Procedure: Fall prevention

Purpose
To set out the procedure to prevent falls from a height, working at heights and around pits.

Definitions

**Budget Unit** A College, School, Division, Department, Cost Centre or Unit designated by the Vice-Chancellor as responsible for an activity of the University

**Competent person** A person who has acquired through training, qualification or experience, the knowledge and skills to carry out the task

**Fall** A fall by a person from one level to another.

**Fall hazard** A circumstance that exposes a worker while at work, or other person while at or in the vicinity of a workplace, to a risk of a fall that is reasonably likely to cause injury to the worker or other person. This includes circumstances in which the worker or other person is:

- in or on plant or a structure that is at an elevated level
- in or on plant that is being used to gain access to an elevated level
- in the vicinity of an opening through which a person could fall
- in the vicinity of an edge over which a person could fall
- on or in the vicinity of a surface through which a person could fall, or
- on or near the vicinity of a slippery, sloping or unstable surface.

**Hazard** A source or situation with a potential for harm through injury, illness, damage to property, damage to the environment, or a combination of these.

**Incident** An unplanned event, which results in injury, ill health, damage or loss

**Risk** The likelihood and consequence of injury or harm occurring.

**Risk control** Taking action to eliminate health and safety risks so far as is reasonably practicable, and if that is not possible, minimising the risks so far as is reasonably practicable.

**Note.** Eliminating a hazard will also eliminate any risks associated with that
hazard.

**Trained Person**  A trained person under this procedure is a person who has successfully completed a training course in Height Safety presented by a Registered Training Organisation endorsed by the Australian National Training Authority.

**Procedure**

**Overview**

1. **The Australian National University (ANU) has developed this procedure to:**
   - manage the risks of working at heights
   - manage the risks of working around pits
   - help prevent falls in the workplace.

2. **A fall is defined as dropping from one level to another, e.g. falling from a height or into a pit or trench. This procedure applies to all types of work where there is a risk of people falling, or being struck by falling objects, from any height, including:**
   - working near unprotected edges, holes, shafts, pits or trenches
   - working at height, on a roof, and where levels change on construction and demolition sites, structures, plant (equipment) or vehicles
   - using equipment (e.g. ladders, elevated work platforms) to access elevated levels.
   - Note. An Elevated Work Platform (EWP) may include a cherry picker, person lift, boom lift (<11 m) or Forklift workbox.

3. **The results of falls may be severe; and can result in death.**

4. **This procedure takes an WHS risk management approach which, through active consultation and communication with stakeholders, is designed to:**
   - identify hazards that could cause a fall
   - prevent and eliminate fall risks, including fall risks when working on the same level, and where prevention is not possible, minimise the risk of falls occurring
   - help minimise specific risks through appropriate work practices, work positioning systems, fall prevention, fall restraint and fall arrest systems
   - provide information on how to establish safe egress and access
• provide information on how to restrict and prevent harm to people through suitable restrictions and barriers
• add to the regular review of fall risks and preventive measures.

Exceptions

5. This procedure does not cover aspects of scaffolding, cranes, or other high-risk work where specific licenced competencies are required. Please consult the WHS Branch or appropriately competent persons for advice.

Part 1: Responsibilities

Director or delegated representative

6. The Director or delegated representative is responsible for:
• providing, and maintaining appropriate facilities and resources to ensure a safe and healthy work environment
• ensuring an WHS risk management system is implemented.

Facilities & Services

7. Facilities & Services nominated representatives are responsible for:
• assessing University infrastructure for fall risks
• ensuring fall prevention is considered, and eliminated or controlled, as part of all new construction and refurbishments
• identifying all fall hazards in the business or undertaking so far as is reasonably practicable
• controlling the risk of falls associated with the identified fall hazards, so far as is reasonably practicable
• controlling the risk of falling objects so far as is reasonably practicable
• ensuring that any measures to control the risk of falls are:
• fit for purpose
• suitable for the nature and duration of the work
• installed and used correctly
• maintained in good working order
• providing relevant workers with adequate and task specific information, training and instruction.
• providing relevant workers with adequate information, training and instruction for emergency and rescue procedures
• undertaking a consultative approach in preventing falls
• reporting hazards and incidents in a timely manner
• reviewing and revising WHS risk control measures.

Operations Manager, Facility Manager or delegated representative

8. The Operations manager, Facility Manager or delegated representative is responsible for:
• identifying all fall hazards associated with their business or undertaking, so far as is reasonably practicable
• controlling the risk of falls associated with the identified fall hazards, so far as is reasonably practicable
• controlling the risk of falling objects so far as is reasonably practicable
• ensuring that any measures to control the risk of falls are:
  • fit for purpose
  • suitable for the nature and duration of the work
  • installed and used correctly, and
  • maintained in good working order.
• providing relevant workers with adequate information, training and instruction
• establishing emergency and rescue procedures to address fall hazards
• providing suitable personal protective equipment
• undertaking a consultative approach in preventing falls
• reporting hazards and incidents in a timely manner
• reviewing and revising WHS risk control measures.

Staff member or contractor

9. A staff member or contractor involved in work with a fall risk is responsible for:
• undertaking training and maintaining competence in fall prevention (heights safety)
• conducting work in the approved manner
• inspecting equipment and access before and after use to ensure it is safe, adequate, and fit for purpose
• controlling the risk of falling objects so far as is reasonably practicable
• controlling the risk of falls so far as is reasonably practicable
• maintaining (or arranging maintenance of) equipment in accordance with manufacturers' requirements. This includes personal protective equipment.
• contributing to fall prevention through consultation and communication
• maintaining a level of fitness appropriate for the task
• wearing a safety harnesses where necessary (They must also maintain a healthy weight within the equipment's specification)
• reporting hazards and incidents in a timely manner
• operators do not work alone, in case they require assistance in an emergency.

Part 2: Fall Risk Management

10. An WHS risk management approach for fall prevention requires consultation with relevant stakeholders to:
   • identify the fall hazards
   • assess the risks associated with the hazard
   • control the risks by implementing the most effective control measure that is reasonably practicable in the circumstances
   • review control measures to ensure they are working as planned.

11. Identifying all hazards that can cause people or objects to fall and understanding the risk associated with those hazards aids in making the right decisions about how to remove or lessen those risks.

Note: Further guidance on fall prevention is available in the Code of Practice: How to prevent falls at workplaces.

See: risk management procedure and tools.

Identification

12. Identify all hazards in the workplace that can cause people or objects to fall. An inspection or walk around the workplace and discussions with people can provide valuable information.

13. Tasks that need particular attention are those:
on any structure or equipment being constructed or installed, demolished or dismantled, inspected, tested, repaired or cleaned

on a fragile surface (for example, cement sheeting roofs, rusty metal roofs and skylights)

on a potentially unstable surface (for example, areas where there is potential for ground collapse)

using equipment to work at an elevated level (for example, when using elevating work platforms or portable ladders)

on a sloping or slippery surface where it is difficult for people to maintain their balance (for example, on glazed tiles)

near an unprotected open edge (for example, near incomplete stairwells)

near a hole, shaft or pit into which a worker could fall (for example, trenches, lift shafts or service pits).

Note: always consider hazards at, above and below ground.

14. In the walk around inspection include:

- surfaces; the stability, fragility or brittleness
- the potential to slip, for example where surfaces are wet, polished or glazed
- the safe movement of workers where surfaces change
- the strength or capacity to support loads, and
- the slope of work surfaces, for example, where they exceed seven degrees
- changes in levels - workers may be exposed to a fall from one level to another structures – the stability of temporary or permanent structures
- the ground – the evenness and stability of ground for safe support of scaffolding or a work platform
- the working area – whether it is crowded or cluttered
- entry and exit from the working area
- edges – protection for open edges of floors, working platforms, walkways, walls or roofs
- holes, openings or excavations – which will require guarding
- hand grip – places where hand grip may be lost; and
- loads and objects being moved or stored in an elevated position – whether they are secured against falling.
Assessing fall risks

15. When assessing the WHS risks arising from each fall hazard, consider:

- the number and movement of all people at the workplace
- the design and layout of elevated work areas, including the distance of a potential fall
- the adequacy of inspection and maintenance of plant and equipment (for example, scaffolding)
- the proximity of workers to unsafe areas where loads are placed on elevated working areas (for example, loading docks) and where work is to be carried out above people and there is a risk of falling objects
- the adequacy of lighting for clear vision
- weather conditions – the presence of rain, wind, extreme heat or cold can cause slippery or unstable conditions
- the suitability of footwear and clothing for the conditions
- the suitability and condition of ladders, including where and how they are being used
- the adequacy of current knowledge and training to perform the task safely (for example, young, new or inexperienced workers may be unfamiliar with a task) and
- the adequacy of procedures for all potential emergency situations.

Note: always consider WHS risks at, above and below ground.

See: Work on Roofs risk assessment

Taking action to control fall risks

16. Identified significant fall risks must be actioned. Consider applying the following in order:

- **Eliminating the hazard and associated risk.** Eliminating the need to work at height, for example, by carrying out the work on the ground (for example Tree pruning, window washing with extension poles), or working from a solid construction (for example scaffolding). Eliminating fall hazards at the design stage is easier and cheaper.
• **Minimising the risk by using a passive fall prevention device.** A passive fall prevention device is any equipment that is designed to prevent a fall and which, after installation, does not require on-going adjustment, alteration or operation by a person. These include physical barriers, edge protection, using temporary work platforms or guard railing.

• **Minimising the risk by using a work positioning system.** A work positioning system involves the use of equipment that enables a person or thing to be positioned and safely supported at a location for the duration of the work being carried out. Elevated work platform (EWP), travel restraint systems and industrial rope access systems are examples. A high level of operator competency is required.

• **Minimising the movement by physically preventing a position of fall – fall restraint.** A fall restraint system is designed to physically prevent a person reaching a position at which there is a risk of a fall. The equipment includes a safety harnesses and ropes.

• **Minimising the risk by using a fall arrest system.** A fall arrest system is equipment that is designed to prevent or reduce the severity of an injury to a person if a fall does occur, for example, catch platforms, industrial safety nets and safety harnesses. A fall arrest system should not be used for falls of less than two metres.

• **Other control measures.** Where these risk control measures are not practicable; a ladder, administrative controls and other reasonably practicable control measures may be used.

**Reviewing fall risks and actions**

17. Reviewing the process will ensure all the WHS risks from fall hazards are identified and the controls still provide protection.

18. A review must be undertaken:
   • before altering the workplace or to any structure, equipment or system that could result in a fall, or
   • if a risk control measure does not control the risks, or
   • after a notifiable incident occurs that involves a fall or a fall hazard, or
   • after being requested by a relevant staff member or Health and Safety Representative.
Part 3: Fall protection procedures

19. Procedures documenting fall protection hazards, risk and control measures shall be discussed with relevant staff and contractors before commencing the task. The induction and discussions must be task specific.

Emergencies and Rescue

20. Emergency plans shall be developed and discussed with relevant people. These plans should include foreseeable emergency and rescue situations. For example, how to recover a suspended individual, or how to conduct a rescue from an elevated work platform. The aim should be to carry out the rescue and retrieval as quickly and safely as possible.

Note: rescue by the emergency services should not be relied upon, particularly in remote locations.

Part 4: Fall prevention equipment

21. There are many options in fall prevention and fall arrest equipment. The equipment must be:
   - carefully selected by competent persons
   - appropriate for the task
   - suitable for the stresses and strains placed on it
   - used by competent persons; and
   - regularly inspected and maintained in accordance with the manufacturer's instructions.

22. Faulty equipment must be repaired (if allowed) or destroyed.

Fall-arrest systems

23. Industrial fall arrest systems and devices are designed to stop an accidental fall. They must be installed by qualified personnel.

24. Anchors and static lines shall be tested at least annually or according to the designers or installers requirements. These requirements may be modified with an appropriate WHS risk assessment.

Ladder Safety

25. Where a ladder is deemed the appropriate height access equipment, the supervisor and user must consider the task, footing, and anchor points, and have an understanding of the fundamental points for the safe use of ladders.
See: Ladders and ladder maintenance

Access to Roof Spaces
See: Roof spaces guideline

Access to Roof Tops
See: Roof top access guideline

Access to Hazardous Locations
See: access to Hazardous Locations procedure

Part 5: Other

Incident Reporting
26. Reporting incidents, accidents, significant exposures and dangerous occurrences assists the University community avoiding repeated incidents. All incidents at the university must be reported via the University's on–line Incident Notification Form.
See: University's on–line Incident Notification Form.

Record keeping
27. The relevant area (Budget Unit) shall preserve fall prevention WHS risk assessment documentation. Records shall be kept for at least five years.
28. The register of employees trained under these procedures shall be maintained within the Human Resources Management System in the licences, certificates and professional memberships database.

Training obligations and courses
29. All people needing to undertake work at heights (over 2 metres) and people approving WHS risk assessment documentation shall:
   - have successfully completed a training course in Height Safety (and attend a refresher course every two years) presented by a Registered Training Organisation endorsed by the Australian National Training Authority; and
   - hold a current Height Safety training certificate or card.
See: safety courses, and Work Environment Group
30. All people required to operate Elevated Work Platforms (EWP) should have completed on operators training course or be competent in the use of the
equipment. As a minimum, operators must be familiar with an EWP’s operation, safety and rescue procedures.

References

- All their hazard alerts (now called safety alerts) are available at http://www.worksafe.act.gov.au/health_safety/resources/publications#Safety%20Alerts
- Managing the Risk of Falls at Workplaces Code of Practice
- Preventing falls in housing construction

Australian Standards

- Please use the latest of these Standards for information on specific issues. These standards were not necessarily used in the development of this procedure.
- AS/NZS 1418.10 Cranes (Including Hoists and Winches) Elevating Work Platform
- AS/NZS 1418.16 Cranes (Including Hoists and Winches) Mast climbing work platforms
- AS/NZS 1418.17 Cranes (Including Hoists and Winches) Design and construction of workboxes
- AS/NZS 1576.1 Scaffolding – General Requirements
- AS/NZS 1891.1 Industrial fall-arrest devices
- AS/NZS 1891.2 Industrial fall-arrest systems and devices, Part 2: Horizontal lifeline and rail systems
- AS/NZS 1891.3 Industrial fall-arrest systems and devices, Part 3: Fall-arrest devices
- AS/NZS 1891.4 Industrial fall-arrest systems and devices, Part 4: Selection, use and maintenance
- AS/NZS 1892 Portable Ladders series
- AS/NZS 2359 Powered industrial trucks
- AS/NZS 2550.10 Cranes – Safe Use Elevating work platforms
- AS/NZS 2550.16 Cranes–Safe Use–Mast climbing work platforms.
- **AS/NZS 2626**  Industrial safety belts and harnesses – Selection, use and maintenance
- **AS/NZS 2865**  Safe working in confined space
- **AS/NZS 4142.3**  Fibre ropes–Man–made fibre rope for static life rescue lines
- **AS/NZS 4389**  Safety mesh
- **AS/NZS 4488**  Industrial rope access systems series
- **AS/NZS 4488.2**  Industrial rope access systems–Selection, use and maintenance
- **AS/NZS 4576**  Guidelines for Scaffolding
- **AS/NZS 4626**  Industrial fall–arrest devices – Selection, use and maintenance
- **AS/NZS 4994**  Temporary edge protection series