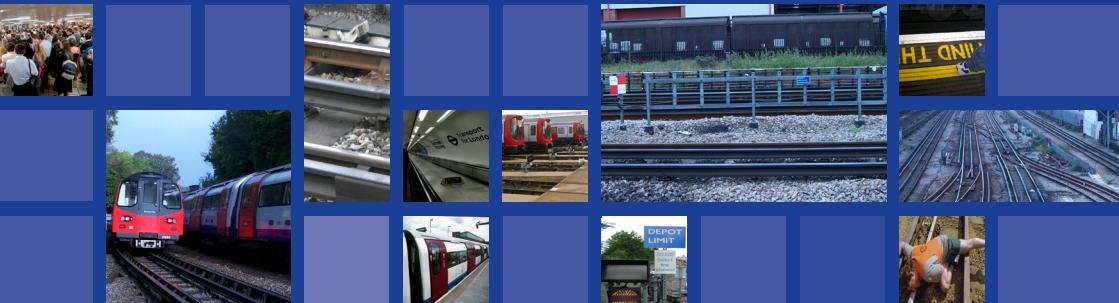




Access

London Underground - Individual Working Alone



Learning information booklet

Issue 2

Effective 1st March 2015



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I Introduction

On completion of this course you will be able to access the track and provide protection for yourself:

- during Traffic Hours
- within depots
- within stabling sidings where traction current is on 24 hours.

Individuals must comply with current legislation and London Underground (LU) rules.

The required standard in the theory and practical assessment must be achieved in order to be awarded a certificate endorsed London Underground - Individual Working Alone (LU-IWA).

2 Personal responsibilities

You must not go on or near the track on the main running line, in a depot or remote stabling sidings unless it is absolutely necessary and your duties require you to do so.

If your duties require you to be on or near the track on the main running line, in a depot or stabling siding, you must be authorised and:

- carry your track safety certificate at all times
- take reasonable care of your own health and safety, and the health and safety of others
- be aware of any expected hazards
- not interfere with or misuse any safety equipment
- pass safety critical messages using the phonetic alphabet
- carry out local instructions relating to specific locations
- use authorised walk ways and walk boards where possible
- report incidents and hazards.

Roles and responsibilities

3 Roles and responsibilities

3.1 Protection Master



A person certificated by LU to provide protection for themselves and others. A Protection Master can be identified with a 'Protection Master' armband worn on the right arm above the elbow.

There are two categories of Protection Master on Traffic Hours, depots and stabling sidings:

- Protection Master Traffic Hours (PMTH) - when trains are moving and traction current is on
- Depot Protection Master (DPM) - in a depot or stabling sidings.

3.2 Lookout



A person certificated by LU to warn staff who might be exposed to danger from moving trains or vehicles. A lookout can be identified with a 'lookout' armband worn on the left arm above the elbow.

The lookout must:

- carry the correct equipment
- warn personnel according to the correct procedures
- stay in position as indicated by the PMTH until protection is no longer required or until relieved by another lookout.



You must not talk to or distract the lookout.

3.3 Handsignaller (engineering)



A person certificated by LU to control the speed of trains by handsignal, flag or handlamp, if required by engineering works. A handsignaller (engineering) can be identified with a 'handsignaller' armband worn on the left arm above the elbow.

The handsignaller (engineering) must:

- carry the correct equipment
- control the speed of trains according to the correct procedures
- stay in the position as indicated by the PMTH until protection is no longer required or until relieved by another handsignaller (engineering).

3.4 Possession Master



A person certificated by LU to take control of a possession. A Possession Master can be identified with a 'Possession Master' (POM) armband worn on the left arm above the elbow.

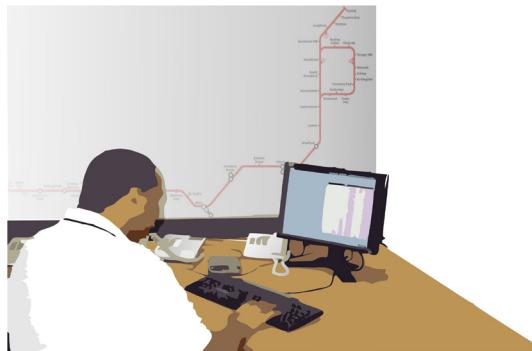
Roles and responsibilities

3.5 Maintenance Manager Operations / Duty Depot Manager



A person who controls and manages the day to day running of the depot.

3.6 Controller



A suitably competent person, in overall control of the train service on a line, normally acting from the line's control room.

4 Protecting yourself on the track

4.1 Protection

“Procedures to ensure personnel on or near the track are not endangered by moving trains or mechanised vehicles.”

4.2 Providing your own protection

When accessing the track alone personnel will be providing their own protection and will be entirely responsible for their own safety on the track.

To be able to go on the track alone and provide your own protection, you must:

- be certificated LU-IWA as a minimum
- be familiar with local conditions, including the scheduled train frequency tables
- have permission from the manager accountable for the location
- only access the track if it is daylight and Traffic Hours
- always have adequate illumination if in a depot
- only access the track within an open (Line Safe) area
- walk facing traffic where possible
- not be distracted from looking out for trains
- remain visible to train operators
- always have an adequate place of safety
- have at least 25 seconds continuous sighting time
- on sighting a train immediately move to the place of safety and acknowledge the train operators warning by raising one arm above your head
- be aware of changing conditions
- inform the controller and your manager or supervisor that you are accessing the track.

5 What you need to protect yourself on the track

5.1 Personal Protective Equipment

When personnel access the track they must wear LU approved Personal Protective Equipment (PPE) including:

- high visibility clothing correctly fastened
- trousers
- no loose clothing that could get snagged on a passing train
- no long coats that can drag across the traction current rails
- footwear with adequate support for walking on rough ground.



Additional PPE may be required as per the method statement.

5.2 Site familiar

If you are accessing a section of track on your own you must be familiar with the area. If you are not familiar then you should refer to the site familiar information document on the LU Network Improvement site.

Area	At or between		Features
Basic	Mile End	Bow Road	
Basic	Bow Road	Bromley-by-Bow	Crossover
Basic	Bromley-by-Bow	West Ham	
Complex	West Ham	Plaistow	Crossover Network Rail and West Ham siding
Basic	Plaistow	Upton Park	
Basic	Upton Park	East Ham	
Complex	East Ham	Barking	Crossover, Network Rail and flyover
Complex	Barking	Upney	Sidings and flyunder
Basic	Upney	Becontree	
Basic	Becontree	Dagenham Heathway	
Basic	Dagenham Heathway	Dagenham East	Crossover
Basic	Dagenham East	Elm Park	
Basic	Elm Park	Hornchurch	Crossover
Basic	Hornchurch	Upminster Bridge	
Complex	Upminster Bridge	Upminster	Network Rail
Complex	Upminster depot	East of station	Network Rail and depot

5.3 Basic areas

These areas are defined as single or double tracks with some points and crossings but no major junctions or restrictive features such as a long viaduct or fly under.

An LU-IWA certificated person can make themselves familiar with a basic area by:

- taking a cab ride in a train
- studying ‘places of safety’ maps
- studying the controllers’ diagrams
- utilising other sources of available information
- walking the site.

Platform grounds are treated as basic areas except where there are:

- multi-tracks
- locations which have other restrictive features.

5.4 Complex areas

These areas are defined as multi-track sites, major junctions and locations with restrictive features. The risks are greater due to the physical conditions on the ground. Staff providing their own protection who are not familiar with areas that are classified as complex, must make a site familiarisation visit accompanied by protection staff who are familiar with the area, prior to any work taking place. It could take a number of visits before the person becomes fully familiar with a complex area.

Conditions encountered at individual locations might include:

- bi-directional working
- multi-track areas
- parallel running or joining end-on to Network Rail or other organisations' lines
- weedkilling train
- obstructions
- limited clearance areas
- access routes and walkways
- depots and sidings
- traction current arrangements
- traction current sections.

6 Documentation

6.1 Traffic Circular

The Traffic Circular is the publication that is used to publish details about the operational railway, such as:

- track, signalling and equipment alterations
- restrictions
- trains and stations
- status reports and amendments to instructions
- communications, vacancies and training courses.



This information can be found on the Network Improvement website.

You must:

- look at the Traffic Circular every week to see if there is anything affecting the proposed work
- always make sure you have the latest publication.

The Traffic Circular also publishes the detailed operation of the weedkilling train on a weekly basis.

6.2 The weedkilling train

The weedkilling train can create another type of hazard, and special precautions may be necessary if entering a treated area within 24 hours of application.



If working in a treated area within 24 hours of application, personnel must:

- make sure that approved disposable clothing and gloves are worn
- ensure contaminated disposable clothing is sealed into plastic bags and disposed of in the correct bin
- wash their boots
- wash their hands before eating or smoking.



If you are just passing through a treated area, within 24 hours of application, without carrying out work, then you do not require disposable clothing and gloves.

6.3 Scheduled train frequency tables

From	To	04:00 - 05:00	05:00 - 06:00	06:00 - 07:00	07:00 - 08:00	08:00 - 09:00	09:00 - 10:00	10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00	14:00 - 15:00	15:00 - 16:00	16:00 - 17:00	17:00 - 18:00	18:00 - 19:00	19:00 - 20:00	20:00 - 21:00	21:00 - 22:00	22:00 - 23:00	23:00 - 24:00	24:00 - 01:00	01:00 - 02:00	02:00 - 03:00	03:00 - 04:00
Campbell Rd sub	Bromley	0 3 16	13 13	25 23	18 18	18 18	18 18	18 25	25 24	25 21	18 18	16 16	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Bromley	West Ham	0 2 14	22 24	25 23	18 18	18 18	18 18	18 24	23 24	25 22	18 18	17 17	17 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
West Ham	Plaistow	0 2 13	22 24	25 24	18 18	18 18	18 18	18 23	24 24	25 23	18 18	17 17	17 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Plaistow	East Ham	0 2 13	21 24	25 24	18 18	18 18	18 18	18 24	23 24	25 22	18 18	16 17	17 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
East Ham	Barking	0 2 11	22 24	24 24	18 18	18 18	18 18	18 23	24 24	25 22	18 18	18 16	16 3	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Barking	Upney	0 1 6	15 15	17 18	13 12	12 12	12 12	11 15	15 15	14 18	15 12	6 6	10 10	2 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Upney	Dagenham East	0 1 5	16 14	17 19	12 12	12 12	12 12	15 15	15 15	14 18	15 12	6 6	10 10	2 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Dagenham East	Hornchurch	0 1 4	11 13	15 19	13 12	12 12	12 12	14 12	14 12	13 17	17 12	7 7	9 9	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Hornchurch	Upminster	0 1 4	10 12	16 18	14 12	12 12	12 12	14 12	14 12	13 16	17 13	8 8	9 9	11 3	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0

Includes Hammersmith & City Line trains between Campbell Road and Barking and Piccadilly Line trains between Acton Town and Hanger Lane Jctn.

DISTRICT LINE (working timetable XXX effective XX December XXXX) EASTBOUND - MONDAY TO FRIDAY

You must be aware of train frequencies when accessing the track.
In particular:

- inspections can be carried out irrespective of train frequencies
- work must not be carried out where there are train frequencies of 16 trains per hour or more and you cannot remain continuously in a place of safety
- if you wish to carry out work where there are train frequencies between 12 and 15 trains per hour, and you cannot remain continuously in a place of safety, you must arrange for a job specific and location specific risk assessment to be undertaken.



Train frequency tables are available from the Network Improvement site. Any changes to the information will be published in the Traffic Circular.

6.4 Train speeds

Train speeds can be found in the line supplement to the Rule Book.

7 Sighting time

The sighting time is the time from when you first see an approaching train to when it reaches you in a place of safety.

You must have at least 25 seconds continuous sighting time.

To calculate sighting time at a particular location, stand in the place of safety and time a train from first sighting it, to the moment it reaches you in that location.

More than one train should be timed to ensure that the average train speed for the location is calculated.

7.1 Distance method

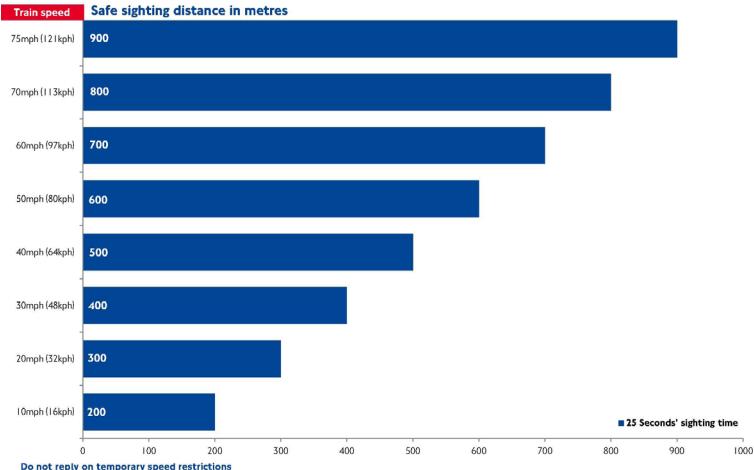
If you cannot measure the sighting time, estimate the safe sighting distance instead.

To do this you must know the maximum train speeds on that section of track and look up the safe sighting distance.

Train speeds are published in the line supplements – look up the permanent speed restrictions.

To estimate the distance on the track, use the kilometre posts which are spaced 200 metres apart.

The following table must be used to decide whether a train can be seen from sufficiently far away to provide the required continuous sighting time:



If the minimum sighting time or distance cannot be maintained you must:

- leave the track
- report back to your manager and arrange for protection.

7.2 Place of safety

A place of safety is a location beside the permanent way where a person can stand safely when trains pass. A place of safety must meet the minimum distance requirements as shown in Rule Book support information 'places of safety'.

A place of safety must:

- have a reasonably good surface to walk on
- not be liable to cause slips and trips
- allow you to walk facing approaching trains
- be wide enough to stand or walk in.

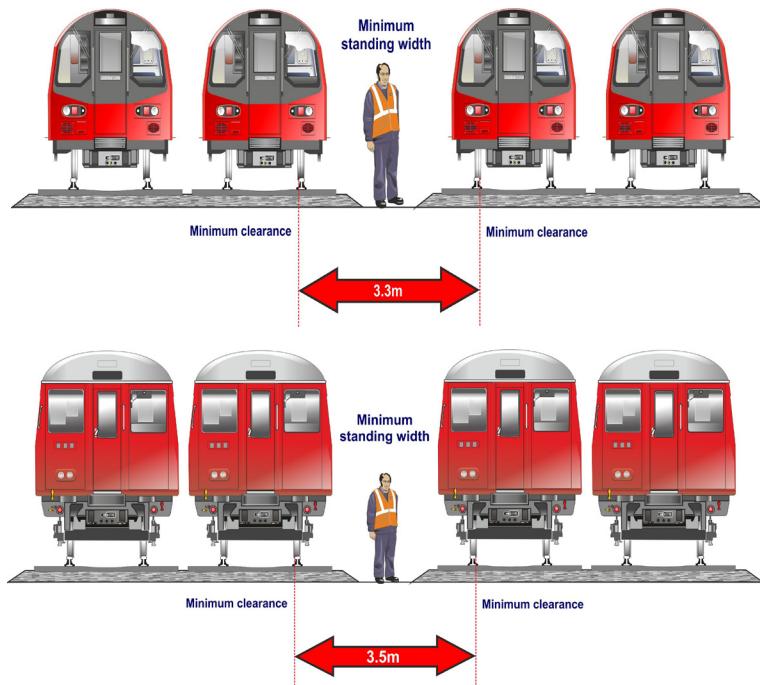
8 Using the cess as a place of safety



The cess can be used as a place of safety on:

- straight track
- curved track
- curved track with a check rail.

8.1 Using the ten foot as a place of safety



The ten foot can be used as a place of safety on:

- straight track
- curved track
- curved track with a check rail.



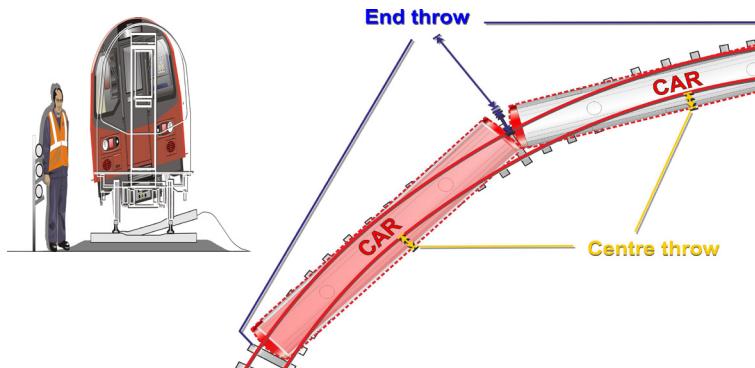
When the ten foot is used as a place of safety, and trains are approaching, personnel must stand sideways in the middle of the ten foot and place anything they are carrying by their side.

Locations where mixed stock can operate, the minimum dimensions calculated for a place of safety must be those shown for surface stock.

8.2 Making allowances for curves

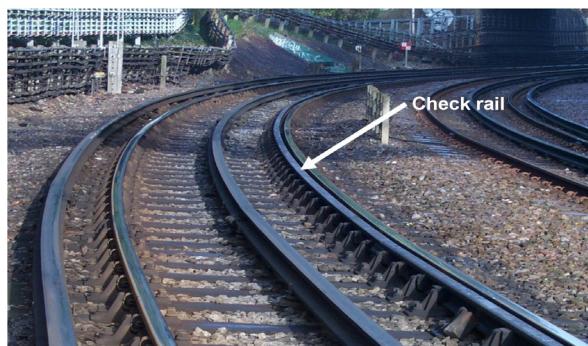
Curved track would affect your safety in the cess or ten foot as:

- curved track makes car bodies lean closer on the inside of the curve
- curved track makes the cars hang out over the rails anywhere except at the bogies (end throw and centre throw).



On curves, you must allow extra clearances for a place of safety, as the end throw and centre throw will be greater.

A check rail is an additional rail fixed in the four foot close to the running rail on the inside of the curve, which restricts lateral movement of the rails of a train.



8.3 Staggered cable runs

From Finchley Road to Preston Road and from Finchley Road to Stanmore, the cable run in the ten foot includes places of safety on alternate sides. In these areas:

- signs are found at the base of limited clearance signs indicating there is a place of safety within the cable run
- places of safety are a maximum of 20 metres apart, alternately each side of the cable run
- a blue mandatory sign stating “do not store tools or materials in this place of safety” are found fixed to the cable run in a place of safety
- always walk facing oncoming traffic even if it means going past the point you want to get to and walking back
- the gaps where you can cross to the other side are spaced 200m apart.



8.4 Limited clearances



A limited clearance sign indicates places where the cess or ten foot is not a place of safety, because there is not enough room for you to stand safely between a passing train and the infrastructure.

8.5 Walking through a limited clearance area

Before attempting to walk through a limited clearance area, you must consider:

- the length of the limited clearance
- are there any refuges, if so, how far apart are they
- the sighting time from when you first see an approaching train, to a place of safety at the approach end of the limited clearance area
- the general conditions, in particular, underfoot conditions.

8.6 How to calculate walking time

You must allow 1 second per metre plus 50% to ensure enough time is available to walk through the limited clearance, or move from refuge to refuge.

8.7 Limited Clearances with refuges

Where limited clearances have refuges, personnel should calculate their walking time to the first refuge.

It is safe to proceed ONLY if they can get through the limited clearance or to a refuge in less than the sighting time of an approaching train reaching the place of safety at the far end of the limited clearance.

8.8 What to do if it is not safe

If sighting time is not sufficient, you must not walk through the limited clearance.

However, you may be able to:

- access the worksite from the other direction
- use a safe route along another track
- take a train through the limited clearance.

8.9 Station grounds

To walk through station grounds at track level. There must be a continuous place of safety throughout the platform and you:

- have a continuous 25 seconds' sighting time
- walk so as to face the oncoming traffic.

9 Unauthorised areas

You must not go in the following areas without the appropriate protection:

- line clear areas
- an area under possession
- long limited clearance areas without refuges
- areas where access is restricted by train frequency
- Waterloo and City line
- areas where LU certification is not valid.

During hours of darkness, you must not go on the track alone.

Personnel should never carry anything large or awkward when they are on or near live track as this could impair your visibility and therefore increase the risk of tripping over and/or being struck by a moving train.

You must not go onto the track in any of these situations, even in an emergency, unless protection has been arranged by a PMTH.

10 Network Rail

Personnel must be certificated and competent to NR standards before accessing any area of the operational railway which is designated as being under NR rules. Staff that are working on LU track do not require any additional protection or NR certification providing they remain within the boundary of the LU system and do not get closer than 2 metres lateral distance from the nearest NR running rail.

The areas where NR certification is needed are:

- Richmond to West of Turnham Green (owned by NR)
- Harrow and Wealdstone to North of Queen's Park (owned by NR but LU certification is valid within Stonebridge Park depot)
- Wimbledon to West of Putney Bridge (owned by LU but NR rules apply due to NR signalling system).



LU certification is not valid for work on either the tracks or the platforms in these areas. If you need to enter the areas, you must have NR certification as Traffic Hours and Engineering Hours does not exist on NR.

10.1 Lines running close to NR lines

Areas where LU and NR property boundaries run close together:

District line:

- Upminster to Campbell Road Junction WB
- Kensington (Olympia).

Central line:

- West Ruislip to North Acton EB
- West Acton to Ealing Broadway WB.

Metropolitan and Circle line:

- Kings Cross to Farringdon IR
- Harrow on the Hill to Finchley Road NB Met and NB Fast Met.

Hammersmith and City line:

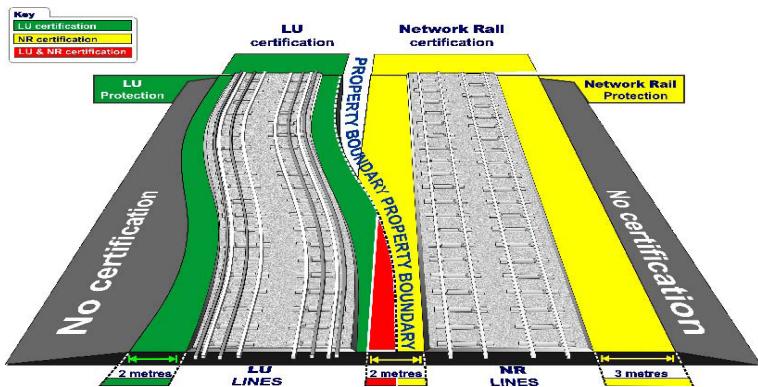
- Paddington to Westbourne Park
- Barking Sidings to Campbell Road Junction WB.

Victoria line:

- Northumberland Park depot road 48.

Working in these areas, LU certification and protection applies if personnel:

- remain on LU property
- do not get closer than 2 metres laterally to the nearest NR running rail.



NR certification and protection is needed if, at any time on:

- LU property, personnel are working within 2 metres laterally from the nearest NR running rail
- NR property, personnel are working within 3 metres laterally from the nearest NR running rail.

NR certification is also needed when you require access through or across NR areas to get to LU assets and come within 3 metres of the nearest NR running rail.



If you are not sure your safety on the track certification is valid at a particular location, you should seek advice from your manager.

10.2 Stations where NR certification is needed

When working on stations belonging to other operators, LU certification and protection will depend on the location of the worksite.

Other operators' stations are at the following locations:

- District line: Barking, Upminster, Kensington (Olympia)
- Central line: Stratford
- Bakerloo line: Queen's Park.

Stations owned by LU where other companies operate are at the following locations:

Metropolitan and Circle line:

- Barbican and Farringdon

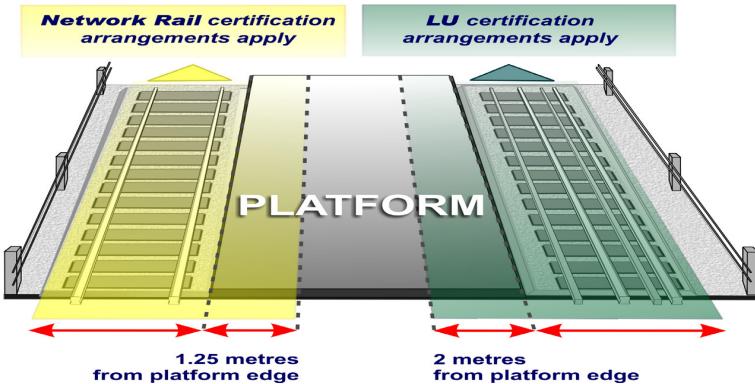
Victoria line:

- Highbury and Islington.

At these stations, LU certification and protection arrangements apply on:

- LU track
- LU equipment on platforms - unless the work is within 1.25 metres of the NR platform edge.

For platform work within 1.25 metres of the NR platform edge, NR certification and protection arrangements apply.



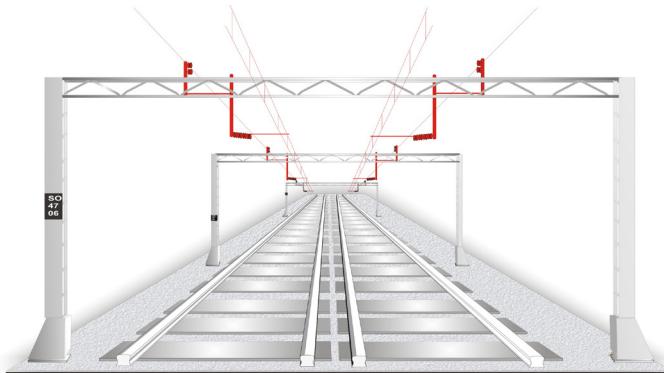
10.3 Overhead Line Equipment



When on a section of line which is adjacent to or passes over NR lines electrified by 25kv (A.C) Overhead Line Equipment (OLE).
Always:

- consider the overhead lines and attachments to be live at all times
- ensure clothing and any articles being carried are at least 2.75 metres away from anything attached to or hanging down from the OLE equipment
- carry long articles horizontally

- keep paint, water and other liquids well away from where they might be thrown, fall or splash onto OLE equipment
- keep tools and equipment, including ropes, wires, tapes and surveying equipment, well clear of OLE equipment
- take extra care not to come within 2.75 metres from the OLE equipment when on a structure of any kind.



10.4 Emergency involving OLE

In an emergency involving OLE the following procedure must be followed:

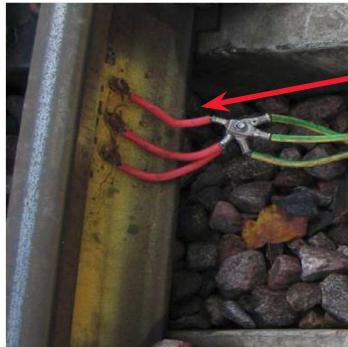
- contact LU controller
- give location and structure number
- nature of emergency
- await further instructions.

Before working or walking near NR lines you must make sure that you are aware of the hazards specific to the area and any additional protection is in place.

10.5 Heathrow Express and London Overground

The Heathrow Express and London Overground have been equipped by NR with 25kv OLE for traction supply purposes.

Where LU's infrastructure is in close proximity of these two lines, measures have been taken to immunise the LU's infrastructure against any electrical hazards that could possibly emanate from the OLE, and these take the form of red, green and yellow bonds.



Immunisation bonds are found on LU lines that run adjacent to certain NR lines.

Your manager or supervisor must fully brief you on the safety procedures that you must follow in these areas.

Warning signs indicate the 'immunised' areas. In these areas bonds are attached to many lines and structures:

- do not remove, cut, connect or disconnect any of the bonds unless authorised to do so
- make sure you are familiar with the area before working there.

The areas are:

Hammersmith & City lines.

- Westbourne Park to Paddington (Suburban), both roads.

Central line.

- Ealing Broadway to Bridge D29, both roads.
- NR bridge which crosses over LU lines at North Acton.

District line.

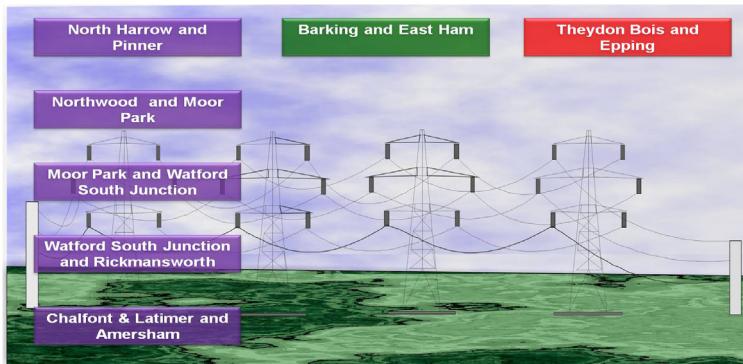
- Ealing Broadway, all roads from the platform buffer stop end to the ends of Nos. 24 and 25 sidings roads east of the station.
- West end of Earl's Court station to Kensington (Olympia).

- Turnham Green to Gunnersbury, both roads.
- District and Piccadilly lines.
- Bridge D29 at Hanger Lane Junction.
- Metropolitan and Jubilee lines.
- Bridge MR10 and MR10A between West Hampstead and Kilburn.
- Bakerloo line.
- At Queen's Park.



If you need to work closer than 2.75 metres from the OLE, or discover a damaged or disconnected bond, the LU controller must be informed.

10.6 High voltage power lines (National Grid)



If any personnel see a line obstructed by fallen wires, they must:

- maintain a safe distance (18m) from the lines at all times
- immediately stop any train from approaching
- inform the LU controller.



For further information refer to leaflet OS LF09 available on the Network Improvement site.

11 Going on the track in Traffic Hours

Traffic Hours starts and finishes at published times and is when passenger trains are normally running and traction current is on.

There must be sufficient light for you to be able to see approaching trains and maintain a continuous sighting time and distance.



A LU-IWA certificated person can only access the track alone and protect themselves, in Line Safe areas. During Traffic Hours if access to a Line Clear areas is required special procedures will be implemented by a PMTH.

11.1 Informing the controller

Before going on the track you must inform the controller and state:

- your name
- your contact number
- you are providing your own protection
- where and when you are going on or near the track
- what time you expect to return.



You must inform your manager or other responsible person that you are accessing the track on your own.

11.2 Looking out for trains

When walking in the track environment you must walk in the cess, facing the direction that trains can approach wherever possible. You must never walk in the:

- four foot unless it is absolutely necessary and safe
- six foot
- ten foot when a train approaches.

When alone on the track, you must not:

- carry out any activity that distracts you from looking up frequently
- wear anything that makes you unable to see or hear approaching trains.



If you cannot look up frequently, protection must be provided by a PMTH.

11.3 Working on station platforms

A site and task specific risk assessment must be carried out before working on a station platform. It must be considered that trains are running and traction current is 'on' at all times, unless otherwise confirmed through appropriate protection procedures.

The appropriate protection procedures must be followed, if the work on the station platform requires any of the work group, equipment or materials to:

- infringe over the platform edge
- enter the gauge of a passing train.

The platform is no longer divided into different areas. Planned work can take place providing the work has been authorised by the LU Access team through the issue of an approved SABRE number(s) which detail the work to be undertaken.

There is no longer a requirement for the station supervisor to give permission for approved, planned work to take place on platforms.

11.4 Emergency work on platforms

Emergency work is allowed whilst trains are running, providing both the station supervisor and controller give permission, and the relevant protection arrangements have been put in place. If necessary, the station supervisor must close the platform to passengers and/or arrange protection by holding a train in the platform.

11.5 Crossing live rails

If you are unable to use walk boards and need to cross live rails you must:

- take the safest route
- look in each direction for moving trains
- have a minimum of 25 seconds sighting time
- look out for obstructions and slippery conditions
- step over each rail
- step on the ballast
- not put your feet where they could become trapped by moving equipment
- leave at least 20 metres between you and a stabled train, unless arrangements are made to make sure the train will not move.



You must not cross live rails unless absolutely necessary and have sufficient sighting times.

11.6 Changing conditions

Example of changing conditions on the track may increase the risk are:

- deteriorating visibility from smoke, fog, rain or snow
- increased noise levels
- trees in winter/summer
- rubbish.

Live track must not be worked on during periods of continuous wet weather.

You should always be aware of changing conditions and if at any time you consider it unsafe to be alone on the track, you should leave the track area and report back to your manager.

12 Depots and stabling sidings

These are locations where:

- trains are stabled
- traction current is normally on 24 hours a day
- depot personnel carry out general train maintenance and overhauls
- trains are cleaned internally and externally.

12.1 Arriving at the depot

When arriving for work at a depot that is not your normal place of work, you must:

- be suitably certificated
- use the authorised walkways to enter the depot
- sign in at the security point in the gatehouse or depot entrance and obtain a visitor's pass, if required
- sign in at the Maintenance Manager Operation's (MMO)/Duty Depot Manager's (DDM) office
- have received the local tour of the depot.



Unless instructed otherwise, always use the authorised or designated walkways and walk boards in the depot/sidings; these are marked out with yellow lines.

When you are required to work in a depot or siding the same principles of protection will apply as for working on or near the track, in addition you must be aware that:

- there are very few clearly defined places of safety
- there are additional hazards such as a washing roads and pit roads

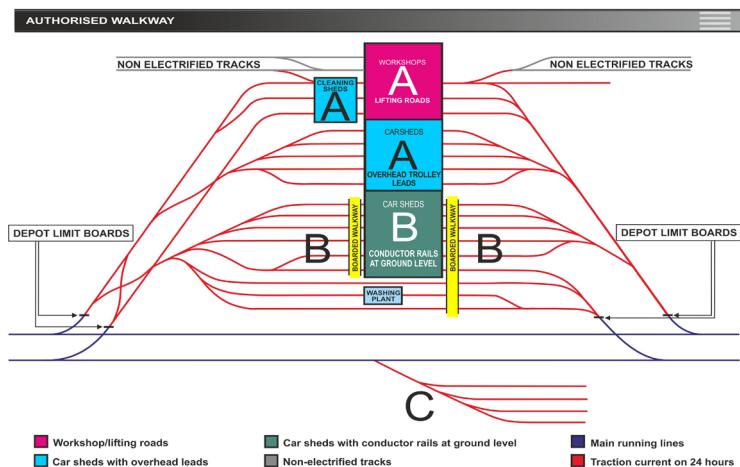
- traction current is on 24 hours a day in most depots and some sidings
- depots have specific signing in procedures
- when walking in a depot always use the authorised or designated walkways and walk boards.

12.2 Train hazards in depots

Hazards relating to trains in depots:

- train movements are bi-directional and can approach from any direction
- trains move more slowly (5, 10, 15 mph) and quietly
- trains may move even when uncoupled, or with no driver's cab
- hidden train movements behind stationary trains
- lighting levels may not be adequate.

Depots and stabling sidings can be divided into three separate areas:



I2.3 Area A:



- sheds with no traction current rails at ground level
- sheds with raised platforms for access to the interior of train, and where traction current rails can be isolated locally using switches located at ground level or are separated by physical barriers
- sheds with overhead trolley leads.

You cannot work in area 'A' unless you are suitably certificated.

I2.4 Area B:



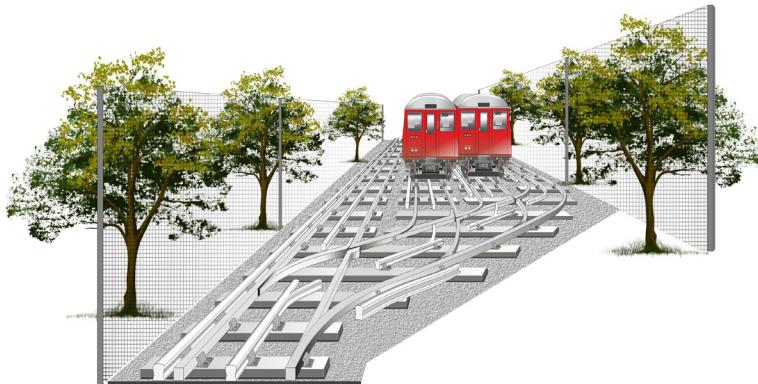
- all track within depot limits, but not including area 'A'

12 Depots and stabling sidings

- all track outside in the depot yard where traction current is at ground level
- non – electrified track (permanent way sidings)
- stabling sheds with conductor rails at ground level that cannot be isolated locally.

You cannot work in area 'B' unless certificated to LU-IWA level or BTA and protected by a DPM.

12.5 Area C:



- all stabling sidings where traction current is on 24 hours
- conductor rails at ground level that cannot be isolated locally.



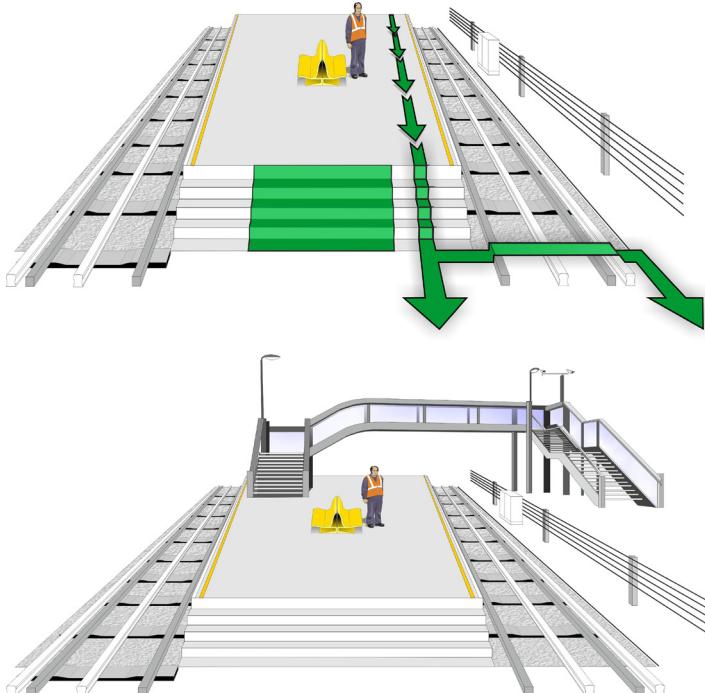
You must be familiar with the area you are accessing.

You cannot work in area 'C' unless certificated to LU-IWA level or BTA protected by a DPM.

I2.6 Accessing stabling sidings

When personnel need to access stabling sidings they must always:

- report to the accountable manager if the sidings are not your normal place of work
- use authorised or designated walkways
- use walk boards
- use footbridges.



You must not cross live rails unless absolutely necessary.

At locations where the stabling sidings cross the main line or are split either side of the main line you must follow the local procedures for these locations.

12 Depots and stabling sidings

At certain locations you must be certificated and competent to NR standards if you need to go beyond the depot limits onto any area of the operational railway which is designated as being under NR rules.



You must be site familiar with the area you are accessing.

12.7 Non-electrified track



These are sections of track which do not have conductor rails, normally found at the ends of the lines or within certain depots and sidings. Due to the nature of these lines having no traction current rails, Engineering Hours does not apply. At these locations, Traffic Hours/depot protection or a possession is required to access the track.

I2.8 Preparing to go on the track in a depot

Before going on the track, you must be familiarised with area 'B' and 'C'. This must be carried out by a competent member of LU personnel or DPM, who are familiar with the area. Individuals must know:

- the train speed for the specific location
- track layouts and walkways
- layout of depot sheds
- traction current sections
- how points are controlled
- local hazards
- places of safety.

I2.9 Sighting time and distance in depots

How far a train travels in 25 seconds

8kph/5mph = 3 carriages



60m / 66yds

16kph/10mph = 6 carriages



110m / 121yds

24kph/15mph = 9 carriages



170m / 187yds

You **MUST** have at least 25 seconds' sighting time of an approaching train

You must have at least 25 seconds continuous sighting time. If it is not possible to time a train, use the sighting distance method to calculate the sighting time needed for the train speed in the depot.



If the minimum sighting time cannot be maintained you must:

- leave the track
- report back to your manager.

12.10 Using walkways, walk boards and areas between tracks

The safest way to walk around a depot is to use official walkways and walk boards where possible.

Areas between the tracks can also be used provided they are wide enough.

When using walkways and walk boards which cross the track, or are within 2 metres of the nearest rail, and there are no physical barriers, personnel must be suitably certificated.

If walking in the four foot, step on the ballast/ash and not on the sleepers as they can be slippery, especially near train wash roads.

12.11 Using walk boards



Using walk boards is the safest method of crossing the track in depots and sidings. Walk boards:

- are raised to the same height as the running rails
- have anti slip surfaces
- have conductor rails cut back.

When crossing the track using walk boards:

- look in each direction for moving trains
- be aware that trains may be stabled up to the walk board
- if driver's cab is occupied, get permission to cross in front of the train
- be aware of hidden train movement.

12.12 Boarding a stationary train



If you are required to board a stationary train, you must:

- get on and off using the side doors
- take particular care when getting off - make sure no other train is approaching.

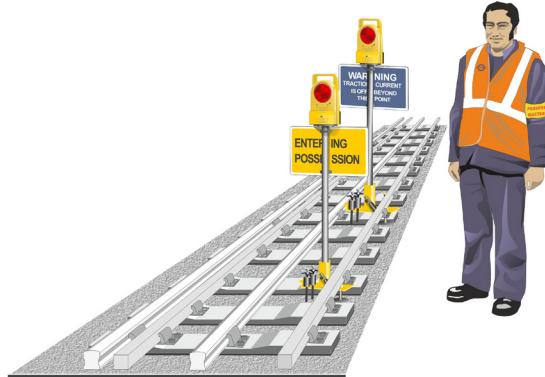
If in an emergency, the front and rear cab doors have to be used, do not:

- step back onto the traction current rails
- slip on couplings
- step back into an inspection pit.



There may be no steps, ladders or handrails.

13 Possessions



A possession is a designated area of track taken out of service for major engineering work. It is under the control of a POM.

If anyone requires entry to any area under a possession, they must have permission from the POM.

14 Communications

A	Alpha			Q	Quebec
B	Bravo			R	Romeo
C	Charlie			S	Sierra
D	Delta			T	Tango
E	Echo	K	Kilo	U	Uniform
F	Foxtrot	L	Lima	V	Victor
G	Golf	M	Mike	W	Whiskey
H	Hotel	N	November	X	X-ray
I	India	O	Oscar	Y	Yankee
J	Juliet	P	Papa	Z	Zulu

14.1 Phonetic alphabet

Communication is a vital part of rail safety, and LU's communication protocols must be used.

14.2 Using numbers

If you are using numbers 10 and over in your message, you must say them one at a time.

For example, 'Train 123' must be spoken as 'Train one two three' not 'Train one hundred and twenty three'.

You must also say the number '0' as 'zero'.

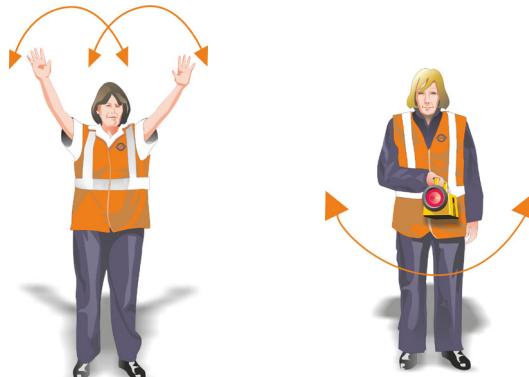
14.3 Using mobile phones and radio equipment

Mobile phones and radio equipment should only be used:

- if it is necessary as part of your duties
- in an emergency
- in a place of safety.

15 Emergency actions

15.1 Stopping a train



If you need to stop a train in an emergency, stand in a place of safety, then use one of the approved signals:

- wave both arms above your head
- wave anything across your body.

15.2 Injured person

Anyone going on or near the track must know what to do if someone is injured.

You must not move a seriously injured person, unless leaving them where they are, would place them in greater danger and cause further injuries.

If a person is seriously injured, and not in contact with live conductor rails, contact the controller or the MMO/DDM, if in a depot, who will implement the local depot emergency procedures.

If a person is in contact with the live conductor rails:

- consider your own safety first
- get traction current switched off immediately whenever possible
- depending on weather conditions, use a piece of dry wood or an insulated tool to roll them off.

15.3 Getting traction current switched off in an emergency

If traction current needs to be switched off on the main line, depot or stabling siding in an emergency:

- contact the controller or the MMO/DDM
- get the current switched off in the particular traction current section
- check that the MMO/DDM has been advised (if applicable).



You must always wait for confirmation that traction current has been switched off.

The controller or MMO/DDM will want to know the following:

- your name
- department or company
- location and section of track which switch off is required
- reason for switching traction current off.

If you get traction current switched off, it is also your responsibility to contact the controller or MMO again to say when it is safe for traction current to be switched on – unless:

- you have arranged for someone else to take over the responsibility to do this
- you have told the controller or MMO/DDM who that person is.

16 References

Rule Book 1 Communications

Rule Book 3 Traction current and high voltage supply

Rule Book 10 Station access

Rule Book 14 Possessions planning and management

Rule Book 15 Possessions protection methods

Rule book 21 Personal safety on the track

The Health and Safety (First Aid) Regulations 1981, Approved code of Practice and Guidance (L74)

Electricity at Work Regulations 1989

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