

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Level 2

Working Safely at Height

Emergency change

Issue date: 04 January 2019
 Compliance date: 11 January 2019
 Expiry date: 10 January 2020

Emergency change NR/BS/LI/413 is attached to this standard/control document.

This emergency change mitigates an urgent safety/asset/equipment risk that cannot await a full review of this standard/control document.

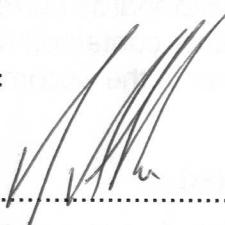
This standard/control document will be reviewed and reissued before the emergency change expires on 10 January 2020.



Bill Cooke, Head of Corporate Workforce Safety

Endorsement and Authorisation

Endorsed by:



.....
 Dave Allen, Occupational Safety Specialist, Working Group Chair

Authorised by:



.....
 Julian Lindfield, Director Safety and Compliance, Steering Group Chair

Accepted for issue by:



.....
 Mick McManus, National Standards Manager

This document is the property of Network Rail. It shall not be reproduced in whole or part nor disclosed to a third party without the written permission of Network Rail.
 © Copyright 2010 Network Rail.

Uncontrolled copy once printed from its electronic source.

Published and Issued by Network Rail, Kings Place, 90 York Way, London. N1 9AG.



Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Issue record

Issue	Date	Comments
1	04 September 2010	First Issue

Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors if applicable from 04 March 2012.

When this standard is implemented, it is permissible for all projects that have formally completed GRIP Stage 4 to continue to comply with the issue of any relevant Network Rail Standards current when GRIP Stage 4 was reached and not to comply with requirements contained herein, unless the designated Standard Owner has stipulated otherwise in the accompanying Briefing Note.

Reference documentation

SI 2005/735	Work at Height Regulations 2005
SI 1998/2307	Lifting Operations and Lifting Equipment Regulations 1998
SI 2007/1592	Construction (Design and Management) Regulations 2007
NR/L2/OHS/ 0102	Work Activity Risk Assessments

Disclaimer

In issuing this document for its stated purpose, Network Rail makes no warranties, express or implied, that compliance with all or any documents it issues is sufficient on its own to ensure safe systems of work or operation. Users are reminded of their own duties under health and safety legislation.

Supply

Copies of documents are available electronically, within Network Rail's organisation. Hard copies of this document may be available to Network Rail people on request to the relevant controlled publication distributor. Other organisations may obtain copies of this document from IHS. Tel: 01344 328039.

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Contents

1 Purpose	4
2 Scope	4
3 Definitions	4
4 Roles and Responsibilities	5
5 Safe Work at Height	6
6 Collective Safeguards	9
7 Scaffolding	9
8 Mobile Elevated Work Platforms (MEWPs)	10
9 Below Ground Workplaces (excavations, manholes etc)	11
10 Personal Protective Equipment	11
11 Anchor Points	12
12 Fragile Surfaces/Materials	12
13 Falling Objects	13
14 Ladders	13
15 Emergency Methodologies	14
16 Competence and Training	15
Appendix A - Training, Competence and Assessment for Network Rail Employees	16
Appendix B - Competence Statements for Network Rail Employees	18

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

1 Purpose

This standard defines the processes to be followed within Network Rail to enable employees who design, plan, manage and carry out work at heights to do so safely, and within the requirements of the relevant legislation.

This standard adopts a risk-based approach to working at height activities in line with the principles of the legislation and industry best practice. Under this approach measures taken to protect the safety of persons are proportionate to the risks involved.

2 Scope

This standard applies to all “Work at Height” carried out by Network Rail employees. “Work at Height” is defined as any work activities where there is a need to control a risk of a person or object falling a distance liable to cause personal injury. This is regardless of the work equipment being used, the duration the person is at height or the height at which the work is being performed. It includes access to and egress from a place of work.

Examples of activities considered as being work at height are :-

- Climbing permanent structures such as gantries, communication masts or signal posts.
- Working close to an excavation, cable pit or foundation where it would be possible for a person or object to fall and cause injury.
- Working on scaffolding or from a mobile elevated work platform (MEWP).
- Working on the back of a flatbed road or rail vehicle.
- Arboriculture and vegetation work performed in trees and on steep embankments.
- Using cradles or ropes to gain access to parts of tunnels, bridges, etc.
- Work on Electrification and Plant assets, boosters etc.
- Using a ladder to gain access to a permanent or temporary structure.

Examples of activities not considered as being work at height:

- Using permanent stairs (if there is no structural or maintenance work being undertaken).
- Work in an office on an upper floor of a multi-story building where there is no risk of falling. (Activities within the building which do involve a risk of falling, e.g. changing a light bulb from a step-ladder, would be considered to be work at height.)

3 Definitions

Fall Arrest System - Personal protective equipment comprising a full body harness and a connecting sub-system made up of a lanyard of suitable length with a built in shock absorber

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

designed to safely arrest a person should he fall from height.

Work Restraint System	Technique using personal protective equipment to prevent a person reaching a position from which they could fall. This system does not include a shock absorber and is not used for fall arrest purposes.
Work Positioning	A system of work in which a persons weight is supported to allow them to carry out work using personal protective equipment in suspension or tension in such a way so as to prevent a fall.
Shock Absorber	A device designed to limit the shock load on equipment and anchor points to below 6 KN – also thereby minimising the impact load on the person falling.

4 Roles and Responsibilities

4.1 Persons who plan or control work at height

Persons responsible for planning and/or managing the work of others have the following responsibilities:

- a) To assess the risks from work activities involving work at height, record the findings, and do all that is reasonably practicable to prevent any person or object falling and causing injury to the worker or anyone else in the vicinity.
- b) To plan work to avoid the need to work at height where they can.
- c) Where working at height cannot be avoided, to give consideration to using an existing platform (i.e. permanent structure such as a flat roof or gantry with fixed guardrails and safe means of access & egress), work equipment or other measures to prevent falls.
- d) Where the risk of a fall cannot be eliminated, to use work equipment or other measures to minimise the distance and consequences of a fall should one occur.
- e) To eliminate or minimise risks from work activities involving work at height by designing out the need to work at height where possible, and where this is not possible by developing and implementing:
 - Safe systems of work for planning, organising and performing work at height.
 - Safe systems for the selection and inspection of suitable work equipment to perform work at height.
 - Safe systems for protecting persons from the consequences of falls of persons or objects.

NOTE 1 It is important that work at height issues are identified early in the planning and preparation stage to allow for the correct decisions to be made in a timely manner with regard to the need for the

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

work at height, access equipment and methods, work methods and any emergency contingency requirements.

- f) Through communication and co-operation with third parties that Company employees working on third party sites are not put at additional risk from performing work at height as a result of working on premises controlled by a third party.
- g) That work at height performed at locations under Company control does not put others at risk (e.g. members of the public or the employees of other companies working on the same site).
- h) That no employee engages in any activity (including planning, supervision and rescue) in relation to work at height, unless he/she is competent to do so, except when being supervised by a competent person during training. Competence includes the fitness of the employee to undertake work at height.
- i) That employees fully understand the nature of the work and work methods prior to starting any work at height and understand the need to report any safety hazard.
- j) That employees understand the need to use the equipment supplied (including safety devices) properly, following any training and instructions given.

4.2 Designers and Specifiers of Equipment and Structures

When designers and specifiers are evaluating the hazards within their designs/specifications for equipment and structures that may require work at height during their construction, operation, maintenance or demolition they shall apply the principle of “Safety by Design” as enshrined in the Construction Design and Management Regulations 2007.

In practice this means that when considering hazard elimination and risk reduction designers and specifiers shall apply, and demonstrate the application of, the principles of prevention (the hierarchy of risk control):

- Eliminate
- Reduce
- Inform
- Control

NOTE 2 The concept of safety by design does not mandate the most costly risk free design from a safety perspective but rather that conscious thought is given to satisfactory solutions for hazard elimination and risk reduction within the confines of reasonable practicability.

5 Safe Work at Height

5.1 General

A risk assessment is the starting point for all work activities involving an element of working at height (see clause 5.2.1). This is intended to identify the hazards and the controls necessary to minimise the risks from those hazards. The risk assessment

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

shall identify any high risk activities carried out at height which may need further control measures.

The hierarchy of control for work at height set out in clause **5.2.2** shall be followed systematically and only when one level is not reasonably practicable may the next level be considered.

The 7 steps identified in clause 5.2 shall be followed when considering any proposed work at height.

5.2 “The 7 steps”

5.2.1 Step 1. Assess the risk and decide how to work safely

When planning any work activity involving work at height the risks shall be assessed and whatever steps the assessment identifies taken, before work starts. The action taken to control the risk shall be proportionate to the risk of harm, and reflect what is reasonably practicable.

NOTE 3 For Network Rail employees the findings of the risk assessment shall be recorded in accordance with risk assessment procedure NR/SP/OHS/00102

5.2.2 Step 2. Follow the hierarchy for safe work at height

(i) **Avoid** by designing out the need to work at height (e.g. cleaning high windows from the ground using extending poles; use of the specially designed dropper tool for changing OLE components).

If it is not necessary to work at height, don't. Avoid work at height so far as reasonably practicable (e.g. it may be possible to assemble a structure at ground level and then lift it into place using a crane rather than assemble it at height).

(ii) **Prevent** by using an existing place of work at height (e.g. a permanent structure such as a flat roof or gantry with fixed guard rails and safe means of access).

Where it is not reasonably practicable to avoid work at height, assess the risks and take measures to allow the work to be done whilst preventing so far as is reasonably practicable people or objects falling. This may include having the work carried out safely from an existing place of work or selecting the appropriate work equipment to prevent falls. An existing place of work at height is a place which does not need additional work equipment to remove the risk of a fall from height occurring.

(iii) **Mitigate** by minimising the distance and consequences of a fall.

Where the risk of people or objects falling still remains, take steps to minimise the distance and consequences. This involves the selection and use of appropriate work/safety equipment. Despite the method/type of work/equipment selected, if it is still not reasonably practicable to avoid or prevent a fall, both the distance of the fall and its consequences shall be minimised.

(iv) **Give priority to collective protective measures** which protect more than one person (e.g. tower scaffolds, mobile elevating work platforms).

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Collective protective measures (see clause 6) shall be given precedence over personal protective measures where reasonably practicable.

(v) **Prevent the risk of falls using personal protective measures** (e.g. work restraint systems which make it impossible to get to a fall position) shall be given priority over fall arrest systems which do not prevent a fall but minimise the consequences (see clause 10).

5.2.3 Step 3. Plan and Organise work properly

- (i) Plan the work, select and use suitable work equipment.
- (ii) Consult employees wherever possible.

NOTE 4 involving employees will encourage a better understanding all-round, both of the risks involved and requirements of the task.

- (iii) Provide a level of supervision proportionate to the risk, experience and capability of the people involved.
- (iv) Communicate risk assessments to those carrying out the work so that they understand their content and what they are required to do to comply.
- (v) Advise operatives that they should ask for further assistance if required.
- (vi) Care should be taken on sites with multiple tasks taking place and/or teams to communicate with all relevant parties.
- (vii) Plan for emergencies and rescue.
- (viii) Take into account the effect weather conditions have on outdoor work at height.

5.2.4 Step 4. Check the competence of those working at height, including those planning and managing activities involving work at height.

Any person undertaking any aspect of work at height (including those planning and managing work at height, and those identified in any emergency plan as performing any rescue function) shall be competent to do so, or if being trained shall be supervised by a competent person.

Competence is a combination of appropriate knowledge and/or training and experience.

5.2.5 Step 5. Select and make use of appropriate work equipment.

Work at height can be performed safely in a number of different ways, using a wide range of work equipment. The choice of equipment is dependent on the risk assessment. Different types of equipment will have advantages and disadvantages depending on the task and environment in which the work is to be performed.

Whatever equipment is selected it shall be fit for purpose (i.e. of sound construction in suitable materials, of adequate strength and free from obvious defects) and meet all current specific legislative requirements.

In selecting work equipment for use in work at height, priority shall be given to collective protection measures over personal protection measures and take account of:

- (i) the working conditions and the risks to the safety of persons at the place where the work equipment is to be used;

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

- (ii) in the case of work equipment for access and egress, the height of the planned work;
- (iii) the distance and consequences of a potential fall;
- (iv) the duration and frequency of use;
- (v) the need for easy and timely evacuation and rescue in an emergency;
- (vi) any additional risk posed by the use, installation or removal of that work equipment or by evacuation and rescue from it.

5.2.6 Step 6. Manage all risks associated with work at height

This will include for example, risks from working on or around fragile surfaces and from falling objects.

5.2.7 Step 7. Inspection and maintenance of the work equipment

Inspection of equipment for work at height shall be carried out prior to work commencing to check that it is safe to use and periodically in line with the manufacturer's requirements.

The purpose of an inspection is to identify whether the equipment is fit for purpose, can be used safely and that any deterioration is detected and remedied before use. Equipment shall be marked so that it is clear when the next inspection is due.

NOTE 5 Inspection frequency and maintenance will vary according to the type of equipment in use for work at height .

6 Collective Safeguards

Collective safeguards are those which lower the risk for more than one individual, for example, access equipment fitted with guard rails or scaffolding. Side guard rails on lorries/rolling stock or nets and airbags are other examples of collective safeguards which will protect more than one person.

Guard Rails shall be at least 910mm high if on an existing structure. If a new guard rail needs to be fitted, or an existing guard rail replaced, then any new or replacement guard rail shall be at least 950mm in height. Any intermediate guard rail shall be fitted so that the gap between it and other safeguards is no more than 470mm. Guard rails shall be suitable for purpose and be of sufficient strength and rigidity. Toe boards shall be at least 150mm high, and suitable and sufficient to prevent the fall of any person, material or object.

NOTE 6 Toe boards are vertical boards fitted to a working platform at the base of the guard rail to prevent materials on the working platform accidentally falling or inadvertently being knocked off the platform.

7 Scaffolding

When scaffolding is used to gain access to work at height, the purpose and use of the scaffold structure shall be fully understood and built in to the design specification. Consideration shall be given to access/egress requirements, any loading likely to be imposed on the scaffolding and storage requirements for the work to maintain clear safe access routes.

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Scaffolds shall be safely positioned so that access to other work areas is not blocked (or if this is unavoidable, alternative safe access shall be provided) so that the structure itself does not present a hazard to other workers (e.g. scaffold poles protruding into walkways).

Scaffolds shall only be erected by trained competent personnel.

Scaffolds shall be built and supported on firm ground and inspected prior to use. This inspection shall be carried out by a suitably competent person prior to the scaffold being put into use for the first time, on a frequency not exceeding seven days and after any severe weather conditions or changes likely to affect the stability of the structure. The last inspection record shall be kept for 3 months at an agreed location, which shall be communicated locally.

Once inspected, prominent notices (e.g. "Scaftag") shall be displayed indicating the scaffold is safe to use. Partly erected or partly dismantled scaffold also requires prominent warning notices to be displayed indicating it shall not be used.

Erection of a prefabricated scaffold ('Zip up') shall be performed from a safe platform within the scaffold in compliance with the manufacturer's instructions.

Inspections of prefabricated scaffolds shall also be carried out following a 7 day period from the previous inspection or if conditions have changed since the prior inspection (e.g. alterations to the scaffold or severe weather).

8 Mobile Elevated Work Platforms (MEWPs)

8.1 General

Where MEWPs are used they shall be inspected prior to initial use and then visually inspected before operation by the operator of the MEWP.

MEWPs shall be positioned on firm, level (within the parameters set by the manufacturer) ground when in use.

MEWPs shall only be operated by trained competent and certificated persons.

NOTE 7 MEWPs should not generally be used as a means of access to or from another structure or surface to the side of the MEWP since climbing out of the MEWP basket in these circumstances is potentially hazardous. However, the risk assessment carried out at the planning stage of any work activity involving work at height may identify the use of a MEWP to gain access to a structure provided that a safe method of access and egress can be employed.

8.2 Use of Harnesses in MEWPs

8.2.1 Scissor Lift (with fixed carrier bed)

The operator and passengers within the carrier shall be attached to designated harness anchorage points at all times whilst the machine is being operated. Handrails and other framework not specifically designated for the purpose shall not be used as points of attachment.

Attachment shall be via work restraint (not fall arrest) to physically prevent personnel being able to fall from the carrier or over reach beyond the confines of the safe work area. It is permissible for a fall arrest lanyard to be used in work restraint mode.

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Once the machine has been positioned at the point of work and the controls disengaged, the operator and passengers do not need to be attached and can move freely within the working platform. Harnesses shall still be worn at all times and shall be attached before the machine is operated or adjusted. The operator is responsible for checking that all personnel attach before the machine is operated.

Where harnesses are used within the carrier during work activity, lanyards shall not present a tripping hazard to the user or other personnel.

8.2.2 Other MEWPs (Boom Lift, Cherry Picker, Forklift Mounted Carrier)

The operator and passengers within the carrier shall be attached to designated harness anchorage points at all times. Handrails and other framework not specifically designated for the purpose shall not be used as points of attachment. Attachment shall be via work restraint (not fall arrest) to physically prevent personnel being able to fall from the carrier. A fall arrest lanyard system can be used in work restraint mode.

9 Below Ground Workplaces (excavations, manholes etc)

Work below ground (e.g. in excavations) may be considered to be work at height if a person can fall a distance liable to cause injury, or if there is a risk of objects falling onto people working in the below-ground workplace. Those at risk include workers as well as members of the public, and the risk is not restricted to deep excavations.

The risk assessment for work activities in below-ground workplaces shall include identification of the risk of falls and the type of safeguard required to protect against falls. Where the risk of injury from falls is foreseeable, guarding systems on below-ground workplaces shall consist of substantial barriers or alternative methods of guarding (e.g. battering back the edges of excavations, or extending trench supports (where used) to a height of at least 950mm above ground level). The risk assessment may also reveal the need for additional safeguards, such as toe boards, to prevent objects falling onto persons working in the below-ground workplace. Early reinstatement of excavations to their original state will remove the risk of injury from falls.

As with other places at which work at height is undertaken, safe access and egress for entry and exit of below ground workplaces shall also be provided.

10 Personal Protective Equipment

Personal protective equipment, such as a work restraint system, can also prevent falls but this form of protection shall only be considered if working at height cannot be avoided and if collective safeguards cannot be applied. Work restraint systems can also be used to prevent the worker over-reaching beyond guardrails. When selecting work equipment, work restraint systems are preferable to fall arrest systems with shock-absorbing lanyards, which do not prevent a fall but mitigate the consequences.

Harnesses and lanyards shall be formally issued following an initial training course and subsequently replaced depending on condition and the manufacturers life expectancy of the equipment.

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Formal inspections are required every 3 months for frequently used (daily) harnesses and 6 monthly for all others. Harnesses shall be checked every time prior to use and any defects found shall be rectified before use or the harness shall be taken out of use and destroyed.

11 Anchor Points

11.1 General

Anchor points and the means of attachment shall be suitable and of sufficient strength and stability for the foreseeable loading, bearing in mind that work restraint and fall arrest systems will result in different loadings. Where permanent anchor points are not available, the need for temporary anchor points shall be identified in the planning stage (e.g. proprietary systems such as suction or ballast-filled temporary anchor points.)

Lanyards shall be securely attached to at least one anchor point at all times during work at height.

11.2 Selection of Appropriate Anchors

Anchors are required to conform to EN 795. There are 5 types of anchor:

- Class A1: Structural anchors designed to be secured to vertical, horizontal and inclined surfaces (e.g. eyebolts).
- Class A2: Structural anchors designed to be attached to inclined roofs.
- Class B: Temporary transportable anchor devices (e.g. tape, webbing slings, wire strops and tripods).
- Class C: Anchor devices employing flexible anchor lines (e.g. "latchway" or "mansafe" systems used on telecoms towers).
- Class D: Anchor devices employing rigid horizontal rails
- Class E: Deadweight anchors (e.g. those used for access to flat roofs etc)

The majority of anchorage used on the railway infrastructure are defined by the nature and frequency of our work as class B anchorage (e.g. temporary strops and slings). It is important that prior to attaching these to existing assets/structures that an assessment is made of the structures suitability and fitness for purpose.

NOTE 8 Work on the OLE structure will be predominately by using a fall arrest system anchored to suitable components such as the main catenary wire.

NOTE 9 Work on signal structures will use fall arrest systems for climbing and work restraint when at the working position.

12 Fragile Surfaces/Materials

Where work at height is to take place near any fragile material (e.g. asbestos-cement roof, glazed roof-light) they shall have prominent notices fitted to warn of the danger. Access to the fragile area shall be secured, where reasonably practicable, and access only given once a safe system of work has been developed and agreed by all parties.

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Suitable platforms, coverings or guard rails shall be used to prevent falls of both personnel and objects.

13 Falling Objects

When working at height, work methods shall be adopted that prevent any tools or stored materials at height from falling (i.e. tethered tools, bolt bags, tool frogs etc).

Nothing shall be thrown or tipped from a height in an uncontrolled manner. Any method of transferring materials to or from a place of work at height shall be safely controlled and contained (e.g. by hoists, chutes, etc)

If there is a risk of objects falling, areas below work being undertaken at height shall be suitably demarcated to prevent unauthorised access to the area.

14 Ladders

14.1 General

Ladders used for access and egress to work areas shall be of sufficient length and provide a firm handhold whilst getting on or off the ladder. A ladder used for access shall be long enough to protrude sufficiently above the place of landing to which it provides access (recommended 1100mm) unless other measures have been taken to provide an alternative firm handhold. The footings shall be firm and regular and the ladder tied by securing the stiles at the upper ends or by use of an effective anti-slip or other stability device, to prevent movement during use.

Initial tying-in of the ladder shall be done with another person footing the ladder to increase its stability.

NOTE 10 When ladders are deployed on ballast, a suitable additional anchorage device should be used to prevent slippage (e.g. ratchet strap secured to the rail).

14.2 Portable Ladders

Ladders shall only be used for work at height when the risk assessment has determined that the use of other means, such as tower scaffolds or mobile elevated working platforms, are not justified because of the low risk or short duration. Ladders shall not be used as a working platform unless a risk assessment has identified that the job is of a short nature (typically 15-30 minutes) and low risk (e.g. changing a single dropper or inspection of an OHL component).

NOTE 11 In general persons working from ladders shall be able to maintain three points of contact at all times. A work restraint, work positioning or first man up access system can be used by suitably trained and competent staff to provide a third point of contact when working from ladders.

Ladders shall be inspected prior to use and periodically. A ladder shall be clearly labelled after annual inspection indicating to the user that it is within inspection date.

14.3 Fixed ladders

Whenever a fixed ladders is climbed the climber shall always carry out a visual check of the structure and ladder, particularly the securing points, both prior to climbing and as they climb the structure.

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

If the climber has any doubt that the ladders are safe to climb, he shall not climb them until they are made safe.

15 Emergency Methodologies

15.1 General

The risk assessment for the work activity at height shall include an assessment of the mechanism for rescuing persons involved in the work activity

Where fall arrest equipment is in use, the rescue arrangements shall allow the person to be rescued in a safe and efficient manner. It is not sufficient to rely on the emergency services to effect a rescue.

Planning for emergencies may take several forms (e.g. provision of communication systems, having a second trained and competent person available at ground level, through to provision of ladders, MEWPs, rescue devices and systems). Sufficient persons shall be trained and competent in the use of any rescue equipment identified, and fully briefed on the emergency plan.

15.2 Fixed or Prefabricated ('Zip-up') Scaffolding

Once correctly erected a scaffold is a designated safe working platform where fall arrest equipment does not have to be worn, therefore emergency rescue systems for fall arrest are not generally required. The most likely emergency situation will be either a health issue or an accident that results in the casualty being incapacitated. If practicable and if it does not threaten the life of the casualty, the casualty should be left on the scaffold and first aid administered whilst assistance is summoned.

15.3 MEWPs

At least one other person who is familiar with the operation of the MEWP shall be at the location where a MEWP is in use. If an emergency arises using a MEWP then the second person shall operate the MEWP and get the casualty to ground level, or call for help. Work from an access platform is performed in the "work restraint mode" therefore emergency rescue systems for fall arrest are not required.

15.4 Overhead Lines

Rescue techniques on overhead lines are detailed in the maintenance risk control sheets and specific OHL work instructions. Linesmen shall be trained in these procedures and the use of associated rescue equipment.

15.5 Below-Ground Workplaces

Since workplaces below ground (e.g. excavations) may also be considered as places of work at height, the risk assessment for the activity shall also address the emergency rescue arrangements, including the identification of any specialist equipment (e.g. rescue tripods, winches and harnesses). The Confined Spaces Regulations 1997 may also apply to workplaces below ground, and these include a specific requirement to put in place emergency arrangements before work starts.

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

16 Competence and Training

16.1 General

Before a person undertakes a task which involves working at height they shall have received the necessary training to be able to perform the allocated task safely.

16.2 Training

All employees working on Network Rail Managed Infrastructure with the potential to work at height as part of their normal working duties shall have received a general working at height awareness brief.

Dependent on the task being undertaken it will be the responsibility of the Network Rail Function to decide on the level of training and competence required to undertake the specific task safely.

Training will be provided by the HR Competence and Training function as detailed in **Appendix A and B** of this procedure. The following non-exhaustive lists of courses are available, depending on functional needs:

- Harness Inspection
- Ladder Inspection
- Working at Height for Managers Planning Work.
- Safe use of Mobile Access platforms
- Safe Working at Height - Advanced Climbers - details assessment methodology and competence statements within **Appendix A and B**
- Safe Working at Height - Climbers – details assessment methodology and competence statements within **Appendix A and B**

16.3 Recertification

Recertification of courses will be undertaken on a course-by-course basis as agreed with HR and the Functional Representatives.

The Assessment in the line process will be used where appropriate.

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Appendix A - Training, Competence and Assessment for Network Rail Employees

Deployment

This appendix supports the Network Rail Competence Management System to identify the competences for

- Safe Working at Height - Climbers
- Safe Working at Height - Advanced Climbers

Training

All persons requiring training shall be assessed and trained as necessary before entering a role.

Maintaining Competence

Line managers shall review the competence of their people at each annual compliance review.

Records

Each function shall hold on file a copy of each competence assessment. It shall be the responsibility of the line manager to keep records of the competency assessment.

If appropriate this can be done via Oracle Learning Management (OLM).

Assessment of Competence

It is the responsibility of the Line Manager to assess the competence of the employee.

The line manager and employee shall consider each of the competence statements in the context of the Job Description and work activities and determine whether or not the specific performance statement can be demonstrated:

- a) The tables within **Appendix B** provide details relating to:
 - Performance Statements
 - Knowledge Statements
 - Scope of Competence
 - Performance Evidence Requirements
- b) Collection of evidence or referencing of evidence to demonstrate meeting the performance statement is not required.
- c) If the employee has attended a specific course this shall be used as evidence towards meeting the competence requirements. However, it shall be recognised, that attendance at a training course does not demonstrate competence. Competence is decided by the line manager.

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Assessment Levels

After the assessment the line manager and employee shall agree one of four levels of competence:

Pre-competent

Level 1 (L1) – Requires Training

Level 2 (L2) – Trained

Competent

Level 3 (L3) – Competent;

Level 4 (L4) – Competent and Experienced

The following identifies how competence shall be assessed

Pre Competent - Level 1 (L1) – Requires training

Little or no experience in working at height.

The employee shall attend one of Network Rail's approved training courses and undertake the General Working at Height Awareness training.

Pre Competent - Level 2 (L2) - Trained

The employee has a working knowledge of working at height.

The employee shall attend one of Network Rail's approved training courses and undertake the General Working at Height Awareness training.

Competent - Level 3 (L3) - Competent

The employee can demonstrate application of each of the competence specifications

The line manager shall monitor the employee until they are considered to be experienced.

Competent - Level 4 (L4) - Competent and Experienced

The employee can demonstrate application of each of the competence specifications to a variety of situations.

Line managers shall monitor the performance of an employee and record this as part of the annual review process.

Actions to assess and improve competence

If it is considered the employee is 'pre-competent' or 'competent' it shall be necessary for the line manager and the employee to agree action plans to verify competence/continued competence.

Annual review of competence

Line managers shall review competence annually.

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Appendix B - Competence Statements for Network Rail Employees

Tables, WH1 and WH 2 provide information for consideration when defining competence requirements for persons required undertaking the following roles

- a) Safe Working at Height - Climber
- b) Safe Working at Height – Advanced Climber

Table WH 1 – Safe Working at Height – Climber

Performance Statements	Knowledge Statements
<p>Individuals shall be able to:</p> <ul style="list-style-type: none"> a) Understand the main requirement of the Working at Height Regulations 2005 and associated best practice. b) Identify the hazards of Working at Height and perform an appropriate risk assessment. c) Identify the relevant Network Rail procedures for Working at Height. d) Produce a Safe System of Work for Working at Height on Network Rail Managed Infrastructure. e) Select appropriate equipment for Working at Height. f) Demonstrate the safe use of appropriate equipment for Working at Height. g) Demonstrate the pre-use inspection of equipment. h) Demonstrate basic emergency and rescue procedures. 	<p>Individuals shall know:</p> <ul style="list-style-type: none"> a) How health and safety legislation applies to working at height, in particular the requirements of the Health and Safety at Work etc Act 1974, the Management of Health and Safety at Work Regulations 1999 and the Working at Height Regulations 2005. b) The principles of Hazard Identification and Risk Assessment. c) The principles of operation of Fall Arrest systems as they pertain to the railway environment. d) The principles of emergency rescue.
<p>Scope of Competence</p> <p>Individuals shall be able to:</p> <ul style="list-style-type: none"> a) Demonstrate the safe identification and use of access equipment such as ladders, fixed and temporary access equipment and protection systems. b) Demonstrate basic safe rescue for climber. 	<p>Performance Evidence Requirements</p> <ul style="list-style-type: none"> a) Direct observation of Safe Working at Height. b) Demonstration of underpinning knowledge.

Ref:	NR/L2/OHS/022
Issue:	1
Date:	04 September 2010
Compliance date:	04 March 2012

Table WH 2 –Safe Working at Height – Advanced Climber

Performance Statements	Knowledge Statements
<p>Individuals shall be able to:</p> <ul style="list-style-type: none"> a) Understand the main requirement of the Working at Height Regulations 2005 and associated best practice. b) Identify the hazards of Working at Height and perform an appropriate risk assessment for Advanced Climbing techniques. c) Identify the relevant Network Rail procedures for Working at Height and Advanced Climbing. d) Produce a Safe System of Work for Working at Height on Network Rail Managed Infrastructure for Advanced Climbers. e) Select appropriate equipment for Working at Height. f) Demonstrate the pre-use inspection of equipment. g) Demonstrate the selection and use of work restraint, positioning and fall arrest including use of horizontal and vertical systems and independent anchor points. h) Demonstrate advanced emergency rescue techniques. 	<p>Individuals shall know:</p> <ul style="list-style-type: none"> a) How health and safety legislation applies to working at height, in particular the requirements of the Health and Safety at Work etc Act 1974, the Management of Health and Safety at Work Regulations 1999 and the Working at Height Regulations 2005. b) The principles of Hazard Identification and Risk Assessment. c) The principles of operation of Fall Arrest techniques as they pertain to the railway environment. d) The principles of advanced emergency rescue.
<p>Scope of Competence</p> <p>Individuals shall be able to:</p> <ul style="list-style-type: none"> a) Demonstrate competence of Safe Working at Height Climber. b) Demonstrate safe Advanced Climbing. c) Demonstrate safe rescue for Advanced Climber. 	<p>Performance Evidence Requirements</p> <ul style="list-style-type: none"> a) Direct observation of Advanced Climbing. b) Demonstration of underpinning knowledge.

Standards Briefing Note

Ref: NR/L2/OHS/022	Issue: 1
Title: Working Safely at Height	
Publication Date: 04 September 2010	Compliance Date: 04 March 2012
Standard Owner: Head of Occupational Health and Safety	
Non-Compliance rep (NRNC): Head of Occupational Health and Safety	
Further information contact: Dave Allen, Occupational Safety Specialist	Tel: 020 335 69148

<p>Purpose:</p> <p>This standard defines the processes to be followed within Network Rail to enable employees who design, plan, manage and carry out work at heights to do so safely, and within the requirements of the relevant legislation.</p> <p>This standard adopts a risk-based approach to working at height activities in line with the principles of the legislation and industry best practice. Under this approach measures taken to protect the safety of persons are proportionate to the risks involved.</p> <p>The procedure also requires designers of equipment and structures, that may require work at height during their construction, operation, maintenance or demolition, who are evaluating the hazards and risks within their designs to apply the principle of "Safety by Design" as enshrined in the Construction Design and Management Regulations 2007.</p>	<p>Scope:</p> <p>This standard applies to all "Work at Height" carried out by Network Rail employees. "Work at Height" is defined as any work activities where there is a need to control a risk of a person or object falling a distance liable to cause personal injury. This is regardless of the work equipment being used, the duration the person is at height or the height at which the work is being performed. It includes access to and egress from a place of work.</p> <p>Examples of activities considered as being work at height are :-</p> <ul style="list-style-type: none"> • Climbing permanent structures such as gantries, communication masts or signal posts. • Working close to an excavation, cable pit or foundation where it would be possible for a person or object to fall and cause injury. • Working on scaffolding or from a mobile elevated work platform (MEWP). • Working on the back of a flatbed road or rail vehicle. • Arboriculture and vegetation work performed in trees and on steep embankments. • Using cradles or ropes to gain access to parts of tunnels, bridges, etc. • Work on Electrification and Plant assets, boosters etc. • Using a ladder to gain access to a permanent or temporary structure. <p>Examples of activities not considered as being work at height:</p> <ul style="list-style-type: none"> • Using permanent stairs (if there is no structural or maintenance work being undertaken). • Work in an office on an upper floor of a multi-story building where there is no risk of falling. (Activities within the building which do involve a risk of falling, e.g. changing a light bulb from a step-ladder, would be considered to be work at height.)
--	--

What's New/ What's Changed and Why:

The Standard sets out Network Rail's interpretation of the Work at Height Regulations, how they apply to the industry and the processes to be followed to achieve compliance with the legislation.

The compliance date of 4th March 2012 is to allow a controlled and risk based roll out of the new training requirements within Infrastructure Maintenance and other affected functions.

Affected documents:

Reference	Impact
-----------	--------

Briefing requirements: Where Technical briefing (T) is required, the specific Post title is indicated. These posts have specific responsibilities within this standard and receive briefing as part of the Implementation Programme. For Awareness briefing (A) the Post title is not mandatory.

Please see <http://ccms2.hiav.networkrail.co.uk/webtop/drl/objectId/09013b5b804504da> for guidance.

Briefing (A- Awareness/ T- Technical)	Post	Team	Function
T	Workforce Health Safety and Environment Advisers	Route	Infrastructure Maintenance
T	Infrastructure Maintenance Directors	Route	Infrastructure Maintenance
T	Infrastructure Maintenance Delivery Managers	Route	Infrastructure Maintenance
T	Infrastructure Maintenance Engineers	Route	Infrastructure Maintenance
T	Workforce Safety Advisers	Route	Infrastructure Maintenance
A	All Staff		Infrastructure Maintenance
T	Heads of HSEA	All Teams	Investment Projects
T	Health and Safety Manager	Buildings and Civils	Asset Management
T	Safety Adviser	Central Team	Commercial Property
T	Risk Control Specialist	Central Team	Operations and Customer Services
T	Operations Safety Specialist	Central Team	NDS
A	All Staff		Investment Projects
A	All Staff		NDS
A	All Staff		Engineering
A	All Staff		Safety and Compliance
A	All Staff		Strategic Sourcing

*NOTE: Contractors are responsible for arranging and undertaking their own Technical and Awareness Briefings in accordance with their own processes and procedure

Ref:	NR/BS/LI/413
Issue date:	4 th January 2019
Compliance date:	11 th January 2019
Expiry date:	10 th January 2020

Emergency change: NR/BS/LI/413

Standard/control document affected: NR/L2/OHS/022 Issue 1, *Working Safely at Height*.

The affected standard/control document will be reviewed and up-issued before this emergency change expires on 10th January 2020.

For further information contact: David Burgess, Principal Workforce Safety Specialist, 07710 939736

1 Reason for Issue

This emergency change is required to bring NR/L2/OHS/022 *Working Safely at Height* in line with Work at Height Regulations regarding the use of ladders and step ladders. This will assist Network Rail in managing the safety risk associated with work at height and falls from ladders and step ladders.

2 Scope

This standard applies to all “Work at Height” carried out by Network Rail employees, contractors and others working on behalf of Network Rail on Network Rail Owned or Managed property or infrastructure.

“Work at Height” is defined as any work activity where there is a need to control a risk of a person or object falling a distance liable to cause personal injury. This is regardless of the work equipment being used, the duration the person is at height or the height at which the work is being performed. It includes access to and egress from a place of work.

Examples of activities considered as being work at height are:

- a) climbing permanent structures such as gantries, communication masts or signal posts;
- b) working close to an excavation, cable pit or foundation where it would be possible for a person or object to fall and cause injury;
- c) working on scaffolding or from a Mobile Elevated Work Platform (MEWP);
- d) working on the back of a flatbed road or rail vehicle;
- e) arboriculture and vegetation work performed in trees and on steep embankments;
- f) using cradles or ropes to gain access to parts of tunnels, bridges, etc;
- g) work on Overhead Line Equipment etc.;
- h) using a ladder to gain access to a permanent or temporary structure;
- i) activities within a building which do involve a risk of falling, e.g. window cleaning or changing a light bulb from a step-ladder, would be considered to be work at height.

Examples of activities not considered as being work at height:

- a) using permanent stairs (if there is no structural or maintenance work being undertaken);
- b) work in an office on an upper floor or a multi-story building where there is no risk of falling.

Ref:	NR/BS/LI/413
Issue date:	4 th January 2019
Compliance date:	11 th January 2019
Expiry date:	10 th January 2020

3 Changes

Clause/sub-clause	Change
14.1 General requirements – portable ladders and step ladders	<p>Now reads:</p> <p>Portable ladders and step ladders used for access and egress to work areas shall be BS EN 131 Professional Use or Class 1 BS 2037/1129 Heavy Industrial use (not to be confused with EN 131 Light Industrial use).</p> <p>NOTE 1: <i>Ladders certified to the withdrawn British Standards, BS 2037 and BS 1129 (often referred to as Class 1 ladders) will no longer be available after a transition period but can still be used.</i></p> <p>Ladders shall be of sufficient length and provide a firm handhold whilst getting on or off the ladder. A ladder used for access shall be long enough to protrude sufficiently above the place of landing to which it provides access (recommended 1100mm) unless other measures have been taken to provide an alternative firm handhold. The footings shall be firm and regular and the ladder tied by securing the stiles at the upper ends or by use of an effective anti-slip or other stability device, to prevent movement during use.</p> <p>Initial tying-in of the ladder shall be done with another person footing the ladder to increase its stability or with the ladder tied at the base.</p> <p>NOTE 2: <i>When ladders are deployed on ballast, a suitable additional anchorage device should be used to prevent slippage (e.g. ratchet strap secured to the rail or fixed structure).</i></p> <p>A step ladder shall be of sufficient length that the user can maintain a hand hold. Step ladders shall not be used where the work would cause a side loading on the step ladder. The steps should always face the work activity taking place, however where this is not possible due to the location then the risk assessment should detail how stability of the step ladder will be maintained.</p>
14.2 Assessment and use of portable ladders and step ladders	<p>Now reads:</p> <p>A portable ladder or step ladder may only be used for work at height if a risk assessment under regulation 3 of the Management Regulations has demonstrated that the use of more suitable work equipment is not justified because of the low risk and:</p> <ul style="list-style-type: none"> a) the short duration of use (maximum of 30 minutes); or b) existing features on site which cannot be altered. <p>This assessment can be completed by following the Work Activity Risk Assessment Process detailed in NR/L2/OHS/00102 <i>Work Activity Risk Assessment</i>.</p> <p>Any surface upon which a ladder or step ladder rests shall be fixed, stable, firm, of sufficient strength and of suitable composition and condition (free from slippage) to support the ladder safely so that its rungs or steps remain horizontal, and any loading intended to be placed on it.</p> <p>A portable ladder or stepladder shall be positioned to confirm its stability during use.</p> <p>A portable ladder or step ladder shall be prevented from slipping or moving during use by:</p>

Ref:	NR/BS/LI/413
Issue date:	4 th January 2019
Compliance date:	11 th January 2019
Expiry date:	10 th January 2020

Clause/sub-clause	Change
	<p>a) securing the sites at or near their upper or lower ends; or b) an effective anti-slip or other effective stability device.</p> <p>No interlocking or extension ladder shall be used unless its sections are prevented from moving relative to each other while in use.</p> <p>Every ladder or step ladder shall be used in such a way that a secure handhold and secure support are always available to the user. The user shall not carry any load up a ladder. Suitable means of carrying loads must be provided, such as tool belts.</p> <p>In general, persons working from ladders or step ladders shall be able to maintain three points of contact at all times. Where two hands need to be free for a brief period for light work, keep two feet on the same step and the body (knees or chest) supported by the stepladder to maintain three points of contact. Make sure a safe handhold is available.</p> <p>A work restraint, work positioning or first person up access system can be used by suitably trained and competent staff to provide a third point of contact when working from ladders.</p> <p>Ladders and step ladders shall be inspected prior to use and periodically. A ladder shall be clearly labelled after annual inspection indicating to the user that it is within inspection date.</p>
14.3 Fixed ladders	<p>Now reads:</p> <p>Whenever a fixed ladder is climbed the person climbing the ladder shall always carry out a visual check of the structure and ladder, particularly the securing points, both prior to climbing and as they climb the structure. If the climber has any doubt that the ladders are safe to climb, they shall not climb them until they are made safe.</p> <p>The user shall not carry any load up a fixed ladder. Suitable means of carrying loads must be provided, such as tool belts.</p>

Ref:	NR/BS/LI/413
Issue date:	4 th January 2019
Compliance date:	11 th January 2019
Expiry date:	10 th January 2020

Approval of Standard and Control Document Owner

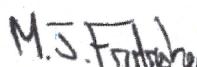
Approved by:



Bill Cooke, Head of Corporate Workforce Safety

Approval of Delivery Function Authority

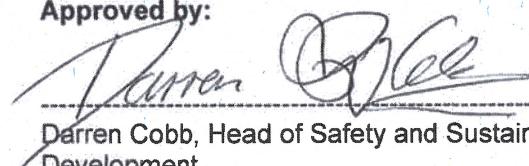
Approved by:



Martin Frobisher, Route Managing Director

Approval of Delivery Function Authority

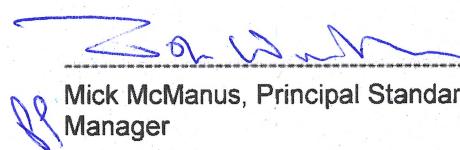
Approved by:



Darren Cobb, Head of Safety and Sustainable Development

Approval of Standards and Controls Management Team

Approved for publication by:



Mick McManus, Principal Standards and Controls Manager

Ref:	NR/BS/LI/413
Issue date:	4 th January 2019
Compliance date:	11 th January 2019
Expiry date:	10 th January 2020

4 Recipients

Name	Post
Priti Patel	Director, Route Health, Safety Quality and Environment
Rupert Lown	Director, Route Health, Safety Quality and Environment
Simon Morgan	Director, Route Health, Safety Quality and Environment
Paul Clark	Director, Route Health, Safety Quality and Environment
David Smith	Director, Route Health, Safety Quality and Environment
Nicola Uijen	Director, Route Health, Safety Quality and Environment
Simon Constable	Head of Route Safety, Health and Environment
Louise Cox	Head of Route Safety, Health and Environment
Katie Innes	Head of Route Safety, Health and Environment
Dave Allen	Route Health and Safety Manager
Matthew Lane	Workforce Health Safety and Environment Advisor
Lee Green	Programme Manager, Infrastructure Projects
Keith Innis	Head of Safety and Sustainable Development
Chris Carey	Head of Safety and Sustainable Development
Stephen Webber	Head of Safety and Sustainable Development
Ian Bradler	Head of Safety and Sustainable Development
Suzanne Kay	Head of Safety and Sustainable Development
Darren Cobb	Head of Safety and Sustainable Development
Adam Binney	Head of Safety and Sustainable Development
Louise Evatt	Head of Safety and Sustainable Development
Neil Marsh	Head of Safety and Sustainable Development
Dominic Thompson	Principal Health and Safety Manager
Philip Doughty	Professional Head of Contact Systems AC/DC
Anthony Dewar	Professional Head of Buildings and Architecture
Richard Stainton	Engineering Expert
Ian Griffiths	Professional Head of Maintenance
Charlie Usher	Head of Maintenance Delivery
Gary Walsh	Head of Maintenance Delivery
Terry Strickland	Head of Maintenance Delivery
Lindsay Saddler	Head of Maintenance Delivery
Richard Owens	Head of Maintenance Delivery
Nick Millington	Head of Maintenance Delivery
Tom McNamee	Head of Maintenance Delivery
Ivan Kimble	Head of Maintenance Delivery
Paul Jenkins	Head of Maintenance Delivery

Ref:	NR/BS/LI/413
Issue date:	4 th January 2019
Compliance date:	11 th January 2019
Expiry date:	10 th January 2020

Steve Hooker	Head of Maintenance Delivery
Stephen Crosbie	Head of Maintenance Delivery
Martin Ball	Head of Maintenance Delivery
David Smale	Head of Maintenance Delivery
Carlo Pezzulo	Lead Union Health and Safety Representative (RMT)
Paul Mangan	Lead Union Health and Safety Representative (TSSA)
Caroline Meek	Head of SHEQ
Eric Aliot	Head of Signalling and Control System Engineering (High Speed)
Meliha Duymaz Oludipe	Route Managing Director
Martin Frobisher	Route Managing Director
Mark Langman	Route Managing Director
John Halsall	Route Managing Director
Rob McIntosh	Route Managing Director
William Kelly	Route Managing Director
Alex Hynes	ScotRail Alliance Managing Director
Francis Paonessa	Managing Director, Infrastructure Projects
Andy Thomas	Managing Director, Strategic Operations
Susan Cooklin	Managing Director, Route Services

5 Details of briefing or cascade communication process

This emergency change will be distributed electronically to recipients listed in clause 4. Recipients are expected to cascade the emergency change to relevant colleagues in their teams.