





GUIDANCE NOTE

Working at Height

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INTRODUCTION

It's not always immediately obvious that the area you are working in is considered to be working from height. But falls at height are one of the biggest causes of workplace fatalities and major injuries across the construction industry.

Working at height means work in any place where, if precautions were not taken, a person could fall a distance liable to cause personal injury. This includes routes to access the work site.

You are working at height if you:



Work above ground/floor level.

Could fall from an edge or through an opening or fragile surface.



Could fall from ground level into an opening or a hole in the ground.



Common reasons for accidents in construction are falls from ladders and fragile roofs, which may not obviously apply to restoration sites, but there are still many situations where restoration volunteers will be working at height, such as working on a lock chamber or bridge or near excavations or other openings in the ground. Sometimes it is obvious when you are working at height on a restoration site but often it may not be.

Here are examples of where you would expect to be working at height:

- 1 Working at the top of an empty lock chamber.
- **2**) Working on top of a bridge.
- **3** Working on a towpath above to a dry canal bed.
- 4 Working alongside an open excavation such as by-wash trench or trench for a back pumping pipe.
- **5** Anything involving ladders, scaffolding, trestles or Mobile Elevating Work Platforms.
- (**6**) Climbing trees as part of tree felling.
- **7** Standing on the flat bed of a delivery lorry.

A partially restored lock has the obvious drop from the coping into the chamber and from the top cill into the chamber, but a partially rebuilt lockside area may have many changes in level and openings that are potential working at height areas. Obscured hazards could also cause working at height risk near locks, such as an untidy site or an unfenced opening near the cill.

> An accident occurred when work was being carried out on a lockside and a volunteer moved the wrong way when a large stone was being lifted. He slipped down a slope and into a ground culvert that was being rebuilt.

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During the rebuilding of a towpath wall, the work takes place from the bed of the canal, but the bricks may be stored on the towpath, with the potential to fall on those working on the wall. When the wall is rebuilt and the towpath is reinstated, there is a potential drop into the dry bed of the canal.

As your restoration work progresses your working at height hazards are likely to change. You will need to manage this change dynamically as the site evolves.

Archaeological work to uncover canal heritage can create working at height hazards as a result of open excavations, even if these are only shallow.





WORK AT HEIGHT REGULATIONS (2005)

Work at Height Regulations (WAHR) require that restoration groups and site leaders assess the risk from working at height and go on to organise and plan the work so it is carried out safely.

Restoration groups and site leaders must:

- **1**) Assess the risks of working at height.
- **2** Decide on the control measures required to make it safe.
- **3** Record the significant findings of the assessment.
- 4 Review the assessment and revise as necessary when circumstances change or the control measures are found not to work.



Do not overcomplicate the process. On most restoration projects working at height risks will be well known and the necessary control measures already in place or easy to apply.



Take a sensible approach when considering precautions for working at height. In some low risk situations, no additional precautions may be needed.

A risk assessment and method statement (RAMS) is a useful way of recording the hazards involved in specific working at height tasks and communicating the risk and precautions required to all those involved in the work. The method statement need be no longer than necessary to achieve these objectives effectively. The method statement should be clear and be illustrated by diagrams where necessary.



Equipment needed for safe working should be clearly identified and available before work starts. Volunteers should consult their site leader if the work method is not practical and needs to be changed.

When planning working at height WAHR requires that you must consider:

- 1 Weather conditions that could compromise volunteer safety.
- 2 That the place where working at height is to be undertaken is safe and should be checked every time before use.
- **3** Stopping materials or objects from falling or if not reasonably practicable, taking suitable and sufficient measures to make sure no one can be injured, such as exclusion zones or mesh on guard fences.
- 4 Storing materials safely so they won't cause injury if they are disturbed or collapse.
- **5** Planning for emergencies and rescue and making sure volunteers know the emergency procedures. Don't just rely on the emergency services for rescue.

Designers have duties under the Construction (Design and Management) Regulations (2015) to consider the need to work at height for the lifespan of a building or structure to clean, maintain and repair it. They should design out the need to work at height if possible.

When choosing equipment you must select the most suitable equipment appropriate for the task, taking into account working conditions, the nature and frequency of the work and the risks to safety of everyone where the equipment will be used.

The equipment, such as scaffolding, should be assembled to the manufacturers instructions and in keeping with industry guidelines. It should be inspected before use by a competent person who has the skills, experience and knowledge of the design and use of this equipment and the inspection recorded.

In addition, scaffolding must be inspected weekly and after any alterations have been made or when it has been standing unused for a while. For example, after adverse weather, accidental damage or changes to the installation.

Any equipment exposed to conditions which may cause it to deteriorate should be inspected at suitable intervals appropriate to the environment and use. An inspection is required every time something happens that may affect the safety and stability of the equipment.

Where a mobile elevating working platform (MEWP) is used a new inspection does not need to be carried each time it is moved. Any MEWP that has come from a rental company should be accompanied with an indication when the last thorough inspection was carried out. When working from a MEWP a safety harness should be worn, except when working over water.





CONTROLLING THE RISKS OF WORKING AT HEIGHT

Before starting to work at height, check that there are appropriate safety measures in place. Bear in mind that you may come into a situation where you are working at height in the course of a task, such as when a trench is being dug.

As with any hazard, the first consideration for reducing the risk should always be whether it can be eliminated altogether. This can be done through careful planning and preparation before you start work.

One of the most effective ways of eliminating the need to work at height is to phase the work so that an exposed edge does not appear. For example when a lock chamber is being demolished, the ground at the back of the lock is excavated leaving 1.5m of wall exposed. Working from outside the lock chamber, the wall is broken down by 0.5m and the excavation and break down repeated until the wall is completely demolished. Re-building would be carried out in a similar manner, with a scaffolding used inside the lock chamber.

This however is not always possible and the risk assessment should identify the controls needed for each stage of the work and these must be in place before section of work starts.

> Collective systems should always be considered as preferable to individual personal protective equipment (PPE) such as a full body harness.

Some examples of collective systems are:

- 1 A simple fence erected behind the coping at the top of the lock chamber.
- 2 Scaffold system and working platforms. Guard rails must always be provided as well as toe-boards sufficient enough to stop people and materials falling. Always ensure that scaffolds and working platforms are designed, erected and checked by trained and competent personnel. No one should make alterations unless trained to do so.
- **3** A solid cover over an opening in the ground. It must have sufficient support at all the edges and must be prevented from sliding away from the opening.
- **4** Bridging a trench or gap in a structure. The supports must be set back from the edge and a handrail provided.
- **5** Fall arrest bags can be used to minimise the distance of a fall. They have limitations, such as the maximum fall distance. Inflatable bags should not be over-inflated or inflated where they would put pressure on a confining structure. There must be a safe means of escape from the bag.

DOS & DON'TS OF WORKING AT HEIGHT

Do:

- As much work as possible from ground level where there isn't an exposed edge.
- Ensure workers can get safely to and from where they work at height.
- Ensure equipment is suitable, stable and strong enough for the job, maintained and checked regularly.
- Take precautions when working on or near fragile surfaces.
- Provide protection from falling objects.
- Provide edge protection for exposed edges.
- Consider emergency evacuation and rescue procedures.
- Minimise the distance and consequences of a fall, by using the right type of equipment where the risk cannot be eliminated. This may be the use of fall arrest bags, but be aware of their limitations.

Don't:

Overload ladders – consider the equipment or materials workers are carrying before working at height. Check the pictogram or label on the ladder for information.

Overload work platforms – for scaffolding ensure the platform can carry the required materials.

Overreach on ladders or stepladders.

- Rest a ladder against weak upper surfaces, eg glazing or plastic gutters.
- Use ladders or stepladders for strenuous or heavy tasks. Only use them for light work of short duration (a maximum of 30 minutes at a time).
- Let anyone who is not competent (who doesn't have the skills, knowledge and experience to do the job) work at height.

Volunteers have a general duty to take care of themselves and others who may be affected by their actions and to cooperate and use equipment provided for their safety.

Volunteers should:

- **1** Report any safety hazard they identify.
- 2 Use the equipment and safety devices supplied them properly, in accordance with any training and instructions.

EXAMPLES OF BAD PRACTICE



A make-shift work platform supported on old tyres, unstable, no edge protection or means of access.



A partly restored lock with openings and unprotected edges.



Installing copings to a finished lock chamber, no edge protection.



Working in a lock chamber on a platform with inadequate access or edge protection.



Breaking out a concrete base to a scaffold tube.



Work to a dewatered lock chamber without edge protection.

WORK AT HEIGHT FLOWCHART



USEFUL RESOURCES:

Working at Height Regulations

Assessing Working at Height

HSE Working at Height

Sign up to read the full Practical Restoration Handbook and supporting resources here: waterways.org.uk/practicalrestorationhandbook



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