

TLIF2080 SAFELY ACCESS THE RAIL CORRIDOR

Learner Guide



TLIF2080 Safely access the rail corridor
Learner Guide

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1.0 SAFETY LEGISLATION

WHAT IS LEGISLATION?

Legislation can have many purposes:

To authorise, to provide, to sanction, to grant, to regulate, to declare or to restrict.
Safety legislation helps to protect our safety in the workplace, and beyond.

Consequences of non-compliance:

Legislation can be reacted to in three ways:

1. It can be followed.
2. It can be breached.
3. It can be ignored.



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OBLIGATION UNDER THE WORKPLACE HEALTH AND SAFETY ACT:

The Work Place Health and Safety ACT place an obligation on certain persons to ensure their own work place health and safety and the work place health and safety of others.

**What are
as a**

**your obligations
worker?**

Workers and other persons at workplaces must follow the instructions given by the employer or principal contractor.

They must not deliberately put the workplace health and safety of anyone at risk, injure themselves or misuse anything provided for workplace health and safety.
Workers must use PPE (personal protective equipment) if it is provided by an employer and if they have been trained in its use.

ELECTRICAL SAFETY ACT:

The purpose of the electrical safety act 2002 is to prevent people from being killed or injured and property from being destroyed or damaged from electricity.

The electrical safety act 2002 also imposes electrical safety obligations on a range of people who may affect the electrical safety of others.



2.0 COMMON TERMS / KEY DESCRIPTIONS.

KEY DESCRIPTION-TRACK

Rail Traffic

Trains, on track vehicles, or any other vehicle registered to run on the QR network.

**Be aware that rail traffic could run
in any direction!**

Danger Zone

The danger zone is the space within 3 metres of the track centre line when measured horizontally and at any level above or below rail when measured vertically.

Position Of safety

Include a place where:

- A structure or physical barrier has been erected to provide protection.
- A place that is not in the danger zone. Or

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- Outside 3 metres from the track centre line.

RAIL:

Continuous lengths of steel on which the wheels of rail traffic run.

**Step over the rails not on them!
Wet rails are slippery!**

SLEEPERS:

Concrete, steel or timber bearers which fix and separate the two rails of a railway track.

Sleepers could be wet and slippery!

BALLAST:

Crushed rock placed around and under the sleepers.

Take care on uneven surfaces!

POINTS:

Movable parts of the rails located where two tracks converge and are to allow rail traffic to change from one track to another.

**Walk around points – keep hands
and feet away from point's
equipment!**

TRACK:

Combination of rails, sleepers, ballast and points.

TRANSFER FACILITY:

A transfer facility is a site where product that is transported by rail operation is loaded or unloaded. The limits/ boundaries of the transfer facility must be clearly marked out so that workers can easily identify whether they are in the danger zone or not.

RAIL CORRIDOR:

The rail corridor is from fence-line, and where there is no fence it is 10 metres from the centre line of the outside track.

Where a transfer facility and the rail corridor meets, the interface between the two must be managed to provide for the safety of all workers from the hazards associated with both operations.

Although the boundaries of the transfer facility vary on the case by case basis, in general terms, the transfer facility incorporates 10 metres either side of the track centre and 10 metres either side of the loading facility.

ACCESS ROAD:

A maintained road that provides access to, and within, the rail corridor.

Access roads may cross the danger zone at assessed occupational level crossings (e.g. livestock crossings).

- You must always read and obey any level crossing signage.

- Make sure you are aware of the requirements at level crossings.
- Take time to stop, look and listen.

There can be different types of access roads- e.g. some require a specific licence in place for people to gain access.

QR access roads must not be used without approval from the rail infrastructure manager.

Moving vehicles within the rail corridor:

When driving and turning vehicles within the rail corridor, no part of the vehicle should enter the danger zone unless the appropriate track protection measure has been implemented.

DO not reverse toward the railway track.

DESIGNATED WALKWAYS:

An area set aside for pedestrians where the use by vehicles is strictly controlled.

The walkway will be marked, and will have signage to indicate its status as a designated walkway.

GENERAL SAFETY POINTS/ REMINDERS:

- Look frequently, approximately every 5 seconds, so you can be aware of your surroundings and any risks that may arise.
- Take care in slippery conditions- wet rails and sleepers are slippery!
- Keep clear of any moving rail traffic, or other vehicles.
- Use the designated walkway- don't take shortcuts by going under or over wagons to cross the tracks, or any other shortcut measures.
- Step over the rails not on them.
- Take care of uneven surfaces.
- Walk around points- keep hands and feet away from points equipment.

HIGH VISIBILITY CLOTHING:

High visibility clothing must be worn when in the rail corridor.

High visibility clothing must be:

1. Worn whenever in the rail corridor.
2. Reflectorised at night or in the poor visibility.
3. The outer layer of clothing.

High visibility clothing should be inspected on a regular basis and replaced if they are badly damaged, soiled or faded.

You **MUST NOT** wear **RED** or **GREEN** coloured clothing within the rail corridor.

Train drivers may confuse them with railway signals and an accident could result.

RED or **GREEN** coloured equipment/items must not be used. (e.g. red or green eskies, vehicles, trucks, toolboxes, generators, hat and safety helmets etc...)

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PERSONAL PROTECTIVE EQUIPMENT (PPE):

All workers have a responsibility to use the correct PPE for the tasks they are required to perform. Information about this will be given at the worksite safety briefing or site induction.



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KEY DESCRIPTIONS- ELECTRICAL

ELECTRIFIED AREA:

Any section of track equipped with overhead line equipment, any substation or supply substation used to provide power for electric trains.

OVERHEAD LINE EQUIPMENT (OHLE)

The structure and overhead equipment necessary for the power supply for electric trains.

ELECTRICAL EXCLUSION ZONE:

Electrical safety regulations define the distance that people, plant and equipment, and materials must stay away from exposed live parts.

The electrical exclusion zone is the area within 3 metres radius below the wiring and supporting overhead line equipment and infinity above.

Inside the transfer facility there is no power in this manner (e.g. overhead power line equipment), however there may be some in the vicinity of the approach and departure sides of the facility.

ELECTRICAL DANGER SIGNS:

Danger signs are a visual control measure located throughout the system on:

- Ladders on rail traffic.
- Over bridges.
- Structures.

PANTOGRAPH:

A retractable frame, mounted on insulators on the roof of an electrical train, which presses against the underside of the contact wire and through which the current is collected from the overhead line equipment.

STRUCTURE BOND:

A bond connecting the steelwork of an overhead line structure, bridge or other metal structure to the system earth.

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This bond is provided to prevent the rise of hazardous voltages on structures and steelwork.

TRACTION BOND:

A bond connecting together the various items of equipment in the traction current return circuit path.

It should be assumed that this bond will be carrying traction current at all times. They are dangerous if removed or damaged.

Missing, broken or poorly maintained bonding exposes workers to serious risks.

- All broken bonds should be treated as live and dangerous.
- Either you or someone else could be killed.
- Stay away from broken bonds.
- Report broken bonds immediately to your supervisor or network controller.

KEY RAIL PERSONNEL.

NETWORK CONTROLLERS:

A worker qualified and authorised to control the movements of rail traffic.

As network controllers are always busy particularly during daylight hours it is important to communicate effectively with network control.

ELECTRIC CONTROL OPERATOR:

The worker who:

- Controls the power supply to the overhead line equipment, and;
- Is responsible for controlling all switching operations and isolations of electrical equipment.

TRACK PROTECTION OFFICER:

A qualified and competent worker who:

- Will assess the site for worksite protection requirements.
- Arranges access to the rail corridor.
- Is in charge of the track worksite protection.
- Has responsibility for liaising with network control to obtain the appropriate authority for the network being performed.
- Arranges the necessary track protection in relation to that authority.
- Conduct the worksite safety briefing in the rail corridor, with the worksite supervisor and the workers.

LOOKOUT:

A qualified and competent worker who:

- Wears a safety yellow vest or shirt.
- Remains in close proximity to workers who require lookout protection.
- Warns workers of the approach of any rail traffic in ample time to ensure workers and/or equipment are moved to a position safely.

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AUTHORISED PERSON:

The authorised person, working within 25,000 volts electrified area, is a qualified and competent worker who:

- Need to be aware of the inherent hazards (high voltage, electric shock) and risks associated with undertaking work activities in and around the 3 metres electrical exclusion zone within the electrified area.
- Supervises the electrical safety aspect of the work when the work could come closer than 3 metres of the overhead line equipment.
- Accept forms.
- Stays on site while work is being done.
- Is appointed by line management to take charge of a specific worksite in the electrical area.
- Holds an “authorised person” card, confirming competency.

RAIL INFRASTRUCTURE MANAGER.

The rail infrastructure manager is a person who:

- Has effective management and control of rail infrastructure or proposed rail infrastructure.
- Arranges for a TPO to assess the worksite.
- Approves the use of access roads.
- Approves designated walkways.

Note; the rail infrastructure manager may delegate these tasks to the local infrastructure manager.





3.0 HAZARDS AND RISKS

A hazard is a source of potential harm. Risk is the likelihood that the harm will occur from exposure to the hazard.

Example the hazard is electricity.



The risk is the likelihood that a worker might be electrocuted by coming into contact with the overhead line equipment.

Example the hazard is rail traffic.



The risk is the likelihood that a worker could be struck by the rail traffic.



4.0 OVERVIEW OF ACCESS REQUIREMENTS.

The matrix below overviews the key requirements for accessing specific areas:

- Within the transfer facility- outside of the danger zone, and inside the danger zone.
- Beyond the transfer facility- within the rail corridor.

WITHIN THE TRANSFER FACILITY				OUTSIDE THE TRANSFER FACILITY
OUTSIDE THE DANGER ZONE	WITHIN THE DANGER ZONE WHEN THE TRACK IS NOT OBSTRUCTED. (Included personnel, equipment, machinery being in a position of safety within 10 second of approaching rail traffic).	Within the danger zone when the track is obstructed.	Within the corridor	
REQUIREMENTS	No requirement business as usual.	Contact network control for blocking protection.	Contact rail infrastructure manager for TPO. TPO will assess protection requirement and help plan works.	Contact rail infrastructure manager for TPO. 5 trackside safety rules will apply.
EXAMPLES	Clearing coal with hose.	Routine maintenance activities.	Major maintenance activities.	Major maintenance activities.

Conducting your work outside the danger zone is the preferred method of work wherever possible.

5.0 WITHIN THE TRANSFER FACILITY; ACCESSING THE DANGER ZONE.

There are two key categories for accessing the danger zone within the transfer facility:

1. When the track is **not** obstructed.
2. When the track **is** obstructed.

WARNING: DO NOT PERFORM ANY WORK IN THE DANGER ZONE UNTIL YOU HAVE AUTHORITY FROM THE NETWORK CONTROLLER TO DO SO.

WITHIN THE DANGER ZONE WHEN THE TRACK IS NOT OBSTRUCTED.

“What do we mean by the track is not obstructed”?

Blocking protection must be first obtained before doing any work in the danger zone that is:

- Inside the limits of the transfer facility and,
- Where workers and equipment can be moved to a position of safety 10 seconds before the arrival of rail traffic.

Blocking protection is a protection method used to stop rail traffic from entering a section of track. Work is carried out between scheduled rail traffic.

You should be aware of your company process for obtaining blocking protection from the network controller.

The track protection officer can sometimes pre-assess a worksite, and identify the range of common activity undertaken and the protection required for each of those activities at that worksite.

This assessment may even cover that ongoing activity, as long as the circumstances of that activity (and associated risks) do not change at that worksite. E.g. all conditions remain the same.



The facilitator will read this scenario aloud. Discuss the scenario with a partner and complete the missing words.

Choose from:

- HAZARD
- NETWORK CONTROLLER
- 5
- RAIL TRAFFIC
- POSITION SAFETY

Scenario:
Alan and his team need to complete some work in the danger zone at the transfer facility.
Authority to enter the danger zone is provided by the.....,
Who will use blocking protection to ensure.....is separated from workers.
These controls are put in place to eliminate.....and prevents risk.
Alan and his team members look frequently (approximately every.....seconds), and can get to a at least 10 seconds before rail traffic arrives.

WITHIN THE DANGER ZONE WHEN THE TRACK IS OBSTRUCTED.

If workers and equipment cannot be moved to a position of safety 10 seconds before the arrival of rail traffic, it is considered that the track” is obstructed”.

Give 2 examples:

As per the matrix, in this situation a track protection officer is required.

- Major maintenance must be planned in advance and notified to the rail infrastructure manager at the earliest opportunity.
- The rail infrastructure manager will arrange for a track protection officer to assess the site and determine protection requirements.
- The track protection officer will get the necessary authority for work in the danger zone within the transfer facility.
- Do not enter the danger zone until the track protection officer gives permission to start work.

Remember: the track protection officer can sometimes pre-assess a worksite, and identify the range of common activity undertaken and the protection required for each of those activities at that worksite.

This assessment may then cover that ongoing activity, as long as the circumstances of that activity (and associated risks) do not change at that worksite.

6.0 OUTSIDE THE TRANSFER FACILITY: ACCESSING THE RAIL CORRIDOR.

RAIL INFRASTRUCTURE MANAGER APPROVAL REQUIRED:

Now that we are able to identify where the rail corridor and the transfer facility are, we can be clear about the requirements within the limits of your transfer facility.

But when you need to enter the rail corridor outside the transfer facility, then you or your supervisor will need to contact the rail infrastructure manager.

The rail infrastructure manager or delegate (local infrastructure manager) will make the arrangements for a track protection officer to assess the site to determine the appropriate protection requirements.

The track protection officer will get the necessary authority for work in the rail corridor that is outside the facility.

If you are required to work in the rail corridor regularly then you are required to complete the “the rail induction training”.

5 Lifesaving Rules.

These rules are designed to keep you safe while trackside. The rules must be followed by everyone at all times:

1. No one can enter the rail corridor without being accredited as a track protection officer or being supervised by a track protection officer.
2. All work within the rail corridor requires a written and approved corridor access safety plan, developed prior to entering the corridor by the worksite track protection officer and supervisor.
3. In developing the corridor access safety form the track protection officer must work down through a hierarchy of trackside safety controls. This means the track protection officer will consider the most effective control measure before any lower levels of control.
4. Where a worker, piece of plant, or equipment has the potential to be struck by rail traffic on an adjacent live track, safety barriers or an approved alternative form of protection be provided.
5. Where working near electrical overhead equipment all workers must maintain the 3 metres electrical exclusion zone unless authorised.



You will need a valid reason to access the corridor



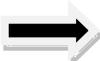
You or your supervisor/manager will need to contact the rail infrastructure manager.



The corridor access safety form is to be completed and agreed to by the worksite supervisor and the track protection officer. The corridor access safety form is then reviewed and signed by the track protection officer's immediate manager/supervisor. The track protection officer will submit the corridor access safety form to the appropriate network. The track protection officer will assess the risks and provide appropriate protection.



Protection must be in place before commencing work,



The track protection officer will assess the need for a corridor induction checklist briefing before workers enter the rail corridor.



Workers can now enter the rail corridor under the supervision of a TPO.

Lookout Protection:

When working within the rail corridor you need multiple levels of controls to treat the hazards, one of which may be a lookout.

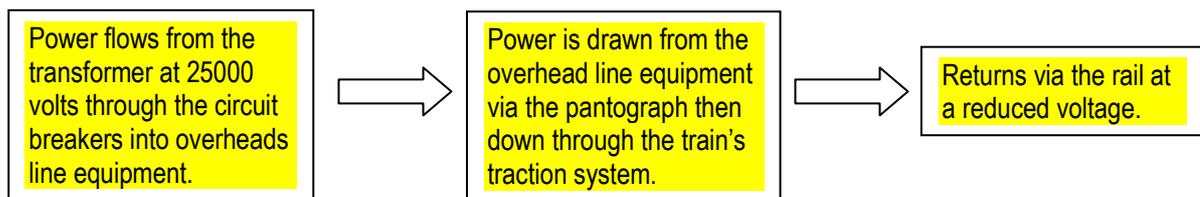
The look out will;

- Be identified by the safety yellow clothing.
- Remain in close proximity to workers to warn about the approach of rail traffic.
- Establish the means of communication e.g.
 1. Verbal
 2. Touch
 3. Whistle
 4. Siren

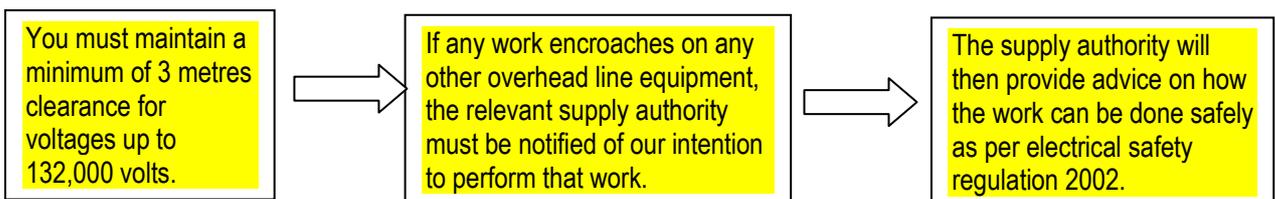
You **must** comply with the instruction given from a lookout.
The look out must not do any other work.

Before accessing the electrical exclusion zone:

QR transforms the power it receives from the electrical distribution companies down to 25,000 volts.



Note: the system is monitored by the electric control operator (ECO) in the control centre.



If your work has the potential to encroach on the 3 metres electrical exclusion zone of QR's overhead line equipment and all work above the overhead electrical equipment, then an authorised person must complete a risk assessment.

Every day before specific work starts, the authorised person or the track protection officer will give a worksite safety briefing that identifies the work to be done and the control measures that must be put in place.

All workers must attend to ensure they understand the work process and their personal safety obligations.

The authorised person is to remain present onsite to supervise the electrical safety aspects of the work.

If the authorised person for any reason leaves the work site or is unable to supervise the electrical safety aspects of the work site or is unable to supervise the electrical safety aspect of the work, another certified authorised person must be appointed. If no relief authorised person is appointed the work must stop immediately and you must move out of the 3 metres electrical exclusion zone.

Overhead line equipment, pantographs and roof-mounted electrical equipment.

Overhead line equipment, pantographs and roof-mounted electrical equipment on rail traffic are extremely dangerous to:

- Touch
- Go near to
- Allow anything to touch
- Allow anything to go near to.

All equipment including all wires and their support equipment including the insulators are to be treated as LIVE and DANGEROUS until they have been made safe.

Conductors.

All materials are to be considered conductors when they have the potential to make contact with any overhead line equipment.

Before using any tools, materials, plant or equipment, become familiar and aware of your surroundings.

Using long items around overhead wires.

You must:

- Take extreme care when using or carrying long items.
- Make sure they do not come within 3 metres of the overhead line equipment.
- Carry long items horizontally and, if necessary, get other people to help you.
- Carry below waist level.

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Using ladders around overhead line equipment.

When using ladders near overhead line equipment, you must only use ladders that are made of wood, or other approved non conducting materials. You must not use ladders that are reinforced with metal attachments running along the sides.

You must carry your ladders horizontally, below the waist and, if necessary get other people to help you.

Beware of the fall arc of a ladder in case it falls-ensure it does not have potential to come into contact with overhead line equipment.

Plant equipment.

Any tools, materials, plant or equipment are to be considered conductors when they have the potential to come with the overhead line equipment.

When using machinery, control measures must be in place to limit the movement of the machine for both electrical and track safety.

Any work involving plant and equipment that is likely to encroach into the 3 metres electrical exclusion zone must be approved.

Only use track crossing that have height barriers installed on both sides to stop high load access.

When using water around any overhead line equipment never hose up toward the LIVE wires.

Vertical clearance at level crossing with overhead line equipment.

Only use the correct track crossing, either:

- An open level crossing defined by danger signs on both sides, or:
- A designated occupational crossing defined by danger signs on both sides and with a height barrier installed on both sides to stop high load access.

Do not use maintenance or temporary track crossings if they have no danger signs or height barriers installed

7.0 UNSAFE SITUATIONS.

You must report any suspected broken equipment or other unsafe situations to the track protection officer onsite.

QR's emergency hotline is: **1800 079 303**

This 1800 number should be called in the event of an emergency on QR property. The number calls through to your local network control, and they will coordinate with emergency services as required.

It is important that all incidents, including near misses, are reported, recorded and investigated regardless of how minor they may be perceived. All workers must report near misses to their supervisor for action ASAP.

This is to enable controls to be identified and implemented to minimise the risk of the circumstances around this incident leading to an accident.

EMERGENCY SITUATIONS:

If placed in an emergency situation it means that something has gone drastically wrong.

Approaching rail traffic.

If at risk of serious injury from two approaching rail traffic lay face down between adjacent sets of tracks.

Stopping rail traffic in emergency only.

If there is a requirement to stop a train after finding an obstruction that could be dangerous to the safe passing of a train.

- ✓ Stand in a position of safety.
- ✓ Raise both arms above your head.
- ✓ If you cannot get the attention of the driver wave your arms violently.
- ✓ At night (or poor visibility) direct any light towards the driver and wave it violently.

Moving vehicles within the rail corridor.

When driving and turning vehicles within the rail corridor, no part of the vehicle should enter the danger zone unless the appropriate track protection measures have been implanted.

[Do not reverse towards the railway track.](#)

Emergency? Call 1800 079 303





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