Guidance on the Use of Stepladders

Stepladders

Stepladders are commonly used by both the Estates and Buildings Department and Academic Units as a means of access to work areas and to work from, as they are freestanding, relatively compact and easy to move from one area to another. However, they should be used with care as they are not designed to take any degree of side loading and are relatively easily overturned. The design of the ladder and the construction medium should also be chosen with care, as all types of ladder are not suitable for all types of jobs.

Most stepladder accidents are the result of human error, usually from poor set up of the ladder or inappropriate work methods, very few accidents result from the stepladders collapsing.

Suitability of stepladder

Whilst the requirements of the Work at Height Regulations 2005 do not ban the use of stepladders as a means of access, or as equipment to work from, and whilst the use of steps may be justified on a practical basis, you must be able you show that you have considered the suitability of safer alternatives. You should keep an open mind about practicable and suitable alternatives to stepladders during any risk assessment that you undertake, or Safe System of Work (SSW) that you compile. If you do use stepladders be clear why you have chosen this method, as you may have to justify the decision at a later date, especially if there is an injury accident.

Stepladders are only suitable for access and work of an uncomplicated nature, that can be carried out easily from the ladder and that is of short time duration. If this is not the case then a stepladder is not suitable and consideration must be given to the use of an access ladder, scaffolding, tower scaffold systems, Mobile Elevating Work Platforms (MEWP), etc.

Planning the use of a stepladder

- Ensure that a stepladder is the best choice of access equipment
- Undertake a risk assessment, or refer to the requirements of the SSW evolved from a risk assessment already in place.

If the assessment already in place is a generic assessment make sure that you also undertake a site specific risk assessment to ensure that there are no local hazards that would materially and detrimentally affect the outcome of the generic assessment and hence the SSW (e.g. overhead powerlines).

Points to consider include:

a. Is the task of short duration?
b. Can the job be easily accessed from a stepladder?
c. Is there sufficient space to erect the stepladder properly?
d. Is the ground that the stepladder is to be positioned on level, firm and stable?
e. Are measures required to protect other people (e.g. barriers, second person to act as guide/look out, etc.)?
f. Have the person(s) carrying out the work received adequate information, instruction or training to enable them to carry out the work safely?
g. Are the person(s) carrying out the work free from any health effects that may adversely affect their safety whilst working from ladders (e.g. vertigo, fear of heights, etc.)?
h. Has the correct type and size of stepladder been selected for the job?

Some stepladders may be too short for high work and some, just as hazardous, too long for lower work. You must be able to work comfortably without over reaching up, down or sideways. Also, has the right class of stepladder been selected for the work type and load?

Types of stepladders

All Stepladders should meet the requirements of the appropriate British or European standards.

- BS 1129:1990 (British) applies to wooden ladders and stepladders.
- BS 2037:1990 (British) applies to metal ladders and stepladders.
- BS EN 131:1993 (European) applies to both metal and wooden ladders and stepladders.
- BS 7377: 1994 (British) applies to stepstools

In addition to the standards that relate to the material the stepladder is made from, there are three British and European standards that relate to their safe working loads:

- Class1 (Industrial) - Maximum static vertical load 175 kg (27.5 stone).
- Class 3 (Domestic) - Maximum static vertical load 125 kg (19.5 stone).
- BS EN 131 - Maximum static vertical load 150 kg (23.5 stone). (Formerly Class 2, Light Trade)

Always check for the relevant standard when buying, or using stepladders. If it is not marked on the stepladder, and you are in doubt about compliance check the details in the manufacturer's guidance, check with your supervisor or line manager, or contact the manufacturer or supplier to ensure that the stepladder has been manufactured to the required British or European standard.

Metal ladders must never be used for work on electrical equipment, or for work near to powerlines. Wooden or carbon fibre ladders are the preferred option, but wooden ladders must be dry.

Visual Checks

Always visually inspect a stepladder before it is used.

- Check for damage to the stiles (the outside uprights), steps and top platform.
- Check that all the stays, hinges, or cords (used to keep the stepladder from spreading) are present, are of sufficient and equal length and are in good condition. · If fitted, check that rubber or plastic non-slip feet are not missing.
- Never use a ladder that has been painted.
- Never use a stepladder that is defective. Do not attempt to repair damage. Always tag the stepladder as being unserviceable, report the damaged equipment immediately to your supervisor and ensure that the damaged equipment is stored separately from serviceable equipment.
- Make sure the steps are clean and dry. Beware of wet, greasy or icy steps. · Wear flat firm soled shoes/boots with clean soles and a good grip.

Setting up the stepladders

- Do not use, or carry metal stepladders, or wooden ladders when wet, beneath low power lines.
- Always follow the manufacturer's instructions.
- Check that the stepladder is fully open and locked into its correct position. (this will normally be with the legs positioned as far apart as the retaining hinges or cords will allow.
- Never use stepladders in the folded/closed position.
- Never use stepladders outside in strong winds.
- Check that there are no overhead hazards near where you are going to work, e.g. overhead electric lines.
- Ensure the stepladder is positioned on a firm and level base. If you are working on soft ground, place the stepladder on a large flat board to provide a suitable stable base.
- Always position at right angles to the work you are doing, i.e. when you climb up the stepladder you naturally face the item you are going to work on. Never work sideways on a stepladder as any force you apply to the work item may be transferred through you body and cause the ladder to topple away from the wall/work item.
- Stepladders are designed for one-person use. Never have more than one person on the stepladder at any one time.
- If stepladders are to be used in front of a doorway, the doors should be securely wedged open, or locked shut and the blind side signed with a warning of persons working behind it. (N.B. Wedges must be removed from Fire Doors when the immediate work area is left unattended for any period of time.)

Working on the stepladder

- Always face the stepladder and use both hands when climbing up and down the steps.
- If you need to carry tools up the steps use a shoulder bag, tool belt, etc. or, if a short ladder, get a colleague to hand the tools to you
- If practicable hold the stepladder with one hand while you work, or get a colleague to steady the stepladder.
- Always keep both feet on the steps whilst working. Never have one foot on the stepladder and the other on something else (e.g. wall, filing cabinet, ledge, etc.).
- Do not leave tools on steps where you could knock them off the ladder, or trip over them.
- Never work from the top step of a stepladder, unless it has been specifically designed for this purpose with a work platform (always check the manufacturers guidance). As a general rule, keep your knees below the top step of the platform.
- Never work sideways on a stepladder as any force you apply to the work item may be transferred through you body and cause the ladder to topple away from the wall/work item and overturn.
- Do not use the rear supports of steps for foot holds.
- Do not over-reach, especially sideways. Move the stepladder! Keep you body within the uprights while working.

Control of ownership and use of stepladders

- University owned stepladders must never be loaned to non-University employees.

Do not feel you are being unreasonable in refusing to lend ladders to others (e.g. visiting contractors) there are good legal reasons for not doing so. In the event of an accident you may be held responsible for providing defective equipment if it were proved that a defect contributed to the accident.

Storage and inspection

- Stepladders should be stored in a covered, well-ventilated place where they are protected from excessive damp, heat and the weather. · Wooden stepladders should be kept off the floor (to avoid contact with damp). Stepladders should not be stored on a position where they are hung from their stiles or rungs.
- Stepladders should be stored out of sight, under lock and key.
- As an alternative, if stepladders are stored in corridors, public areas, etc. they should be secured to a wall, or suitable actions taken to ensure they do not fall over.
- A formal system should be instituted for recording stepladder inspections.
- Visual inspections should be carried out before and after normal use. Inspections should also be carried out at other set intervals. The

frequency of these set inspections will depend on the amount a stepladder is used.
- As part of a system of inspection and maintenance, stepladders should be individually identified.
- This identification may include marking or painting small areas of the stepladder. However, painting should be kept to an absolute minimum, as painting may hide defects.
- Stepladders found to be defective should be clearly labelled or marked and withdrawn from service until repaired, or disposed of.

Legislation

Key legislation to be aware of when considering working at height includes:

- Management of Health and Safety at Work regulations 1999
- Work at Height Regulations 2005
- Provision and Use of Work Equipment Regulations 1998
- Lifting Operations and Lifting Equipment Regulations 1998
- Construction (Health, Safety and Welfare) Regulations 1996

Further information

There are two excellent articles on the practical alternatives to the use of stepladders on the Electrical Contractors Association's website at: http://www.eca.co.uk/default.asp

Other useful documents are:

- 'Safe Use of Ladders, Stepladders and Trestles', HSE Guidance Note 31 (GS), ISBN 0 7176 1143 4
- 'Health and Safety in Construction' HSG150, ISBN 0 7176 2106 5
- 'The Stepladder User's Guide', DTI, at: http://www.dti.gov.uk/homesafetynetwork/dy_stepladder.htm
- 'Construction Site Safety, Safety Notes', CITB, ISBN 1 85751 006 2
- HSE falls from height webpage at: http://www.hse.gov.uk/falls/index.htm

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