

The Glasgow School of Art

GSA Guide to Safe Use of Ladders and Low Level Access Equipment

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Policy Control

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GSA Guide to Safe use of Ladders and Low Level Access Equipment

Introduction

This note is intended to help staff and students decide how best to achieve what they want to do without injury to themselves, others, or damage to their work or our buildings and equipment. This document should be read in conjunction with GSA's Health and Safety Risk Assessment Procedure.

Please consider the following when planning any work at height inside studios, galleries or similar spaces:

1. Avoid working at height

Before working at height you must follow these simple steps:

- avoid work at height where it is reasonably practicable to do so
- where work at height cannot be easily avoided, prevent falls using either an existing place of work that is already safe or the right type of equipment
- minimise the distance and consequences of a fall, by using the right type of equipment where the risk cannot be eliminated

Finding a way of completing a planned task without the need to work at height is the ideal solution. Through planning and design it is often possible to avoid or greatly reduce the time spent working at height.

Examples might include:

- creating an artwork flat on the ground and then lifting the finished work into its vertical position on completion (e.g large sculptures)
- constructing artworks in sections at ground level, so limiting the work at height to that of assembly work alone
- using floor space or low tables to display work instead of hanging on a wall

If you cannot carry out the task without working at height it is important that you have assessed the task and selected the correct equipment.

2. Selecting the right equipment

If you anticipate working at height to hang work, place exhibits, etc. careful thought should be given to selecting appropriate work equipment. Any work at height should be carefully considered from the earliest stage of planning the task and this should help you complete the task safely and successfully.

Just because you only plan to work off a surface for a short period does not mean you can use inappropriate equipment. Chairs and tables are NOT appropriate equipment for work at height!

The HSE has produced a helpful online selection tool which aids the decision making process when identifying appropriate equipment for work at height. You simply enter the parameters of the planned work and the appropriate equipment options are highlighted along with links to further information. It can be found at: <http://www.hse.gov.uk/work-at-height/wait/wait-tool.htm>

When selecting equipment for work at height, the factors to consider include;

- the height the activity will take place at
- the actual activity – does it involve lifting, moving, the use of tools or equipment
- how long you intent to work at height for
- the number of people at risk of a fall
- the surface conditions
- other hazards in the work area such as electrical components including cabling
- other fall risks such as balconies or windows etc.

3. Types of Equipment

Below are some examples of equipment suitable for accessing low levels which could be used within GSA premises:

3.1 Step- Stool

Step Stools are often used in library, office and retail environments where access to low levels are needed quickly and for very short periods of time. i.e. to place items on a shelf within reach.

Cost: approximately £20 to buy.



3.2 Hop Up Platform

Low-level hop up type platforms are intended for low-level access requirements, often by for plastering or decorating trades. Hop up platforms are typically aluminum or wood, with a small platform providing low height access assistance.

Cost: approximately £30 to buy.



3.3 Podium Steps

Podium Steps are defined by PASMA as a “Low-level work platform with one working platform with side protection for use by one person with a maximum working platform height of less than 2.5 “

For more information on this please see the following:
<http://www.pasma.co.uk/about/pas-250-faqs/>

Podiums provide low-level height access offering a firm platform with adjustable height, and guardrail. They can be tubular self-erecting or folded prior to erection, so as to pass through standard doors and corridors.

The key message is to put tools and materials onto a podium at ground level where possible and always close and lock the gate before starting work.

Possible hire cost: in the region of £60 per week.



3.4 Step Ladder

A stepladder is a self-supporting ladder providing swift access to low risk and short duration work. Generally, no more than 30 minutes.

A key message is to align steps facing the activity and not to work off the top two steps where the step forms the very top of the stepladder, unless there is a suitable handrail available on the stepladder.

Possible hire costs: in the region of £30 per week.



3.5 Leaning Ladders

Ladders are classified for type of use:

- EN 131 is for trade and light industrial use. Generally work within GSA would require this standard.
- BS2037/BS1129 Class 1 for heavy duty and industrial use
- BS2037/BS1129 Class 3 is for domestic use.

Manufacturers must always supply information about the specification of their ladders and provide information such as maximum working load.

A key message is that ladders should be used for low risk, short duration work.

Staff should only use a leaning ladder or stability device if they are competent. Where possible, the use of appropriate stability devices should be included. Users should be trained and instructed to use the equipment safely.

Possible hire cost: in the region of £70 per week.



4. Before using any equipment

Before starting a task, you should always carry out a 'pre-use' check to spot any obvious visual defects to make sure any equipment is safe to use.

A pre-use check should be carried out:

- by the user
- at the beginning of the working day
- after something has changed, eg a ladder has been dropped or moved from a dirty area to a clean area (check the state or condition of the feet)

Before using a step ladder or leaning ladder you should:

- **Check the stiles** – make sure they are not bent or damaged, as the ladder could buckle or collapse.
- **Check the feet** – if they are missing, worn or damaged the ladder could slip. Also check ladder feet when moving from soft/dirty ground (e.g. dug soil, loose sand/ stone, a dirty workshop) to a smooth, solid surface (e.g. paving slabs), to make sure the foot material and not the dirt (e.g. soil, chippings or embedded stones) is making contact with the ground.
- **Check the rungs** – if they are bent, worn, missing or loose the ladder could fail.
- **Check any locking mechanisms** – if they are bent or the fixings are worn or damaged the ladder could collapse. Ensure any locking bars are engaged.
- **Check the stepladder platform** – if it is split or buckled the ladder could become unstable or collapse.
- **Check the steps or treads on stepladders** – if they are contaminated they could be slippery; if the fixings are loose on steps, they could collapse.

5. Using a Step-stool

Before starting a task, you should always carry out a 'pre-use' check to spot any obvious visual defects to make sure that any equipment is safe to use.

A Step-stool is a simple piece of equipment which is easily used. However you should also read any manufacturer's instructions that came with the equipment to become familiar with its operation and if you are not sure, then you should seek advice from your line manager and/or tutor/programme leader.

You should to move the step into a new position rather than risk overreaching for access to an item, and subsequently losing your balance. Don't carry items in both hands when mounting.

6. Using a Hop Up platform

A hop up platform is very simple to use, however you should also read any manufacturer's instructions that came with the equipment to become familiar with its operation and if you are not sure, then you should seek advice from your line manager and/or tutor/programme leader.

A hop up platform should not be used if the rubber on the bottom is damaged as this increases the risk that the equipment could move when in use. If the rubber is damaged to the extent where it might compromise this facility then it should be removed. They are designed not to move when you apply weight to it. You should also ensure that you wear shoes that will not slip on the stools surfaces or you avoid clothes that you could catch your heel on when mounting the step.

You should to move the step into a new position rather than risk overreaching for access to an item, and subsequently losing your balance. Don't carry items in both hands when mounting.

7. Using Podium Steps

Such platforms may be appropriate for those hanging work for display, or where carrying out tasks such as painting or sculpture, where there is a need for high levels of focus and concentration which may present risks whilst working on a traditional step ladder.

Equipment of this type is available in wide range of styles and configurations, both for purchase or hire. Where there is a risk of damage to adjacent surfaces, bumpers can be fitted.

The key safety considerations with such equipment are:

- Only to be used following a suitable risk assessment, and discussions with line manager or tutor/programme leader
- Only to be erected by trained persons (if separate components are involved)
- Observe manufacturer's instructions
- Never move the platform whilst persons are still on it
- Ensure ground conditions are suitable – flat, level and firm
- Lock castor wheels before use (if fitted)
- Ensure all components are in place and remain in place throughout use.
- Avoid overloading the platform with tools or materials
- Make sure the gate (if fitted) is closed whilst in use

8. Using a Step Ladder

The law says that ladders can be used for work at height when a risk assessment has shown that using equipment offering a higher level of fall protection is not justified because of the low risk and short duration of use; or there are existing workplace features which cannot be altered.

Short duration is not the deciding factor in establishing whether an activity is acceptable or not – you should have first considered the risk. As a guide, if your task would require staying up a leaning ladder or stepladder for more than 30 minutes at a time, it is recommended that you consider alternative equipment.

You should only use ladders in situations where they can be used safely, e.g. where the ladder will be level and stable, and where it's reasonably practicable to do so, the ladder can be secured.

If you do identify stepladders as the most appropriate equipment, they should be used correctly:

- only use a step ladder in good condition, and on flat level ground
- do not work above the 3rd step from the top (leave 3 clear steps)
- maintain 3 points of contact
- work 'head on' rather than at right angles
- do not over reach sideways
- if you don't feel comfortable / safe / steady - come down immediately
- be aware of other risks –ground conditions, overhead lighting etc
- never straddle the top of a stepladder

9. Using Leaning Ladders

When doing a "pre- use check" on a leaning ladder it is important to look for:

- twisted, bent or dented stiles
- cracked, worn, bent or loose rungs
- missing or damaged tie rods
- cracked or damaged welded joints, loose rivets or damaged stays
- inspect ladder stability devices and other accessories in accordance with the manufacturer's instructions

When using a leaning ladder to carry out a task you should follow the steps below:

- only carry light materials and tools – read the manufacturers' labels on the ladder and assess the risks
- don't overreach – make sure your belt buckle (navel) stays within the stiles
- make sure it is long enough or high enough for the task
- don't overload it – consider workers' weight and the equipment or materials they are carrying before working at height.
- make sure the ladder angle is at 75° – you should use the 1 in 4 rule (ie 1 unit out for every 4 units up)
- always grip the ladder and face the ladder rungs while climbing or descending – don't slide down the stiles
- don't try to move or extend ladders while standing on the rungs
- don't work off the top three rungs, and try to make sure the ladder extends at least 1 m (three rungs) above where you are working
- don't stand ladders on moveable objects, such as pallets, bricks, lift trucks, tower scaffolds, excavator buckets, vans, or mobile elevating work platforms
- avoid holding items when climbing (consider using a tool belt)
- don't work within 6 m horizontally of any overhead power line, unless it has been made dead or it is protected with insulation. Use a non-conductive ladder (eg fibreglass or timber) for any electrical work
- maintain three points of contact when climbing (this means a hand and two feet) and wherever possible at the work position
- where you cannot maintain a handhold, other than for a brief period (eg to hold a nail while starting to knock it in, starting a screw etc), you will need to take other measures to prevent a fall or reduce the consequences if one happened
- for a leaning ladder, you should secure it (eg by tying the ladder to prevent it from slipping either outwards or sideways) and have a strong upper resting point, ie do not rest a ladder against weak upper surfaces
- wherever possible, use an effective stability device

10. Storing and Maintaining Equipment

Any equipment should be stored after use appropriately to ensure that it does not become damaged.

All types of ladders should be stored horizontally on racks with an adequate number of support points and should not be stored near heat sources or in damp conditions or in the sunlight or in any other condition that may damage the ladder.

11. Unsuitable Equipment

It is important that, any non GSA procured equipment are removed from site, disposed of or secured out of use until they can be removed.

Where students or staff bring in old ladders it should be made clear to them that these are not appropriate for work at height, and if they are to be used for their intended function at any time (for example during a performance, or integrated into a larger structure), an assessment of their strength and condition should be made in conjunction with a member of staff prior to their use.

12. Further Reading

Here are some HSE documents which may also give further guidance:

- “Using leaning ladders safely” <http://www.hse.gov.uk/work-at-height/leaning-ladders.htm>
- “Using stepladders safely” : <http://www.hse.gov.uk/work-at-height/stepladders.htm>
- “Working at height - A brief guide” : <http://www.hse.gov.uk/pubns/indg401.pdf>
- “Safe use of ladders and stepladders - A brief guide”:
<http://www.hse.gov.uk/pubns/indg455.pdf>

For more information on Risk Assessment you should refer to the GSA Health and Safety Risk Assessment Procedure.