



Working at Height

Policy and Procedures

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1. Introduction

Falls from height are the biggest cause of workplace deaths in the UK and one of the main causes of major injuries. In 2014/15 falls from height accounted for nearly one in three work place fatalities (29%), nearly 3000 major injuries and over 6000 injuries that required over seven days absent from work [1].

The Work at Height Regulations 2005 was enacted to protect staff and others against risks to their health and safety while working at height. The amended 2005 regulations removed the definition of 'Work at Height' being at least two metres, and placed no minimum height at which Work at Height considerations apply.

Work at Height should be avoided where possible. But when this it is not possible a suitable and sufficient risk assessment must be undertaken and a safe system of work implemented. Any work at height needs to be properly planned in advance of the work activity, appropriately supervised and carried out in a safe manner. Careful consideration should be taken in the selection and use of work equipment, including ladders.

This policy and procedure is applicable to all staff, contractors and users working at LSHTM. Working at Height in an office, or other low risk environment, can be addressed via the general risk assessment form available on the LSHTM Safety pages ([Risk Assessment Forms](#)).

2. Definitions

Work at Height This is work in any place at, above or below ground level where a person could be injured if they fell from that place. This can also include means of access and/or egress to a place of work.

Work at Height does not include slip, trip or fall on the same level, nor does it include walking up or down a permanent staircase in a building

Work Equipment Means any machinery, appliance, apparatus, tool or installation for use at work (Provision and Use of Work Equipment Regulations 1998 [2])

3. Responsibilities

3.1. Deans of Faculty and Heads of Professional Support Services

- Ensure that every effort is made to avoid working at height and that where it cannot be avoided a suitable and sufficient risk assessment is undertaken before the work is carried out
- Provide suitable work equipment or other measures such as guard rails, to prevent falls where work at height cannot be avoided and ensure that all work at height is being properly maintained and inspected
- Ensure that there is a method statement, which includes emergency procedures, has been developed prior to working, *except* for the simplest activities where the precautions are straightforward and easily repeated.
- Ensure that a 'Permit to Work' has been raised and communicated to those undertaking the work
- Ensure that all staff working at height have appropriate information, instruction, training and supervision to ensure their competence
- Ensure that contractors do not start any work at height without having provided a suitable risk assessment and method statement
- Ensure that all contractors employed are competent to work at height and are appropriately supervised when on site.

3.2. Director of Estates

- Shall appoint one or more suitably qualified and experienced 'Roof Permits to Work' Issuers
- Ensure a register of all roof areas under their control is maintained
- Ensure that any equipment purchased is suitable
- Ensure that pre-use checks of equipment and reporting of defects is undertaken
- Ensure that an audit of roof areas is undertaken every five years

3.3. Roof Permits to Work Issuers

- Shall not issue any permits for work being undertaken by themselves unless countersigned by another PTW issuer
- Ensure that all necessary precautions, including emergency procedures, have been communicated to the persons in charge of the work
- Assess all associated risks involved in working at height and develop a safe system of work, including the selection, and the appropriate inspection of suitable equipment, where necessary
- Be responsible for the issuing of the roof permits to work, for the management of staff and contractors while they are on site and the cancellation of roof permits to work

3.4. Safety Advisor

- Assist the Deans of Faculty and Heads of Professional Support Services, the Director of Estates, and the Roof Permits to Work Issues in the selection of suitable equipment
- Assist in the development and undertaking of audits concerning working at height and associated equipment
- Develop and put into place training for Roof Permit to Work Issuers, Employees and Users to ensure safe use of any work at height equipment
- Be responsible for the maintenance of this policy and procedure
- Assist in the undertaking of Roof Audits

3.5. Employees, Contractors, Users etc.

- Assist line management with the assessment of risks with regard to working at height. Inform them if the system of work is inadequate or inadequate, and do not work in the area until informed it is safe to do so
- Comply with any method statement developed through risk assessment and any requirements of a roof permit to work
- Report all accidents and incidents (including near misses), or any defects in equipment via the Incident Report Form ([Incident Report Form](#))

4. Procedures

4.1. Working with Ladders, Step-ladders and Step-Stools

Taken from INDG455 Safe Use of Ladders and Step-ladders
(<http://www.hse.gov.uk/pubns/indg455.pdf> [3])

Ladders can be used for low-risk, short duration activities that do not require higher level fall protection.

As a guide ladders and step ladders should be used for no more than **30 minutes**.

4.1.1. Using ladders

Training is required in the safe use of ladders and users must be deemed competent to be able to use the equipment safely.

4.1.2. Pre-Use Checks

A pre-use check of ladders should be carried out:

- By the user
- At the beginning of the working day
- After something has changed e.g. if the ladder has been dropped or damaged, moved from a dirty to a clean area etc.

Items to check

- **The Stiles** – ensure they are not bent or damaged, as the ladder could buckle or collapse
- **The Feet** – if they are missing, worn or damaged the ladder could slip. Also check the ladder feet if moving from soft/dirty ground to smooth, solid surfaces to make sure that there is nothing embedded to prevent the feet from making contact with the ground
- **The Rungs** – if they are bent, worn, missing or loose the ladder could fall
- **Any Locking Mechanisms** – if they are bent or the fixings are worn or damaged the ladder could collapse. Ensure that any locking bars are engaged.
- **Stepladder platform** – if it is split or buckled the ladder could become unstable or collapse
- **Steps or treads on stepladders** – if they are contaminated they could be slippery, if the fixings are loose on steps, they could collapse

Record the outcomes of any pre-use checks in the ladder booking out ledger.

4.1.3. Using ladders safely

Simple precautions to minimise the risk of a fall:

Leaning Ladders

- Only carry light materials
- Don't overreach
- Make sure the ladder is long enough or high enough for the task
- Don't overload the ladder, check the pictogram or information on the ladder
- Make sure the ladder is at 75°
- Always grip ladders and face the ladder rungs while climbing or descending
- Don't move or extend ladders while standing on the rungs
- Don't work off the top three rungs and make sure the ladder extends at least 1m above where you are working
- Avoid holding items when climbing
- Maintain three points of contact when climbing (one hand and two feet)

Stepladders

- Check all four stepladder feet are in contact with the ground and the steps are level
- Only carry light materials and tools
- Don't overreach
- Don't stand or work on the top three steps
- Ensure any locking devices are engaged
- Try and position the stepladder to face the work activity and not side on
- Try to avoid work that imposes a side loading
- Maintain three points of contact at the working position (two feet and one hand)

4.2. Working with Mobile Scaffolds

Taken from HSE (<http://www.hse.gov.uk/construction/safetytopics/scaffold.htm> [4])

Towers should be erected by trained and competent people. There are a number of organisations that provide training for the safe erection and use of tower scaffolds.

The incidents that occur are mainly caused by:

- **Dangerous methods of erection or dismantling** – where a safe system is not being followed;
- **Defects in the erected scaffold** – where the tower structure is incorrectly assembled or where a platform guardrail is missing;
- **Misuse of the scaffold** – where a ladder is used on a tower causing it to overturn or when a person falls while the tower is being moved.

4.2.1. Erection and dismantling

The manufacturer, supplier or hirer has a duty to provide an instruction manual explaining the erection sequence, including any bracing requirements.

Towers should be erected following a safe method of work, either using:

- **Advance guard rail system** – where temporary guard rail units are locked in place from the level below and moved up to the platform level. They are in place before the operator accesses the platform to fit the permanent guard rails.
- **'Through-the-trap' (3T)** – involves the operator taking up a working position in the trap door of the platform, from where they can add or remove the components which act as the guard rails on the level above the platform. It is designed to ensure that the operator does not stand on an unguarded platform.

4.2.2. Stability

To maintain tower stability you must make sure:

- The tower is resting on firm, level ground with the locked castors or base plates properly supported. Never use bricks or building blocks to take the weight of any part of the tower; stabilisers or outriggers are installed when required by the instruction manual; and
- That a tower is never erected to a height above that recommended by the manufacturer.

4.2.3. Precautions and inspection

Tower scaffolds must comply with the standard of required for all types of scaffolds, e.g. double guardrails, toeboards, bracing and access ladder. When the tower is purchased or hired it should arrive with all the necessary components to prevent falls and ensure stability.

Towers rely on all parts being in place to ensure adequate strength. They can collapse if sections are left out. All towers must be inspected following assembly and then at suitable regular intervals by a competent person. In addition, if the tower is used for construction work and a person could fall 2 metres or more from the working platform, then it must be inspected following assembly and then every 7 days. Stop work if the inspection shows it is not safe to continue, and put right any faults. The result of an inspection should be recorded and kept until the next inspection is recorded.

4.2.4. Using and moving

Make sure everyone involved is aware of, and follows, these simple rules:

Using

Never use a tower:

- In strong winds;
- As a support for ladders, trestles or other access equipment;
- With broken or missing parts; or
- With incompatible components.

Moving

When moving a tower you should **always**:

- Reduce the height to a maximum of 4m;
- Check that there are no power lines or other obstructions overhead;
- Check that the ground is firm, level and free from potholes; and
- Push or pull using manual effort from the base only.

Never move a tower while people or materials are on the tower, or in windy conditions.

Further information can be found Work at height, Access equipment, Information, Tool (WAIT) e-Learning tool (<http://www.hse.gov.uk/work-at-height/wait/index.htm> [5])

5. Risk Assessment Guidance

In the event that work at height cannot be avoided, a suitable and sufficient risk assessment MUST be undertaken. The outcomes of this risk assessment must provide the evidence for the development of a safe system of work, which includes the provision of emergency procedures. If the risks are significant, the assessment and the method statement (safe system of work) must be written down.

5.1. Assessing the Risks

When assessing risk, all available information about the work to be undertaken needs to be available and consulted. All foreseeable risks must be considered in advance and the following may need to be considered.

- Working on roofs without adequate fixed protection
- Working on roofs without unprotected roof lights
- Working from a ladder
- Working from a scaffold or scaffold tower

5.2. Areas for consideration in the assessment should include:

- The work being undertaken
- Frequency of access
- Duration of the work
- Location in relation to the presence of hazards e.g. overhead services etc.
- The working environment with regard to weather and lighting
- Safe means of access and egress
- Lone working
- Condition and stability of work surfaces such as fragile materials, slippery surfaces etc.
- Physical capabilities of the workers such as pregnancy or vertigo sufferers
- Falling objects
- Impact on adjacent work activities, or passage of staff adjacent to work at height
- Prevention of access by unauthorised persons

The written risk assessment must be completed on the Non-Laboratory Risk Assessment form available on LSHTM intranet ([Risk Assessment Form](#))

5.3. Developing a Method Statement

In the development of a written method statement, the information gathered during the risk assessment will be used to develop a document that will give information and instruction to the employee who are carrying out the work. It will also detail, where necessary:

- Collective fall protection
- Personal fall arrest
- Requirements for inspection
- The means of preventing unauthorised access to the area underneath the work being carried out
- Any supervision that may be necessary
- Any weather conditions that workers may be exposed to e.g. ice roofs, slippery surfaces in the rain, wind etc.
- Any emergency or rescue conditions e.g. it is not acceptable just to rely on the emergency services, this needs to be covered in the risk assessment and planned prior to the work being carried out

Collective measures such as guard rails etc. should be deployed in the first instance rather than personal protection. Fall arrest/restraint equipment should be the last in the hierarchy of control as Personal Protective Equipment (PPE).

5.4. Rescue Plan

Any method statement must include a rescue that considers how an injured worker could be removed safely. The speed of response is an essential consideration, especially when a safety harness is being used as a control measure. Persons suspended in a harness can become unresponsive in as little as five minutes and may be fatally injured in 15 minutes if help is not immediately available.

6. Training Requirements

All members of Estates and Facilities staff who are required or permitted to use ladders or mobile scaffold will be required to undertake the following training:

Training requirement	Staff required to undertake training	Provider	Requalification
Induction	All	In house	None
Using Ladders Safely	All E&F staff who have to use ladders	External	As determined by provider
Mobile Scaffold	All E&F staff who have to use mobile scaffold equipment	External	As determined by provider
First Aid	Staff Identified	External	3 years from initial qualification

7. Ladder Audit Checklist

<i>Number</i>	<i>Item</i>	<i>Comments</i>	<i>Actions to Take</i>
1	Are the registers of roofs complete and up to date?		
2	Have risk assessments been undertaken for significant activities that require work at height?		
3	Have the risk assessments been recorded?		
4	Have method statements been developed for work at height based on risk assessment?		
5	Do method statements include emergency and appropriate rescue plans?		
6	Has all work on roofs been conducted on a permit to work?		
7	Are permits to work signed off correctly by a trained/competent roof permit to work issuer?		
8	Do method statements for work on roofs adequately address all the hazards and use of PPE?		
9	Has an audit of all roof areas been carried out in the past 5 years?		
10	Are there suitable barriers, hand rails or covers provided on the roof areas?		
11	Is there evidence that harnesses or fall arrest equipment is in use where appropriate?		
12	Have all employees who may work at height been adequately trained?		
13	Has safe access and egress been provided where required?		

8. References

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- [1] HSE, "Workplace injury - all industries," [Online]. Available: <http://www.hse.gov.uk/statistics/causinj/index.htm> .
- [2] HSE, "Provision and Use of Work Equipment," [Online]. Available: <http://www.hse.gov.uk/work-equipment-machinery/puwer.htm> .
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