

HS39 Working at Heights | Standard Operating Procedure

1. Background information

1.1. Introduction/Purpose

1.1.1. This Standard Operating Procedure (SOP) details the processes for working at heights at SOAS University of London.

1.2. Scope

1.2.1. The purpose of The Work at Height Regulations 2005 is to prevent death and injury caused by a fall from height. If you are an employer or control work at height (for example facilities managers or building owners who may contract others to work at height) the Regulations apply to you.

1.3. Roles and Responsibilities

1.3.1. In accordance with the Work at Heights Regulations 2005, SOAS university will ensure that:

- Where the business activities involve 'work at height' the designated health and safety (H&S) person will assess the task beforehand and will consider the most suitable means of access.
- Suitable control measures such as exclusion zones will be put in place to ensure the safety of any others who will be in the vicinity.
- Employers and those in control of any work at height activity must make sure work is properly planned, supervised and carried out by competent people.
 - This includes using the right type of equipment for working at height.
 - Low-risk, relatively straightforward tasks will require less effort when it comes to planning.

1.3.2. Employees have general legal duties to take reasonable care of themselves and others who may be affected by their actions and to co-operate with their employer to enable their health and safety duties and requirements to be complied with.

2. Main Content

2.1. Controlling Risks When Working at Height.

2.1.1. The first consideration should be whether working from a height could be avoided. To achieve this the university should assess the suitability of the following alternatives:

- Using extendable tools from ground level to remove the need to climb a ladder.
- Installing cables at ground level.
- Lowering a lighting mast to ground level.
- Ground level assembly of edge protection.

2.2. Preventing a Fall from Occurring

2.2.1. The following guidelines must be considered when assessing whether a fall can be prevented.

- Using an existing place of work that is already safe, eg a non-fragile roof with a permanent perimeter guardrail
- For example, a concrete flat roof with existing edge protection, or guarded mezzanine floor, or plant or machinery with fixed guard rails around it.
- Using work equipment to prevent people from falling, such as.
 - Mobile elevating work platforms (MEWPs) such as scissor lifts.
 - Tower scaffolds.
 - Scaffolds.
 - Using a work restraint (travel restriction) system that prevents a worker getting into a fall position for personal protection.

2.3. Minimising the Distance and/or Consequences of a Fall

2.3.1. If the risk of a person falling remains the SOAS must take sufficient measures to minimise the distance and/or consequences of a fall. The following measures must be considered:

- Safety nets and soft-landing systems, eg air bags, installed close to the level of the work.
- Industrial rope access, eg working on a building façade.
- Fall arrest system using a high anchor point.

2.4. Using Ladders and Stepladders

2.4.1. For tasks of low risk and short duration, ladders and stepladders can be a sensible and practical option.

2.4.2. If the risk assessment determines it is correct to use a ladder, SOAS should further minimise the risk by making sure workers:

- Use the right type of ladder for the job.
- Are competent (you can provide adequate training and/or supervision to help).
- Use the equipment provided safely and follow a safe system of work.
- Are fully aware of the risks and measures to help control them.

2.4.3. A permit to work must be obtained for any working above 2M high. A risk assessment of the task may well be necessary prior to the university allowing work to commence.

2.4.4. Guidelines for the use of ladders on the SOAS University campus:

- All ladders used on the premises will be of type 1 or 2 and not domestic ladders.
- All ladders are to be checked for defects before use, any defects are to be reported to a manager.
- Regular inspections of ladders must occur to keep them maintained and free from defects.
- There is to be a clearance of five rungs (1.05m) at the top of the ladder.
- The top of the ladder is to be tied, if this is not practicable the ladder is to be footed at all times.
- Ladders are to be used at an angle of 75 degrees at the base, or a ratio

of 1 unit horizontally and 4 units vertically. If this is not possible the ladder is to be tied at the top.

- There is to be three points of contact on the ladder at all times.
- No more than one person should use a ladder at any one time.
- No overreaching is permitted on ladders.

2.4.5. Guidelines for the use of stepladders on the SOAS University campus:

- All stepladders must be checked for defects before use, any defects are to be reported to a manager.
- Regular inspections of stepladders occur to keep them maintained and free from defects.
- When in use, all stepladders should be stood on a firm base with wheel castors locked if present.
- Work should not be carried out from the top step.
- No overreaching is permitted on stepladders.
 - The step ladders should be moved to prevent overreaching.
- No more than one person should use a step ladder at any one time.

2.5. Tower Scaffolding

2.5.1. Most scaffolding on SOAS sites are of small construction and are tower scaffolds obtained from a hire company.

2.5.2. Construction of a tower scaffold at the university.

- Towers are only to be erected, altered and dismantled by competent and experienced personnel.
- Before construction ensure that the manufacturer's instructions are with the scaffolding.
- Scaffold equipment is to be checked for defects before construction, any defects are to be reported to a manager.
- The Manufacturer's instructions must be followed when assembling the tower.
- The structure is to be braced on all planes.
- Towers should be stood on a firm base with wheel castors locked if present.
- Ladders are to be inside the scaffolding.
- Any incomplete towers are to display a warning notice.

- The condition of the tower scaffolding is to be inspected before use.

2.5.3. Guidelines for the use of tower scaffolding on the SOAS campus.

- Avoid using tower scaffolds in severe weather conditions unless tied or stabilised.
- Ensure the safe working load is not exceeded.
- Inspect the tower scaffold before each use, to ensure that is still within the manufacturers' guidelines and has no defects.

2.5.4. Guidelines for dismantling tower scaffolding on the SOAS campus.

- Keep to the manufacturer's instructions.
- Never drop anything from the tower.

2.6. Moving Mobile Towers

- 2.6.1. Mobile tower scaffolds are not to be moved with people or objects on them.
- 2.6.2. When moving mobile towers apply manual force to the base do not use mechanical means.
- 2.6.3. Overhead checks must be completed before a tower can be moved to ensure the area is clear of obstructions.

2.7. Other Scaffolding

- 2.7.1. Other types of scaffolding will be constructed by scaffolders (outside companies) and be of the correct design with adequate load-bearing capabilities.

2.8. Roof Access Techniques

- 2.8.1. Access to the university roof work area will be by an internal staircase and no ladders will be used. One area of work will require the use of a MEWP which is supplied, with a trained operator, by the client.
- 2.8.2. All operatives will wear harnesses and attach to the horizontal life lines currently in place on the roof structure.
- 2.8.3. A nominated person will be identified, who is responsible for managing all aspects of roof access work. The nominated person will have experience and/or training in the type of work the university plans to undertake. Similarly, designated supervisors will be required to directly oversee and direct work in progress on all jobs.

2.9. Planning Roof Access Operations

- 2.9.1. A system of work will be drawn up, taking account of risks from roof work/operations generally and job-specific risks that are present and can be foreseen.
- 2.9.2. The safe system will specify rescue arrangements, the selection of correct equipment, the selection of people with the necessary level of competence and arrangements for control and communication.

2.10. Personnel

2.10.1. Competence: A competent person may be defined as someone who is suitably trained or qualified by knowledge and practical experience to enable them to:

- Carry out their required duties at the level of responsibility required of them.
- Fully understand any potential hazards related to the work under consideration.
- Detect any technical defects or omissions in that work, recognise any implications for health and safety, and be able to specify appropriate remedial action as necessary.

2.10.2. Training and Competence:

- All operatives have received training in roof work and have appropriate knowledge, experience and practical skills for the type of work being undertaken.
- Training is carried out by a competent organisation and includes assessment of specific skills and knowledge.
- The training programme is formalised in both time and performance and is assessed by a competent person who did not deliver the training.
- Training schemes must clearly state the scope of the training provided, the intended duration of certification and any limitations to be observed, either of individual personnel or of working methods.
- If access techniques have not been used for more than six months, refresher training is carried out and the operative receives a higher level of supervision until they have become accustomed again to this type of work.
- Operatives maintain a working record showing training received and details of subsequent work experience. This record will assist employers in assessing and verifying an employee's suitability for particular types of work.
- Before starting any job, all operatives must be competent to:
 - Properly inspect access equipment before every use.
 - Understand all risks arising from the access method and work task.

- Use all access techniques required by a particular worksite.

2.11. Access Equipment

2.11.1. Guidelines for the use of access equipment on the SOAS campus:

- All equipment is appropriate to its application.
- Almost all rope access equipment is classed as personal protective equipment and should therefore carry a CE mark.
- All access equipment is supplied with a certificate of conformity, giving the specifications and performance characteristics where appropriate.
- If there is any doubt as to the suitability of equipment, advice is sought from a competent supplier.
- Key requirements of rope access equipment:
 - The harness will conform to EN 813.
 - Descender devices should be of a type that will stop if the user loses control or allow only a slow, automatically controlled descent in the hands-off position.
 - The backup device should be capable of withstanding any foreseeable forces resulting from the rope access activity, without catastrophic damage to the line or device.
 - The rope should be of kern mantel construction, semi-static (low stretch) type, of a diameter between 10.5 mm and 11.5 mm, in accordance with EN 1891.
 - Dynamic mountaineering rope (EN 892) is not suitable for suspension or as a back-up rope but may be used for personal lanyards (cows' tails).

2.12. Clarification, Marking and Traceability

2.12.1. Equipment is individually marked in a way that does not impair its function.

2.12.2. Equipment is properly maintained and stored and is traceable back to the manufacturer or supplier.

2.13. Inspection, Care, Maintenance and Longevity

2.13.1. Equipment is inspected before each use (pre-use inspection) and examined thoroughly by a competent person in accordance with a specified schedule, normally at intervals no greater than six months.

2.13.2. If equipment is used in arduous environments, inspection should take place at intervals no greater than three months.

2.13.3. The results of thorough inspections is recorded. Rope access equipment is classified as lifting equipment and therefore falls within the requirements of the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).

2.14. Other PPE

2.14.1. Some work tasks or work environments may require the use of other protective equipment, such as warm clothing, waterproofs, hearing or eye protection, gloves etc.

2.15. Control of Working Methods

2.15.1. Risk control measures that apply to all rope access work:

- Operatives will always be attached to at least two independently anchored safety systems.
- Connection to the rope access system will be in an area where there is no risk of a fall from a height unless there is protection by other means.
- Exclusion zones will be established as appropriate.
 - This may require zones at locations other than the top and bottom of the rope access work.
- An efficient communication system is established, e.g., mobile phone, radio, whistle etc.
- All practicable measures are taken to avoid injury-causing impact with the structure or obstructions.

- Operatives are properly dressed and equipped, appropriate to the work situation and conditions.

2.16. Consideration of Working Methods

2.16.1. In addition to general controls for rope access, there will be specific considerations such as:

- The type of access method.
- Ease of anchoring.
- Ease of access to and egress from work position, eg flat roof, clear pavement.
- Objective hazards during the work, eg wind, sun, rain (especially wind).
- Dangers to third parties.

2.16.2. The level of skill required of operatives and the level of necessary supervision will be indicated by these factors.

2.17. Use of Work Equipment

2.17.1. Steps are taken to ensure that any work equipment (eg cleaning tools, buckets, squeegees etc) is properly secured and used safely.

2.17.2. All items must be attached so they cannot fall, and large items (over 8 kg) should be suspended on an additional haul rope.

2.17.3. Tool bags or pouches may be appropriate for some work.

2.18. Rescue

2.18.1. The provision of adequate emergency measures is of prime importance when carrying out rope access work.

2.18.2. There is a specific rescue plan for each worksite, with on-site practice if appropriate.

2.18.3. Work teams should practice rescue techniques from time to time.

2.18.4. Operatives should always be in a position to recover themselves or to be recovered quickly and efficiently by the immediate work team or by a dedicated on-site rescue team.

2.18.5. Rescue equipment should be appropriate to the nature of the workplace, eg length of ropes, availability of extra anchor slings, hauling equipment etc.

2.19. First Aid

2.19.1. Every worksite should have access to reasonable first aid provisions and at least one member of a work team has received first-aid training.

2.20. Mobile Elevated Working Platforms (MEWPs)

2.20.1. MEWPs are supplied by the client together with a trained operator.

2.20.2. The equipment's owners must have carried out their own written risk assessment on its use under the Management of Health and Safety At Work Regulations 1999 and the Provision and Use of Work Equipment Regulations 1998.

2.20.3. Standard precautions must be followed. These are detailed in the list below:

- People must not operate a MEWP unless they have been trained and authorised as competent or are undergoing formal training under close supervision. Training should be in accordance with a recognised scheme such as one run by the CITB or the International Powered Access Federation (IPAF).
- The responsibility for providing training lies primarily with the window cleaning contractor as the employer but they must be provided with suitable information on the use of MEWPs by the equipment's owners, ie the building management or hire company.

- The maximum number of people that may be carried on the platform and the safe working load should be clearly marked on the platform.
Anyone using the MEWP's platform must wear a full body harness in good condition, with an energy-absorbing or inertia-reel lanyard to the current BS EN standards.
 - Use of such equipment as a fall restraint system that prevents falls is currently the most common.
 - If fall arrest is used (to stop someone once they have fallen), then a properly rated anchor point is essential (most are currently rated only for fall restraint).
 - The clearance height of the platform should also be considered because, when working below 5 m, an energy-absorbing style lanyard may be too long to stop someone's fall. In all cases consult the maker of the equipment on its suitability.
- A set of operating instructions must be available for use and reference whenever the MEWP is in use.
- The maximum permissible wind speed in which the MEWP may operate or remain raised/extended should be clearly specified.
- The maximum gradient on which a MEWP may operate should be clearly marked on the platform, and inclinometers should be provided to enable an operator to establish the slope of the ground.
- Stabilisers/outriggers should be provided with suitable soleplates for use on soft ground.
- Identify any localised ground hazards such as ducts, manhole covers, holes or voids.
- Ensure no parts of the MEWP can protrude into any areas where vehicles may strike the MEWP.
- The user of the MEWP should make use of the information supplied by the manufacturer relating to the minimum supporting capacity of the ground needed by the MEWP and the site-specific risk assessment for the activity should take the nature of the working environment into account.
- The person(s) on the platform should be in control of all movements at all times. However, if, as in the case of the road vehicle type of chassis supported.

- MEWPs, where horizontal-travelling controls are at ground level, then there should be a suitable system of communication between platform personnel and the ground controller, eg two-way radios or an intercom system.
- Guard-rails at least 920 mm high, with mid-rails or mesh infilling, and toe boards at least 150 mm high, should be provided at the edges of platforms.
 - Alternatively, solid enclosures at least 920 mm high should be provided. Access gates should not open outwards and should return automatically to the closed and fastened position; a vertically sliding section of the mid-rail can also be an acceptable means of access.
- The upper surface of the platform should be made slip-resistant and adequate means of attachment for safety harnesses should be provided. Properly secured guard rails may provide a suitable attachment point.
- Before being used for the first time on-site, MEWPs should be thoroughly examined by a competent person and a copy of that examination report should be made available to the hirer/user.