

WORK AT HEIGHT



Health and Safety Guidance Note



NFU Mutual
RISK MANAGEMENT SERVICES

INTRODUCTION

Working at height remains one of the biggest causes of fatalities and major injuries. 'Work at height' means work in any place where, if there were no precautions in place, a person could fall a distance that could cause personal injury e.g. a fall from a ladder, a roof or through a fragile roof, an opening in the floor or a hole in the ground.

The most common falls from height involve overreaching, over-balancing, equipment failure, misuse of equipment, unexpected movement (particularly where ladders are involved) and the failure of a fragile surface.

The Work at Height Regulations 2005 applies to all work at height where there is a risk of a fall which is liable to cause personal injury (the previous 2 metre rule in construction no longer applies). They place duties on employers, the self-employed, and any person who controls the work of others to ensure that:

- Work at height is avoided where possible;
- Work equipment or other measures are used to prevent falls, where work at height cannot be avoided, for example podiums fitted with guard rails offer greater stability than steps;
- Work equipment or other measures are used to minimise the distance and consequences of a fall, where the risk of a fall cannot be eliminated, for example fall arrest equipment;
- All work at height is properly planned and organised;
- Those involved in work at height are trained and competent;
- The risks from working at height are assessed and appropriate work equipment is selected and used;
- The risks from fragile surfaces are properly controlled;
- The risks from falling objects are properly controlled;
- Equipment for work at height is properly inspected and maintained.

PRECAUTIONS

The regulations require all tasks involving work at height to be risk assessed so that adequate controls can be put in place to prevent falls. Low risk, relatively straightforward tasks will require less effort when it comes to these control measures. The Regulations include Schedules that highlight requirements for existing places of work, and means of access for work at height, collective fall prevention (e.g. guardrails, working platforms), collective fall arrest (e.g. nets, airbags etc.), personal fall protection (e.g. work restraints, lanyards) and ladders.

Take a sensible, pragmatic approach when considering precautions for work at height. Factors to weigh up include the height of the task; the duration and frequency; and the condition of the surface being worked on. There will also be certain low-risk situations where common sense tells you no particular precautions are necessary.

WEATHER

If the work at height is to be undertaken outside, remember to take account of weather conditions that could compromise safety and keep in mind that weather conditions are changeable.

SELECTING WORK EQUIPMENT

When selecting equipment for work at height you must:

- Use the most suitable equipment - you must look at what the job requires, how long will it last and where it needs to be done. It is not illegal to use a ladder to work at height but other means of access such as fixed scaffold, tower scaffold or mobile elevated working platforms should be considered, before relying on ladders;
- Give collective protection measures (e.g. guard rails) priority over personal protection measures (e.g. safety harnesses);
- Take account of the working conditions and the risks to the safety of all those at the place where the work equipment is to be used.

When deciding which type of equipment is most suitable for a particular task, consider the following:

- Distance to be climbed: Portable ladders are less suitable for higher climbs, particularly if loads are carried. Where possible, provide temporary stairs or scaffold access towers with internal stairs, rather than portable ladders;
- Duration and frequency of the task: longer duration or regular jobs generally justify a better standard of fall protection, e.g. a tower scaffold, podium step or cherry picker rather than a ladder or stepladder. A ladder or stepladder may be acceptable for short duration tasks, e.g. replacing a light bulb when building a tower or podium would not be reasonable because the task itself takes only a few seconds to do. But, installing several rows of light bulbs or fluorescent strips in a false ceiling refurbishment may justify the use of a tower or podium steps because the task takes longer;
- Slopes or poor ground conditions;
- Obstructions, e.g. steelwork or overhangs;
- Fragile surfaces;
- Floor loading;

- Evacuation and rescue e.g. if you have to use a fall arrest system, you must make sure a rescue can be carried out if a worker is left suspended from a roof edge.

FRAGILE SURFACES

You must ensure that no one working under your control goes onto or near a fragile surface unless that is the only reasonably practicable way for the worker to carry out the work safely.

If anyone does work on or near a fragile surface you must:

- Ensure (as far as it is reasonably practicable to do so) that suitable platforms, coverings, guard rails, and the like are provided (and used) to minimise the risk;
- Do all that is reasonably practicable, if any risk of a fall remains, to minimise the distance and effect of a fall.

If anyone working under your control may go onto or near a fragile surface, you must do all that is reasonably practicable to make them aware of the danger, preferably by prominent warning notices fixed at the approaches to the danger zone.

FALLING OBJECTS

Where it is necessary to prevent injury, you must do what you can to prevent anything falling. If it not reasonably practicable, you must ensure that no one is injured by anything falling by ensuring that nothing is:

- Thrown or tipped from height if it is likely to injure anyone;
- Stored in such a way that its movement is likely to injure anyone.

If the workplace contains an area in which there is a risk of someone being struck by a falling object or person, you must ensure that the area is clearly indicated and that unauthorised people are unable to reach it e.g. with the use of barriers.

CONTRACTORS

If you employ contractors for work at height, you have a legal duty to make sure they are competent to do the work you want them to do. You should be checking their experience, competence and management arrangements.

Once you have selected a competent contractor, you will need to exchange information and agree the method of work. Both will need to be done before work starts. Pre-work meetings are a good way of ensuring that the work is properly planned and controlled. Finally, you will also need to monitor their work.

ROOF WORK

All work on roofs is dangerous even if the job only takes a few minutes. Proper precautions are needed to control the risks. Issues to consider include:

- Safe access to the roof – this requires planning. Consider the use of scaffolds, mobile towers, mobile access equipment and ladders;
- Roof edges and openings – sloping roofs require scaffolding to prevent people or materials falling from the edge. You must fit edge protection to the eaves of any roof.

Where work is of short duration (tasks measured in minutes), properly secured ladders to access the roof and proper roof ladders may be used.

SCAFFOLDING

- Scaffolding must be designed, erected, altered and dismantled by competent people unless the work is supervised by a competent person*;
- Always ensure the scaffold is based on a firm level foundation and is properly braced and tied into a permanent structure or otherwise stabilised;
- Always ensure that scaffolding has the appropriate guard rails, toe-boards and brick guards;
- Never overload a scaffold and only use in appropriate weather conditions;
- Ensure that platforms are fully boarded and wide enough for work and access;
- Ensure that scaffold boards are properly supported and do not over hang excessively i.e. more than four times its thickness;
- Make sure that there is a safe ladder or other means of access to the platform. If a ladder is used it must be tied off and extend at least one metre above the platform to provide a safe handhold.
- Ensure that the scaffolding is inspected regularly and formal detailed inspections are made at least every 7 days or sooner if something occurs that may have affected its strength and/or stability.

*A competent person is someone who has undertaken CISRS (Construction Industry Scaffolders Record Scheme) training for scaffold systems.

TOWER SCAFFOLDS

- Tower scaffolds should always be erected by a suitably trained and competent individual*, following a safe method of work – the supplier should always provide an instruction manual which will explain the erection sequence for the particular equipment;
- Never erect a tower scaffold higher than is recommended by the manufacturer and always ensure that it is erected on firm, stable ground;
- You must ensure that there is a safe way to get into and from the work platform – never allow climbing the outside of a tower scaffold;
- Ensure that there are appropriate guard rails and toe-boards;
- You should never move the tower when people or materials are on the tower;
- Ensure that the relevant components show no signs of rust or damage;
- Make sure that toe boards and guard rails are provided at the suitable heights (Toe board 150mm, intermediate guard rail 470mm and the top guard rail 950mm);
- Consider weather and ground conditions as these may adversely affect the stability of the tower and also its suitability for the task;
- Ensure that an inspection regime is in place to ensure the tower remains safe at all times (a sample inspection sheet can be located at the end of this guidance note).

*A competent person is someone who has undertaken PASMA (Prefabricated Access Suppliers' & Manufacturers' Association Ltd) training for tower scaffold erection/use.

MOBILE ELEVATED WORK PLATFORMS (MEWPS)

- MEWPs are a useful method of working at height – however, take care to always select the appropriate MEWP for the job and the workplace;
- Always ensure the operator of the MEWP is fully trained and is familiar with the specific type of MEWP that they are going to use;
- You should always use the equipment on firm level ground and ensure that any outriggers are extended and chocked as necessary;
- Think about the area where the MEWP is to be used – are there any specific hazards such as overhead power lines? – consider segregating the area where the equipment is in use – this will prevent vehicles and people being in the area where there is the possibility of being struck or hit by falling materials;
- Don't allow workers to climb out of the platform to reach their work position and never move the platform in the raised position;
- Make sure you have considered a suitable means of descent from the platform in case of an emergency.

NON-INTEGRATED WORKING PLATFORMS (MAN-CAGES)

- The use of man-cages are only allowed for occasional use, for example; tasks that would otherwise be carried out using less safe means of access, such as ladders, because it is impractical to hire a MEWP due to the short duration and infrequent nature of the tasks e.g. clearing a blocked gutter;
- Integrated working platforms are preferable to non integrated ones;
- It is essential that if you choose to use a man-cage, that it is compatible with the truck on which it is used – you should consult your truck supplier or manufacturer for information.

FIXED LADDERS

- Fixed ladders should only be used if it is not practical to install a staircase;
- Fixed ladders should be of sound construction, properly maintained and securely fixed;
- Rungs should be horizontal and give adequate foothold and the stiles should extend at least 1100 mm above the landing;
- Fixed ladders over 2.5 m long at a pitch of more than 75° should be fitted with safety hoops or permanently fixed fall-arrest systems.

LADDERS AND STEPLADDERS

- Contrary to common belief, ladders have not been banned under health and safety law. In fact, they can be a sensible and practical option for low-risk, short duration tasks (e.g. less than 30 minutes);
- You can use a ladder if:
 - Three points of contact can be maintained at all times
 - The work only requires one hand to be used;
 - The work can be reached without stretching;
 - The ladder can be fixed to prevent slipping;
 - A good handhold is available.
 - The ladder is safe to use and has been regularly inspected (a sample inspection sheet can be located at the end of this guidance note);
- Always choose a suitable ladder for the job - use an EN131 'Professional' ladder.

FALL PROTECTION EQUIPMENT

Fall protection equipment such as harnesses and lanyards must be marked accordingly and safe for such a purpose. Where appropriate, fall protection equipment (including accessories) should be thoroughly examined before it is used for the first time and at least six-monthly or at intervals laid down in an examination schedule set by a competent person.

A regime for the inspection of lanyards should be drawn up by a competent person. The regime should include:

- The lanyards to be inspected (including their unique identification);
- The frequency and type of inspection (pre-use checks, detailed inspection and, where appropriate, interim inspection);
- Designated competent persons to carry out the inspections;
- Action to be taken on finding defective lanyards.
- Means of recording the inspections.
- Training of users;
- A means of monitoring the inspection regime to verify inspections are carried out accordingly.

INSPECTIONS

You must ensure that each place where work is to be done at height is checked on every occasion before that place is used. This involves checking the surface and every parapet, permanent rail, etc.

You must ensure that any item of equipment used for work at height (including fall protection) is inspected:

- After it is assembled or installed, if its safety depends on how it is assembled or installed;
- As often as is necessary to ensure safety, and in particular to make sure that any deterioration can be detected and remedied in good time.

You must ensure that before you use any equipment which has come from another business (e.g. from a hire company), and before any equipment leaves your business, it is accompanied by an indication that the last inspection required by these Regulations has been carried out.

INFORMATION, INSTRUCTION, TRAINING AND SUPERVISION

You must ensure that everyone involved in working at height is competent to do so (or, if being trained, is supervised by a competent person). Where other precautions do not entirely eliminate the risk of a fall occurring, you should train those who will be working at height in how to avoid falling, and how to avoid or minimise injury to themselves should they fall.

It is important that workers are appropriately supervised. Effective supervision can help you monitor the effectiveness of the training that people have received, and whether employees have the necessary competence to do the job.

OVERVIEW

- Consider whether there are other, safer ways of doing the job. Can work at height be avoided?
- Ensure that you have fully considered all of the ways in which you or your employees could be at risk of falling;
- Don't underestimate the risks involved.
- Simply 'taking care' is not enough. Proper precautions must be in place;
- Don't start work at height until you have properly planned the work and assessed and controlled the risks involved;
- Decide what equipment is required for the job. Ideally precautions should be designed to prevent a fall, for example using guard rails at a roof edge or crawling boards on a fragile roof. For some jobs it may be appropriate to use fall arrest equipment such as a safety harness and lanyard;
- If you have not got the appropriate equipment then get it. Don't take a chance with a ladder if what you should be using is a tower scaffold. Making do without the right equipment to speed up the work or minimise expense can lead to injury or death, as well as prosecution if the law is broken;
- Ensure that there are no defects in any equipment that you use;
- Make sure that equipment is used safely and that any necessary training or supervision is provided.

FURTHER GUIDANCE

- HSE Work at Height Website
www.hse.gov.uk/construction/safetytopics/workingatheight.htm
- INDG401 Revision 2 A brief guide to The Work at Height Regulations 2005
www.hse.gov.uk/pubns/indg401.pdf
- HSG33 Health and Safety in Roof work
www.hse.gov.uk/pubns/priced/hsg33.pdf
- PM28 Fourth Edition Working Platforms (Non-integrated) on Forklift Trucks
www.hse.gov.uk/pubns/pm28.pdf
- INDG455 Safe Use of Ladders and Stepladders
www.hse.gov.uk/pubns/indg455.pdf
- GEIS5 Fragile Roofs: Safe Working Practices
www.hse.gov.uk/pubns/geis5.pdf
- INDG368 Using contractors: A brief guide
www.hse.gov.uk/pubns/indg368.pdf

These documents are available to download free of charge from www.hse.gov.uk/pubns/books/

MOBILE SCAFFOLD TOWER INSPECTION SHEET

| | | | | | |
|---|---|------------|-----------|------------|-----------------|
| Name and Position of person carrying out the checks: | | | | | |
| Date and Time of Inspection: | | | | | |
| Location of Tower Scaffold: | | | | | |
| Make/Type of Tower Scaffold: | | | | | |
| Tower Scaffold Identification Number: | | | | | |
| Inspection type: | Before first use/After 7 days/Adverse weather/Alteration | | | | |
| | Inspection of Component Parts | Yes | No | N/A | Comments |
| | Castors | | | | |
| 1 | Castor housings, wheel and tyres not damaged. | | | | |
| 2 | Wheels rotate freely. | | | | |
| 3 | Castor swivels rotate properly. | | | | |
| 4 | Wheel brakes function properly. | | | | |
| | Adjustable Legs | Yes | No | N/A | Comments |
| 5 | Not bent. | | | | |
| 6 | Threads undamaged. | | | | |
| 7 | Threads clean and free from debris. | | | | |
| 8 | Device to stop the leg falling out of the frame checked and functioning correctly. | | | | |
| | Frames | Yes | No | N/A | Comments |
| 9 | Frame members are straight and undamaged. | | | | |
| 10 | Frame members free of debris or other material. | | | | |
| 11 | Spigots are straight and parallel with the axis of the column tube. | | | | |
| 12 | The devices for locking frames together have been checked and are functioning correctly. | | | | |
| | Platforms | Yes | No | N/A | Comments |
| 13 | Undamaged. | | | | |
| 14 | Frames are square and true. | | | | |
| 15 | Decks are not split or warped. | | | | |
| 16 | Deck-to-frame fixings are firm. | | | | |
| 17 | Toe board clips/fixings are undamaged and firm. | | | | |
| 18 | Outriggers and stabilizers have been checked for damage and hooks and couplers are functioning correctly. | | | | |

| | Pre-Use Site Checks | Yes | No | N/A | Comments |
|----------------------------------|---|-----|----|-----|---------------------|
| 19 | Ground is firm and level. | | | | |
| 20 | No overhead obstructions or hazards. | | | | |
| 21 | Wind and weather conditions permit safe use. | | | | |
| 22 | The height to base ratio is correct (check suppliers instruction manual). | | | | |
| 23 | Mobile tower is vertical and square and the horizontal braces and platform are level. | | | | |
| 24 | Outriggers or stabilisers are correctly positioned and secured. | | | | |
| 25 | All base plates or castor wheels are fully in contact with the ground, including those on stabilisers or outriggers. All castors should be properly locked. | | | | |
| 26 | All spigot and socket joint locks holding the frames together are secured. | | | | |
| 27 | All bracing members have been located exactly in accordance with the supplier's instructions. | | | | |
| 28 | All guardrails, intermediate rails and toe boards are in position. | | | | |
| 29 | Access ladders in position and firmly located. | | | | |
| 30 | Barriers in place at ground level to prevent people walking into the tower or straying into the work area. | | | | |
| 31 | Suitable storage provision is made for tools and materials on the platform. | | | | |
| Further Actions Necessary | | | | | By Whom/Date |
| | | | | | |

LADDER INSPECTION SHEET

| | |
|---|--|
| Name and Position of person carrying out the checks: | |
| Date and Time of Inspection: | |
| Location of ladder: | |
| Make/Type of Ladder: | |
| Ladder Identification Number: | |

| | Ladder Inspection Checks | Yes | No | N/A | Comments |
|----|--|------------|-----------|------------|---|
| 1 | General condition sound (clean, dry, free). | | | | |
| 2 | No cracks. | | | | |
| 3 | No rungs missing or loose. | | | | |
| 4 | Not painted. | | | | |
| 5 | No stiles damaged or bent. | | | | |
| 6 | No warping or splitting (wood). | | | | |
| 7 | No corrosion (metal). | | | | |
| 8 | No sharp edges or dents (metal). | | | | |
| 9 | No rungs bent (metal). | | | | |
| 10 | Footpads present and securely fixed. | | | | |
| 11 | Caps/rubber fittings in good condition. | | | | |
| 12 | Slip-resistant rubber or plastic feet present. | | | | |
| 13 | Bracing in good condition (stepladders). | | | | |
| | Pre-Use Site Checks | Yes | No | N/A | Comments |
| 14 | Has the correct type of ladder been selected? | | | | Current ladders: Class 1 Industrial - heavy duty (maximum load 175kg), or, Class EN131 Commercial - medium duty (maximum static load 150kg). Newly purchased ladders: EN131 Professional - maximum static load 150kg. |
| 15 | Ladder positioned in a secure location, free from being struck by vehicles or knocked over by opening doors and windows. | | | | |
| 16 | Ladder is placed against a strong non-fragile surface. | | | | |
| 17 | Ladder is placed on even and stable ground. | | | | |

| | Pre-Use Site Checks | Yes | No | N/A | Comments |
|-----------|--|------------|-----------|------------|---------------------|
| 18 | Ladder placed at the correct angle (75 degrees/1 in 4). | | | | |
| 19 | Can the work be done without over reaching/ stretching? | | | | |
| 20 | Ladder extends 1 metre above the working platform or is a suitable handhold available. | | | | |
| 21 | Top of ladder is tied securely by the use of ropes, ties or other stability devices (ensuring that the ladder is not secured by its rungs). | | | | |
| 22 | If top of ladder is not tied, bottom of ladder is secured or second footed. | | | | |
| 23 | Are suitable working platforms provided for ladders that are more than 9 metres in length? | | | | |
| 24 | Is the correct footwear being worn? i.e. clean soles, in good condition, no dangling laces. | | | | |
| 25 | Are tools stored in shoulder bags or holster belts? | | | | |
| 26 | Are barriers and signs in place to prevent people straying into the work area? | | | | |
| | Step Ladder Checks | | | | |
| 27 | Step ladder placed on even ground. | | | | |
| 28 | Step ladder positioned correctly (it should not be positioned side on to work tasks). | | | | |
| 29 | Is there a handhold such as a handrail available? Ensure that that the top two or three rungs are not worked from unless they have been specifically designed with special hand holds. | | | | |
| 30 | Are the side hinges fully extended and securing clips in good condition and in working order? | | | | |
| No | Further Actions Necessary | | | | By Whom/Date |
| | | | | | |

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VERSION: 2 – 0421