

GE 707 has been refreshed for 2012. The content provides easy to understand health, safety and environment information and practical guidance for operatives.

It has been written to assist operatives and specialists sitting the CITB-ConstructionSkills' *health, safety and environment test*.

The content follows the new test structure, which includes new chapters on respiratory risks and environment, as well as individual specialist chapters.

GE 707 is also the official publication supporting the CITB-ConstructionSkills' Site Safety Plus one day health and safety awareness course.

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Safe start
Health, safety and environment handbook

GE 707/12



CITB-ConstructionSkills

Safe start

Health, safety and environment handbook



GE 707/12

Official
Publication





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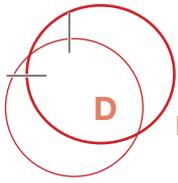
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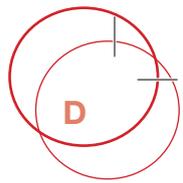
High risk activities

What your site and employer should do for you

1. Ensure work at height is planned, so proper precautions are put in place.
2. Provide systems to:
 - prevent you falling (such as mobile tower)
 - collect you or stop you if you fall (such as harness).
3. Provide the correct work at height equipment and ensure it is inspected and maintained.
4. Give you information and instruction so you can work at height safely.

What you should do for your site and employer

1. Follow the agreed safe system of work.
2. Use only equipment and methods you have been trained in.
3. Not misuse any equipment.
4. Not take risks or short cuts.
5. Stop and seek advice if anything changes or seems unsafe.



What's the problem?

- ✓ Falls continue to be the biggest cause of fatal injury in Britain's workplaces.
- ✓ On average there are 50 fatalities a year in construction – around half are falls from height.
- ✓ 60% of all work at height injuries are from falls below head height.
- ✓ Most falls were caused by not using the right piece of equipment for the job.

Many falls were from ladders, stepladders or improvised platforms, which offer little or no fall protection.

Falls through fragile roofs, skylights and openings still happen far too frequently.

For all work at height, measures must be taken to prevent the risk of any fall that could cause injury as there is no distinction made between low and high falls.

Work at height is work at **any** height where a person could fall and be injured. It also includes instances (such as working next to an open excavation) because of the risk of falling in.

What your employer should do

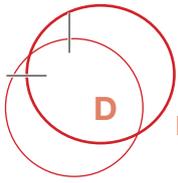
- ✓ Identify jobs that involve work at height.
- ✓ Plan the work to ensure that appropriate precautions are in place.
- ✓ Select and use the right equipment.
- ✓ Make sure that people working at height are competent.
- ✓ Communicate risk control measures to the workforce.
- ✓ Ensure the equipment is regularly inspected and maintained.

Planning the work

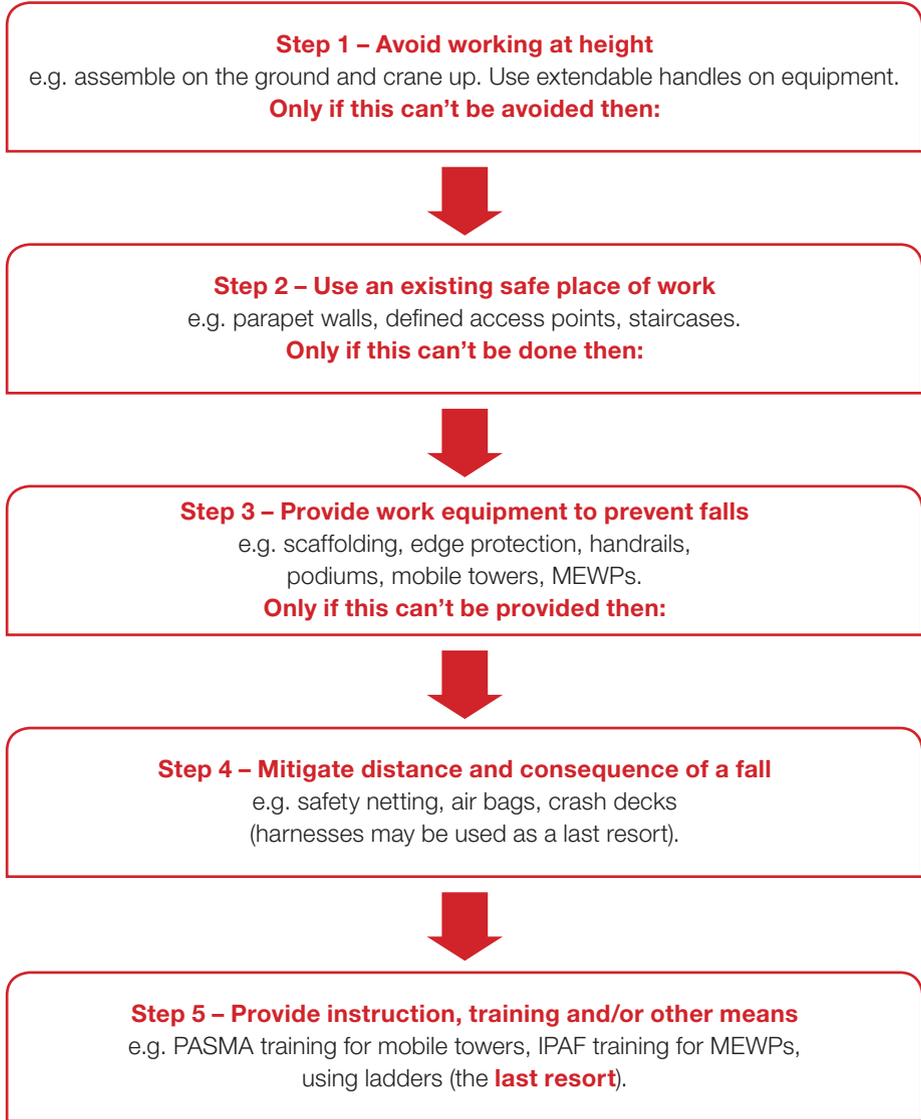
- ✓ A risk assessment must be undertaken for all work at height.
- ✓ It should take into account things such as:
 - the complexity of the work being done
 - who is doing the work and for how long
 - weather conditions and surface conditions (such as wet sloping roof)
 - how to raise and store materials and equipment.

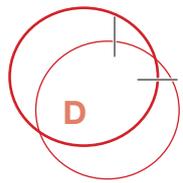
When anyone is planning work at height they must follow the hierarchy of control measures.

You should also follow the hierarchy when selecting any access equipment.



Hierarchy for working at height





Working at height

- ✓ Safe access (such as a tower staircase or tied ladder) must be provided.
- ✓ Edge protection (such as temporary guard-rails) must be put in place.
- ✓ Barriers should be set back from the edge.
- ✓ Surfaces can become very slippery when wet or frosty.
- ✓ You should not work on any structure where there is no protection from falls.
- ✓ If you are working on a leading edge then measures (such as safety nets) should be installed. Harnesses may only be used as a last resort.

Fragile roofs

Sadly there are still many fatal and serious injuries from people falling through fragile roofs and roof lights.

Asbestos cement sheets are common, but fragile roof lights, which look like the more secure surrounding roof structure over time, are not so obvious.

Other materials include glass, plastics and old unstable structures.

Many people did not know parts of a roof were fragile. Others thought it would take their weight or tried to walk near the underlying supports. All ended in tragedy.

A safe system of work **must** be put in place by:

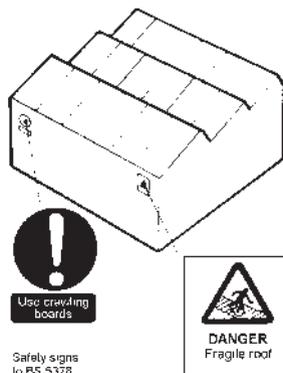
- ✓ providing a suitable access (such as a stair tower or ladder)
- ✓ installing safety netting, crash decks or airbags underneath the roof.

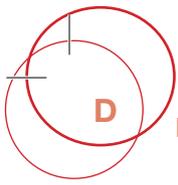
If this is not possible then:

- ✓ stagings with handrails, which are sufficient to span the underlying supports, must be provided.

If this is not possible then:

- ✓ crawling boards to spread the weight should be provided.





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Never attempt to access or cross a fragile roof light without a safe access system.

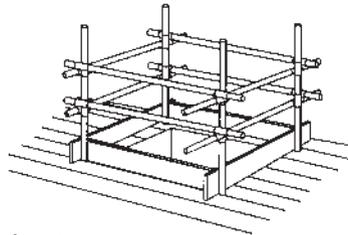
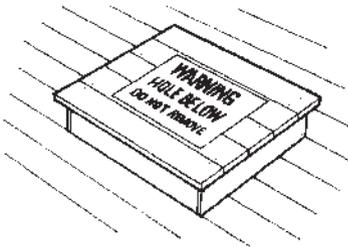
Voids and holes

Any hole or void where a person could fall any distance and hurt themselves must be protected. These include:

- floor and roof openings
- floor joists and roof trusses
- lift shaft openings
- service holes and risers
- open manholes and other voids.

Any opening must be protected with secure barriers, covers, gates or doors, which are secured in position and display appropriate warning signs.

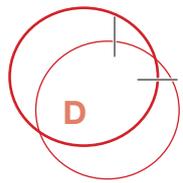
- Never remove a protective cover unless authorised to do so.
- If you think something should be covered speak to your supervisor, employer or site manager.



Preventing falls

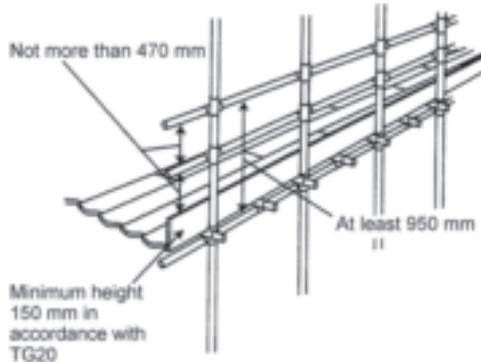
The best prevention of falls of persons should be by physical barriers and equipment.

- Methods include: Scaffolding, mobile towers, mobile elevating work platforms (MEWPs), podiums, edge protection systems.
- The minimum height of any guard-rail is 950 mm.
- Any gap on the barrier must be not more than 470 mm.
- Plastic barriers, netting or rope and pins are not suitable as edge protection to prevent persons from falling.



Netting, brick guards or solid boards should be used to prevent falls of materials.

If a guard-rail has to be moved, it must only be done with permission and only by a trained and competent person. The guard-rail must be replaced as soon as possible.



Arresting falls

- ✓ If falls can't be prevented then the risk of injury must be minimised.
- ✓ Fall arrest systems include air/bean bags, safety netting and crash decks.
- ✓ The safe system of work must contain a system for emergency rescue.

Harnesses

Harnesses should only be used if falls can't be prevented by physical barriers or minimised by using fall collection systems.

- ✓ Harnesses are there to protect a person if they fall.
- ✓ The selection of the type of harness and lanyard to be used is vital. It should take into account where it is being used, how far the wearer may fall, any obstructions they may hit and any pendulum effect.
- ✓ You must receive training before using a harness and lanyard.
- ✓ It is vital you know how to inspect a harness for damage, how to fit it properly, where to attach it and where not to attach it.

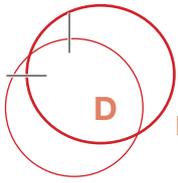


A harness could be the one thing preventing you falling to your death.

Never use a harness to work at height unless you have been trained.

There must be an effective rescue plan in place in case a person wearing a harness falls as:

- ✓ they need to be reached very quickly
- ✓ when someone is arrested and suspended in a harness their body can suffer from complications (this is known as suspension trauma)



High risk activities

- ✓ people who have fallen wearing a harness have died from suspension trauma after they have been rescued.

Types of access equipment

Mobile elevating work platforms

- ✓ Common types are scissor lifts and cherry pickers.
- ✓ You must only use these if you have been fully trained and are competent.
- ✓ If you are a passenger in a cherry picker type MEWP you must wear a full body harness and lanyard clipped to the designed attachment point in the basket.
- ✓ **Never** clip onto an adjacent structure.

Scaffolding

- ✓ Scaffolding must only be erected, altered or dismantled by trained and competent scaffolders.
- ✓ Any platform you are working on must have guard-rails and toe-boards fitted.
- ✓ Keep the scaffold working platform clean and tidy.
- ✓ MEWPs should not be used for accessing other structures.
- ✓ Brick-guards must be fitted if materials are stored above toe-board height.

Do not access scaffolding if you see this sign:

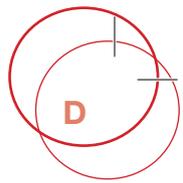


Mobile tower scaffolds

Mobile towers are safe and versatile access equipment if used correctly. Unfortunately, many towers are not erected or used correctly and are the cause of numerous accidents each year.

You must hold a PASMA or equivalent qualification to erect, alter or dismantle a mobile tower.

If you are only working on a tower, as a minimum you should receive a tool box talk on the risks and hazards associated with using towers.



It should cover common risks such as:

- ✓ locking wheel brakes
- ✓ using only the internal ladder to access the deck
- ✓ checking that guard-rails and toe-boards are fitted (these must not be removed)
- ✓ making sure that:
 - working platforms are not fitted too high so that guard-rails are too low
 - towers are not overloaded
 - the hatch is closed when working on the platform.

Podiums

Podiums have become very popular pieces of access equipment. They:

- ✓ are safe and versatile access equipment if used correctly
- ✓ can be unstable and topple over if not assembled or used correctly.

Stepladders

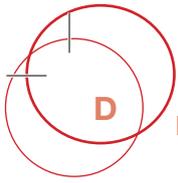
There is a wide variety of stepladders on the market. Some offer very good fall protection and others less so.

They should only be considered for light work of short duration and where the use of other, more suitable work equipment is not appropriate.

Wherever possible, platform steps should be the preferred option over traditional swing-back steps.

Stepladders should be used only when it's not possible to use other access methods.

- ✓ Always check they are in good condition before use.
- ✓ Always use on firm, level ground.
- ✓ Always make sure they are fully extended and face forward towards the steps.
- ✗ Never over reach.
- ✗ Never stand on the top four treads or top third of any stepladder unless it is designed to be used this way.



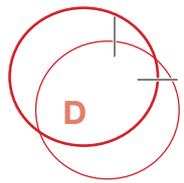
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Platform steps



Ladders

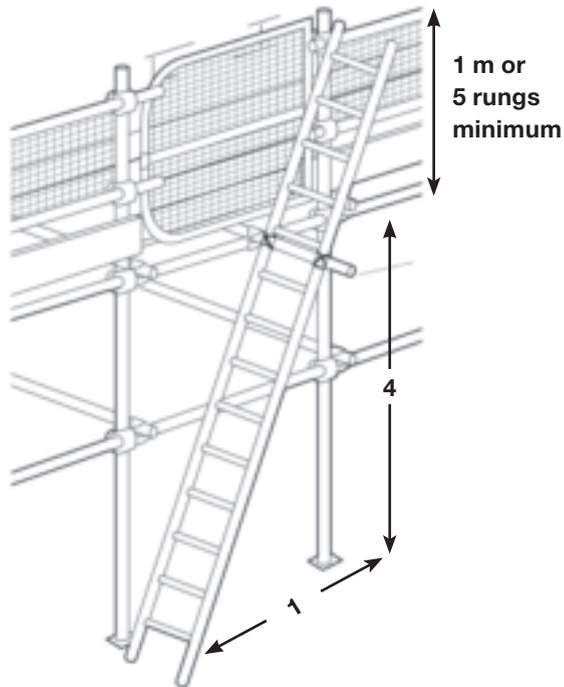
- ✓ These are the most commonly used pieces of access equipment for a wide range of tasks.
- ✓ They are also the most misused when used as a working platform.
- ✓ It is essential that those who use ladders are trained and competent to do so.
- ✓ Ladders should be your **last option**.
- ✓ They should only be considered for light work of short duration and where the use of other, more suitable work equipment is not appropriate.
- ✓ Always check a ladder before use.
- ✓ A painted ladder can hide defects or damaged parts.
- ✓ Report any defects to your supervisor.

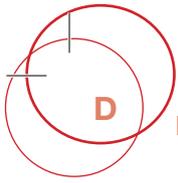


If ladders are used, they should:

- ✓ be of the correct type – Class 1 industrial or EN131
- ✓ be in good condition
- ✓ be placed on firm and level ground
- ✓ be properly secured (tied at the top)
- ✓ use outriggers if available
- ✓ be set at the correct length and angle for the job – **75°** or a ratio of **1:4 (one out to four up)**
- ✓ extend one metre or five rungs past the stepping off point.

You should have three points of contact at all times.





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