Guideline

Recipient - Learner Guide and Log Book

MD-20-293

QUEENSLAND RAIL OFFICIAL

Learner Full Name	
Personnel Number (Employees)	
Date of Birth (Contractors)	
LMS Course Code	**00127861**
This course demonstrates the skills and knowledge required to supervise and manage electrical risks associated with work activities in or in proximity to the three (3) metre electrical exclusion zone.	

Version: 1.5
Updated: 19/06/2024

Policy: Safety Policy

QueenslandRail

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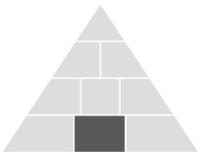


1 Learner Instructions

This Learner Guide and Log Book is designed to support your learning and to record your practical experience that you will gain on the job. It contains information, references, pictures, and activities relevant to Recipient.

Listen to your facilitator/trainer carefully and refer to your guide throughout this program.

References to Rules and Regulations have been made throughout this guide. Rules and Regulations change on a regular basis.

Make an entry in this Log Book once every six (6) months and have your supervisor sign the record of your work. A copy of any supporting evidence shall be attached to the Log Book.

The Learner Log Book is your responsibility to keep safe and once completed you will need to provide it to your supervisor.

IMPORTANT: All criteria shall be performed correctly and will be marked ‘Satisfactory’ or ‘Not Satisfactory’.

The following information contained in this Learner Guide has been obtained from the Electric Traction Systems Standard (ETSS) MD-10-191.

2 Supervisor Obligations

Supervisors shall assist qualified Recipients by providing them with opportunities to maintain competency.

The supervisor shall ensure that the Recipient is given the necessary time, resources, and support to enable them to fulfil their role.

3 Course Overview

3.1 Purpose

The purpose of this training is to provide the Recipient, working in Queensland Rail's 25 000 volt Electrified area, with the knowledge and awareness to:

- Undertake and plan work activities within three (3) metres of the energised "live" traction equipment, including overhead lines.
- Undertake work activities that have the potential to come within three (3) metres of the energised "live" traction equipment, including overhead lines.
- Supervise and manage electrical risks associated with work activities in or in proximity to the three (3) metre electrical exclusion zone. Recipients shall be aware of the inherent hazard (high voltage electric shock) and risks associated with undertaking work activities in and around the three (3) metre electrical exclusion zone within the Electrified area.
- Ensure only those workers accredited as a Recipient can be issued with the necessary authority by the Nominated Person or the Traction Power Engineer or nominated representatives to proceed with specific work in or adjacent to the three (3) metre electrical exclusion zone in the Electrified Area.
- React appropriately and manage emergency situations in relation to Queensland Rail's 25kV three (3) metre electrical exclusion zone.

4 Competency Requirements

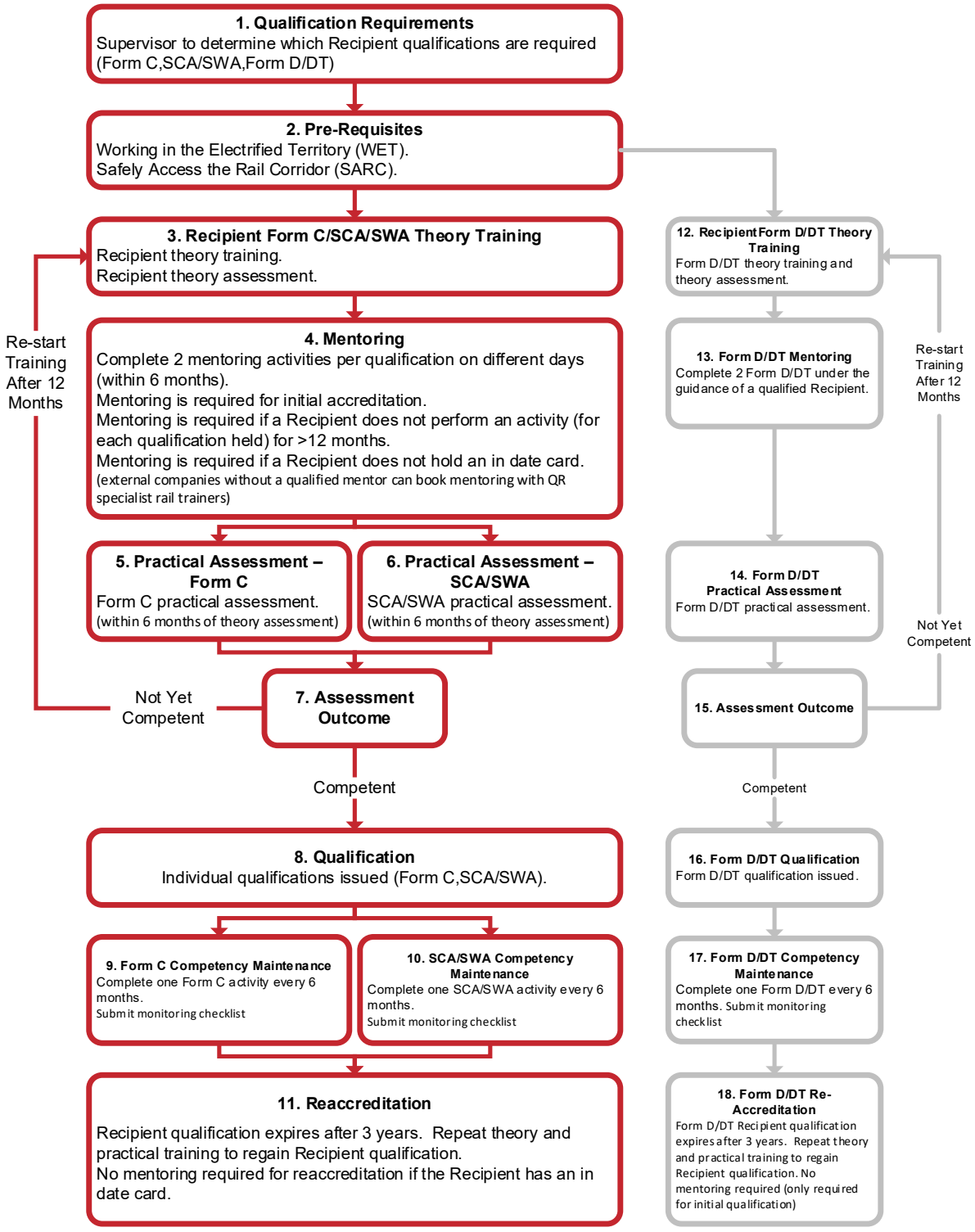
There are three (3) separate Recipient qualifications issued within Queensland Rail. The flowchart on the following page outlines the pathway to accreditation and maintenance of competency.

4.1 Issuing of Recipient cards

Recipient cards will be issued upon successful completion of the course. Competency maintenance documentation shall be submitted for each qualification every six (6) months. This shall be submitted to the Queensland Rail Assets Training Delivery team.

All Recipients are required to attend the complete Recipient course every three (3) years.

Existing Recipients are not required to repeat the mentoring portion of the course.


1. Qualification Requirements
Supervisor to determine which Recipient qualifications are required (Form C,SCA/SWA,Form D/DT)
2. Pre-Requisites
Working in the Electrified Territory (WET).
Safely Access the Rail Corridor (SARC).
3. Recipient Form C/SCA/SWA Theory Training
Recipient theory training.
Recipient theory assessment.
4. Mentoring
Complete 2 mentoring activities per qualification on different days (within 6 months).
Mentoring is required for initial accreditation.
Mentoring is required if a Recipient does not perform an activity (for each qualification held) for >12 months.
Mentoring is required if a Recipient does not hold an in date card.
(external companies without a qualified mentor can book mentoring with QR specialist rail trainers)
Re-start Training After 12 Months
5. Practical Assessment – Form C
Form C practical assessment.
(within 6 months of theory assessment)
6. Practical Assessment – SCA/SWA
SCA/SWA practical assessment.
(within 6 months of theory assessment)
Not Yet Competent
7. Assessment Outcome
Competent
8. Qualification
Individual qualifications issued (Form C,SCA/SWA).
9. Form C Competency Maintenance
Complete one Form C activity every 6 months.
Submit monitoring checklist
10. SCA/SWA Competency Maintenance
Complete one SCA/SWA activity every 6 months.
Submit monitoring checklist
11. Reaccreditation
Recipient qualification expires after 3 years. Repeat theory and practical training to regain Recipient qualification.
No mentoring required for reaccreditation if the Recipient has an in date card.
12. Recipient Form D/DT Theory Training
Form D/DT theory training and theory assessment.
13. Form D/DT Mentoring
Complete 2 Form D/DT under the guidance of a qualified Recipient.
Re-start Training After 12 Months
14. Form D/DT Practical Assessment
Form D/DT practical assessment.
Not Yet Competent
15. Assessment Outcome
Competent
16. Form D/DT Qualification
Form D/DT qualification issued.
17. Form D/DT Competency Maintenance
Complete one Form D/DT every 6 months. Submit monitoring checklist
18. Form D/DT Re-Accreditation
Form D/DT Recipient qualification expires after 3 years. Repeat theory and practical training to regain Recipient qualification. No mentoring required (only required for initial qualification)

4.2 Retraining requirements

All Recipients are required to attend the complete Recipient course every three (3) years. Existing Recipients are not required to repeat the mentoring portion of the course.

4.3 Recipient qualification suspension

The Electrical Discipline Head will suspend the Recipient qualification from anyone who is found to be non-compliant in an audit or is in breach of legislation or approved procedures, pending investigation. Further training and reaccreditation may be required after the completion of the investigation.

5 Learning Objectives

By the end of this course, you will be able to:

- Describe and apply the duties, obligations, and responsibilities of a Recipient.
- Review and complete the key components of the required documentation, including Safe Work Method Statement.
- Demonstrate the tasks required to manage the electrical safety of workers during a work activity at a worksite.
- Explain and demonstrate the correct communication methods when communicating electrical safety information, including emergency situations.

5.1 Pre-requisites

- Working in the Electrified Territory (WET).
- Safely Access the Rail Corridor (SARC).

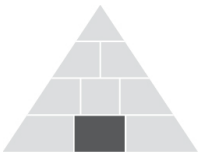
5.2 How learners will be assessed

Learners will be assessed using the assessments listed below:

- Theory assessment.
- Practical assessment.

You shall not perform any aspect of the work as a Recipient until you have successfully completed the training and assessment.

Recipient accreditation can only be achieved with the completion of both classroom and practical assessments. Learners who fail to achieve a satisfactory result in the practical assessment will be required to wait 12 months to reattempt the full Recipient course.



Upon successful completion of the theory assessment, participants will be endorsed in their Learner Guide by the trainer. If you disagree with the results of the assessment, you can lodge an appeal. For complaints and appeals related to non-accredited training and assessment issues, please refer to the Employee complaints Procedure MD-13-487.

5.3 Practical assessment

The Practical Assessment will be conducted at the Acacia Ridge Training Facility by a qualified assessor.

Depending on the qualification you are completing, you shall be assessed in receiving the following:

- Safety Clarification Advice (SCA).
- A Standard Work Activity (SWA), suitable for working within the three (3) metre electrical exclusion zone of the live Overhead Line Equipment.
- Form C - Permit To Work.

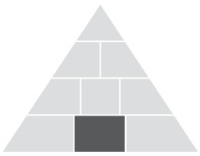
Failure to complete and pass the practical assessment will result in the attendance of the full Recipient course again.

6 Relevant traction system information

6.1 Common terminology in the electrified territory

At Queensland Rail there are many terms, definitions, and acronyms specific to each job role and work area. It is important to take the time to familiarise yourself with this terminology. The following table lists common terms and definitions relevant to working in the electrified territory. More terms and definitions can be found in the Electric Traction Systems (ETSS) Standard MD-10-191, located on the Queensland Rail intranet.

Term	Definition
Bond	An Approved electrical conductor, complete with terminations, which connect items of equipment. There are two main types of bonds: 1. Structure Bond - a bond connecting the steelwork of an overhead traction wiring structure, bridge, or other structure to the earthing system. This bond is provided to prevent the rise of hazardous voltages on structures and steelwork. 2. Traction Bond - a bond connecting together the various items of equipment in the traction current return circuit path. It shall be assumed that this bond will be carrying traction current at all times.
Catenary Wire	A bare stranded conductor, being the uppermost of the two overhead wires mounted above the track and supporting the Contact Wire.
Contact Wire	A bare solid conductor being the lower of the two overhead wires mounted above the track. The pantographs of electric trains press against the underside of this wire and collect the current required by the train.
Electric Traction System/Infrastructure	Railway High Voltage electrical distribution network used to supply energy for Rolling stock and approved designated railway applications. The system incorporates Overhead Line Equipment, return circuits (including designated running rails), substations, switching, protection and control equipment.
Electric Control Operator (ECO)	The Competent worker who is Approved and authorised to control the power supply to the Electric Traction System and is responsible for controlling all switching operations and isolations of Electrical Apparatus.
Electrified Territory	Any section of track equipped with overhead traction wiring equipment, or any substation or Supply Substation used to provide power for electric trains.
Exclusion Zone	The “exclusion zone”, for a person for Electrical Apparatus, or for mobile plant for Electrical Apparatus, means the distance nominated within: The following excerpt has been taken from Section 69 of the Electrical Safety Regulation 2013 (Qld): • ‘Exclusion zone, for a person, operating plant or vehicle for an overhead electric line, means the distance from the line stated for the person, plant or vehicle’. (Government, 2017) Module 2 within this standard for the Electric Traction System. The exclusion zone for the 25 kV single phase Electric Traction System aligns with the requirements of the Regulation for a nominal phase to phase voltage above 33 kV up to 50 kV. The Transport Infrastructure (Rail) Regulation 2017 (Qld) (Part 5) sets out the height, width, length, and weight limits for vehicles and loads crossing railway lines. Here at Queensland Rail, the exclusion zone is three (3) metres left, right, below and infinity above the traction equipment.



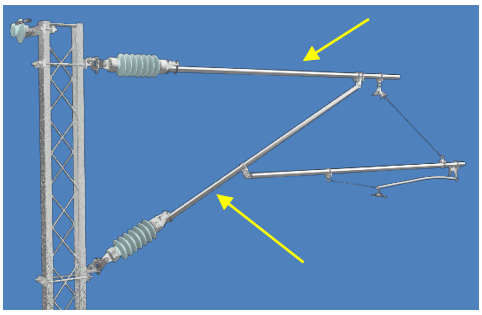
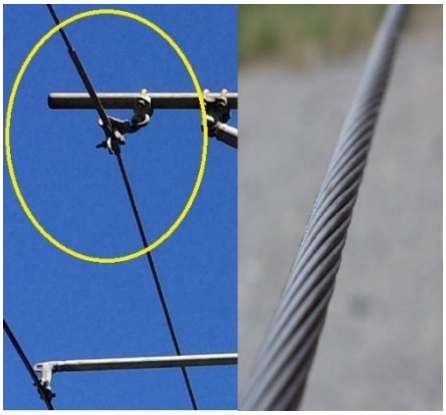
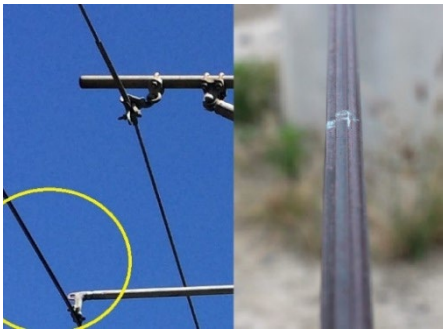
Term	Definition
Feeder Wire	A conductor attached by insulators to overhead traction wiring supporting structures. It is energised at: • 25 kV with respect to traction rails, and, • 50 kV with respect to contact lines incorporating contact and catenary conductors (i.e. energised at a voltage 180 degrees out of phase with respect to contact lines).
Form C - Permit To Work	A permit issued subsequent to isolation and earthing of relevant Electrical Apparatus to facilitate safe work Near or on Electrical Apparatus including Overhead Line Equipment. This form is a declaration signed and issued by a Nominated Person (NP) for work to be carried out on, or Near to, overhead traction wiring equipment. The purpose of the form is to make known to the Recipient (Authorised Person in Charge) specifically which equipment is isolated and earthed, and upon which, or near to which, it is safe for work to be carried out. Work related to a Form C shall be adequately described and controlled by a relevant Safe Work Method Statement.
Form D Permit to Work	Permit to work on high voltage apparatus including high voltage cables.
Instructed Person	A worker adequately advised and supervised by an Authorised Person “Recipient” to enable them to avoid the hazards, which may be present.
Isolated	Disconnected from all possible sources of energy by means that prevent unintentional energisation of the Electrical Apparatus and that are assessed as a suitable step in the process of making safe for access purposes.
Isolation Protection	Approved measures to prevent the energisation of isolated/de-energised Overhead Line Equipment by the passage of Electric Train Pantograph (s).
Methodology	See “Work Methodology”
Person Conducting a Business or Undertaking (PCBU)	The following excerpt has been taken from the Electrical Safety Act 2002 (Qld): ‘Meaning of person conducting a business or undertaking 1. For this Act, a person conducts a business or undertaking - (a) whether the person conducts the business or undertaking alone or with others; and (b) whether or not the business or undertaking is conducted for profit or gain. 2. A business or undertaking conducted by a person includes a business or undertaking conducted by a partnership or an unincorporated association. 3. If a business or undertaking is conducted by a partnership (other than an incorporated partnership), a reference in this Act to a person conducting the business or undertaking is to be read as a reference to each partner in the partnership. 4. A person does not conduct a business or undertaking to the extent that the person is engaged solely as a worker in, or as an officer of, that business or undertaking.’ (Government, 2017)

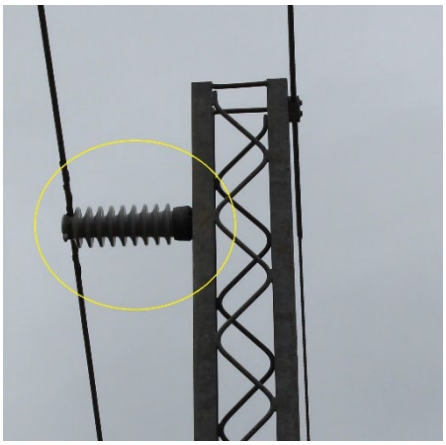
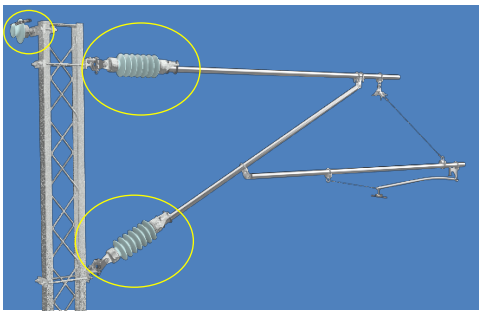
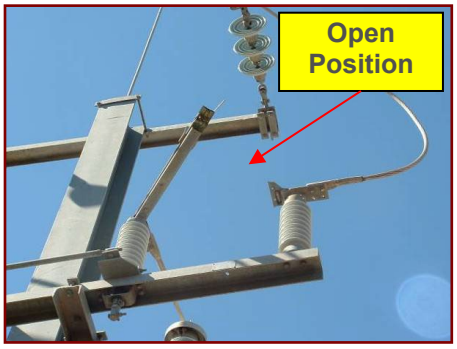
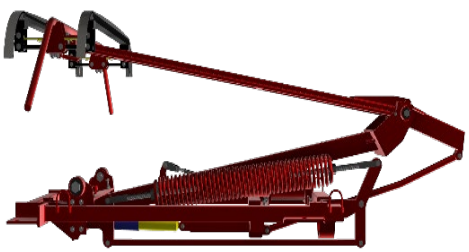
Term	Definition
Recipient (Person in Charge of Electrical Safety)	An Authorised Person who has the competence and responsibility to supervise the electrical safety aspects of the work and has been appointed by a PCBU to take charge of a specific Worksite in Electrified Areas. The Recipient shall be given overriding safety responsibility for activities within the Worksite by the PCBU. The Recipient shall remain on site and in charge of the worksite at all times for the duration of the Approved work activity. A Recipient can be issued with a Form C - Permit To Work or Safety Clarification Advice (SCA). When work is being completed under a Standard Work Activity (SWA), there shall be a Recipient onsite to supervise the electrical safety aspect of the work. The Recipient is responsible for the content, and compliance with, the requirements of a relevant and approved Safe Work Method Statement.
Return Conductor	A conductor attached to the overhead traction wiring equipment supporting structures in the Booster Transformer System. It carries traction return current.
Safety Clarification Advice (SCA)	Written advice provided to a Recipient (Person in Charge of Electrical Safety) on how to safely carry out work that has the potential to come within the three (3) metre electrical exclusion zone of the live Electric Traction System. It is site and activity specific written advice, concerning work restrictions in the vicinity of live Overhead Line Equipment. This advice is supplied by the Traction Power Engineer or their delegated representative in response to a request from a Recipient (Authorised Person in Charge of Electrical Safety). Work related to a SCA shall be adequately described and controlled by a relevant Safe Work Method Statement.
Safety Clarification Advice (SCA) Issuer	An Approved Competent worker trained and authorised by the Traction Power Engineer to issue a SCA to a Recipient (Authorised Person in Charge).
Safety Observer	(When working Near Exposed Electrical Apparatus) A person deemed competent by the Recipient or their PCBU for the task and specifically assigned the duty of observing and warning against unsafe approach to Electrical Apparatus or other unsafe conditions. Also referred to as safety spotter.
Safe Work Method Statement (SWMS)	For the purpose of work Near or on Exposed Electrical Equipment, a controlled document that shall: a) Identify the Worksite and high-risk construction work activity to be conducted Near or on Exposed Electrical Equipment. b) State hazards relating to the high-risk construction work and risks to health and safety associated with those hazards (risk assessment). c) Describe the control measures to be implemented. d) Describe how the control measures are to be implemented, monitored and reviewed. e) Lists the relevant workers and Health and Safety Representative (HSRs) who were consulted in the preparation of the SWMS. f) Be set out and expressed in a way that is readily accessible and understandable to persons who use it. A safe work method statement shall be site and be work activity specific. A relevant and adequate Safe Work Method Statement is a prerequisite for the issue of an authority to work using either a Form C or SCA issued to a Recipient (Authorised Person in Charge).
Standard Work Activities (SWA)	An approved Safe Work Method Statement endorsed by the Traction Power Engineer and authorised by a relevant manager in charge of work near electric traction infrastructure (PCBU). It prescribes the minimum safety requirements for routine and standard works that could encroach within the Electric Traction System three (3) metre electrical exclusion zone.

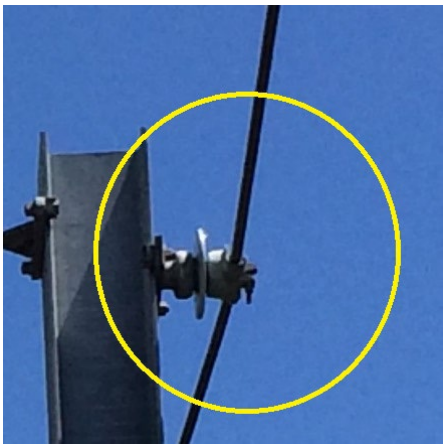
Term	Definition
Temporary Portable Earths	Approved earthing devices applied for the earthing and short-circuiting of Electrical Apparatus.
Traction Power Engineer (TPE)	The Competent registered professional electrical engineer responsible for the Electric Traction System in a defined geographic area in respect of: 1. System operation, maintenance, and integrity. 2. Electrical safety advice. The role encompasses Approved Competent delegated representatives appointed by the Traction Power Engineer.
Work Methodology	A document which includes the following mandatory requirements: a) Description of the work. b) Work location. c) Title. d) Unique number. e) Revision number. f) Approver's name, signature, and date. g) Details of each step of the activity to be performed. h) Control measures to be implemented to ensure the workers, plant and vehicles do not encroach the electrical exclusion zone or reduced electrical exclusion zone to create an unsafe electrical situation.
Worksite	An area under the direct control of the Recipient (person in charge of electrical safety) where work may be carried out using either a Form C - Permit To Work or Safety Clarification Advice (SCA) or both.

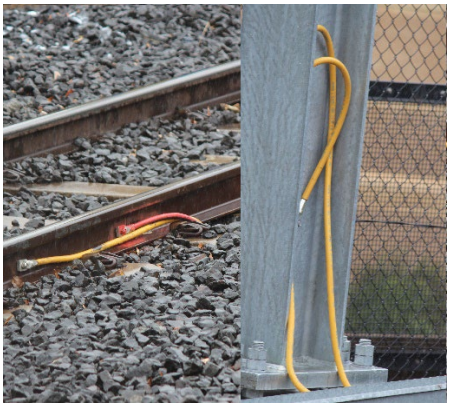
6.2 Traction Apparatus Glossary

Apparatus	Description	Picture
Autotransformers	A traction transformer with three terminals connected to the Electric Traction system.	
Booster Transformers	A traction current Transformer with a transformation ratio equal to 1. Its primary winding is connected in series with contact line conductors energised at 25kV. Its secondary winding is connected in series with Return Conductors and is an integral part of the traction current return circuit from electric vehicles, and other Approved loads, back to Supply Substations.	

Apparatus	Description	Picture
Cantilever	It is an Insulated swivelling type structural member, comprising of different sizes of steel tubes, to support and to keep the overhead catenary system in position so as to facilitate current collection by the pantograph at all speeds without infringing the structural members.	
Catenary Wire	A bare stranded conductor, being the uppermost of the two (2) overhead wires mounted above the track and supporting the Contact Wire.	
Contact Wire	A bare solid conductor being the lower of the two overhead wires mounted above the track. The pantographs of electric trains press against the underside of this wire and collect the current required by the train.	
Earths	Approved earthing devices applied for the earthing and short-circuiting of Electrical Apparatus.	

Apparatus	Description	Picture
Feeder Wire	A 25kV transmission line conductor or cable in the electrical power distribution system. Identified by locating the seven (7) or nine (9) disc insulator on the mast.	
Insulators	A specially designed component constructed of insulation material to separate parts of a circuit from each other or from earth.	
Isolators	A mechanical device installed as part of the High Voltage (HV) Overhead Equipment operated under the direction of the ECO by an NP/SNP providing suitable electrical circuit disconnection and reconnection when performing HV switching.	
Midpoint Connection	An electrical connection between the traction rail and the Return Conductor (RC).	
Pantograph	Electrical Apparatus mounted on insulators on the roof of electric trains used for collecting current from contact wiring. An articulated hinged device designed to allow vertical movement of the pantograph head to achieve a specified uplift force against the Contact Wire under defined operating conditions.	

Apparatus	Description	Picture
Return Conductor (RC) Uncovered	A conductor attached to the overhead traction wiring equipment supporting structures in the Booster Transformer System. It carries traction return current. Identified by locating the single disc insulator on the mast.	
Return Conductor (RC) Covered	Same as uncovered Return Conductor. Has 1.2mm thick PVC cover. This cover has NO insulating value. Identified by locating the single disc insulator.	
Structure (Black) Bond	Structure Bond - a bond connecting the steelwork of an overhead traction wiring structure, bridge, or other structure to the earthing system. This bond is provided to prevent the rise of hazardous voltages on structures and steelwork.	

Apparatus	Description	Picture
Traction (Red) Bond	Traction Bond - a bond connecting items of equipment in the traction current return circuit path. It shall be assumed that this bond will be carrying traction current at all times.	
Yellow Bond	Specified critical structure bonds (yellow bonds) used to provide equipotential bonding at defined locations.	

7 Introduction

This course is made up of the following key components:

8 The Electrical Safety Act 2002 (Qld)

8.1 Overview

The following information has been taken from the Electrical Safety Act 2002 (Qld):

The Electrical Safety Act 2002 (Qld) (The ES Act) is directed at eliminating the human cost of death, injury and destruction that can be caused by electricity.

The purpose of the Electrical Safety Act 2002 (Qld) is to establish a legislative framework for preventing:

- Persons from being killed or injured by electricity; and
- Property from being destroyed or damaged by electricity.

8.2 Duty of Care

The Electrical Safety Act 2002 (Qld) imposes electrical safety duties (and penalties) on several roles to ensure electrical safety is achieved. A person can have an electrical safety obligation in more than one capacity.

In situations where the Work Health and Safety Act 2011 (Qld) and the Electrical Safety Act 2002 (Qld) both apply, the Electrical Safety Act 2002 (Qld) takes precedence. Queensland Rail is a designated Electricity Entity under the Electrical Safety Act 2002 (Qld).

8.3 Obligations Under the Act

Duty of the electricity entity (Queensland Rail):

As a designated electricity entity, Queensland Rail has a duty to ensure that its works are:

- Electrically safe; and
- Operated in a way that is electrically safe.

This duty includes requirements for inspection, test, and maintenance. Queensland Rail has designated electric traction infrastructure as entity works.

8.4 Duty of workers

Section 39 of the Electrical Safety Act 2002 (Qld) defines the duties of workers as follows:

- Take reasonable care for the worker's own electrical safety; and
- Take reasonable care that the worker's acts or omissions do not adversely affect the electrical safety of other persons or property; and

- Comply, so far as the worker is reasonably able, with:
  - Any reasonable instruction that is given by the person conducting the business or undertaking to allow the person to comply with the ES Act
  - Any reasonable instruction about electrical equipment located at the workplace given by a person in control of the electrical equipment to allow the person to comply with the ES Act; and
- Cooperate with any reasonable policy or procedure relating to electrical safety at the workplace that has been notified to workers.

8.5 Penalties

According to the Electrical Safety Act 2002 (Qld), the maximum penalty for an offence committed by an individual, other than as a person conducting a business or undertaking or as an officer of a person conducting a business or undertaking - $464,000 (3,000 penalty units) or 5 years imprisonment (as of 2024).

Queensland Work Health and Safety Officers can issue on the spot fines for breaches of the Work Health and Safety Act 2011 (Qld).

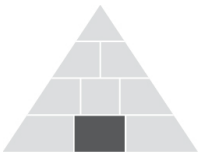
8.6 PCBU industrial manslaughter offence under Queensland legislation

The objective of the Recipient role is to assist PCBU's in meeting their legislative obligations when working on or near Electric Traction Infrastructure.

The industrial manslaughter provisions make it an offence for a person conducting a business or undertaking (PCBU), or a senior officer, to negligently cause the death of a worker. In particular, the offence applies if:

- a worker dies, or is injured and later dies, in the course of carrying out work for the business or undertaking (including during a work break); and
- the PCBU's, or senior officer's, conduct cause the death of the worker (i.e. the action or inaction of the PCBU, or senior officer, substantially contributes to the death); and
- the PCBU, or senior officer, is negligent about causing the death of the worker (i.e. the person's action or inaction departs so far from the standard of care required).

Where a PCBU, or senior officer, commits industrial manslaughter, a maximum penalty of 20 years imprisonment for an individual, or $15.5M (100,000 penalty units) for a body corporate, applies (as of 2024).



9 Role and responsibilities of a Recipient

A Recipient is a person who is in charge of electrical safety. They are an authorised person of a PCBU (person conducting a business or operating) who has the competence and responsibility to supervise the electrical safety aspects of the work and has been appointed to take charge of a specific worksite in electrified areas.

Their primary duty and responsibility is to manage the electrical safety of a worksite. The Recipient must be satisfied other work will not interfere with their primary duties.

9.1 Pre-start briefing

The Recipient is responsible for delivering an effective Pre-Start Safety Briefing, which outlines the electrical safety control measures for the worksite. This includes:

- Delineating and communicating the safe area of work, and
- Monitoring the need for a pause and re-start process considering new hazards, risks and changes in the work site.

9.2 General requirements

Note

Permits to work issued near the limits of isolation (and/or adjacent to energised HV equipment) shall be received on site by the Recipient to confirm:

- the safe area of work; and
- the scope of work (including stages of work if required).

The Recipient shall delineate the safe area of work (in a manner appropriate for the work group) and communicate the requirements for safe work to workers under their supervision.

The Recipient has overriding electrical safety responsibility for activities within the worksite and shall remain on site and in charge of the electrical safety of the worksite at all times for the duration of the approved work activity. The Recipient must be able to visually see the worksite at all times and be in a position to stop work if an electrical safety issue arises.

If the Recipient must leave site, all work must be stopped. All workers/equipment/machinery must be moved to a Safe Place and remain there. Work cannot recommence until the Recipient is back on site and advises the work group that work can recommence, or the Recipient has transferred their responsibilities to another qualified Recipient.

A Recipient can be issued with a Permit To Work (Form C/D) or Safety Clarification Advice (SCA). The Recipient is responsible for compliance with the requirements of a relevant Safe Work Method Statement.

9.3 Changes to paperwork

Any alterations shall be struck through with a single line (so that it is still legible) and initialled by the person making the alteration. The use of correction fluid/tape is prohibited.

	DETAILS	TRANSFERING FROM RECIPIENT	TRANSFERING TO RECIPIENT	DETAILS	
TRANSFER 1	Recipient Name:	Bob Smith	Janet Wright	TRANSFER DATE AND TIME	07/10/2020 09:06
	Recipient Number:	G123456	JW ~~Janet~~ G987654		
	Signature:	Bob Smith	Janet Wright		
	New Recipient Contact No.	-	0414123456	ECO Advised:	☑ Yes

9.4 Additional writing on paperwork

It is not permitted to write phone numbers, activation/deactivation times or any other information in the blank areas of a Permit To Work (Form C/D) or Safety Clarification Advice (SCA). Recipients shall only write in the designated areas of these documents.

9.5 Working above or within three metres of live overhead line equipment

Note

Workers shall always treat the Overhead Line Equipment as LIVE and DANGEROUS.

Workers must not carry out any work above live Overhead Line Equipment or within three (3) metres in any other direction from live Overhead Line Equipment, unless a written Safety Clarification Advice (SCA) or Standard Work (SWA) Activity Statement has been provided which has been approved by the Traction Power Engineer (TPE) or their representative. The Traction Power Engineer can authorise the use of an approved engineered barrier.

9.6 Mandatory Exclusion Zone

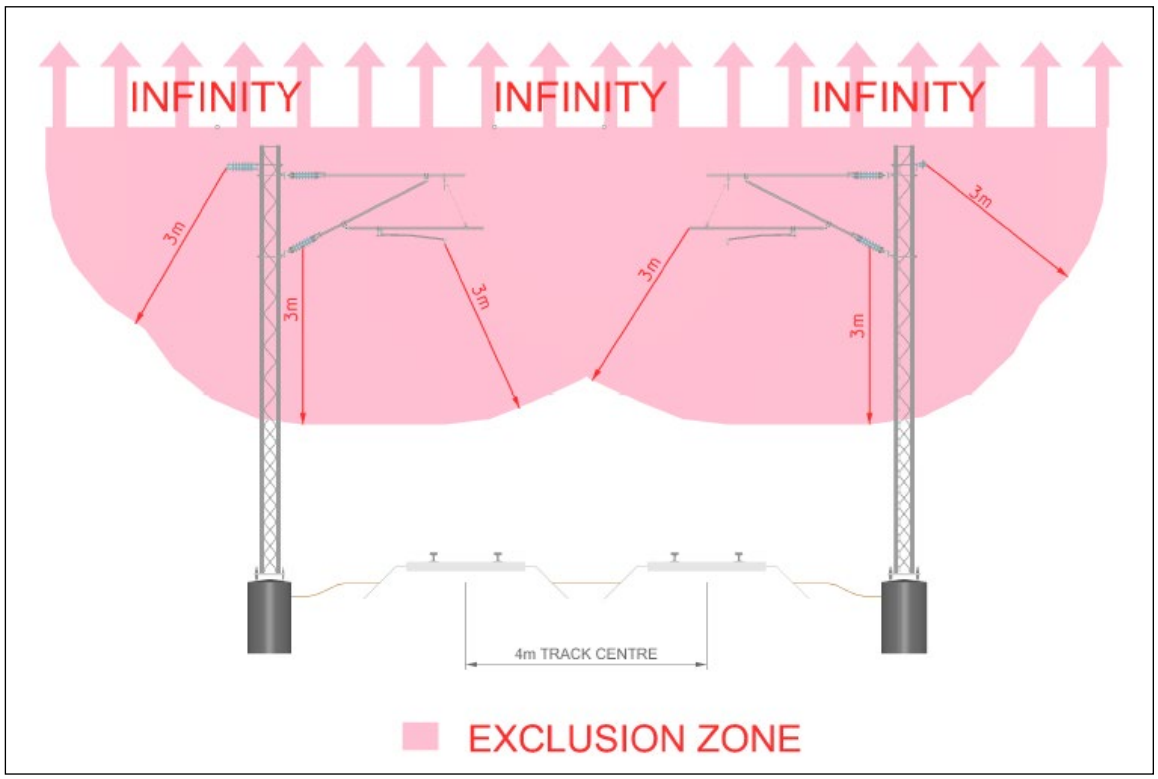


Figure 1 - Three (3) metre electrical exclusion zone

All Overhead Line Equipment and high voltage plant shall be considered LIVE and DANGEROUS.

Personnel, plant, and equipment shall maintain a minimum of three (3) metres from live conductors and equipment unless approval has been granted by the Traction Power Engineer or their representative.

No work is allowed within the Overhead Line Equipment three (3) metre electrical exclusion zone without:

a) A Form C -Permit to Work, issued by a Nominated Person, OR,
b) A Safety Clarification Advice (SCA) endorsed by the traction power engineer or designated representative, OR,
c) A Standard Work Activity (SWA) endorsed by the traction power engineer or designated representative, OR,
d) An approved engineered barrier designed and erected with the objective to separate the worksite from exposed live electrical equipment.

The preferred control for work within or near the three (3) metre electrical exclusion zone is a Permit To Work. A Form C is a Permit To Work on or near Overhead Line Equipment.

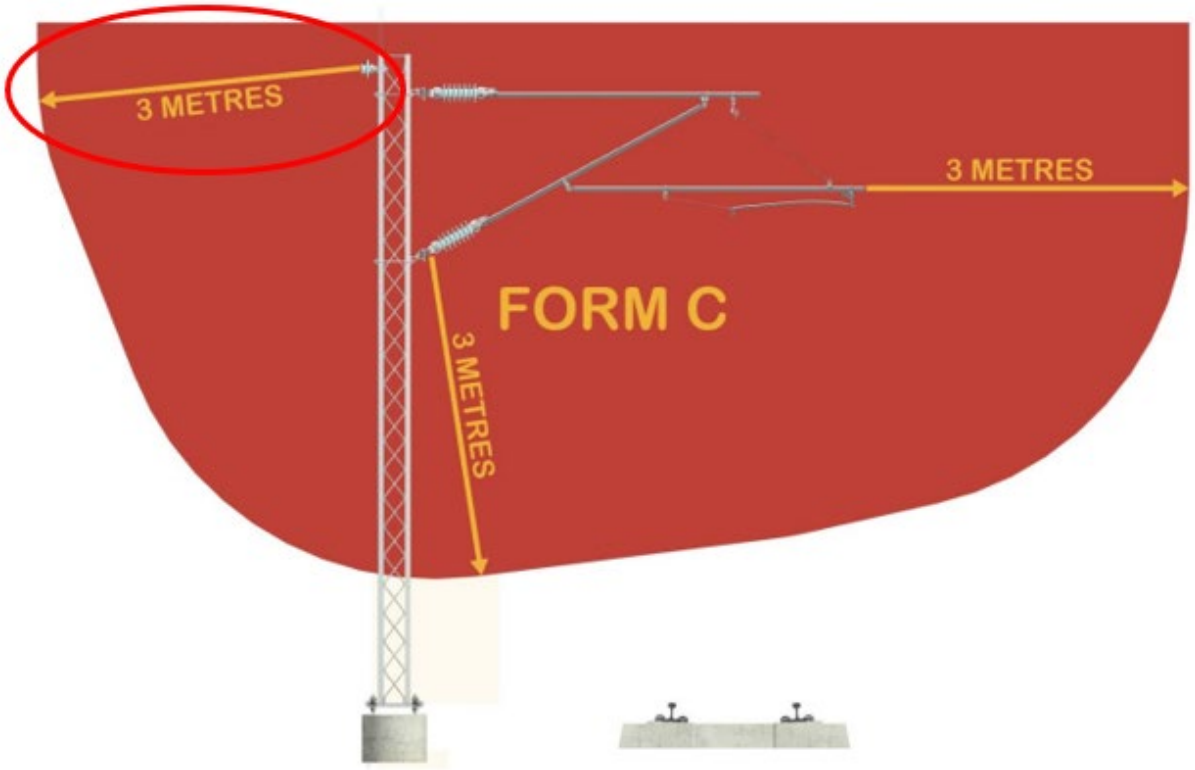


Figure 2 - Three (3) metre electrical exclusion zone - Form C

It is important to note that the three (3) metre electrical exclusion zone includes Overhead Line Equipment mounted on the rear of the masts such as feeder wires or return conductors as shown in Figure 2.

A Safety Clarification Advice (SCA) or Standard Work Activity (SWA) is the least preferred control for work within or near the three (3) metre electrical exclusion zone because the Overhead Line Equipment remains LIVE and DANGEROUS. An SCA or SWA will be required if there is any potential to encroach the three (3) metre electrical exclusion zone whilst the Overhead Line Equipment remains LIVE and DANGEROUS.

Figure 3 - Three (3) metre electrical exclusion zone - SCA/SWA

No work is allowed within the three (3) metre electrical exclusion zone of HV apparatus (e.g. HV cable terminations) without:

a) A Permit To Work on HV apparatus (Form D or DT) issued by a Nominated Person, OR,

b) An approved engineered barrier designed and erected with the objective to separate the worksite from exposed live electrical equipment.

A train pantograph is considered LIVE and DANGEROUS when it is in contact with Overhead Line Equipment. The pantograph must be considered to be part of the three (3) metre exclusion zone.

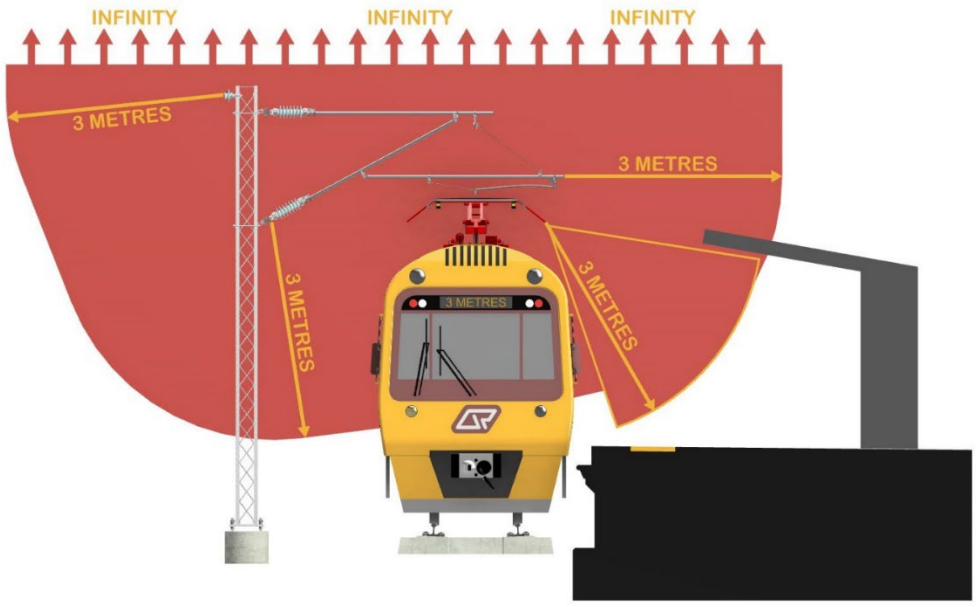


Figure 4 - Three (3) metre electrical exclusion zone - including pantograph

9.7 Operating plant working near electrical equipment

Before setting up a crane or other operating plant such as an Elevating Work Platform (EWP) near overhead power lines and equipment, the PCBU shall conduct an inspection to identify the presence of overhead power lines and equipment that may pose a risk. Consultation regarding the work and the related risks shall occur between the PCBU, the workers conducting the work and the crane or plant operator.

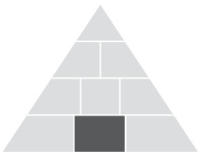
If a risk involving live overhead power lines has been identified, the PCBU shall conduct a written risk assessment to determine the risk of encroaching on the three (3) metre electrical exclusion zone. A copy of this assessment shall be kept for future reference.

When assessing the risk, the PCBU should consider:

- Identifying the minimum clearance distance from the closest part of the crane or other operating plant to the power line
- Whether the load is intended to be carried above or adjacent to live power lines or may encroach the three (3) metre electrical exclusion zone.

The outcome is to be documented in a Safe Work Method Statement (SWMS) provided by the PCBU and their Recipient providing a priority list of control measures based on risk levels. A site inspection is to be organised with the PCBU Recipient and the Traction Power Engineer or their representative who will provide an agreed control measure in the form of:

- Form C -Permit To Work
- Safety Clarification Advice (SCA)
- Standard Work Activities (SWA)
- Approved engineered safety barriers.



10 Safe Work Method Statement (SWMS)

All work on or near Overhead Line Equipment requires a Safe Work Method Statement.

For the purpose of work near or on Exposed Electrical Equipment, a SWMS is a controlled document that shall:

- Have a title which describes the type of work.
- Contain a unique number for the SWMS (and the associated methodology for SCA's).
- Contain a revision number, date and the name and signature of the approver.
- Be specific to the worksite location and task.
- Identify the Worksite and work activity to be conducted Near or On Exposed Electrical Equipment.
- State hazards relating to the high-risk construction work and risks to health and safety associated with those hazards (risk assessment).
- Describe the measures to be implemented to control the risks.
- Describe how the control measures are to be implemented, monitored, and reviewed.
- Contain the relevant stages of the work (for complex worksites).
- Be set out and expressed in a way that is readily accessible and understandable to persons who use it.
- Be signed by all workers involved in the activity before work commences.

A safe work method statement shall be site and work activity specific. A relevant and adequate Safe Work Method Statement is a prerequisite for the issue of a Form C/D or Safety Clarification Advice (SCA) to a Recipient (Authorised Person in Charge).

10.1 Control measures for Safe Work Method Statements (SWMS)

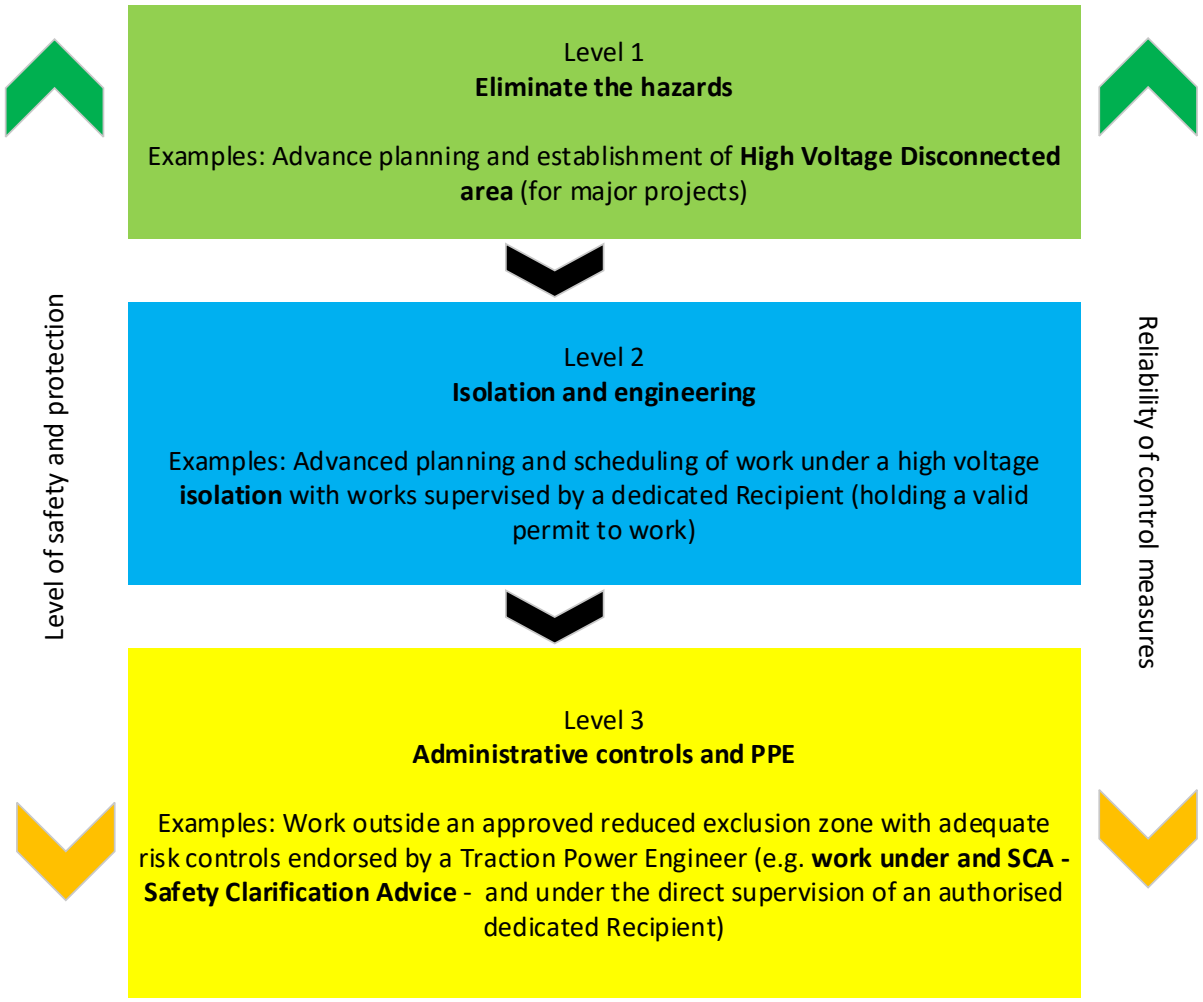
The hierarchy of risk controls

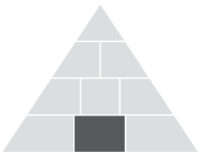
Electrical safety depends on appropriate training, risk assessment, work planning, and verification of risk controls (including assurance of safe work location).

Risk controls are ranked from the highest level of protection and reliability to the lowest. It is important to work through the hierarchy to choose the control(s) that most effectively eliminates or minimises the risk, taking into consideration the specific work circumstances, so far as is reasonably practicable. This may involve a single control measure or a combination of two (2) or more controls.

The major control measures for Electrification Safety are:

- Form C -Permit To Work, or
- Safety Clarification Advice, or
- Standard Work Activity, or
- Approved engineered barriers.





The following control measures shall be considered in order of hierarchy when developing the SWMS.

The preferred control measure is elimination. Evidence should be provided that the elimination control was considered before choosing a lower level of control.

Hierarchy of control	Typical controls within Queensland Rail	Examples
Elimination	HV Approved Disconnection Points Removal of OHLE span Removal of feeders from HV equipment	Implementation of approved HV disconnection points to segregate (greenfield) work areas from all possible sources of HV supply (e.g. live traction network and other HV supplies). Re-designing equipment or work processes to eliminate the risk exposure (e.g. remote operation of switchgear equipment whenever possible). Conducting detailed measurement of electrical clearances (within the three (3) metre electrical exclusion zone) with a laser survey (or a purpose build recording car) where workers conduct all activities away from the three (3) metre electrical exclusion zone.
Substitution	A different way to undertake the task/work Laser to measure distance	Minimise the risk by substituting or replacing a hazard or hazardous work practice with a safer one. This may include performing the work another way. Selecting plant and equipment which allows performance of works in electrified areas without encroaching the 25 kV three (3) metre electrical exclusion zone (e.g. selection of smaller excavators to complete tasks - accounting for lower excavation rates feasible).
Isolation	Form C/D	Scheduling work to a time when it can be performed under an isolation (e.g. during a scheduled major track closure or night time isolation). Requesting and scheduling work on and near HV equipment under a permit to work (e.g. Form C for Overhead Line Equipment or Form, D/ DT for HV apparatus) with work supervised by a Recipient and clearly communicating and demarcating the safe area of work on site (by the Recipient - Person in charge of electrical safety). This is the preferred control for work on and near existing (live) electric traction infrastructure noting that the risk of an electrical incident cannot be eliminated when working on electrified corridors. The greatest risk is found when a worker or work party performs work at the wrong location (assuming an isolation is in place) or at the wrong time (before or after the isolation is secured and a permit of work is issued).

Hierarchy of control	Typical controls within Queensland Rail	Examples
Engineering controls	Approved barrier Height limiting device Height barriers	Engineering controls are physical control measures to minimise risk. If a risk then remains, the duty holder shall minimise the remaining risk, so far as is reasonably practicable, by using: Administrative controls.
Administration controls	SCA or SWA with Recipient on site and in control of Spotter/Electrical Safety observer	Administrative controls should only be considered when other higher order control measures are not reasonably practicable, or to increase protection from the hazard. These are work methods or procedures designed to minimise the exposure to a hazard.
Personal protective equipment	Use the approved PPE for the task. For example: • Safety eye protection • PPE Clothing • Safety Footwear • Safety Helmets	Personal protective equipment (PPE) is the lowest order control measure in the hierarchy of controls. PPE should also only be considered when other higher order control measures are not reasonably practicable or to increase protection from the hazard.

10.2 Examples of control measures for working within or near the three (3) metre electrical exclusion zone

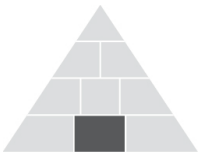
Below are some common examples of controls which are used when working within or near the three (3) metre electrical exclusion zone. Please note that the following list of examples is not exhaustive and is intended to provide a general overview. Other controls not listed here may also be relevant to individual worksites.

Type of control	Picture
Bollards and flagging	
Temporary fencing	

Type of control	Picture
Permanent fencing	
Water filled barriers	

Type of control	Picture
Barriers and flagging attached to track infrastructure	
Excavation boundaries	

Type of control	Picture
Temporary barriers	
Electronic height limiters for plant and machinery	

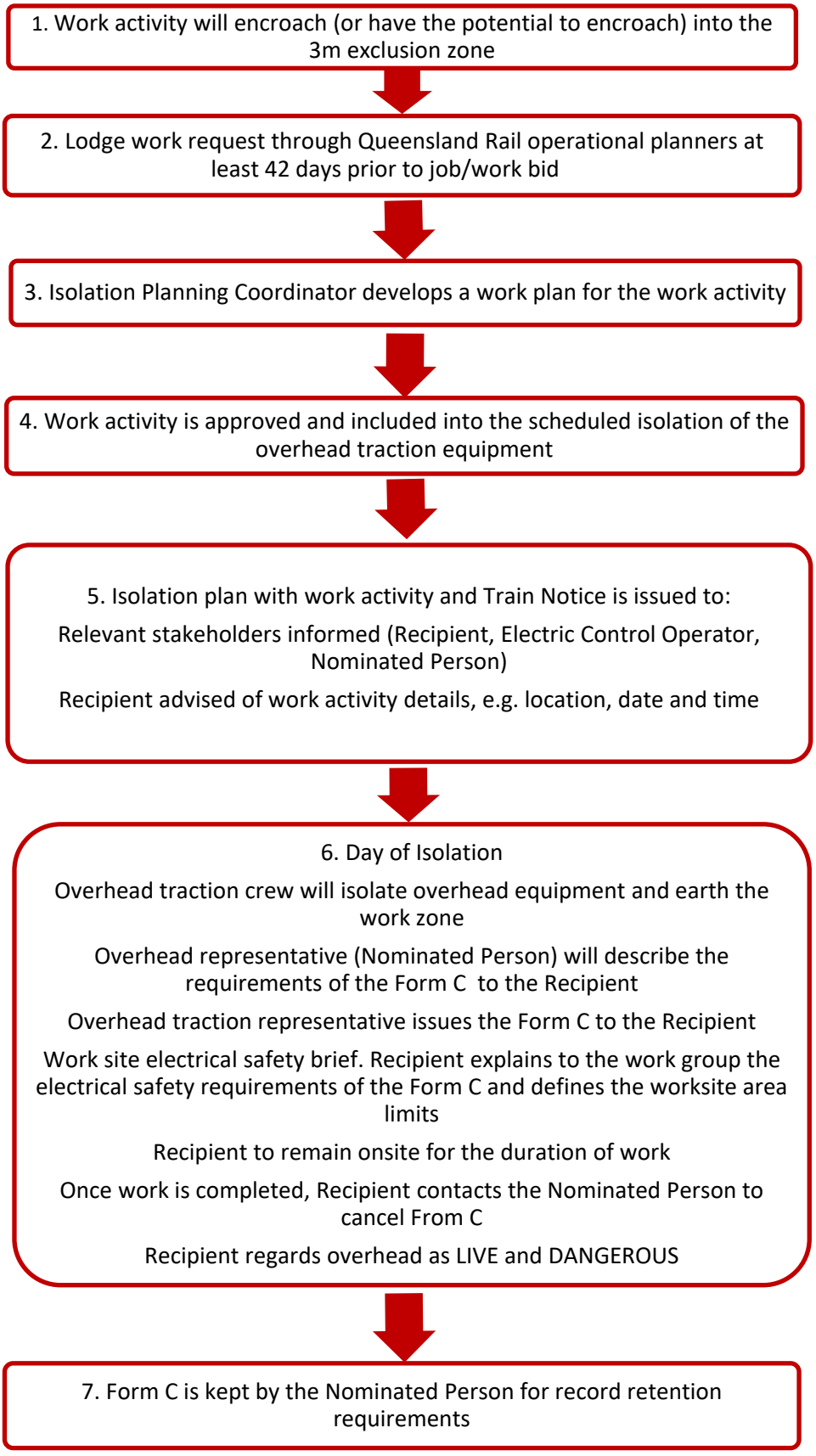


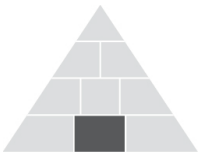
10.3 Live equipment above a Form C or SCA/SWA worksite

Control measures shall be in place for any live equipment above a Form C or SCA/SWA worksite. The control measures may include, but are not restricted to:

- Constructing physical barriers or height warning indicators either side of the overhead electric line that are lower than the maximum travel height permissible without encroaching within the three (3) metre electrical exclusion zone.
- Applying appropriate signage at least 8m to 10m either side of overhead electric lines.
- Ground barriers, where appropriate.
- Informing workers of required work practices.
- Ensuring operators are aware of the height and reach of their machinery in both stowed and working positions.
- Lowering all machinery to the transport position when relocating.
- Providing workers with maps or diagrams showing the location of underground and overhead electric lines; and
- Where possible, directing work away from live equipment and not towards it.

11 Form C Permit To Work





11.1 Isolations and Permit To Work (Form C)

A Form C is a permit issued subsequent to isolation and earthing of relevant Electrical Apparatus to facilitate safe work near or on Electrical Apparatus, including Overhead Line Equipment.

This Form C is a declaration signed and issued by a Nominated Person for work to be carried out on, or near to, overhead traction wiring equipment.

The purpose of the form is to make known to the PCBU Recipient (Authorised Person in Charge) specifically which equipment is isolated and earthed, and upon which, or near to which, it is safe for work to be carried out.

Work related to a Form C shall be adequately described and controlled by a relevant Safe Work Method Statement.

11.2 Form C Process

11.2.1 Determining an isolation

An isolation should always be the preferred control measure, before considering working under a Safety Clarification Advice or a Standard Work Activity.

11.2.2 Isolation bids

When a requirement exists for a Planned Isolation, the worker requesting the isolation shall provide a written request to the Operational Planners. This request shall be submitted more than 42 days before the requested isolation date.

This requirement applies to isolations of the overhead line and traction power supply equipment. Once the isolation bid has been approved, the isolation plan can be finalised.

11.2.3 Isolation

The purpose of an isolation is to allow work to occur that cannot be carried out safely within the live three (3) metre electrical exclusion zone. By isolating the overhead Traction Equipment (switching the power off), it allows work to be carried out safely on or near the Overhead Traction Equipment.

11.2.4 Earthing

The isolated Overhead Line Equipment is earthed to safely discharge induced or residual voltages.

In the event that supply is accidentally restored, the temporary earths limit the rise in potential difference (voltage) at the work area and will in turn cause protection equipment to operate.

The Overhead Line Equipment shall be tested and earthed to complete the isolation process.

11.3 Working under isolation conditions

The Recipient's responsibility is to receive, accept responsibility, transfer, and finally surrender the Form C at their particular work site (unless an alternative surrender site has been arranged) and control workers according to the conditions listed on the document. The Electric Control Operator (ECO) is in charge of the isolation process.

11.3.1 Part 1: issuing a Form C

Form C - Permit To Work will allow workers under the supervision of a Recipient, to work "ON" or "NEAR" isolated Overhead Line Equipment.

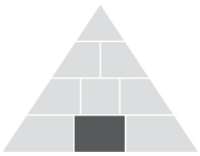
The Nominated Person will issue the Form C - Permit To Work to a Recipient only.

The Nominated Person will check to ensure the Recipient is qualified.

This permit is issued after the isolation and earthing of the Overhead Line Equipment is completed.

The issue of the Form C will be accompanied by verbal explanations from the Nominated Person concerning:

1) The working limits of the worksite.
2) Where earths are located for the protection of the worksite.
3) Equipment which has not been isolated and is LIVE and DANGEROUS.
4) Associated timeframes of the isolation.



Any permit/Form C issued where there is live wire/equipment near the worksite or abutting the limits of the isolation shall be followed by a walk through with the Nominated Person explaining to the Recipient potential electrical hazards.

Recipients can receive a Form C at a predetermined location depending on the circumstances, only if the worksite is not adjacent to energised (live) equipment.

Note

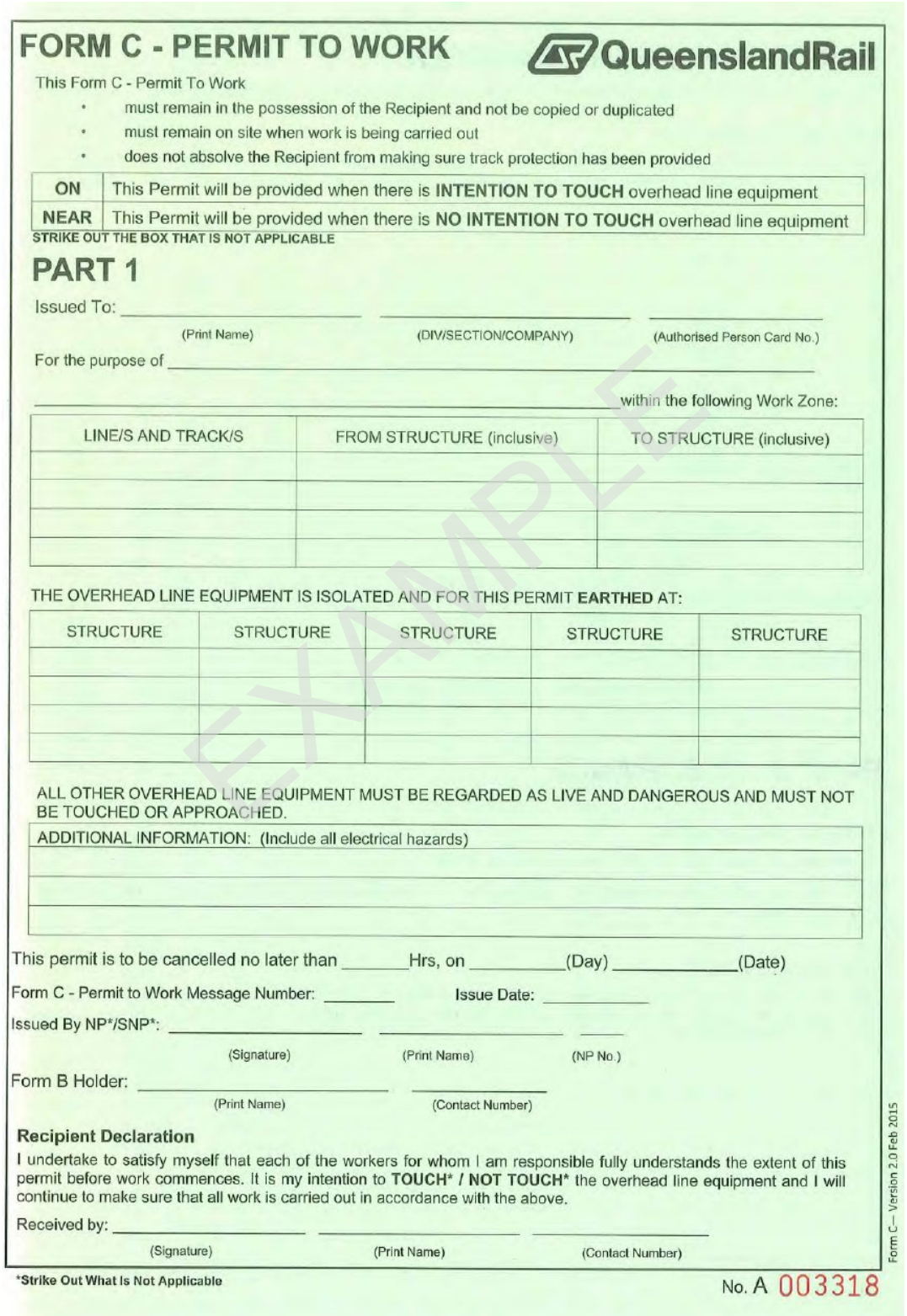
After receiving the Form C - Permit To Work the Recipient shall conduct a Pre-start Briefing with their work group explaining all aspects of the electrical safety.

The Recipient must be able to visually see the Form C worksite at all times and be in a position to stop work if an electrical safety issue arises.

The Recipient shall be in a position to stop work.

When the Recipient leaves the site with the Form C, no work can be undertaken within the three (3) metre electrical exclusion zone, and they shall remain contactable after leaving the site.

Where two (2) or more working parties are working within the same isolation, a separate Form C - Permit To Work shall be issued to each Recipient.



FORM C - PERMIT TO WORK

QueenslandRail

This Form C - Permit To Work

- must remain in the possession of the Recipient and not be copied or duplicated
- must remain on site when work is being carried out
- does not absolve the Recipient from making sure track protection has been provided

ON	This Permit will be provided when there is **INTENTION TO TOUCH** overhead line equipment
NEAR	This Permit will be provided when there is **NO INTENTION TO TOUCH** overhead line equipment

STRIKE OUT THE BOX THAT IS NOT APPLICABLE

PART 1

Issued To: _____ _____ _____

(Print Name) (DIV/SECTION/COMPANY) (Authorised Person Card No.)

For the purpose of _____

_____ within the following Work Zone:

LINE/S AND TRACK/S	FROM STRUCTURE (inclusive)	TO STRUCTURE (inclusive)

THE OVERHEAD LINE EQUIPMENT IS ISOLATED AND FOR THIS PERMIT **EARTHED** AT:

STRUCTURE	STRUCTURE	STRUCTURE	STRUCTURE	STRUCTURE

ALL OTHER OVERHEAD LINE EQUIPMENT MUST BE REGARDED AS LIVE AND DANGEROUS AND MUST NOT BE TOUCHED OR APPROACHED.

ADDITIONAL INFORMATION: (Include all electrical hazards)

This permit is to be cancelled no later than _____Hrs, on _____(Day) _____(Date)

Form C - Permit to Work Message Number: _____ Issue Date: _____

Issued By NP*/SNP*: _____ _____ _____

(Signature) (Print Name) (NP No.)

Form B Holder: _____ _____

(Print Name) (Contact Number)

Recipient Declaration

I undertake to satisfy myself that each of the workers for whom I am responsible fully understands the extent of this permit before work commences. It is my intention to **TOUCH* / NOT TOUCH*** the overhead line equipment and I will continue to make sure that all work is carried out in accordance with the above.

Received by: _____ _____ _____

(Signature) (Print Name) (Contact Number)

*Strike Out What Is Not Applicable

No. A 003318

Form C – Version 2.0 Feb 2015

Figure 5 - Example blank Form C

11.3.2 Marking the limits of a Form C worksite

When a Recipient is issued a Form C - Permit to work, the Nominated Person issuing the permit will explain to the Recipient where the limits of their worksite are located.

It is the responsibility of the Recipient receiving the Permit to visibly mark the limits of their individual worksite using the recommended sign. The recommended sign should have the following qualities:

A safety orange background that can be wrapped around a mast.

- Text containing the following words:
  - Limit of work area for Form C - Permit to work.
  - Reflective tape above and below the text.

For work at night, it is recommended that flashing LED blue lights are used to mark the limits of a worksite.

It is the responsibility of the Recipient receiving the permit to make sure all workers under their control understand where those limits are placed.

If it is not possible to mark the limits as outlined above, then the Recipient shall produce a worksite sketch, illustrating the limits of the worksite. The Recipient shall use the sketch to brief the work group at the pre-start meeting.

11.3.3 Worksite safety briefing

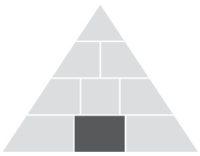
The Recipient shall communicate electrical safety information to all workers under their control through a daily Pre-Start Safety Briefing.

This allows the appointed Recipient and their workers to discuss the work process, types of control measures for electrical safety issues that shall be in place and may impact on their working safely at that work site.

Any new workers who arrive at the worksite after the Pre-Start Briefing shall have the electrical safety aspects of the Pre-Start delivered to them by the Recipient. Whilst completing this task, the Recipient shall ensure electrical safety on site can be monitored effectively or shall stop the work. If work must be paused, all workers, equipment and machinery shall be moved to a Safe Place and remain there until the Recipient is back on site and advises the work group that work can recommence.

If work is unable to be paused (when a new worker enters the worksite), the Recipient may:

- Transfer the permit to another Recipient, or
- Delegate the role to deliver the Pre-Start Safety Briefing to a suitably competent/experienced worker.



The Recipient shall conduct additional briefings when there is a change of shift or any visitors come to the worksite.

Under no circumstances shall the Recipient leave the work site whilst work for the electrical activity is being undertaken.

Note

If the Recipient must leave the worksite, all workers will be stood down and will be instructed to keep three (3) metres away from all Overhead Line Equipment. All plant and machinery shall be removed from the three (3) metre electrical exclusion zone.

11.3.4 Part 2: Recipient Transfer

Complete Part 2 Transfer

When the Recipient is to be relieved the Form C - Permit To Work shall be transferred in a face-to-face meeting on site, with the relieved and relief Recipient. The relieved Recipient shall:

- Check that the relief Recipient is qualified.
- Ensure the relief Recipient understands all the conditions associated with the Form C - Permit To Work.
- Complete the necessary transfer details in Part 2 of the Form C.
- Sign Part 2 of Form C.
- Ensure that the relief Recipient completes Part 2 of the Form C.

On completion of the transfer Part 2, the relief Recipient is to immediately advise the Nominated Person of the transfer details. If the Nominated Person cannot be contacted, then contact the ECO and provide the transfer details.

When transferring a Form C, the relief Recipient shall read the Relief Recipient Declaration out loud to the relieved Recipient.

PART 2: RECIPIENT TRANSFER

This section must be completed when the Recipient is to be relieved only by another Recipient.

Relief Recipient Declaration

I am now in charge of the electrical safety of workers working under this Permit. I fully understand the conditions of this Permit and I will continue to make sure that all work is carried out in accordance with these conditions.

		1	2	3	4	5
Relief Recipient	Signature:					
	Print Name:					
	Contact No.:					
	Authorised Person No.:					
Recipient being relieved	Signature:					
	Time of transfer:					
	Date:					

On completion of transfer the relief Recipient is to immediately advise the NP / SNP or the ECO

ECO Brisbane: QR internal phone: 812212 or 811313
QR external phone: 3235 1212 or 3235 1313

EXAMPLE

Figure 6 - Example Form C transfer section

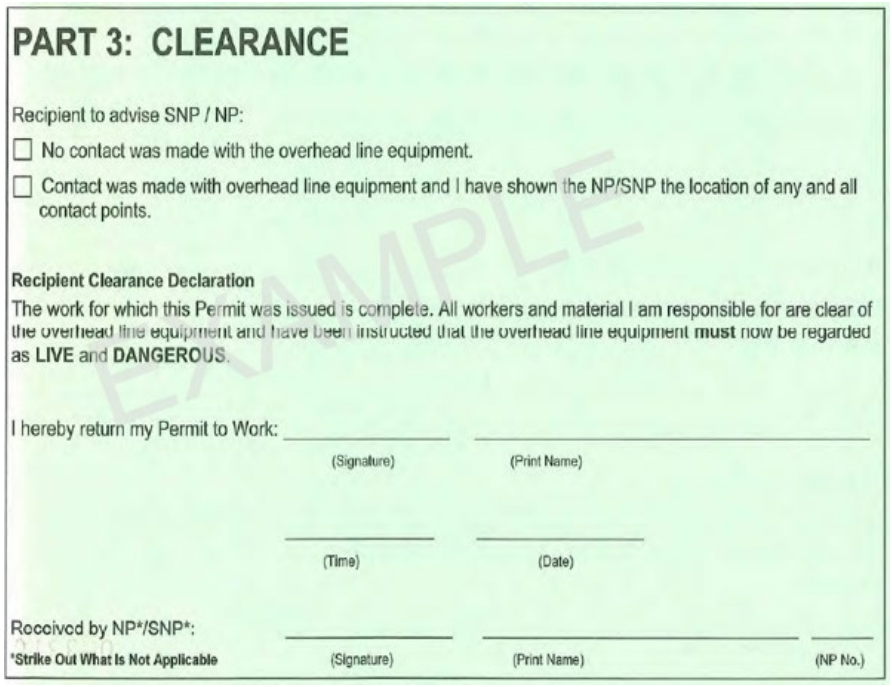
11.3.5 Part 3: Clearance of Form C

Complete Part 3 Form C

At the completion of the work for which the Form C was issued, but not later than the cancellation time shown on the Form C, the Recipient shall make sure:

- All plant, equipment and materials are removed, and all workers have moved clear of a minimum distance of three (3) metres from the Overhead Line Equipment.
- All worksite limit markers are removed.
- The Nominated Person has been advised if contact has been made with the Overhead Line Equipment. It is preferable that the Nominated Person is contacted as soon as any contact has been made with the Overhead Line Equipment.
- Part 3 of the Form C is completed, and the declaration is read aloud.
- The Form C is surrendered to the Nominated Person at the agreed location.

Once the Form C has been surrendered and cancelled, all workers shall treat the Overhead Traction Equipment as LIVE and DANGEROUS.



PART 3: CLEARANCE

Recipient to advise SNP / NP:

☐ No contact was made with the overhead line equipment.

☐ Contact was made with overhead line equipment and I have shown the NP/SNP the location of any and all contact points.

Recipient Clearance Declaration

The work for which this Permit was issued is complete. All workers and material I am responsible for are clear of the overhead line equipment and have been instructed that the overhead line equipment **must** now be regarded as **LIVE** and **DANGEROUS**.

I hereby return my Permit to Work: _____ _____

(Signature) (Print Name)

_____ _____

(Time) (Date)

Received by NP*/SNP*: _____ _____ _____

*Strike Out What Is Not Applicable (Signature) (Print Name) (NP No.)

Figure 7 - Example Form C clearance section

11.3.6 Example Form C scenario

The following scenario illustrates a Form C worksite and the associated Form C.

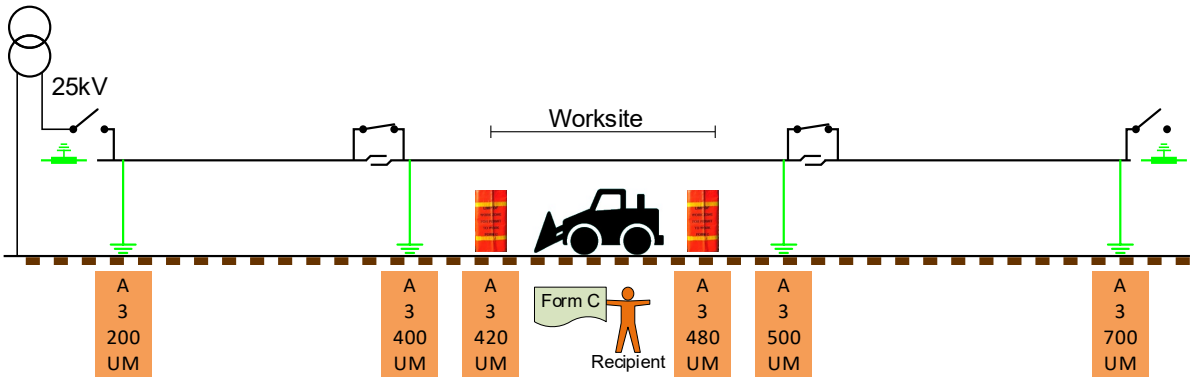


Figure 8 - Example Form C scenario

FORM C - PERMIT TO WORK

QueenslandRail

This Form C - Permit To Work

- must remain in the possession of the Recipient and not be copied or duplicated
- must remain on site when work is being carried out
- does not absolve the Recipient from making sure track protection has been provided

~~ON~~	~~This Permit will be provided when there is **INTENTION TO TOUCH** overhead line equipment~~
NEAR	This Permit will be provided when there is **NO INTENTION TO TOUCH** overhead line equipment

STRIKE OUT THE BOX THAT IS NOT APPLICABLE

PART 1

Issued To: THOMAS EDISON (Print Name) QR - SEQ ASSETS (DIV/SECTION/COMPANY) 12345 (Authorised Person Card No.)

For the purpose of MOVEMENT OF BALLAST USING FRONT END LOADER

within the following Work Zone:

LINE/S AND TRACK/S	FROM STRUCTURE (inclusive)	TO STRUCTURE (inclusive)
UP MAIN	A/3/400UM	A/3/500UM

THE OVERHEAD LINE EQUIPMENT IS ISOLATED AND FOR THIS PERMIT **EARTHED** AT:

STRUCTURE	STRUCTURE	STRUCTURE	STRUCTURE	STRUCTURE
A/3/400UM	A/3/500UM			

ALL OTHER OVERHEAD LINE EQUIPMENT MUST BE REGARDED AS LIVE AND DANGEROUS AND MUST NOT BE TOUCHED OR APPROACHED.

ADDITIONAL INFORMATION: (Include all electrical hazards)

This permit is to be cancelled no later than 14:30 Hrs, on SUNDAY (Day) 10/07/2022 (Date)

Form C - Permit to Work Message Number: 0805 Issue Date: 10/07/2022

Issued By~~NP*~~/SNP*: CHARLES BRUSH (Signature) CHARLES BRUSH (Print Name) 166 (NP No.)

Form B Holder: NIKOLA TESLA (Print Name) 0414123456 (Contact Number)

Recipient Declaration

I undertake to satisfy myself that each of the workers for whom I am responsible fully understands the extent of this permit before work commences. It is my intention to ~~**TOUCH***~~ / **NOT TOUCH*** the overhead line equipment and I will continue to make sure that all work is carried out in accordance with the above.

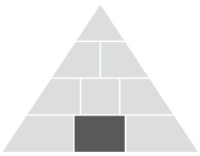
Received by: THOMAS EDISON (Signature) THOMAS EDISON (Print Name) 0414654321 (Contact Number)

Form C – Version 2.0 Feb 2015

***Strike Out What Is Not Applicable**

No. A 003318

Figure 9 - Example Form C scenario front page



PART 2: RECIPIENT TRANSFER

This section must be completed when the Recipient is to be relieved only by another Recipient.

Relief Recipient Declaration

I am now in charge of the electrical safety of workers working under this Permit. I fully understand the conditions of this Permit and I will continue to make sure that all work is carried out in accordance with these conditions.

		1	2	3	4	5
Relief Recipient	Signature:	BILL STANLEY				
	Print Name:	BILL STANLEY				
	Contact No.:	0414987654				
	Authorised Person No.:	123987				
Recipient being relieved	Signature:	THOMAS EDISON				
Time of transfer:		10:35				
Date:		10/07/2022				

On completion of transfer the relief Recipient is to immediately advise the NP / SNP or the ECO

ECO Brisbane: QR internal phone: 812212 or 811313
QR external phone: 3235 1212 or 3235 1313

PART 3: CLEARANCE

Recipient to advise SNP / NP:

☑ No contact was made with the overhead line equipment.

☐ Contact was made with overhead line equipment and I have shown the NP/SNP the location of any and all contact points.

Recipient Clearance Declaration

The work for which this Permit was issued is complete. All workers and material I am responsible for are clear of the overhead line equipment and have been instructed that the overhead line equipment **must** now be regarded as **LIVE** and **DANGEROUS**.

I hereby return my Permit to Work: BILL STANLEY (Signature) BILL STANLEY (Print Name)

13:55 (Time) 10/07/2022 (Date)

Received by ~~NP~~*/SNP*: CHARLES BRUSH (Signature) CHARLES BRUSH (Print Name) 166 (NP No.)

*Strike Out What Is Not Applicable

Figure 10 - Example Form C scenario rear page

12 Safety Clarification Advice (SCA)

12.1 Safety clarification advice principles

A Safety Clarification Advice (SCA) is written advice provided to a Recipient (Person in Charge of electrical safety) on how to safely carry out work that has the potential to come within the three (3) metre electrical exclusion zone of the live Electric Traction System.

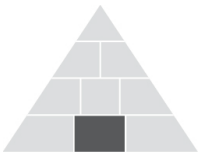
It is site and activity specific written advice, concerning work restrictions in the vicinity of live Overhead Line Equipment. This advice is supplied by the Traction Power Engineer or their delegated representative in response to a request from a PCBU Recipient (Authorised Person in Charge at that site). The SCA shall be issued by the Traction Power Engineer to the Recipient on site.

Work related to a SCA shall be adequately described and controlled by a relevant Safe Work Method Statement.

When working under an SCA, the Recipient shall ensure that any conductive materials are stored an appropriate distance from live equipment, to prevent step and touch potential.

A Safety Clarification Advice is:

Provided by Queensland Rail on how to safely carry out work that could or will come within the three (3) metre electrical exclusion zone of the live Overhead. The Safety Clarification Advice shall be a uniquely numbered form.



It applies only:

- When all the advice on control measures written in the Work Method Statement and Safety Clarification Advice has been carried out; and
- For that specified work activity; and
- For a specific time period or until the specified work activity is completed, (whichever comes first); and
- At a specified location.

The advice contained on the Safety Clarification Advice form shall clearly indicate the restrictions on work and work methods when work could or will come within three (3) metres of the live Overhead Line Equipment.

It is not a Form C - Permit To Work. The Recipient remains responsible for the electrical safety of the work group.

Each Safety Clarification Advice shall set out as an additional restriction that the Recipient shall tell the Electric Control Operator at the start and at the finish of daily work activities. This activates or deactivates the Safety Clarification Advice.

Safety Clarification Advice can be transferred from one Recipient to another Recipient. This shall be recorded on the Safety Clarification Advice and the Electric Control Operator shall be informed at the time of transfer.

A COPY to the RECIPIENT
A COPY to LOCAL AREA TRACTION POWER ENGINEER FOLDER and ELECTRIC CONTROL OPERATOR

QueenslandRail

SCA Number

ELECTRIFIED AREA
SAFETY CLARIFICATION ADVICE (SCA)

(For non-standard work activities that have the potential to encroach the 3m to Electrical Exclusion Zone around LIVE overhead traction equipment)

The Recipient must contact the ECO at the start and finish of work. SCAs are not to be activated, deactivated, transferred, or cancelled between the hours of 0600hrs and 0700hrs, excluding emergency scenarios.

Date:		**Electrical Section:**		
Location/Track:				
Work Limits:				
Requestor:				
Job:				
Time Duration:	From		to	
Description of Specific Work:				
Relevant SWMS				
Advice on Control Measures to be Implemented:				

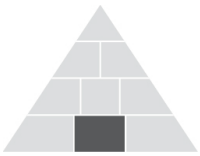
Caution: The Recipient is responsible for ensuring that all workers are fully informed and understand the Job Safety Analysis and Safe Work Method Statement. These are to comply with recipient requirements of recipient training. The Recipient shall communicate the above with the Safety Clarification Advice before starting work. The recipient is responsible for the electrical safety of work group.

1. The Recipient shall implement all control measures before work starts
2. The Recipient shall continuously monitor and manage the work site while workers are working next to the live overhead line equipment
3. The Recipient shall contact the SCA issuer if control measures need reassessment or changing
4. The Recipient shall contact the ECO and SCA issuer if work finishes early and complete early cancellation
5. The Recipient shall contact the SCA issuer to extend or renew the SCA. Any extension must be completed minimum 48 hrs before the SCA completion date.
6. When transferring the SCA, both Recipients shall fill out the details at the back of the SCA form and the New Recipient shall contact the ECO.
7. Transfer of SCA must be performed in person and on site between the existing Recipient and new Recipient.

Issued By		Received By
	Name	
	Position	
	Recipient Number	
	Phone	
	Signature	

Remember: The SCA provides mandatory advice on work site traction electrification safety. **The Recipient remains responsible for the electrical safety of the work group**

Early Cancellation					
Time:		**Date:**		**Signature:**	



SCA TRANSFER DETAILS

SCA Number

New Recipient to contact ECO at time of transfer

	DETAILS	TRANSFERING FROM RECIPIENT	TRANSFERING TO RECIPIENT	DETAILS	
TRANSFER 1	Recipient Name:			TRANSFER DATE AND TIME	
	Recipient Number:				
	Signature:				
	New Recipient Contact No.			ECO Advised:	☐ Yes
TRANSFER 2	Recipient Name:			TRANSFER DATE AND TIME	
	Recipient Number:				
	Signature:				
	New Recipient Contact No.	-		ECO Advised:	☐ Yes
TRANSFER 3	Recipient Name:			TRANSFER DATE AND TIME	
	Recipient Number:				
	Signature:				
	New Recipient Contact No.	-		ECO Advised:	☐ Yes
TRANSFER 4	Recipient Name:			TRANSFER DATE AND TIME	
	Recipient Number:				
	Signature:				
	New Recipient Contact No.	-		ECO Advised:	☐ Yes
TRANSFER 5	Recipient Name:			TRANSFER DATE AND TIME	
	Recipient Number:				
	Signature:				
	New Recipient Contact No.	-		ECO Advised:	☐ Yes
TRANSFER 6	Recipient Name:			TRANSFER DATE AND TIME	
	Recipient Number:				
	Signature:				
	New Recipient Contact No.	-		ECO Advised:	☐ Yes

I ACCEPT RESPONSIBILITY FOR THE SCA AND UNDERSTAND THE CONDITIONS ON THE FORM AND HAVE ADVISED ELECTRIC CONTROL OPERATOR OF THE CHANGE OF RECIPIENT.

ECO:	Internal Phone	External Phone
Brisbane	889 1212	3072 1212

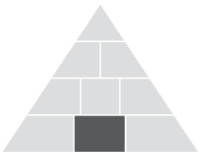
12.2 ECO actions for SCA worksites

If a fault occurs on the 25 kV traction equipment adjacent to a worksite with an active SCA, the ECO shall attempt to contact the Recipient in charge of the area via the contact number/s received when the SCA was activated.

In the event that communications cannot be immediately established with the Recipient in charge of the area, the ECO shall continue to attempt to make contact and shall not re-energise the 25 kV equipment within six minutes of the initial fault time.

Unnecessary train delays can occur if a Recipient fails to deactivate an SCA.

The ECO shall report any failure to contact the Recipient in charge of the area to the “On call Engineer” for further investigation and appropriate action.



12.3 The Safety Clarification Advice process

Step 1	It is determined that the work activity may encroach the three (3) metre electrical exclusion zone.
Step 2	The applicant is to determine whether the work can proceed using a higher level of control such as a Form C.
Step 3	A Safe Work Method Statement, risk assessment and work description are prepared for the work activity. The applicant will determine the methodology and electrical safety controls.
Step 4	The applicant is to submit the Safety Clarification Advice (SCA) Application (MD-21-260) along with the supporting information (SWMS, methodology). The application must be submitted a minimum of 15 business days before the date of requiring the Safety Clarification Advice.
Step 5	The Traction Power Engineer will contact the Safety Clarification Advice (SCA) Requestor to organise a site visit to assess if an SCA would be suitable for the works. During the site visit, the methodology and controls will be further discussed. It is recommended that the Safety Clarification Advice (SCA) Requestor, Site Supervisor and Recipient attend the initial site visit.
Step 6	If the methodology and controls are determined to be inadequate to allow the works to be performed safely from a traction power perspective, the SCA application will be rejected, and the activity must be completed under an isolation. If there are any significant changes to the application, the Safety Clarification Advice (SCA) application will require resubmission and the processing timeframe will be reset.
Step 7	Once the controls are finalised and prior to the Safety Clarification Advice (SCA) being issued, the SWMS must list the same electrical safety controls that will be listed on the Safety Clarification Advice (SCA). The SWMS must be signed and dated by the author or approver of the SWMS prior to SCA issuing.
Step 8	The Safety Clarification Advice (SCA) is issued to the Recipient onsite for the work activity.
Step 9	On the day of the job, the Recipient will: • Confirm the Safety Clarification Advice (SCA) is for the correct location and is within the listed time duration. • Call the ECO to advise that they are onsite. • Discuss the Safety Clarification Advice with the work group by way of a Pre Start Briefing. • Administer the Safety Clarification Advice for the work activity. • Call the ECO at the end of the day or when the job is completed. • Cancel the Safety Clarification Advice upon completion of the job.
Step 10	File Safety Clarification Advice for record retention requirements.

12.4 Requesting a Safety Clarification Advice

When work could or will require workers or objects to approach closer than the three (3) metre electrical exclusion zone of the live Overhead Line Equipment, the PCBU line management team shall appoint a Recipient. This only applies to work which has not been categorised as a Standard Work Activity.

A uniquely numbered Safe Work Method Statement detailing the electrical safety aspects of the work shall be documented by a PCBU, in consultation with both the trained Recipient and their work team.

- This worker shall have knowledge of electrical safety and working within three (3) metres of the live Overhead Line Equipment.

- The Safe Work Method Statement shall contain the minimum control measures needed to make sure an unsafe electrical situation is not created at any stage of the works.

The Recipient shall give, to the Traction Power Engineer, a written request for a Safety Clarification Advice (SCA) Application Form MD-21-260 at least 15 business days before the date of requiring the Safety Clarification Advice.

The Work Method Statement shall also be submitted at this time.

The Recipient shall arrange for the Traction Power Engineer or their representative to carry out a worksite inspection.

The Traction Power Engineer or their representative shall make sure the Recipient, who will receive the Safety Clarification Advice, is qualified.

12.5 Issuing a Safety Clarification Advice (SCA)

The Traction Power Engineer or their representative may issue a Safety Clarification Advice to the Recipient or advise in writing an alternative process to ensure electrical safety and compliance with legislation. Initial advice may be verbal.

The Safety Clarification Advice shall set out control measures needed to be in place before work starts to make sure electrical safety is not compromised.

Controls listed on a Safety Clarification Advice may be in addition to those written in the Safe Work Method Statement.

Advice on Control Measures to be Implemented:	No plant, equipment, material or personnel are to come within 2.0m of **LIVE** 25kV OHLE or train pantographs. Beware of **LIVE** OHLE supported on portals.
	The Recipient MUST ensure that the following electrical safety controls are adhered to: • A demarcation barrier shall be setup on road 22 at a minimum of 2.9m from the nearest rail and 2.0m horizontally offset from live OHLE. • The Recipient/safety observer must be positioned at the barrier to ensure plant and equipment do not extend past the barrier toward OHLE and must always have direct communication with operators. • Each piece of plant must be assigned a Recipient/safety observer. • Safety observer to have clear access to the emergency stop buttons. • All materials are to be carried at waist height. • Materials are not to be lifted greater than 300mm above the installed posts. • Fence panels are to be installed by two workers when being fixed to the posts.

Figure 11 - Example Safety Clarification Advice controls

Minimum distances of demarcation barriers require the approval of the Traction Power Engineer. Distances of demarcation barriers will be defined on the Safety Clarification Advice and the SWMS / methodology.

Figure 12 - Barrier distance approved by the Traction Power Engineer

The Safety Clarification Advice shall reference the uniquely numbered Safe Work Method Statement. All writing in pen on a Safety Clarification Advice (SCA) Application Form MD-21-260 shall be in black or blue ink.

Relevant SWMS	All work must be carried out as per: • SWMS: QR01-02-03 – Fencing installation works (rev1.0, signed G.Ohm, date 31/12/2025)

Figure 13 - Example Safety Clarification Advice SWMS reference

The Recipient receiving the Safety Clarification Advice shall read and understand the details listed in the advice. Any questions or concerns about the Safety Clarification Advice shall be raised with the issuer before signing the advice.

Issued By		**Received By**
HEINRICH HERTZ	**Name**	THOMAS EDISON
TRACTION POWER ENGINEER	**Position**	RECIPIENT
-	**Recipient Number**	123456
0414111222	**Phone**	0414123456
Heinrich Hertz	**Signature**	Thomas Edison

Figure 14 - Example Safety Clarification Advice reciept section

The Traction Power Engineer or their representative shall email a copy of the Safety Clarification Advice to the Electric Control Operator.

12.6 Implementing a Safety Clarification Advice (SCA)

The Recipient is responsible for implementing and communicating all the control measures to workers as part of the daily Pre-Start Safety Briefing.

Control measure requirements for height limited plant can vary depending on the type of worksite. Worksites that have a Principal Contractor (PC) arrangement in place may have individual requirements specified by the contractor. It is the responsibility of the Recipient to ensure that the correct controls have been implemented on height limited plant in accordance with the Safety Clarification Advice (SCA), SWMS and work methodology.

Recipients are also responsible for informing the Electric Control Operator at the start and at the finish of daily work activities to activate and deactivate the Safety Clarification Advice.

A Recipient can only activate one (1) Safety Clarification Advice (SCA) at any given time.

The Recipient must be able to visually see the Safety Clarification Advice (SCA) worksite at all times and be in a position to stop work if an electrical safety issue arises.

It is important that the Electric Control Operator knows when the Recipient is on site. (When you start and finish the work).

If a fault occurs in your area, the power to the overhead traction equipment will be shut down automatically.

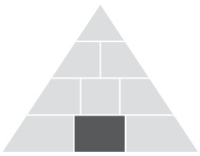
If your Safety Clarification Advice (SCA) is not active, the Electric Control Operator would be unaware of your presence on site, and they will switch on the power to the overhead traction equipment immediately.

If your Safety Clarification Advice (SCA) is active, the Electric Control Operator is aware of your presence on site, and they will delay switching the power on to give you time to contact them in the event of an emergency.

12.6.1 Marking the limits of a Safety Clarification Advice (SCA) worksite

It is the responsibility of the Recipient implementing a Safety Clarification Advice (SCA) to visibly mark the limits of their individual worksite where possible. The method for marking the limits of the Safety Clarification Advice (SCA) worksite should be documented in the SWMS.

For work at night, consideration should be given to illuminated methods for marking the limits of the Safety Clarification Advice (SCA) worksite.



If it is not possible to mark the limits as outlined above, then the Recipient shall produce a worksite sketch, illustrating the limits of the worksite. The Recipient shall use the sketch to brief the work group at the pre-start meeting.

12.7 Transferring a Safety Clarification Advice (SCA)

When the Recipient is to be relieved the Safety Clarification Advice (SCA) **shall be transferred in a face-to-face meeting onsite** (within clear visibility of the worksite) with the relieved and relief Recipient.

Work associated with a Safety Clarification Advice (SCA) should cease while Recipients are carrying out the Safety Clarification Advice (SCA) transfer process. This is because both Recipients are unable to monitor the electrical safety aspects of the worksite while they are focussing on the Safety Clarification Advice (SCA) transfer process.

The relieved Recipient shall:

- Check that the relief Recipient is qualified by viewing their Recipient qualification card and checking that their Log Book is up to date.
- Ensure the relief Recipient understands all the conditions associated with the Safety Clarification Advice (SCA).
- Identify any electrical safety hazards on site.
- Complete the necessary transfer details on the Safety Clarification Advice (SCA).

The relief Recipient shall:

- Read and understand the requirements and conditions detailed on the Safety Clarification Advice (SCA).
- Read and understand the SWMS/methodology which is defined in the Safety Clarification Advice (SCA).
- If there is any doubt or confusion about the control measures specified on the Safety Clarification Advice (SCA), no work is to proceed until the control measures are fully understood. If required, seek clarification from the Safety Clarification Advice (SCA) issuer.
- Read the transfer declaration out loud to the outgoing Recipient.
- On completion of the transfer, the relief Recipient is to immediately advise the ECO of the transfer details.
- Advise the workgroup that they are the person responsible for the electrical safety aspects of the worksite and the requirements specified on the Safety Clarification Advice (SCA).

The transfer section shall be completed by both the Recipient and the relief Recipient.

SCA TRANSFER DETAILS

SCA Number	24HH100

New Recipient to contact ECO at time of transfer

	DETAILS	TRANSFERING FROM RECIPIENT	TRANSFERING TO RECIPIENT	DETAILS	
TRANSFER 1	Recipient Name:	THOMAS EDISON	BILL STANLEY	TRANSFER DATE AND TIME	10/07/2022 10:22
	Recipient Number:	123456	123987		
	Signature:	THOMAS EDISON	BILL STANLEY		
	New Recipient Contact No.	-	0414987654	ECO Advised:	☑ Yes

I ACCEPT RESPONSIBILITY FOR THE SCA AND UNDERSTAND THE CONDITIONS ON THE FORM AND HAVE ADVISED ELECTRIC CONTROL OPERATOR OF THE CHANGE OF RECIPIENT.

ECO:	Internal Phone	External Phone
Brisbane	892 1212	3072 1212

Figure 15 - Example Safety Clarification Advice transfer section

12.8 Cancelling a Safety Clarification Advice (SCA)

A Safety Clarification Advice (SCA) becomes cancelled when:

- The specific work has been completed before the time allowed has elapsed (the Recipient still needs to cancel the Safety Clarification Advice (SCA) with the ECO if work has been completed).
- At the designated finish time (the Recipient still needs to cancel the Safety Clarification Advice (SCA) with the ECO once the designated finish time has elapsed).
- The recipient contacts the ECO to cancel the Safety Clarification Advice (SCA) on full completion of the work.

In each case the Recipient shall contact the Electric Control Operator to physically cancel the Safety Clarification Advice (SCA).

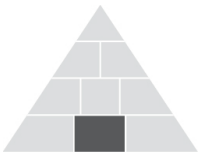
The Electric Control Operator shall give the Recipient a date and time to be documented within the “cancellation time” field on the Safety Clarification Advice (SCA).

The Electric Control Operator and the Recipient shall enter this date and time in the section of their copies of the Safety Clarification Advice (SCA).

Early Cancellation					
Time:	16:10	Date:	10/07/2022	Signature:	BILL STANLEY

Figure 16 - Example Safety Clarification Advice cancellation section

Once the Safety Clarification Advice (SCA) has been cancelled, the Recipient shall notify the SCA issuer that the SCA has been cancelled with the ECO.



12.9 Example Safety Clarification Advice (SCA)

Below is an example of a Safety Clarification Advice (SCA) and its associated work methodology illustrations for the worksite.

A COPY to the RECIPIENT
A COPY to LOCAL AREA TRACTION POWER ENGINEER FOLDER and ELECTRIC CONTROL OPERATOR

QueenslandRail

SCA Number	24AB019

ELECTRIFIED AREA
SAFETY CLARIFICATION ADVICE (SCA)

(For non-standard work activities that have the potential to encroach the 3m to Electrical Exclusion Zone around LIVE overhead traction equipment)

The Recipient must contact the ECO at the start and finish of work. SCAs are not to be activated, deactivated, transferred, or cancelled between the hours of 0600hrs and 0700hrs, excluding emergency scenarios.

Date:	01/01/2026		**Electrical Section:**	123
Location/Track:	Wardenclyffe Station, Down Ferny Grove Line – Platform 2			
Work Limits:	F/2/100 to F/2/150 (Platform 2)			
Requestor:	ABC Constructions			
Job:	Wardenclyffe Station Upgrade – Pile Cap Cropping			
Time Duration:	From	07:00, Friday, 2 January 2026	to	18:00, Friday, 9 January 2026
Description of Specific Work:	Pile Cap Cropping for Platform 2 using Excavator (Volvo ECR235E)			
Relevant SWMS	All work must be carried out as per: • Methodology – MTY-SCA-JOB1-01 Pile Cap Cropping (Rev1.0, Signed: James Joule, Dated: 20/12/2025. • SWMS-456123-001 Civil Earthworks – Pile Cap Cropping (Rev: 4, Signed: Luigi Galvani, Dated: 21/12/2025).			
Advice on Control Measures to be Implemented:	No plant, equipment, material or personnel are to come within 2.0m of **LIVE** 25kV OHLE or train pantographs. Beware of **LIVE** OHLE supported on portals. The Recipient MUST ensure that the following electrical safety controls are adhered to: • A demarcation barrier (i.e. Bollards and flagging) will be established 2.0m from platform edge and horizontally from all **LIVE** OHLE at the Pile Cap worksite to delineate plant work zone. • Recipient/Electrical Safety Observer must be positioned at the demarcation to ensure plant and equipment do not extend past the barrier towards the OHLE. • A safety warning line (i.e. paint or tape) is to be installed at least 9.0m from platform edge in the carpark parallel to track. The Excavator will be set up and work parallel to track behind the safety warning line to prevent encroachment into the reduced EEZ. • Excavator will break down piles in segments and always slew away from the OHLE as low as possible. • Plant is not permitted to park under masts and must have booms and materials stowed away when not working. Stock piling is to be kept minimal (not to increase height of original platform).			

Caution: The Recipient is responsible for ensuring that all workers are fully informed and understand the Job Safety Analysis and Safe Work Method Statement. These are to comply with recipient requirements of recipient training. The Recipient shall communicate the above with the Safety Clarification Advice before starting work. The recipient is responsible for the electrical safety of work group.

1. The Recipient shall implement all control measures before work starts
2. The Recipient shall continuously monitor and manage the work site while workers are working next to the live overhead line equipment
3. The Recipient shall contact the SCA issuer if control measures need reassessment or changing
4. The Recipient shall contact the ECO and SCA issuer if work finishes early and complete early cancellation
5. The Recipient shall contact the SCA issuer to extend or renew the SCA. Any extension must be completed minimum 48 hrs before the SCA completion date.
6. When transferring the SCA, both Recipients shall fill out the details at the back of the SCA form and the New Recipient shall contact the ECO.
7. Transfer of SCA must be performed in person and on site between the existing Recipient and new Recipient.

Issued By		Received By
HEINRICH HERTZ	**Name**	THOMAS EDISON
TRACTION POWER ENGINEER	**Position**	RECIPIENT
-	**Recipient Number**	123456
0414111222	**Phone**	0414123456

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Figure 17 - Example Safety Clarification Advice (SCA)

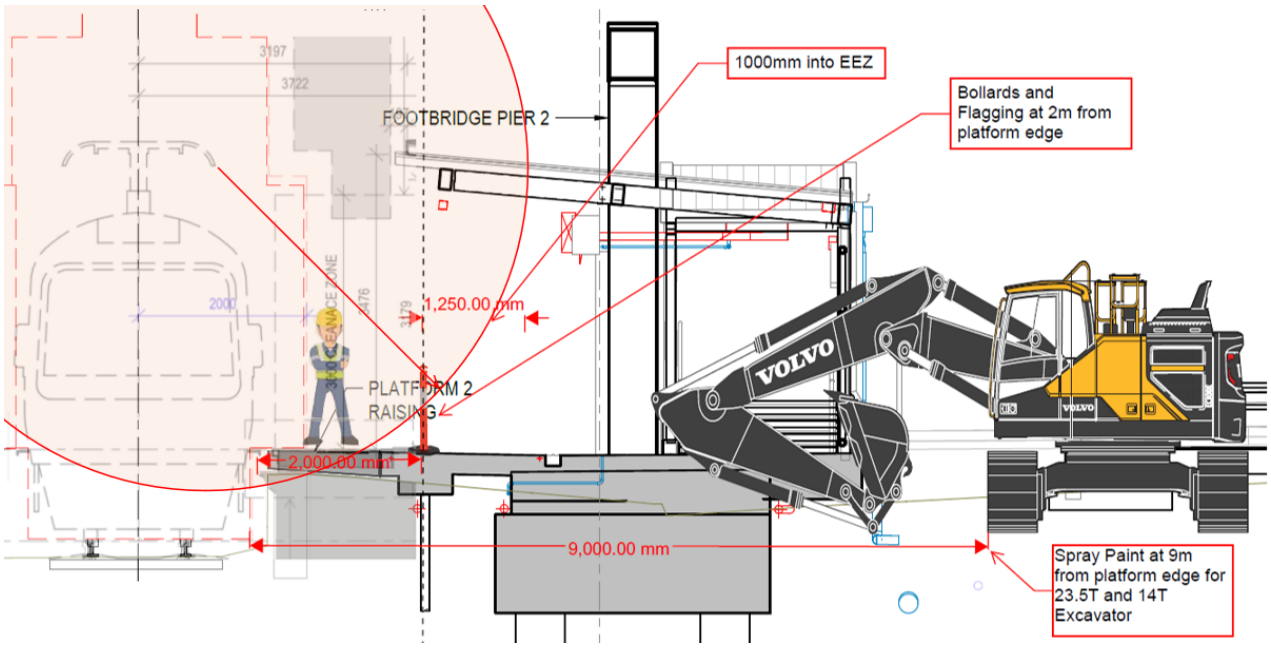


Figure 18 - SCA methodology Side View

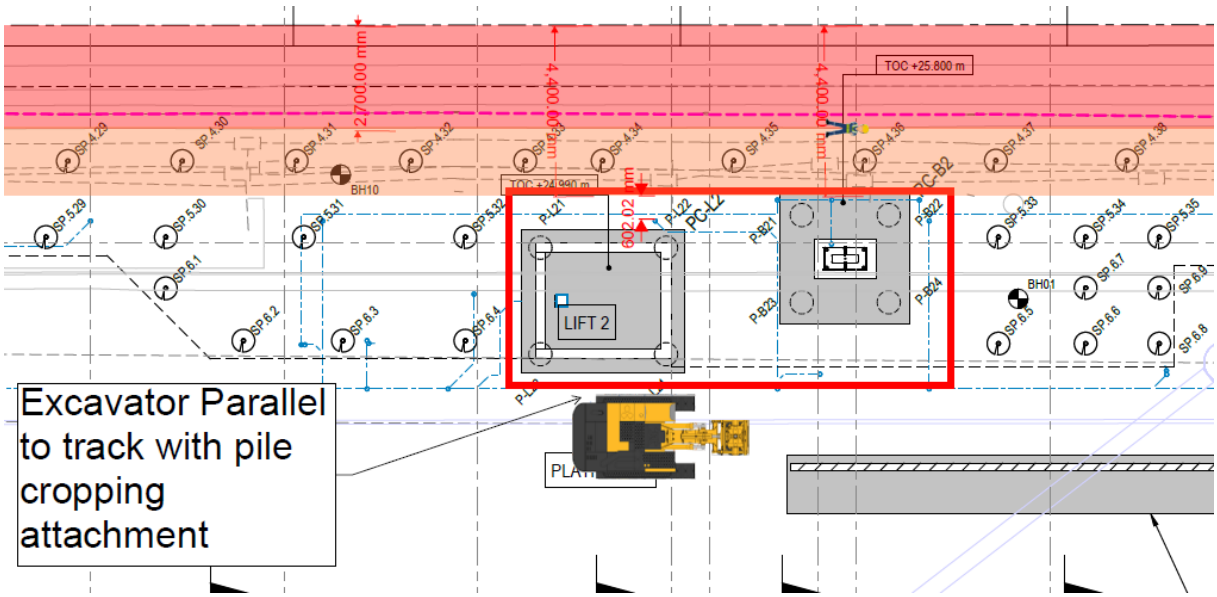
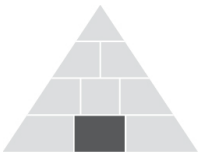


Figure 19 - SCA methodology Top View



13 Standard Work Activity (SWA)

An approved Safe Work Method Statement (Standard Work Activity) is endorsed by the Traction Power Engineer and authorised by a relevant manager in charge of work (PCBU) near electric traction infrastructure. It prescribes the minimum safety requirements for routine and standard works that could encroach with the Electric Traction System three (3) metre electrical exclusion zone.

If the work encroaches into the three (3) metre electrical exclusion zone, a Recipient shall be in place at all times to supervise the electrical safety aspect of the work.

Standard Work Activities are defined work activities at defined locations where work can be done at varying times, but the electrical risks and associated control measures remain unchanged.

The control measures shall take into account the worst-case scenario and hazards for all locations where the Standard Work Activities is authorised.

Standard Work Activities are approved by the persons in control of the electrical equipment or their representative.

If a Standard Work Activity exists for a particular task, a Safety Clarification Advice will not be issued for the same task. However, a Safety Clarification Advice is needed if the defined work listed in the Standard Work Activity changes.

Works within the Queensland Rail three (3) metre electrical exclusion zone performed by other electricity entities (using approved procedures) are usually classified as Standard Work Activities.

13.1 Authorised working inside the exclusion zone

When operating plant in the three (3) metre electrical exclusion zone, or when it is intended to operate in the three (3) metre electrical exclusion zone, a Plant Electrical Safety Observer or another safe system of work shall be used which will prevent contact with the overhead line.

Another safe system of work may include one or more of the following precautions:

- Use of limit switches to prevent the operating plant from contacting the Overhead Line Equipment
- Positioning and design of the operating plant which will prevent the plant from contacting the line.

Note

For plant operated by an instructed person who does not have an electrical safety observer, or another safe system as required, the instructed person shall be considered to be an untrained person.

In this case, the operating plant shall not be operated in the three (3) metre electrical exclusion zone without an electrical safety observer or another safe system of work that prevents contact with the line.

The electrical safety observer should not carry out any other work or function that compromises their role as an electrical safety observer.

13.2 Machinery with Queensland rail approved height limiting devices

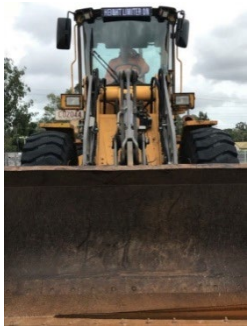
Height limiting devices are approved by the Manager Plant Engineering as suitable for work around electrified track.

Approval is required from the Traction Power Engineer, or their representative, to operate plant or machinery within the three (3) metre electrical exclusion zone.

When approval to encroach the three (3) metre electrical exclusion zone is granted, the mobile plant shall be fitted with an approved and correctly functioning height limiter.

Only approved machinery will be allowed to operate under overhead lines.

Approved machinery is registered by Queensland Rail. A current registration sticker shall be fitted and visible.



The Electrical Safety Act 2002 (Qld) specifies exclusion zones around live equipment that shall not be entered when performing work.

An untrained person shall not operate any plant in situations where any part will intrude into the three (3) metre electrical exclusion zone.

14 Safety Observer Zone (SOZ)

Safety observer zone requirements are prescribed in electrical safety legislation (Electrical Safety Code of Practice 2020 - Working near overhead and underground electric lines).

A crane, plant or person is considered to be in the safety observer zone when, by the position the crane, plant or person is located, it is possible that any of the following could enter the three (3) metre electrical exclusion zone of live electric traction lines during operation:

- Any part of a person or tool being held by a person.
- Any part of the crane or operating plant.
- Any person on or working on an EWP.
- Any hand tools or other equipment held by anyone involved with the operation.
- The load being moved.

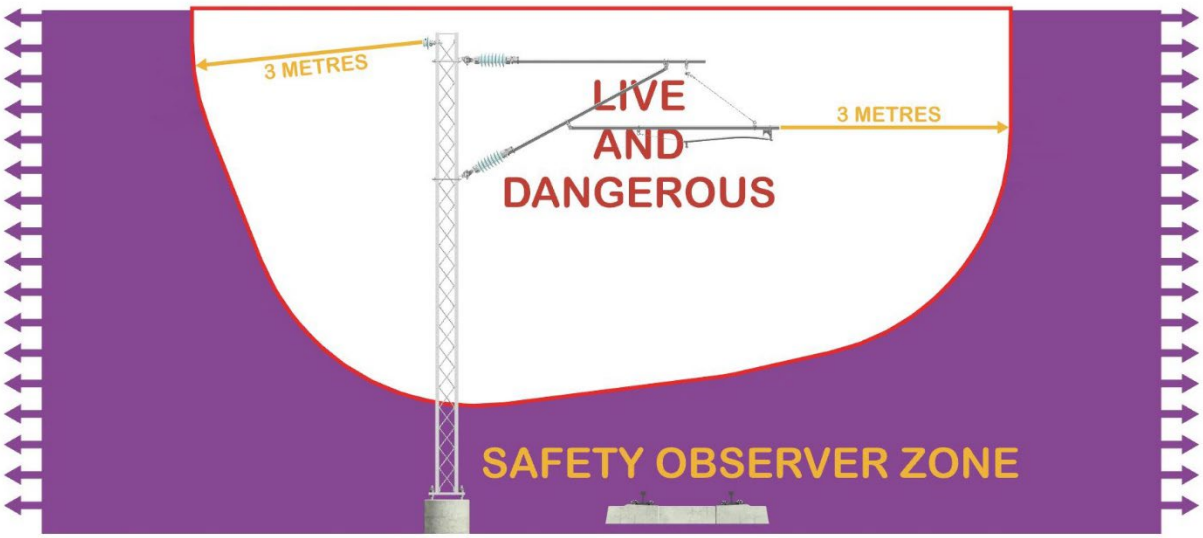


Figure 20 - Safety Observer Zone

The safety observer zone concept is designed:

- To encourage operating plant operators to locate their equipment away from the possibility of encroaching into the three (3) metre electrical exclusion zone.
- When that is not possible, adopt other suitable precautions to prevent encroachment.

A crane or operating plant is not operating in a safety observer zone when:

- High voltage electric lines have been de-energised and earthed.
- Any part of the crane, plant or load being moved is prevented from entering the three (3) metre electrical exclusion zone by physical barriers.

When working within the safety observer zone, a higher form of control is recommended (e.g. a limiting device, hard barrier etc.).

When work is planned to take place in the safety observer zone, the PCBU line management team shall prepare a SWMS which details:

- The electrical safety aspects of the work.
- The necessary controls (e.g. red warning tapes, height limiters) which will be implemented to prevent encroachment into the three (3) metre electrical exclusion zone.
- The requirement for a safety observer that has a current qualification as a Recipient SCA/SWA.

The Recipient and/or PCBU line management shall follow the Safety Clarification Advice (SCA) application process to apply to work in the safety observer zone. The Traction Power Engineer may visit site to determine if the proposed controls are adequate. If suitable controls have been proposed, the Traction Power Engineer or their representative will provide approval in writing.

If the controls are not deemed adequate, the Traction Power Engineer or their representative may request a revised application for a Safety Clarification Advice (SCA) or Form C.

The safety observer zone for overhead electric lines is illustrated in the figure below. While this figure illustrates a crane operating, the example applies to all operating plant, people and tools and equipment.

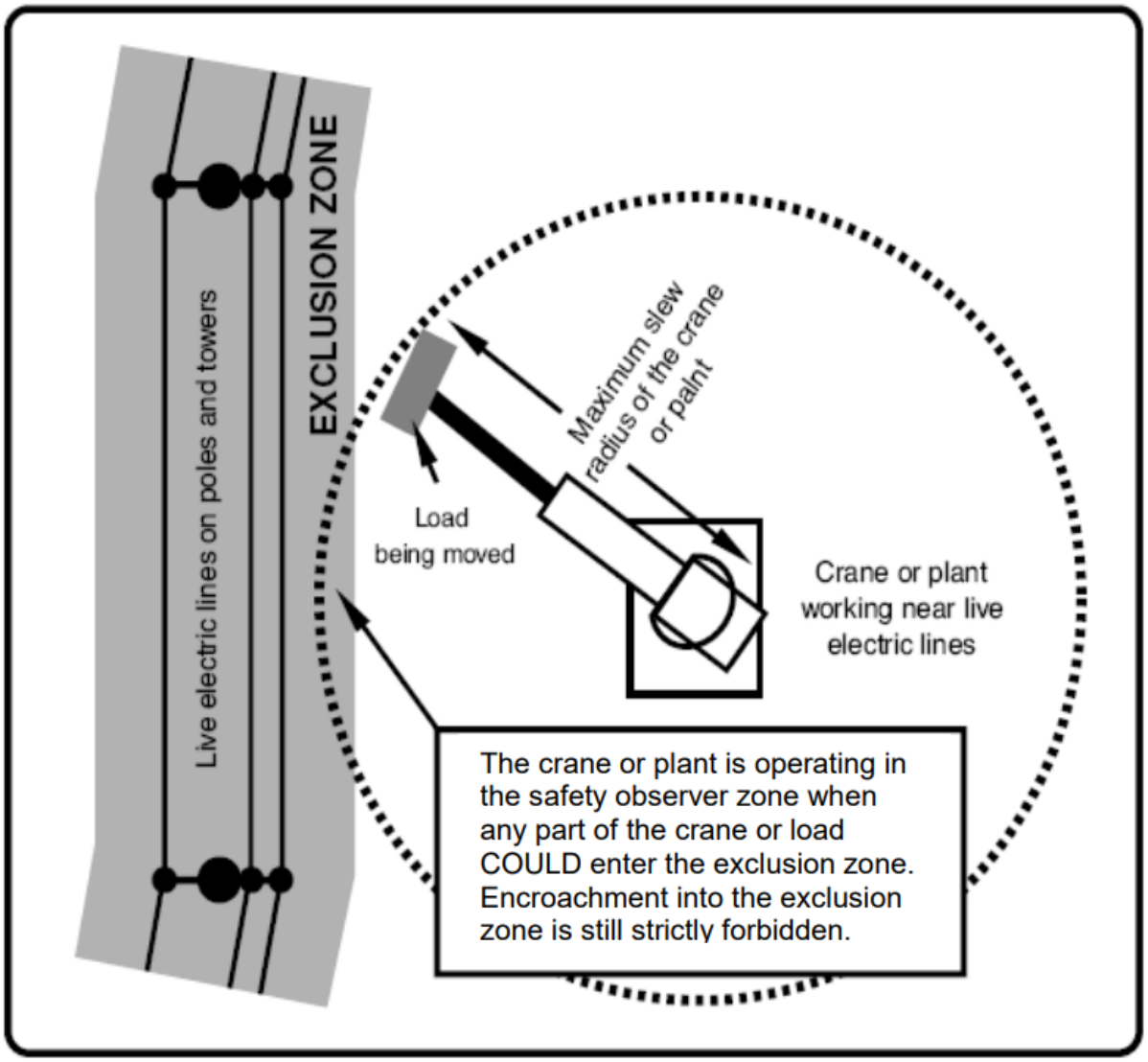


Figure 21 - Safety observer zone example

The safety observer requirements for working in the safety observer zone are detailed in section 15.5.

15 Safety Observers

15.1 Safety Observers general information

15.1.1 Types of Safety Observers

Queensland Rail has three (3) types of safety observers for working on or near the three (3) metre electrical exclusion zone as shown in Table 1:

Safety Observer Type	Description
Plant Electrical Safety Observer	A Plant Electrical Safety Observer is required when it is possible that a crane or plant could enter the three (3) metre electrical exclusion zone of live electric traction lines during operation; or when it is possible that a crane or plant could be operated outside of the limits specified in a Form C, SCA or SWA.
Site electrical safety observer	A Site Electrical Safety Observer can assist a Recipient with the monitoring of the electrical safety of a worksite.
Safety Observers for the Safety Observer Zone	A Safety Observers for the Safety Observer Zone shall be in place when a crane, operating plant or person is operating within the safety observer zone.

Table 1 - Types of safety observers

15.1.2 Safety Observers qualification requirements

Persons performing the role of safety observer shall hold the qualifications shown in Table *2*:

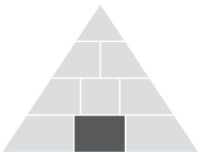
Safety Observer Type	Qualification Requirement
Plant Electrical Safety Observer	Recipient - SCA/SWA (in date qualification with Log Book up to date)
Site electrical safety observer	Recipient - SCA/SWA (in date qualification with Log Book up to date)
Safety Observers for the Safety Observer Zone	Recipient - SCA/SWA (in date qualification with Log Book up to date)

Table 2 - Qualification requirements for safety observers

15.1.3 Safety Observer duties

A person performing one of the safety observer roles in Table 1 shall not perform any other safety observer role concurrently.

A person performing one of the safety observer roles in Table 1 shall not be a Recipient in charge of a Form C, SCA, SWA or Form D/DT at the same time that they are performing the role of safety observer, unless they are a Plant Electrical Safety Observer and there is only one (1) piece of plant on the whole worksite.



15.2 Plant electrical safety observer

A Plant Electrical Safety Observer is required when:

1) it is possible that a crane or plant could enter the three (3) metre electrical exclusion zone of live electric traction lines during operation; or
2) Crane or plant is being used in the Safety Observer Zone; or
3) When defined as a control measure within a SWMS; or
4) When defined as a control on a Safety Clarification Advice (SCA) or Standard Work Activity (SWA).

The Plant Electrical Safety Observer shall hold a current qualification as a Recipient - SCA/SWA.

When engaging a Plant Electrical Safety Observer, the Recipient is responsible for the following:

- Verifying that the Plant Electrical Safety Observer holds a current Recipient SCA/SWA qualification.
- Endorsing the Plant Electrical Safety Observer.
- Verifying the Plant Electrical Safety Observer is able to perform the role.
- Communicating the scope of work to the Plant Electrical Safety Observer.

The Plant Electrical Safety Observer shall not carry out any other work, including:

- Performing any other safety observer role concurrently.
- Being a Recipient in charge of a Form C, SCA, SWA or Form D/DT at the same time as being a Plant Electrical Safety Observer, unless there is only one (1) piece of plant on the whole worksite. If there is only one (1) piece of plant on the whole worksite, the Recipient may also be a Plant Electrical Safety Observer concurrently if required.

The Plant Electrical Safety Observer shall not be required to observe more than one crane or operating plant at any one time.

There is no limit to the number of Plant Electrical Safety Observers that can be used on a worksite. The number of Plant Electrical Safety Observers is dependent on the amount of plant and machinery onsite and the layout of the worksite. The number of Plant Electrical Safety Observers should be documented in the SWMS.

On appointment of the Plant Electrical Safety Observers, the Recipient Shall:

a) Ensure that the Plant Electrical Safety Observer is be capable of competently performing the task and has a good understanding of the work to be conducted, including the plant and equipment to be used.

b) Identify the Plant Electrical Safety Observer to the operator of the crane or operating plant.

c) Instruct the operator of the crane or operating plant to follow safety directions given by the Plant Electrical Safety Observer.

d) Ensure that the Plant Electrical Safety Observer can communicate effectively with the operator of the crane or operating plant and demonstrate how they should warn the operator if the plant they are operating is about to approach the three (3) metre electrical exclusion zone.

e) Test that communication methods between the Plant Electrical Safety Observer and the operator of the crane or operating plant are effective (Specialist communication equipment may be necessary where there is a barrier to communication.).

f) Instruct the Plant Electrical Safety Observer that they Shall not carry out any work while performing their role of Plant Electrical Safety Observer, including:

   1) Not being the Recipient of another Form C/SCA/SWA/Form D/DT while performing Plant Electrical Safety Observer duties.

   2) Not being any other type of Safety Observer for the same worksite or any other worksite while performing Plant Electrical Safety Observer duties.

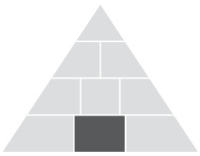
      Note: A Plant Electrical Safety Observer can simultaneously undertake the role of plant spotter, provided that fulfilling the plant spotter responsibilities does not interfere with their duties as a Plant Electrical Safety Observer.

g) Instruct the Plant Electrical Safety Observer on how to manage and report electrical incidents or emergencies. This includes breaches of the controls specified in the SWMS, methodology or Safety Clarification Advice (SCA).

A Plant Electrical Safety Observer is required when working under a permit to work (Form C) if there is the potential for the crane or plant to encroach three (3) metre electrical exclusion zone of adjacent live equipment.

15.3 Site electrical safety observer (for monitoring electrical safety of a worksite)

A Site Electrical Safety Observer may be appointed by the PCBU Recipient to assist with the monitoring of electrical safety of a worksite.



The Site Electrical Safety Observer shall hold a current qualification as a Recipient – SCA/SWA.

When engaging a Site Electrical Safety Observer, the Recipient is responsible for the following:

- Verifying that the Site Electrical Safety Observer holds a current Recipient SCA/SWA qualification.
- Endorsing the Site Electrical Safety Observer.
- Verifying the Site Electrical Safety Observer is able to perform the role.
- Communicating the scope of work to the Site Electrical Safety Observer.

The Site Electrical Safety Observer shall not carry out any other work, including:

- Performing any other safety observer role concurrently.
- Being a Recipient in charge of a Form C, SCA, SWA or Form D/DT at the same time as being a Site Electrical Safety Observer.

Site Electrical Safety Observers are responsible for assisting the Recipient to discharge their electrical safety responsibilities. The appointment of Site Electrical Safety Observers is at the discretion of the PCBU Recipient, based on the scope of work. A maximum of two (2) Site Electrical Safety Observers can be appointed for a worksite.

On appointment of the Site Electrical Safety Observer, the Recipient Shall:

a) Test that communication methods with the Site Electrical Safety Observer (radio, phone) are effective.
b) Identify the Site Electrical Safety Observer to the work group.
c) Instruct the work group to follow safety directions given by the Site Electrical Safety Observer.
d) Instruct the Site Electrical Safety Observer that they Shall not carry out any work while performing their role of Site Electrical Safety Observer, including:
    1) Not being the Recipient of another Form C/SCA/SWA/Form D/DT while performing Site Electrical Safety Observer duties.
    2) Not being any other type of Safety Observer for the same worksite or any other worksite while performing Site Electrical Safety Observer duties.
e) Instruct the Site Electrical Safety Observer on how to manage and report electrical incidents or emergencies. This includes breaches of the controls specified in the SWMS, methodology or Safety Clarification Advice (SCA).

If a Recipient cannot adequately monitor electrical safety of a worksite with two (2) Site Electrical Safety Observers, then consideration should be given to reducing the scope of works or dividing the worksite into manageable sections. Additional SCA's/SWA's/Form C's and qualified Recipients may be required to manage the divided worksite.

15.3.1 Site electrical safety observer diagram

Figure 12 shows an example work area that is being protected by a Form C - Permit To Work, adjacent to live overhead. It is demonstrating the use of Site Electrical Safety Observers that have been appointed by the Recipient to cover a larger worksite.

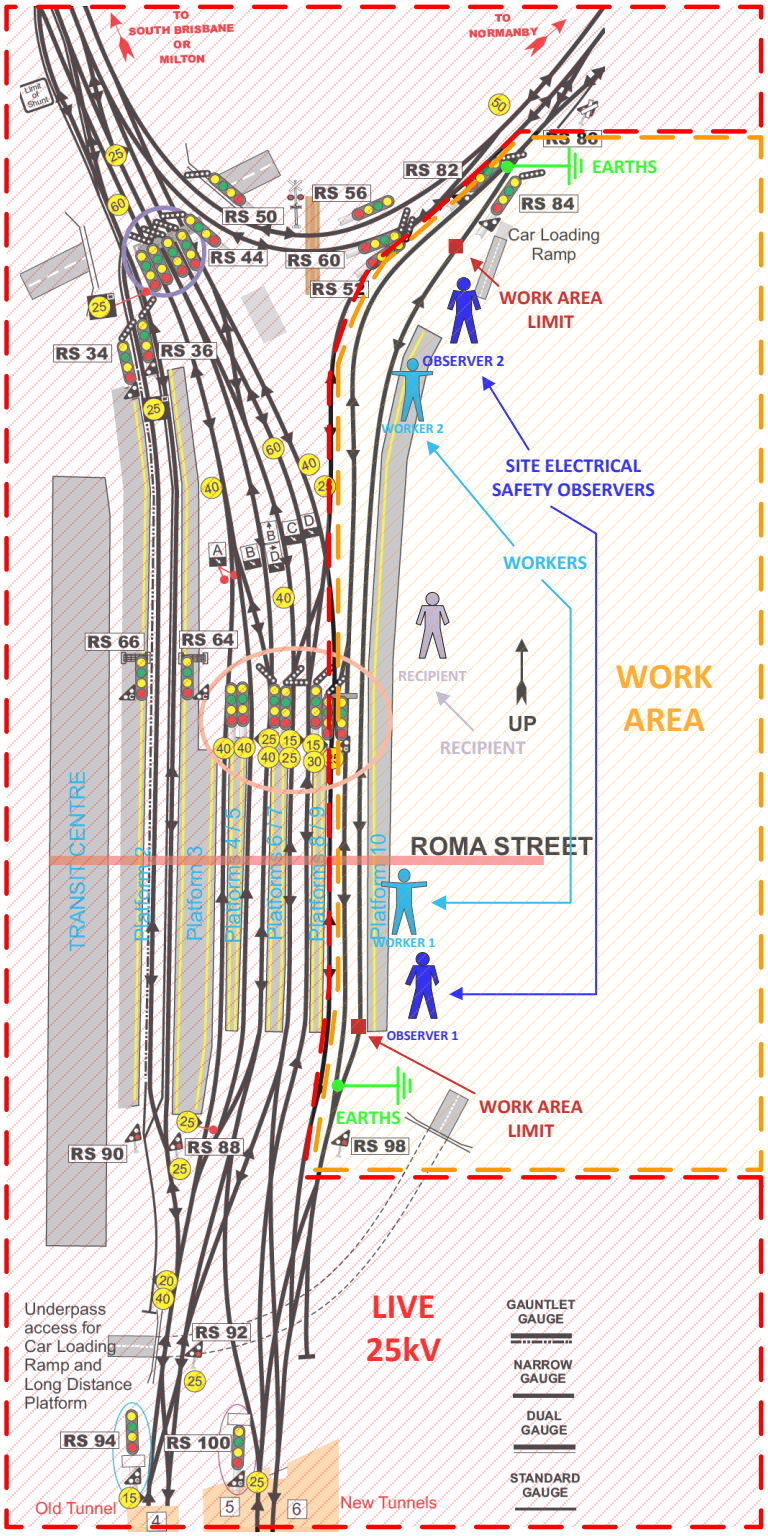


Figure 22 - Example site electrical safety observer site layout

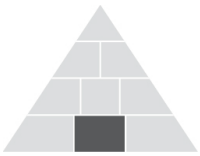
15.4 Safety Observers for the Safety Observer Zone (SOZ)

The following safety observer zone requirements are prescribed in electrical safety legislation (Electrical Safety Code of Practice 2020 - Working near overhead and underground electric lines).

A Safety Observer shall be in place when a crane, operating plant or person is operating within the Safety Observer Zone.

The following special provisions apply:

- The person conducting a business or undertaking is responsible for appointing a safety observer. If any part of the crane, plant, load, or person is about to enter the three (3) metre electrical exclusion zone, the safety observer should warn the operator or person. Encroachment into the three (3) metre electrical exclusion zone is strictly forbidden.
- The crane or plant operator should not operate a crane or plant without a safety observer in situations where an observer is required.
- The safety observer shall not carry out any other work other than the safety observer role.
- The safety observer shall not be required to observe more than one crane, operating plant, or workgroup at a time.
- The safety observer should be able to communicate effectively with the operator of the crane, operating plant or workgroup at all times and should warn the operator or person about the approach to the three (3) metre electrical exclusion zone. Specialist communication equipment may be necessary where there is a barrier to communication.
- Except where rail mounted elevating work platforms are being used for working on rail traction electrical apparatus, the safety observer should not be located on the work basket of an elevating work platform.
- The safety observer should be trained to perform the role. Queensland Rail requires the safety observer for the safety observer zone to hold a current Recipient - SCA/SWA qualification.
- The safety observer should have the authority to stop the operation of a crane, operating plant, or workgroup.
- The safety observer should mark the border of the three (3) metre electrical exclusion zone with suitable markers e.g. red warning tapes, which can be easily viewed by the crane, plant operator or workgroup.



If a crane, plant, or member of a workgroup breaches the three (3) metre electrical exclusion zone, the safety observer shall immediately stop work at the site and request the workgroup and/or plant to move to a safe position and report the breach to the ECO.

A maximum of one (1) Safety Observer shall be used in the Safety Observer Zone.

The safety observer in the safety observer zone may appoint Plant Electrical Safety Observers to assist with monitoring plant on the worksite (in accordance with the SWMS and work methodology).

The safety observer in the safety observer zone may appoint a maximum of two (2) Site Electrical Safety Observers for a worksite.

Electrical safety observer video

The following link is to a video published by the Electrical Safety Office regarding electrical exclusion zones and the role and responsibility of an Electrical Safety Observer.

Electrical exclusion zones

16 Form D Permit To Work on High Voltage Apparatus

The Queensland Rail ETOP Part 3: Safe Access to High Voltage Substations and Electrical Apparatus Procedure MD-17-262 shall be issued or made available to all workers who may be associated with planning, designing, constructing, commissioning, operating, and maintaining Queensland Rail's High Voltage Electrical Apparatus. This includes traction substations and High Voltage cables within the rail corridor.

For Recipients needing to receive a Form D, additional training and assessment is required, including endorsement from the Principal Traction Power Engineer.

17 Communication Protocols

All related workers shall be made aware of how the Electric Control Operator (ECO) can be contacted promptly and shall be equipped, as needed, with effective means of communications for use in conjunction with isolation procedures.

All safety communication between the ECO and workers shall be:

- Clear: Aiming to eliminate confusion by using easy to understand language.
- Concise: Relevant to the task using agreed terms.
- Confirmed: Safety critical information needs to be acknowledged and repeated by the receiver.

The Recipient shall identify themselves by name and title.

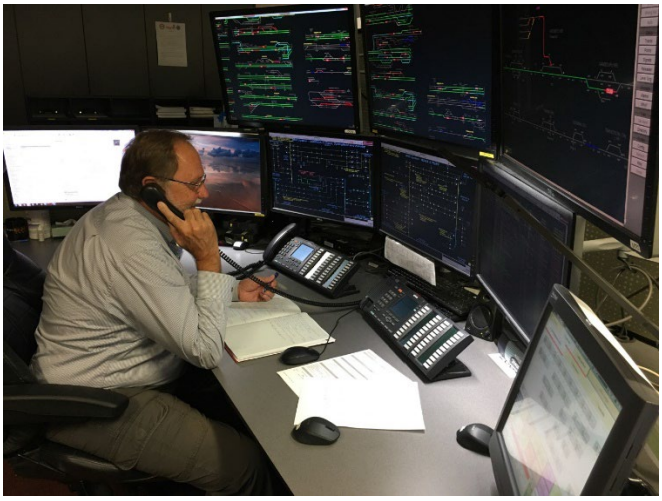
17.1 Reporting damage, incidents, and emergencies

Electric Control Operator (ECO)

The ECO is responsible for controlling the safe and reliable provision of traction power supply.

Important

The ECO is your main point of contact regarding notification of any damage to electrification infrastructure, incidents, and life-threatening emergencies.



Electric Control Operator

Important numbers	
To report damage to electrification infrastructure and incidents	07 3072 1212
To report life-threatening emergencies	1800 079 303

17.2 Report the location of faults, incidents, and emergencies

Your location can be communicated to the ECO by referring to a station name (and a platform number if possible), a tunnel number, or the street name at a level crossing.

Structure numbers are the preferred means of identifying a location in the Queensland Rail electrified territory. The ECO can verify the location of damaged infrastructure, or incident location based on your report using structure numbering. Typical numbering includes a reference to the railway line, kilometrage and track designation, as illustrated in the image above.

17.3 Responding and reporting a life-threatening emergency

In the event of a worker becoming aware of an emergency requiring, or likely to require, Overhead Line Equipment to be made safe, the worker shall:

	**1. Stay clear of any hazards**	Secure the area remembering the three (3) metre electrical exclusion zone for all people.
	**2. Call the emergency number**	Call the Queensland Rail Emergency telephone number 1800 079 303.
	3. Say: **"Emergency, Emergency, Emergency"**	This will ensure that you have the full attention of Network Control.
	Advise details of the incident including:	
	**4. Provide your name and phone number**	In the instance that the ECO needs to contact you, or the call drops out.
	5. Provide your location	The closest structure number (preferred) or station name (including platform number).
	6. Describe the incident or fault	Photograph it if possible and send it to the ECO. This will assist the ECO to determine a suitable and prudent course of action.
	7. Wait for further instruction from the ECO	

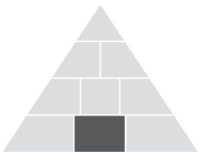
17.3.1 What to do if plant or equipment brings down powerlines

Workers using plant or machinery in close proximity to live overhead powerlines shall ensure that they know the emergency procedures applicable for the work being carried out, including the contact number for the Electric Control Operator. Should live powerlines come into contact with operating machinery, the following steps shall be followed:

Step 1: Stay in the machinery and call the Electric Control Operator immediately.

Step 2: If there is an immediate danger, such as a fire, an evacuation is absolutely necessary, assess your escape route and check for fallen powerlines.

Step 3: Exit the machinery by jumping - make sure to land with both feet together.



Step 4: When jumping, don't touch the machinery and the ground at the same time.

Step 5: Once you have landed with both feet together, jump or shuffle with your feet together away from the machinery.

Step 6: Move in this way until you are at least 10 metres from the machinery. Do not go back.

This evacuation procedure should be covered during the Pre-Start briefing and also listed in the SWMS when there will be work using plant or machinery in proximity to live overhead powerlines.

18 Additional information

18.1 Auditing and compliance testing

The worksites under the control of a Recipient are subject to auditing from Queensland Rail workers. To ensure compliance, a Traction Power Electrical Safety Audit Checklist MD-17-534 can be used by Recipients to perform a self-audit.

19 Mentoring requirements

Upon completion of the theory assessment, the Recipient shall be signed off by the trainer as competent and ready to commence the two (2) mentoring activities under the supervision of a qualified Recipient. The qualified Recipient is responsible for both the electrical safety of the worksite and the supervision of the Recipient undertaking the mentoring activities.

Learners may organise their own mentoring activities with a qualified Recipient. Alternatively, learners who are unable to book in their own mentoring activities can arrange the two (2) mentoring activities with the Asset Training Delivery team.

Trainer declaration: **I have assessed the Recipient as competent in the theory component of the Recipient training and I approve the Recipient listed below as ready for their two (2) mentoring sessions (for each qualification) under the supervision of a qualified Recipient.**	
Recipient name:	
Date:	

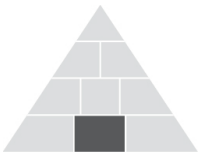
Name & signature of Trainer	**Trainer service number**
☐ **Satisfactory**	☐ **Not Satisfactory**

19.1 Mentoring prior to accreditation

After the successful completion of the theory assessment, you shall complete two (2) Recipient duties for each qualification under the supervision of a qualified Recipient. The two (2) activities shall include the following:

- 2 x Form C (if attaining the Recipient - Form C qualification).
- 2 x SCA or SWA (if attaining the Recipient - SCA/SWA qualification).

These two (2) activities shall be entered into the Recipient Log Book and shall be completed within the six (6) months following the completion of the theory assessment. Each mentoring activity shall be completed on a separate day. The practical assessment must be completed within the six (6) months following the completion of the theory assessment.



19.2 Qualified Recipient requirements

The qualified Recipient must have a minimum of 12 months experience as a qualified Recipient prior to being able to fulfil the mentoring role.

While the role of mentoring is to provide the trainee Recipient with the opportunity to perform the duties of a Recipient and supervise the electrical safety of the worksite, the qualified Recipient performing the role of mentor is still accountable and responsible for the electrical safety of the worksite. The responsibilities of the qualified Recipient include:

- Providing advice and guidance to the Recipient in training.
- Assuming the role of a Recipient for the worksite in the event the Recipient being mentored is not performing their duties safely.
- Signing the Log Book as Satisfactory after the successful completion of the mentoring activity.
- Signing the Log Book as Not Satisfactory if the mentoring activity was not successful or incomplete.

In the event the Recipient being mentored is not performing their duties safely, the qualified Recipient shall assume the role of Recipient for the worksite.

For mentoring activities that are not completed by the trainee Recipient and the qualified Recipient has to step in and assume the role of Recipient, the mentoring activity is not to be deemed successful and the Recipient shall perform a new mentoring activity at a later date.

19.3 Mentoring Activity 1

DATE:	
Type of Recipient activity:	
Name & signature of TPE, NP or transferring Recipient	**Supervisor's name & signature**

19.3.1 Qualified Recipient sign-off

Name & signature of qualified Recipient	**Recipient number**
☐ **Satisfactory**	☐ **Not Satisfactory**

19.4 Mentoring Activity 2

DATE:	
Type of Recipient activity:	
Name & signature of TPE, NP or transferring Recipient	**Supervisor's name & signature**

19.4.1 Qualified Recipient sign-off

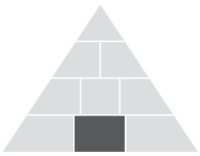
Name & signature of qualified Recipient	**Recipient number**
☐ **Satisfactory**	☐ **Not Satisfactory**

19.5 Mentoring Activity 3

DATE:	
Type of Recipient activity:	
Name & signature of TPE, NP or transferring Recipient	**Supervisor's name & signature**

19.5.1 Qualified Recipient sign-off

Name & signature of qualified Recipient	**Recipient number**
☐ **Satisfactory**	☐ **Not Satisfactory**



19.6 Mentoring Activity 4

DATE:	
Type of Recipient activity:	
Name & signature of TPE, NP or transferring Recipient	**Supervisor's name & signature**

19.6.1 Qualified Recipient sign-off

Name & signature of qualified Recipient	**Recipient number**
☐ **Satisfactory**	☐ **Not Satisfactory**

19.7 Issuing of Recipient qualification

Upon completion of the two (2) mentoring activities, and the Practical Assessment, the Recipient card will be issued by the Queensland Rail trainer.

Any Recipient process/document non-compliance will be exposed during the practical assessment.

19.8 Recipient accreditation

Important

The Recipient qualification shall be issued for three (3) years.

Recipients are required to be re-accredited every three (3) years. Re-accreditation shall include a theory assessment and a practical assessment (for each Recipient qualification). Mentoring is not required for re-accreditation (mentoring is only required for initial accreditation).

20 Recipient Log Book

20.1 Recipient Log Book requirements

Minimum Log Book entry requirements are as follows:

- One entry every six (6) month period for a Form C.
- One entry every six (6) month period for a Safety Clarification Advice (SCA) or Standard Work Activity (SWA).

The Recipient shall fill out the Log Book page in this Learners Guide. This shall be signed by their line manager and:

- The Traction Power Engineer; or
- Nominated Representative; or
- Nominated Person; or
- Transferring Recipient.

The Recipient shall submit the Recipient Monitoring Checklist MD-20-336 and the associated documentation to the Assets Training Delivery team every six (6) months (or the RIW system for non-Queensland Rail workers). The SWMS and the Pre-Start Briefing associated with the monitoring activity shall be submitted with the monitoring checklist. A photograph of the SWMS and Pre-Start Briefing is acceptable as evidence for the monitoring checklist. Form C's are not required to be submitted with the monitoring checklist and they must not be photographed or copied.

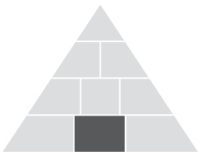
If utilisation is not maintained as above, the qualification for receiving a Form C, SCA or SWA and or both will be removed by Queensland Rail.

Supervisors shall review and sign the Recipient Log Book after each activity. Since the main purpose of this is to check utilisation only, the Supervisor is not required to hold Recipient qualifications.

Failure to complete the Log book will require the attendance of the full Recipient course again.

Recipients must have their up to date Log Book in their possession whenever they are performing Recipient duties.

This Log Book is an evidence guide and can be asked for at any time by the Traction Power Engineer or Nominated Representative or Nominated Person. The Recipient line management team shall ensure these criteria are met.



All documentation relating to the role of Recipient, including the Recipient Log Book should be retained for a minimum of five (5) years.

The Nominated Person or Traction Power Engineer will request to view the Recipients Log Book to verify competency. Nominated Persons or Traction Power Engineers may refuse to issue a Form C or SCA to any Recipients that fail to produce their Log Book.

20.2 Supervisor instructions

The Learner Log Book has been designed so the learner can record their tasks, behaviours and skills gained to demonstrate the role of Recipient.

The supervisor shall complete the following:

- Complete each required Learner Log Book.
- Observe the learner and tick the 'completed' box when they have finished demonstrating the task to the satisfactory level.
- When all tasks have been completed, use your judgement to make the decision if the learner has demonstrated a 'Satisfactory' or 'Not Satisfactory' performance of the job indicated. You will need to record your decision by ticking either the 'Satisfactory' or 'Not Satisfactory' box.
- If your final judgement of the learners' performance is 'Not Satisfactory', the learner may require further development and you will need to contact the Assets Training Delivery Team. Ensure you record comments as evidence for why the judgement is 'Not Satisfactory'.

The supervisor is responsible for ensuring first line assurance activities are performed with Recipients to ensure that the controls are operating effectively and as intended. The supervisor who is required to sign the Log Book can be the supervisor of the Recipient or a site supervisor of a worksite that a Recipient has performed Recipient duties.

20.3 What happens afterwards

When you have finished the required activities in the Learner Log Book, your supervisor will check your performance and let you know if the outcome is 'Satisfactory' or 'Not Satisfactory'.

If your result is 'Not Satisfactory' and you believe that it should be 'Satisfactory' you have the right to appeal the result.

20.4 Form C Log Book

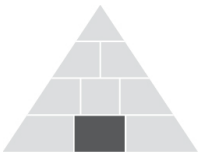
Learners shall complete one entry every six (6) months (5 events) for a Form C. Supervisors shall review and sign the Recipient Log Book after each activity. Failure to complete the required competency maintenance will result in having to complete the full Recipient course again.

Competency maintenance due date:	
Date:	
Type of Recipient activity:	

Name & signature of NP or transferring Recipient	**Supervisor's name & signature**
☐ **Satisfactory**	☐ **Not Satisfactory**

Competency maintenance due date:	
Date:	
Type of Recipient activity:	

Name & signature of NP or transferring Recipient	**Supervisor's name & signature**
☐ **Satisfactory**	☐ **Not Satisfactory**

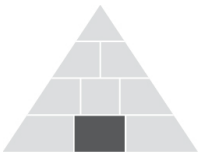


Competency maintenance due date:	
Date:	
Type of Recipient activity:	
Name & signature of NP or transferring Recipient	Supervisor's name & signature
☐ Satisfactory	☐ Not Satisfactory

Competency maintenance due date:	
Date:	
Type of Recipient activity:	
Name & signature of NP or transferring Recipient	**Supervisor's name & signature**
☐ **Satisfactory**	☐ **Not Satisfactory**

Competency maintenance due date:	
Date:	
Type of Recipient activity:	
Name & signature of NP or transferring Recipient	**Supervisor's name & signature**
☐ **Satisfactory**	☐ **Not Satisfactory**

Competency maintenance due date:	
Date:	
Type of Recipient activity:	
Name & signature of NP or transferring Recipient	**Supervisor's name & signature**
☐ **Satisfactory**	☐ **Not Satisfactory**



20.5 SCA/SWA Log Book

Safety Clarification Advice (SCA) or Standard Work Activities (SWA)

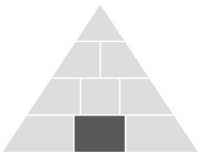
Learners shall complete one entry every six (6) months (5 events) for an SCA or SWA. Supervisors shall review and sign the Recipient Log Book after each activity. Failure to complete the required competency maintenance will result in having to complete the full Recipient course again.

Competency maintenance due date:	
Date:	
Type of Recipient activity:	
Name & signature of TPE, or transferring Recipient for SCA. ECO name for SWA	**Supervisor's name & signature**
☐ **Satisfactory**	☐ **Not Satisfactory**

Competency maintenance due date:	
Date:	
Type of Recipient activity:	
Name & signature of TPE, or transferring Recipient for SCA. ECO name for SWA	**Supervisor's name & signature**
☐ **Satisfactory**	☐ **Not Satisfactory**

Competency maintenance due date:	
Date:	
Type of Recipient activity:	
Name & signature of TPE, or transferring Recipient for SCA. ECO name for SWA	**Supervisor's name & signature**
☐ **Satisfactory**	☐ **Not Satisfactory**

Competency maintenance due date:	
Date:	
Type of Recipient activity:	
Name & signature of TPE, or transferring Recipient for SCA. ECO name for SWA	**Supervisor's name & signature**
☐ **Satisfactory**	☐ **Not Satisfactory**



Competency maintenance due date:	
Date:	
Type of Recipient activity:	
Name & signature of TPE, or transferring Recipient for SCA. ECO name for SWA	**Supervisor's name & signature**
☐ **Satisfactory**	☐ **Not Satisfactory**

Competency maintenance due date:	
Date:	
Type of Recipient activity:	
Name & signature of TPE, or transferring Recipient for SCA. ECO name for SWA	**Supervisor's name & signature**
☐ **Satisfactory**	☐ **Not Satisfactory**

20.6 Log Book completion examples

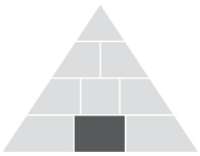
The following examples provide a guide for how to complete the Recipient log book.

20.6.1 Form C log book example

Competency maintenance due date:	**30/06/2022**
Date:	**15/04/2022**
Type of Recipient activity: Receiving a Form C from a Nominated Person (NP) Type of work: Movement of Ballast using front end loader Work Location: Up Main from A/3/400UM to A/3/500UM Time: 08:05 – 10:35	
Name & signature of NP or transferring Recipient	**Supervisor's name & signature**
NP: Charles Brush (NP No: 166) *Charles Brush*	George Westinghouse (Service No: 123456) *George Westinghouse*
☒ **Satisfactory**	☐ **Not Satisfactory**

20.6.2 SCA log book example

Competency maintenance due date:	**30/06/2022**
Date:	**15/04/2022**
Type of Recipient activity: Receiving a transferred SCA from another Recipient Type of work: Lifting pre-cast concrete panels onto platform 2 using a crane Work Location: East Ipswich station platform 2 from W/35/6/075DM to W/36/254DM Time: 13:15 – 18:42	
Name & signature of TPE, or transferring Recipient	**Supervisor's name & signature**
Recipient: Ben Franklin (Recipient No: 987654) *Ben Franklin*	George Westinghouse (Service No: 123456) *George Westinghouse*
☒ **Satisfactory**	☐ **Not Satisfactory**



20.6.3 SWA Log Book example

Competency maintenance due date:	**30/06/2022**
Date:	**15/04/2022**
Type of Recipient activity: Activating and deactivating SWA MD-13-268 Type of work: Trackwork using height limited plant Work Location: Mayne Yard Road 32 Time: 09:35 – 13:12	
Name & signature of TPE, or transferring Recipient	**Supervisor's name & signature**
ECO: Alex Volta Activation: 09:35 Deactivation: 13:12	George Westinghouse (Service No: 123456) *George Westinghouse*
☒ **Satisfactory**	☐ **Not Satisfactory**

21 References

Government, Q. (2017, 10 23). legislation.qld.gov.au. Retrieved 08 19, 2019, from Queensland Legislation: https://www.legislation.qld.gov.au/view/html/inforce/current/act-2002-042#sec.39

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22 Document history

Document Information

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Document Authoriser	Chief Executive Officer (CEO)
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Document Owner / Approver	Discipline Head Electrical
Content Developer*	Electrical Standard and Assurance Officer (High Voltage)
Audience	All employees, contractors and consultants

*Contact for further information

Document Amendment History

Version	Date	Section(s) Amended	Summary of Amendment
1.5	19/06/2024	4.1, 4.2, 6.2, 7, 8.5, 8.6, 9.2, 9.4, 9.6, 10.2, 11.3.1, 12.3, 12.4, 12.6, 12.7, 12.7.1, 12.8, 14, 15, 19.2, 20.1, 20.2	Additional apparatus added to the Traction Apparatus Glossary, new section about additional writing on paperwork, expanded explanation of the three (3) metre electrical exclusion zone, new section of example controls working on or near the three (3) metre electrical exclusion zone, update to the Safety Clarification Advice (SCA) process, new section providing an example Safety Clarification Advice (SCA) and associated controls, updates to Recipient requirements for Implementing a Safety Clarification Advice (SCA), new section about marking the limits of a Safety Clarification Advice (SCA), clarification on the requirements for transferring a Safety Clarification Advice (SCA), new section describing the Safety Observer Zone (SOZ), consolidated and updated section describing the three (3) types of safety observers and their qualification requirements, update to the requirements for Recipients performing the role of mentor, clarification about the requirement for Recipients to have a copy of their log book with them while performing the role, clarification about the supervisor who Is required to sign log books.

Version	Date	Section(s) Amended	Summary of Amendment
1.4	21/10/2021	4.1, 9.6.2, 10.3, 14.1, 10.3, 16.3, 19.1, 14, 18.2, 18.1, 9.1, 12.6, 19.6, 15	Updated qualification flowchart. Changed Plant Safety Observer to Plant Electrical Safety Observer. Changed Site Safety Observer to Site Electrical Safety Observer. Updated emergency contact details. Clarified monitoring documentation requirements. Clarified other entity works. Updated mentor requirements. Clarified practical assessment requirements. Deleted pre-start video links. Added Form C example. Added log book completion examples. Underlined all live references in the SCA section.
1.3	07/04/2021	9.6.2, 9.62.1, 9.6.2.2, 10.1, 10.3, 10.3.1	Minor amendments to Plant Safety Observer. Clarification of Plant Safety Observer requirements. Expanding on substitution examples. Minor amendments to Site Safety Observer
1.2	04/02/2021	4.1, 10.3, 12.3	Minor amendment to mentoring requirement. Clarification of safety observers. Grammar correction