



Health & Safety

Ladders and Stepladders

<i>Version</i>	1.0
<i>Version date</i>	September 2022
<i>Review date</i> ¹	September 2025
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¹ or earlier if change in legislation or on risk assessment

Amendment Control

Version	Date	Amendments
1.0	Aug 2022	

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Policy Summary

This policy covers the requirements with regard to the safe use of ladders and stepladders on university premises. It applies to all campuses, student accommodation, workshops and all other premises owned, hired or used by the University. It provides guidance in the identification, assessment and prevention of all risk associated with the use of ladders and stepladders and should be read in conjunction with the University's 'Provision and Use of Work Equipment' (PUWER) and 'Work at Height' Policies.

All ladders will be subject to the following controls and will be managed by the appropriate School/Service.

- Before any ladder or stepladder is used, a risk assessment and safe system of work are prepared, and suitable control measures are implemented to reduce any identified risk to as low as reasonably practicable. Working from ladders and stepladders can be used, provided the use is justified, the job is of short duration, light duty and can be carried out safely or, that existing features on campus cannot be altered to allow an alternative to be used.
- The users have been consulted on the formulation of risk assessments and safe system of works and the relevant control measures being proposed.
- All personnel involved in, or who are likely to be affected by, the work receive adequate instruction and training to carry out their task.
- Work is carried out by trained and competent personnel instructed in the requirements of the risk assessment and safe system of work and the proposed control measures.
- Competent, trained personnel are appointed to supervise work areas covered by this procedure and related work activities.
- Control measures are reviewed on a periodic basis, or when an incident or significant change dictates, to evaluate their on-going suitability and effectiveness.

Similarly, contractors and sub-contractors are required to ensure that their employees are competent to carry out their activities when using such equipment. The University will periodically monitor contractor and sub-contractor competence records to ensure they are being maintained.

Any ladders and stepladders must be both suitable for the new work task and in a safe condition before use.

No visible defects and a pre-use check should be carried out before every use.

An up-to-date record should be kept of detailed visual inspections. They should be formally inspected every 6 months (if used once a week or more) or 12 months (if used less than once a week) using the Ladder Inspection Checklist (Appendix 1) and recorded on the Ladder Register (Appendix 2) by a competent person in accordance with the manufacturer's instructions.

Ladders and stepladders must be maintained and stored in accordance with the manufacturer's instructions.

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1. Scope

This Policy is to apply to all work carried out with the use of ladders and stepladders and should be read in conjunction with the University's Provision and Use of Work Equipment (PUWER) Policy. It applies to all campuses, student accommodation, workshops and all other premises owned, hired or used by the University. All work involving the use of ladders and stepladders is considered 'Work at Height' and reference must be made to our Working at Height Policy.

Similarly, contractors and sub-contractors are required to ensure that their employees are competent to carry out their activities when using such equipment. The University will periodically monitor contractor and sub-contractor competence records to ensure they are being maintained.

Note: Ladders and stepladders are not banned under Health and Safety law. In fact, they can be sensible and practical options for low risk, short-duration tasks.

2. References

- The Health and Safety at Work Act
- The Provision and Use of Work Equipment Regulations
- The Work at Height Regulations
- The Management of Health and Safety at Work Regulations
- BS 1129: 1990 Specification for Portable Timber Ladders and Stepladders and Lightweight Stagings
- BS 2037: 1994 Specification for Portable Aluminium Ladders, Steps, Trestles and Lightweight Stagings
- BS EN131-2: 1993 Ladders, specification for requirements, testing and marking
- Safe Use of Ladders – A Brief Guide – INDG 455
- HSE Website – (Work at Height Access Equipment Information Toolkit) - <http://www.hse.gov.uk/work-at-height/wait/wait-tool.html> has details on various possible solutions for choosing the right access equipment for working at height.

3. Definitions

3.1. Ladder

A portable frame of wood, plastic, metal or any other material consisting of two long parallel members (stiles) with rungs or steps fixed to them at right angles. Primary use is to provide access, may be used for light duty short duration works subject to a suitable and sufficient risk assessment.

3.2. Stepladder

A short portable ladder (made of wood, metal, fibreglass or any other material) with flat steps, not rungs, made free-standing by means of a supporting frame attached by a hinge at the ladder's top

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Revision Date: September 2022
Version: 1.0
Author: Health and Safety Office, Edinburgh Napier University

where there is usually a platform to stand on. Often known as 'steps' or 'A-frames' primary use is to provide access, may be used for light duty short duration works subject to a suitable and sufficient risk assessment.

4. Category of ladder

4.1. Industrial

- Heaviest duty, suitable for construction
- Class 1 BS2037:1994 Duty Rating 130 Kg (20.4st)
- Maximum vertical static load 175 Kg (27.5st)

4.2. Trade

- Generally used in a trade environment
- BS EN131 (previously class 2)
- Maximum permissible load 150 Kg (23.5st) subject to a risk assessment

4.3. Domestic

- Light domestic work around the home only
- Class 3 BS2037:1994 Duty Rating 125Kg (19.5st)

5. Use of ladders

Ladders can be used when a risk assessment shows that using the equipment offering a higher level of fall protection is not justified because:

- The risk is low;
- The job is lightweight and of short duration; or
- There are existing workplace features which cannot be altered.

As a guide, if the task requires staying up a ladder or stepladder for more than 30 minutes at a time, it is recommended that an alternative type of equipment should be considered.

Ladders should only be considered where the use of other, safer, work equipment is not appropriate. Safer alternatives to the use of ladders and stepladders such as tower scaffolds, podium steps, 'Zarges', 'Sherpasopic' or similar stepladders, must be considered ahead of the use of traditional ladders and stepladders.

Where contractors are used, these requirements must be outlined to prospective contractors at pre-tender and start-up meetings.

6. Risk assessment

6.1. Responsibilities

All ladders will be subject to the following controls and will be managed by the appropriate School/Service.

- Before any ladder or stepladder is used, a risk assessment and safe system of work are prepared, and suitable control measures are implemented to reduce any identified risk to as low as reasonably practicable. Working from ladders and stepladders can be used, provided the use is justified, as the job is of short duration, light duty and can be carried out safely or, that existing features on campus cannot be altered to allow an alternative to be used.
- The users have been consulted on the formulation of risk assessments and safe system of works and the relevant control measures being proposed.
- All personnel involved in, or who are likely to be affected by the work, receive adequate instruction and training to carry out their task.
- Work is carried out by trained and competent personnel instructed in the requirements of the risk assessment and safe system of work and the proposed control measures.
- Competent, trained personnel are appointed to supervise work areas covered by this procedure and related work activities.
- Control measures are reviewed on a periodic basis or when an incident or significant change dictates, to evaluate their on-going suitability and effectiveness.

Similarly, contractors and sub-contractors are required to ensure that their employees are competent to carry out their activities when using such equipment. The University will periodically monitor contractor and sub-contractor competence records to ensure they are being maintained.

6.2. Risk assessment – ladders

There are many hazards and risks associated with working with ladders that users need to consider (note: these lists are not exhaustive).

Hazards

- 1) Failure of the ladder – due to lack of maintenance, fatigue, metal fatigue, etc.
- 2) Items falling from the ladder.
- 3) Ladder touching/earthing an electrical supply.
- 4) Manual handling in transportation/erection.
- 5) Persons overreaching/stretching to reach position.
- 6) Slipping of ladder due to not being secured or footed.
- 7) Overloading of the ladder.
- 8) Inappropriate use of ladders.

- 9) Environmental factors.
- 10) Uneven ground.
- 11) Overhead cables and electrical supplies – especially metal ladders.
- 12) Poor ground conditions.
- 13) Unauthorised access.

Risks

- 1) Injury due to falling.
- 2) Injury due to being struck by falling material.
- 3) Possible fatality due to falling or being struck.
- 4) Electrocution coming into contact with electrical supply.
- 5) Injury to third parties.
- 6) Musculoskeletal disorders-strains, etc.
- 7) Damage to property/services.

Preventative measures

As part of the risk assessment, the following preventive measures should be considered and implemented to mitigate any hazards and risks identified (note: this list below is not exhaustive).

- 1) Segregate work areas where possible.
- 2) Ladders are stored correctly and are regularly inspected by the user at the beginning of the working day or after something has changed.
- 3) Front end of ladder kept above head height when carrying, care taken when turning.
- 4) Check the stiles are not bent or damaged.
- 5) Check the feet are not worn or damaged.
- 6) Check the rungs are not bent, worn, missing or loose.
- 7) Check locking mechanisms are not bent or missing or worn and locking bars are engaged.
- 8) Ladder erected by competent personnel.
- 9) Painted ladder must not be used – this can hide damaged parts.
- 10) All defects must be reported and defective ladder removed from use.
- 11) Non-conductive ladders must be used where an electrical hazard is present.
- 12) Ladders must be on a stable, firm base and leaning at a safe angle ideally 1 unit out to 4 units up. The base shall be of sufficient strength and composition to support the ladder so that its rungs or stops remain horizontal and it can support any loading intended to be placed on it.
- 13) Ladder must be secured at the top and extended a safe distance above landing stage i.e. 5 rungs or 1.05m or handhold is provided during its use. At ladder access points, a self-closing gate must be installed if practicable.
- 14) The ladder must be secured at the top or bottom to prevent it from slipping or moving during use, e.g. anti-slip or stability device.
- 15) Ensure footwear is free from excessive mud or grease before climbing a ladder.
- 16) Use both hands on stiles, maintaining three points of contact at all times and always face the ladder.

- 17) Use tool belt/holster or shoulder bag for light tools etc. raising or lowering other tools, materials by rope.
- 18) Always ensure the ladders are the correct way up (metal ties under wood on rung).
- 19) Ladder access must be maintained free of obstructions.
- 20) All platform openings which ladders pass through should be no longer than as reasonably practicable and no more than 500mm in width, leaving sufficient platform width for access.
- 21) Ladders must not be extended more than 9 metres without an intermediate platform or rest platform.
- 22) Long ladders, 6 metres +, require an intermediate tie rope to prevent swaying.
- 23) Only one person permitted on a ladder at any one time.
- 24) No work shall be carried out from a ladder that requires the removal of both hands from the ladder.
- 25) No compressed air or water hose works shall be carried from a ladder.
- 26) Ladder rungs are not to be used to support platforms of any kind.
- 27) Ladders should be removed or boarded if unauthorised access is possible out of working hours.
- 28) All users using ladders should receive training toolbox talk on ladder pre-use inspections and on the risk assessment and safe system of work applicable to the activity.
- 29) No interlocking or extension ladder to be used unless its sections are prevented from moving relative to each other whilst in use.
- 30) Where ladders are used as a means of access/egress, then it may be necessary to provide additional guardrails or handholds up the length of the ladder where deemed by a risk assessment.

6.3. Risk assessment – stepladders

There are many hazards and risks associated with working with stepladders that users need to consider (note: these lists are not exhaustive).

Hazards

- 1) Failure of the stepladder– due to lack of maintenance, fatigue, metal fatigue, etc.
- 2) Items falling from the stepladder.
- 3) Ladder touching/earthing an electrical supply.
- 4) Persons overreaching/stretching to reach position.
- 5) Working too high on stepladder.
- 6) Overloading of the stepladder.
- 7) Inappropriate use of the stepladder.
- 8) Overhead obstructions.
- 9) Material/spillage on steps.
- 10) Activities of others in vicinity.
- 11) Environmental factors.
- 12) Poor ground conditions.

Risks

- 1) Injury due to falling or being struck by falling materials.
- 2) Possibility of fatality due to falling or being struck.
- 3) Electrocution coming into contact with any electric supply.
- 4) Injury to third parties.
- 5) Damage to property/services.

Preventative measures

As part of the risk assessment, the following preventive measures should be considered and implemented to mitigate any hazards and risks identified (note: this list below is not exhaustive).

- 1) Stepladders manufactured to BS EN131 will only be allowed on campus, if the stepladders have a SWL capacity of 150Kg or above.
- 2) Highlight university requirements to likely contractor/sub-contractor users at tender stage and induction.
- 3) All treads, stiles, hinges and restraining ties/ropes must be checked before use.
- 4) Non-conductive stepladders to be used if an electrical hazard is present.
- 5) Always use stepladders on a firm and level base.
- 6) Ensure any locking devices are engaged.
- 7) Don't work from the top step unless a suitable platform is provided. The knees of a person using stepladders not to be above top steps, i.e. no working off top three steps.
- 8) Don't use boards between treads on steps to provide a working platform.
- 9) Don't paint wooden steps.
- 10) Don't lean outwards or sideways from the steps to move them.
- 11) Damaged stepladders must be reported immediately, taken out of service and destroyed or returned to the supplier.
- 12) Stepladders are not designed for any degree of side loading – no overreaching.
- 13) Stepladders must be fully extended and placed at right angles to the work with all four legs firmly and squarely on a firm level stable base. The base shall be of sufficient strength and composition to support the ladder so that its rungs or stops remain horizontal and it can support any loading intended to be placed on it.
- 14) All users using the stepladders should receive training toolbox talk on pre-use inspection of stepladders and on the risk assessment and safe system of work applicable to the activity.
- 15) The rear parts of stepladders must not be used for foot support.
- 16) Stepladders are prevented from spreading by means of stays or cords. They must be of sufficient and equal strength kept in good order and renewed if found defective.
- 17) Only one person must use a stepladder at any one time, if the steps are used in a doorway, the door should be wedged open securely.
- 18) Segregate work activities where possible.
- 19) Stepladders must not be used on any temporary platform.
- 20) All users using stepladders should receive a toolbox talk/training into the risk assessment and safe system of work applicable to the activity.

- 21) Stepladders must be secured to prevent them from slipping or moving during use, e.g. anti-slip or stability device.

7. Inspections and records

Any ladders and stepladders must be both suitable for the new work task and in a safe condition before use.

- No visible defects and a pre-use check should be carried out before every use.
- An up-to-date record should be kept of detailed visual inspections. They should be formally inspected every 6 months (if used once a week or more) or 12 months (if used less than once a week) using the Ladder Inspection Checklist (Appendix 1) and recorded on the Ladder Register (Appendix 2) by a competent person in accordance with the manufacturer's instructions.
- If ladders are being used as part of a scaffold system, they will have to be inspected every seven days as part of the scaffold inspection requirements.
- Ladders and stepladders must be maintained and stored in accordance with the manufacturer's instructions.

Appendix 1: Ladder Inspection Checklist

Appendix 2: Ladder Register

8. Training

All persons using ladders and stepladders will receive instructions in the requirements and safe use of such equipment and consulted on their views.

Similarly, contractors and sub-contractors are required to ensure that their employees are competent to carry out their activities when using such equipment. The University will periodically monitor contractor and sub-contractor competence records to ensure they are being maintained.

Appendix 1: Ladder Inspection Checklist

Ladder Inspection Checklist

Ladders should be checked briefly before every use and formally inspected every 6 months (if used once a week or more) or 12 months (if used less than once a week) using this checklist.

Date of Inspection:	School/Service Ladder ID No. :	Inspected by:

Location at time of inspection:	
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Item to be checked	Condition Pass / Fail	Action Required	Who by	When by
GENERAL				
Suitable for work use				
Loose steps or rungs (consider loose if they can be moved by hand). <i>Remove from use: repair or discard</i>				
Loose, damaged or corroded nails, screws, bolts or other metal parts. <i>Remove from use: repair or discard</i>				
Warped, bent or twisted stiles. <i>Discard: do not attempt repair</i>				
Cracked, split or broken stiles, braces, steps or rungs. <i>Discard: do not attempt repair</i>				
Slivers/splinters on stiles, rungs or steps. <i>Remove from use: repair or discard</i>				
Damaged, missing or worn non-slip feet. <i>Remove from use: repair or discard</i>				
Ladder painted (may hide defects). <i>Remove from use: remove paint or discard</i>				
STEPLADDERS				
Wobbly or unstable. <i>Remove from use: repair or discard</i>				
Loose or bent hinge spreaders. <i>Remove from use: repair or discard</i>				
Broken stop on hinge spreaders. <i>Discard: do not attempt repair</i>				
Loose hinges. <i>Remove from use: repair or discard</i>				
EXTENSION LADDERS				
Loose, broken or missing extension locks. <i>Discard: do not attempt repair</i>				
Defective locks that do not seat properly when ladder is extended. <i>Remove from use: repair or discard</i>				
Deterioration of rope. <i>Remove from use: repair or discard</i>				

IMPORTANT: Ladders should not be re-used until proper repairs have been carried out – remove ladder to a safe place and attach warning notice to prevent use.

NOTE: Discarded ladders should be cut up or broken beyond repair, to prevent re-use.

