OPQ questions	Contact ESI Signalling Integrity for OPQ questions
	 Identifies and organises resources needed to accomplish tasks 		
	 Monitors performance against deadlines and milestones 		
Following Instructions and Procedures SCP11, 12 & 13	Contact ESI Signalling Integrity for OPQ questions	Contact ESI Signalling Integrity for OPQ questions	Contact ESI Signalling Integrity for OPQ questions
Coping with Pressures and Setbacks SCP11, 12 & 13	 Maintains a positive outlook at work Works productively in a pressurised environment 	Contact ESI Signalling Integrity for OPQ questions	Contact ESI Signalling Integrity for OPQ questions
	Keeps emotions under control during difficult situations		
	 Handles criticism well and learns from it 		
	• Balances the demands of a work life and a personal life		

Competency	Descriptor	Supervisor Questions	Candidate Questions
Deciding and Initiating Action SCP13 only	Makes prompt, clear decisions which may involve tough choices or considered risks	Contact ESI Signalling Integrity for OPQ questions	Contact ESI Signalling Integrity for OPQ questions
	Takes responsibility for actions, projects and people		
	 Takes imitative, acts with confidence and works under own direction 		
	Initiates and generates activity		
Analysing SCP13 only	Contact ESI Signalling Integrity for OPQ questions	Contact ESI Signalling Integrity for OPQ questions	Contact ESI Signalling Integrity for OPQ questions

7 Behavioural Competency Assessment Report

Assist in Inspection and Testing, or Perform Inspection and Circuit Testing, or Perform Circuit Function Testing of Signalling Works (ST S 43011, 12 and 13) – Behavioural Competency Assessment

Candidate Name:	Joe Blogs
Report Prepared By:	Bee Checker
Role:	Signal Engineer, Sydney Trains
Date:	Friday 3 December, 2010

This report is provided as evidence of assessment of the behavioural competency of the candidate to undertake Assist in Inspection and Testing (ST S43011)/Perform Inspection and Circuit Testing(ST S 43012)/Perform Circuit Function Testing of Signalling Works (ST S 43013).

Occupational Personality Questionnaire was completed on 22 November, 2010 and the outcome of this assessment indicated that the following competencies needed to be validated via a Supervisors report:

Behavioural Competencies Assessed– Assist in Inspection and Testing/Perform Inspection and Circuit Testing/Perform Circuit Function Testing of Signalling Works

		Candidate Overall Rating
Working with People	 Demonstrates an interest in understanding of others 	Exceeds Criteria
SCP12 & 13 only	• Adapts to the team and builds team spirit	
	 Recognises and rewards the contribution of others 	
	 Listens, consults others and communicates proactively 	
	Supports and cares for others	
	 Develops and openly communicates self-insight such as an awareness of own strengths and weaknesses 	
Adhering to	Upholds ethics and values	Meets criteria
Principles and	Demonstrates integrity	
Values SCP11, 12 & 13	 Promotes and defends equal opportunities, builds diverse teams 	
	 Encourages organisational and individual responsibility towards the community and the environment 	

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		Candidate Overall Rating
Planning and Organising SCP11, 12 & 13	 Sets clearly defined objectives Plans activities and projects well in advance and takes account of possible changing circumstances Identifies and organises resources needed to accomplish tasks Monitors performance against deadlines and milestones 	Meets criteria
Following Instructions and Procedures SCP11, 12 & 13	 Appropriately follows instructions from others without unnecessarily challenging authority Follows procedures and policies Keeps to schedules Arrives punctually for work and meetings Demonstrates commitment to the organisation Complies with legal obligations and safety requirements of the role 	Meets criteria
Coping with Pressures and Setbacks SCP11, 12 & 13	 Maintains a positive outlook at work; works productively in a pressurised environment Keeps emotions under control during difficult situations Handles criticism well and learns from it Balances the demands of a work life and a personal life 	Exceeds criteria
Deciding and Initiating Action SCP13 only	 Makes prompt, clear decisions which may involve tough choices or considered risks Takes responsibility for actions, projects and people Takes imitative, acts with confidence and works under own direction Initiates and generates activity 	Meets criteria

		Candidate Overall Rating
Analysing SCP13 only	 Analyses numerical data, verbal data and all other sources of information 	Significantly exceeds criteria
	 Breaks information into component parts, patterns and relationships 	
	 Probes for further information or greater understanding of a problem 	
	 Makes rational judgements from the available information and analysis 	
	 Produces workable solutions to a range of problems 	
	 Demonstrates an understanding of how one issue may be part of a much larger system 	

Supervisors follow up report was conducted with Tee Rex (Commissioning Engineer, Sulphide Junction Project) on Tuesday 30 November to explore the competency of Planning and Organising. Mr Rex provided examples that he had observed of Joe Blogs planning and organising resources required to undertake work tasks and being able to organise his time to complete work.