

# Personal Track Safety

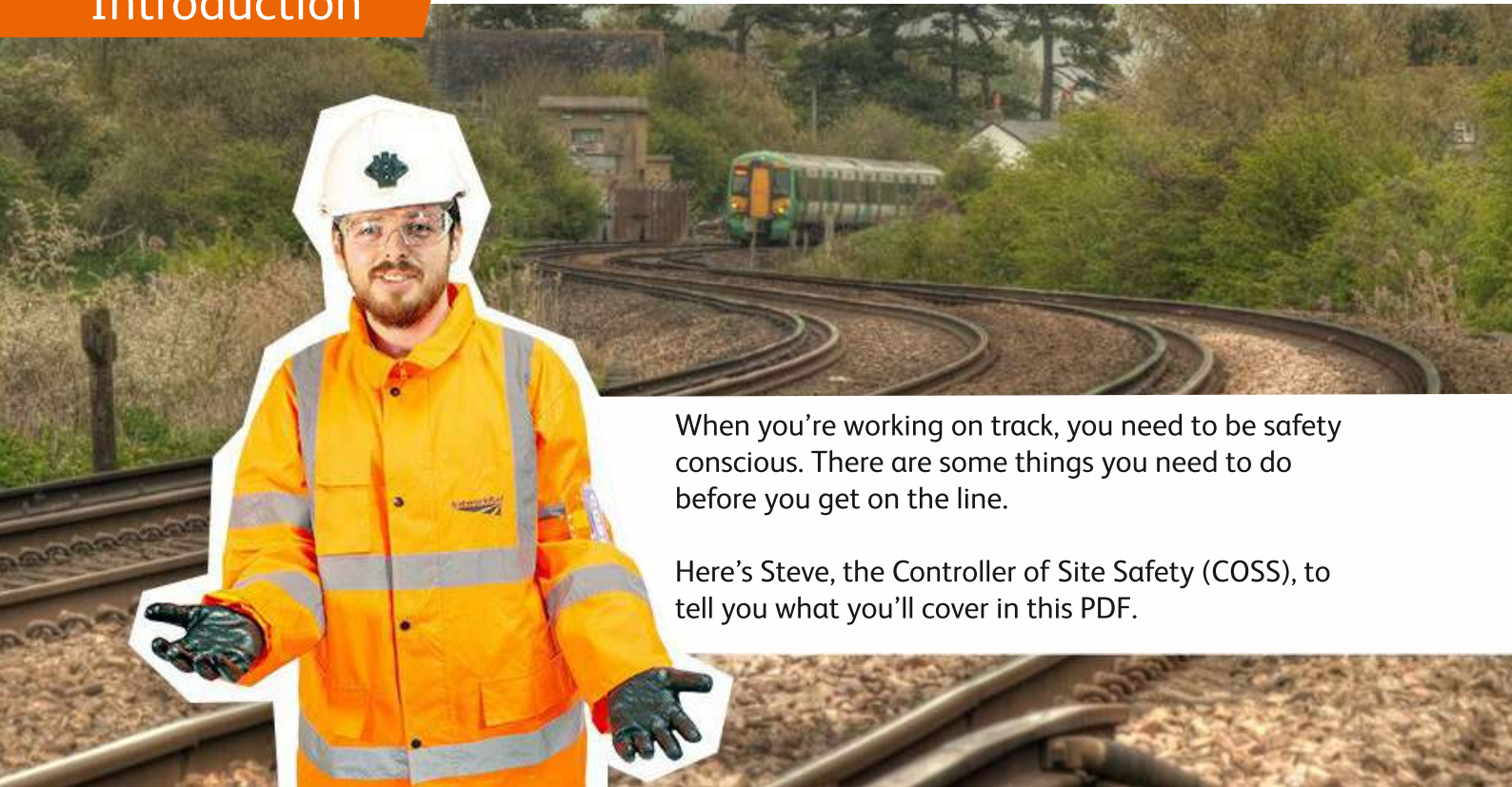


**04**

**Preparing to work  
safely**

# Preparing to work safely

## Introduction



When you're working on track, you need to be safety conscious. There are some things you need to do before you get on the line.

Here's Steve, the Controller of Site Safety (COSS), to tell you what you'll cover in this PDF.

“ This PDF will cover what you need to know before you step out onto the infrastructure.

You'll cover the basics such as the protective clothing you should wear, who you'll work with, where you should position yourself on the railway and the Safe Systems of Work you must follow in order to maintain your safety and the safety of those around you at all times.

”

# Preparing to work safely

## This section will show you how to work safely.

You may come across a number of people, like the person in charge, who will be supervising the work activity and may also be acting as the COSS.

During your work, you will meet a number of colleagues with specific titles and roles that are important to your safety at work. The Controller of Site Safety, or COSS, will be with you when you are working in a group. They are required to brief you, and establish a Safe System of Work. A group is defined as being two or more people.

The Look Out/s keep watch for approaching trains, and warn anyone on or near the line that a train is approaching.

The Site Warden is provided to make sure that if someone in the group strays outside the Site Warden's warning area towards an open line, they shout a warning that tells them to get back.

All these people have to be trained and certified competent. Their role is to help you stay safe on, or near, the railway line.

Work to carry out repair and maintenance on the railway is normally planned and can be carried out with no trains running. Work can be carried out with trains still running if it has been demonstrated through planning that it is safe to do so, and that warning will be provided to the work group either by equipment warning or by a Look Out/s.

Different types of safe system can be set in place for carrying out the work. On a blocked line, or lines, a complete stoppage of all train movements can be agreed. A temporary fence can be put up between the blocked line and the nearest open lines.



# Preparing to work safely

## Safe Systems of Work (SSOW)

A COSS may also appoint a Site Warden to warn any group member if they stray outside the safe area by shouting 'Get back!'. They might also blow their horn. Always stay within the safe limits of the work site when you're working on an open line. If a Site Warden shouts a warning, check that you are within the safe area, and move back if you are not. Never distract a Site Warden while they are carrying out their work – they could save your life.

When working on an open line, there are several track warning systems that can be used.

An Automatic Track Warning System (ATWS) is triggered by the train going over a device called a treadle. The warning is usually given by sirens and flashing lights.

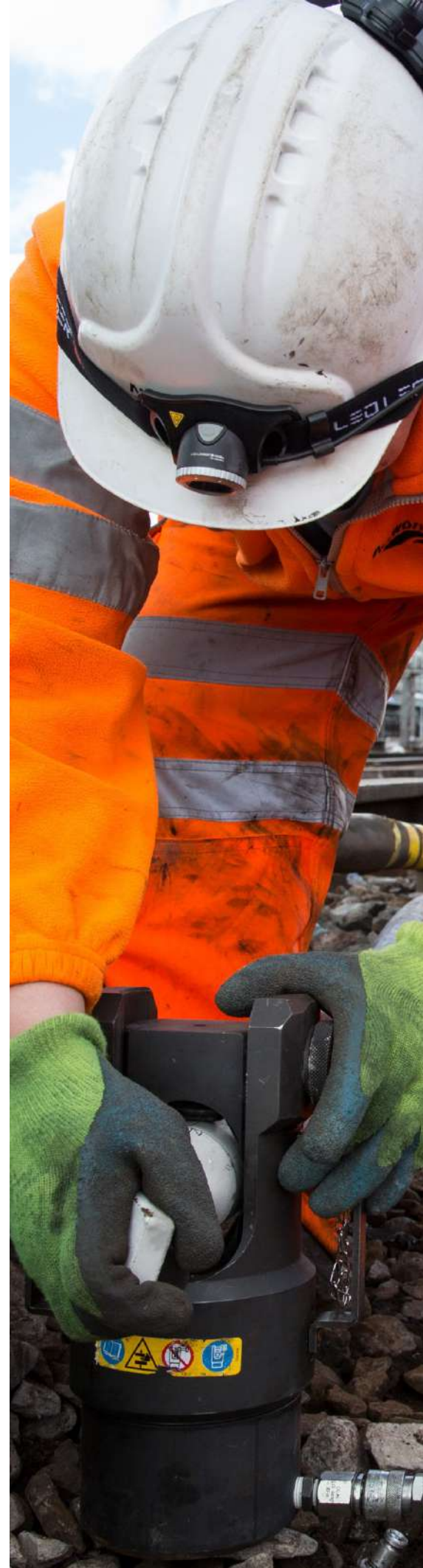
With a Look Out Operated Warning System (LOOWS), the Look Out triggers the alarm. This has similar equipment to an ATWS, with flashing lights, sirens, and sometimes a personal warning device. The Look Out will be provided and will warn you of approaching trains. They will warn the group so that it gives them enough time to reach a position of safety at least ten seconds before the train arrives.

Unassisted Look Outs can give a warning by horn, whistle, touch, or, for noisy equipment, a special cut-off device. They must have a Look Out qualification and wear a Look Out armband on their upper-body, on the left arm.

Train Operated Warning System (TOWS) uses track circuits to detect trains. When a train approaches, it switches from an intermittent to a continuous tone. Look Outs can also be provided for this as an additional safety measure.

When a warning sounds, acknowledge it by raising one arm above your head, stop work right away, and move into a position of safety. If you leave any tools or materials on the ground, they should be at least two metres away from the line in order to avoid the slipstream, or even getting hit by the train. Remain in the position of safety until the COSS says it's safe to leave.

If you have any concerns about the safe system in place, stop what you are doing, move to the position of safety, and speak to the COSS.



# Preparing to work safely

## Being prepared



Before you begin work you need to be wearing the mandatory PPE. You need to carry a Sentinel card and you should check that there is an appropriate Safe System of Work in place. You'll find out more about each of these points later in this PDF.

If you have a **Safeguarded** Safe System of Work, all the lines are blocked. However, in other cases, while a Safe System of Work is in place, trains may continue to run on the line you are working on or on adjacent lines. That's why it's important to follow safety guidelines.

You don't need to carry your medical card with you on the line or to put up a fence around your area of work.

# Preparing to work safely

## Roles and responsibilities

During your first day on site, the following people will soon become familiar to you. Take a moment to find out the different roles and responsibilities of your team mates. Each of them will be wearing an armband showing their role on their left arm.



### Controller of Site Safety (COSS)

“I’m the Controller of Site Safety (COSS). I make sure that a Safe System of Work is in place and maintained. I am responsible for the safety of the group to keep people safe from trains.”



### Safe Work Leader (SWL)

“I am the Safe Work Leader (SWL). I do everything that a COSS does, making sure that a Safe System of Work is in place. I’m also responsible for making sure the work task is completed safely, and I act as the person in charge.”



### Person In Charge

“I am the person in charge and I supervise the work activities. I am responsible for making sure the work activities are completed safely and I may also act as the COSS or the Safe Work Leader to keep the work group safe from trains. I will brief the group on the contents of the Safe Work Pack to make sure everyone understands what to do.”



### Protection Controller (PC)

“I’m the Protection Controller (PC). I take control of the shared line blockage. So what does this mean in practice? Well, if there are two or more COSS or Safe Work Leaders or Individuals working alone (IWA) who need a line blockage at the same place and same time, then I’m appointed to make sure the line blockage protects all the groups or IWA.”



### Lookout

“As the Lookout, it’s my job to give warning of approaching trains to everyone in the group on or near the line.”



### Site Warden

“I’m the Site Warden. I’m there to warn anyone that moves outside the safe limits of the Site Warden Warning area. Anything outside that area is deemed unsafe, so don’t be offended if I shout at you to ‘Get back’.”

# Preparing to work safely

## Personal Protective Equipment (PPE)



Before you begin work, you'll need to make sure you've got the right PPE.

Your employer will give you any PPE you need to wear and they'll show you how to use it.

Keep it clean, check it for damage and report any defects. PPE can only protect you if you wear it properly – so make sure you do.



On the infrastructure you have to wear at least a class 2 high visibility (HV) safety vest or jacket.

You must also wear full-length HV trousers or overtrousers to protect you from lineside vegetation and any slips or falls.

The wearing of eye protection and safety gloves appropriate for the activity is also mandated. Staff will be advised by the person in charge if there are any special requirements for specific eye or hand protection to be used.



If you have recently qualified in Personal Track Safety then you should wear a **blue safety helmet** until you and your sponsor agree that you have gained enough experience.

Once you have had the green square removed from your Sentinel card, a white safety helmet is the mandatory requirement from then on.

# Preparing to work safely

## Personal Protective Equipment (PPE)



When on or near the line or lineside you must wear the approved safety footwear.



It is now mandatory to wear safety glasses and hand protection when on or near the line (Network Rail Infrastructure).

Depending on your work or the site rules, you might also have to wear other items such as ear defenders and specific goggles and gloves.

Some tasks will require you to wear fire retardant PPE.

You can wear sunglasses in bright conditions. But don't use tinted glasses or lenses if your job requires you to see colours.



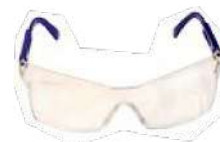
# Preparing to work safely

## Minimum PPE



As a minimum, you must wear **all** of the following:

- Safety boots
- Safety helmet
- High visibility safety vest or jacket
- High visibility trousers or overtrousers
- Safety glasses
- Gloves.



# Preparing to work safely

## Sentinel

Sentinel is the rail industry's scheme for making sure that the people who work on or near the line are competent and medically fit.



Your Sentinel card will show a photograph, an ID number and a chip. This chip contains further information about you and your competences, and the shifts you have worked. Whenever you receive a new competence, your Sentinel card will be updated automatically. You don't need to request a replacement or send it to be updated.



Each time you go to work on a site, your Sentinel card will be scanned and checked before you are allowed to start. You may be stopped from working on the site if you don't have the right competences or you have recently finished another shift. You must carry your Sentinel card with you and have it scanned each time you work.

# Preparing to work safely

## Positions of safety

A position of safety is an area clear of all open lines where you can stand safely until the train has passed or where you should go to when you get warning that a train is approaching. The COSS or Safe Work Leader will tell you where the position of safety is for your worksite, before you start working there.



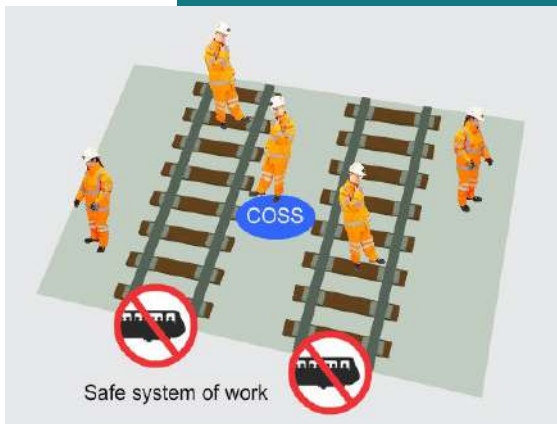
If the speed is 100mph or less then you must stand at least 1.25 metres (4 feet) from the nearest running rail of any open line to be safe.



If the speed is over 100mph then you must stand at least 2 metres (6 feet 6 inches) from the nearest running rail of any open line to be safe.

# Preparing to work safely

## Safe Systems of Work (SSOW)



With a **Safeguarded** Safe System of Work, a space is provided between the site and the nearest open line.

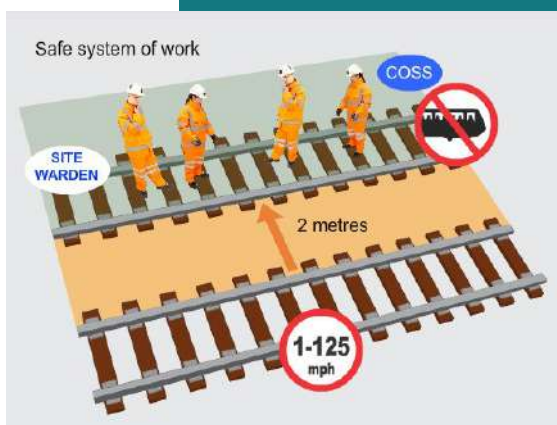


In a **Fenced** Safe System of Work a temporary fence is put up between the site and the nearest open line. There are three types – rigid safety barrier, blue plastic netting or black and yellow striped barrier tape.

A safety barrier can be positioned no less than 1.25 metres (4 feet) from the nearest open line.

The COSS or Safe Work Leader will brief you about the fenced zone.

Stay on the safe side of the fence. Do not lean on or over the fence and do not lean objects against the fence.



With a **Separated** site of work, a space is provided between the site and the nearest open line.

The space must be at least 2 metres (6 feet 6 inches) and the Site Warden is appointed if there are more than two people in the group.

The Site Warden is provided, so if someone strays outside the Site Warden Warning area towards an open line, they will shout a warning: “Get back!”

If the group is you and the COSS or Safe Work Leader, the appointment of a Site Warden is not required. The space must still be at least 2 metres (6 feet 6 inches) between the site and the nearest open line.

# Preparing to work safely

## Safe Systems of Work (SSOW)



We also use four types of **equipment warning** systems. With Equipment Warning you will be warned when a train is approaching. The COSS or the Safe Work Leader will make sure enough prior warning is given for you to reach the position of safety. You must be in the position of safety at least 10 seconds before the train passes.

There are four methods of equipment warning, listed in order of preference:

- Warning systems – Permanent (e.g. ATWS permanently installed)
- Warning systems – Train Operated Warning System (TOWS)
- Warning systems – Human activated (e.g. Lookout operated warning system LOWS)
- Warning systems – Portable (e.g. portable ATWS system).



A **Look Out** warning uses unassisted Look Outs and the warning is given by horn, whistle or touch if there is noise or the group are wearing ear protection.

A Look Out may also use a cut-off device on noisy equipment, such as a kango.

The COSS or Safe Work Leader will brief you on which method is to be used.

# Preparing to work safely

## Equipment warning

As you've seen, there are **four** methods of equipment warning.



With an **Automatic Track Warning System (ATWS)**, approaching trains are detected by equipment attached to the running rails.

The warning is given by trackside flashing lights and sirens and/or a personal warning device.

There are different types of ATWS warning systems which may be used: permanent and portable.



With a **Train Operated Warning System (TOWS)**, approaching trains are detected by the signalling system.

The warning is given by trackside sirens.



With a **Look Out Operated Warning System (LOWS)**, the warning system is activated by the Look Out when a train is sighted. The warning is given by trackside flashing lights and sirens and/or a personal warning device.

# Preparing to work safely

## Possession

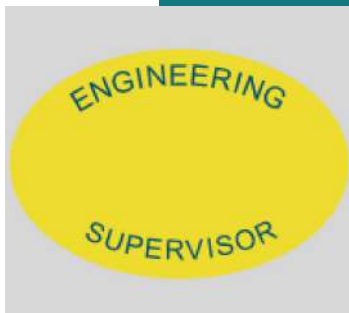
A lot of the engineering work we undertake on the rail infrastructure is done in a possession.



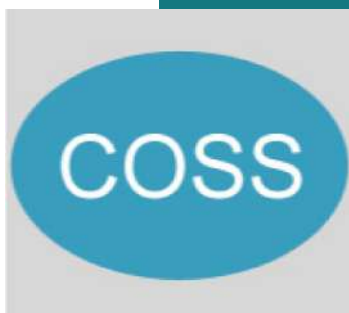
A **possession** of the line is taken to prevent passenger and freight trains from running to make sure that engineering work is done safely. This includes track renewal and heavy maintenance. A possession may only block certain lines. You may find that adjacent lines are still open.



A **Person in Charge of the Possession (PICOP)** is appointed to take charge of the possession and worksites are established within the possession.



Often, engineering trains and On Track Plant (OTP) are required to operate within the possession and the presence of these pose additional risks for track workers. Note that they may approach from any direction within a possession. An **Engineering Supervisor (ES)** or **Safe Work Leader (SWL)** is appointed to manage each worksite.

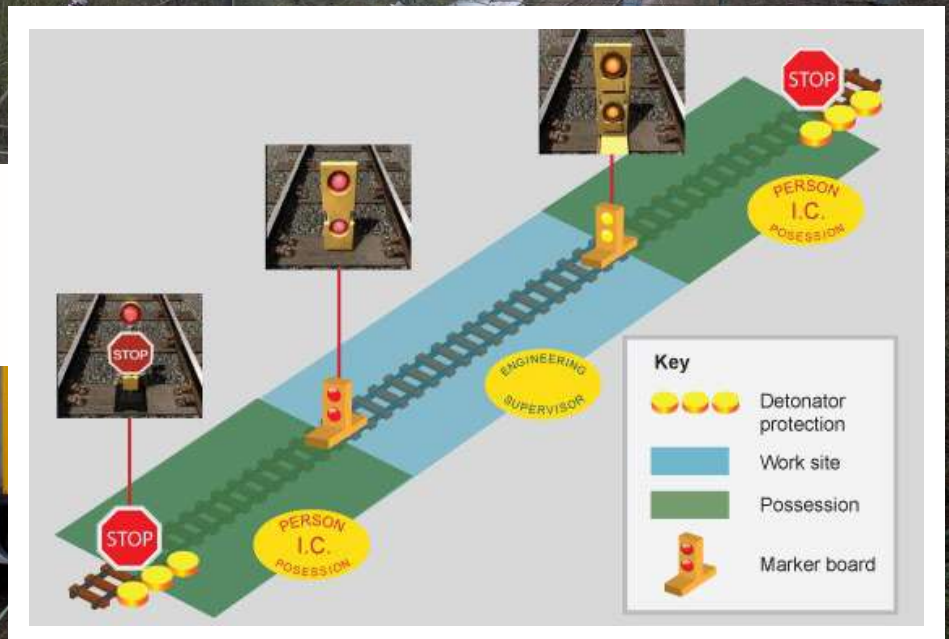


A **Controller of Site Safety (COSS)** is appointed to set up a Safe System of Work for each group working within the possession or worksite as required.

# Preparing to work safely

## Possession

Here's a typical possession arrangement.



As you can see, the Possession Limit Board (PLB) and detonators are placed at either end of the possession to act as protection and to indicate where the possession starts and finishes.

Worksite marker boards indicate the ends of the worksite. These boards have different coloured lights on each side. If you can see the yellow lights you are within the worksite. If you can see the red lights you are outside the worksite. Your work could take you into the area between the detonators and the worksite. You will always have a Person in Charge of Possession (PICOP) in these areas, and an Engineering Supervisor (ES) or Safe Work Leader (SWL) within the worksite.

In all cases a COSS or Safe Work Leader must be appointed and they will brief you on all of the dangers and hazards associated with the presence of on track plant (OTP) and engineering trains.



# Preparing to work safely

## Summary



You've now reached the end of this PDF.

Here's Steve again with a quick recap.

“

Now that you've got this far, you should know about what you need before starting work on the line. Things like the mandatory PPE, an agreed Safe System of Work and your Sentinel card.

You saw the main people you'll be working with at the worksite: the COSS or Safe Work Leader, PC, Look Out and Site Warden.

You also covered the five types of Safe System of Work (SSOW). These are used when a nearby line is open, and include:

- Safeguarded
- Fenced
- Site Warden Warning
- Equipment Warning
- Lookout Warning.

When we need to close part of the line, we'll arrange a possession. These come with their own rules and processes.

That's the end of this part of the Personal Track Safety (PTS) learning. Please read the other PDFs or e-learning topics in this course before you take the online Assessment.

”