Fall Prevention Procedure (24) V5

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# PURPOSE

To provide guidance in the management of fall prevention.

# SCOPE

This procedure applies to all workers under the Catholic Church Endowment Society Inc. (CCES).

# DEFINITIONS

Definitions can be found on the [Catholic Safety Health & Welfare SA Website](http://www.cshwsa.org.au/definitions/).

## Information

Falls are a major cause of death and / or serious injury in Australian workplaces. Fall hazards are found in many workplaces where work is carried out at height, for example stacking shelves, working on a roof, unloading a large truck. Falls can also occur at ground level into holes, trenches and at the same level for example slip, trips and falls.

# RESPONSIBILITIES

Specific responsibilities for carrying out certain actions required by the CCES, have been allocated to particular position holders within the organisation. Such responsibilities are consistent with the obligations that the legislation places on officers, managers, supervisors, workers and others in the workplace.

Responsibility, authority and accountability processes have been defined in [Responsibility, Authority & Accountability Procedure (12)](https://www.cshwsa.org.au/download/4118/), and summarised in:

* [Responsibility, Authority & Accountability Matrix – Workers (025G)](https://www.cshwsa.org.au/download/4134/);
* [Responsibility, Authority & Accountability Matrix – Managers & Supervisors (023G)](https://www.cshwsa.org.au/download/4331/);
* [Responsibility, Authority & Accountability Matrix – Officers (024G)](https://www.cshwsa.org.au/download/4131/); and
* [Work Health & Safety and Injury Management Policy](https://www.cshwsa.org.au/).

You are required to familiarise yourself with this procedure in order to understand the obligations that you may have in relation to its implementation and to carry out your assigned actions and responsibilities.

This Procedure is to be read in conjunction with your Organisational Policies and / or Procedures.

# **PROCEDURE**

## Identification of hazards

Persons Conducting a Business or Undertaking (PCBU) must identify all locations and tasks that could cause injury due to a fall. Areas of particular concern are those carried out:

* on any structure or plant being constructed or installed, demolished or dismantled, inspected, tested, repaired or cleaned;
* on a fragile surface (e.g. cement sheeting roofs, rusty metal roofs, fibreglass sheeting roofs and skylights);
* on a potentially unstable surface (e.g., areas where there is potential for ground collapse);
* using equipment to work at the elevated level (e.g., when using elevating work platforms or portable ladders);
* on a sloping or slippery surface where it is difficult for people to maintain their balance (e.g., on glazed tiles);
* near an unprotected open edge (e.g., near incomplete stairwells);
* near a hole, shaft or pit into which a worker could fall (e.g., trenches, lift shafts or service pits).

### Inspect the workplace

Officers / Managers / Supervisors should consult with their workers to identify tasks where there is potential to fall. Key things to look for include:

* surfaces:
* stability, fragility or brittleness;
* potential to slip where surface are wet, polished or glazed;
* safe movement of workers where surfaces change;
* strength or capability to support loads;
* slope of work surface – where they exceed seven (7) degrees;
* levels – where levels change and workers may be exposed to a fall from one level to another;
* structures – the stability of temporary or permanent structures;
* grounds – the evenness and stability of the ground for safe support of scaffolding or a work platform;
* work 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 require guarding;
* hand grip – places where hand grip may be lost.

In some situations, advice may be needed from technical specialists, such as structural engineers, to check the stability of structures or load bearing capacity.

### Review available information, including incident report

Review records of previous injuries and ‘near-miss’ incidents related to slip trips and falls.

## How to assess the risk for working at heights

When assessing the risk of each fall hazard, the following matters should be considered:

* design and layout of elevated work areas, including the distance of a potential fall;
* number and movement of all people in the workplace;
* proximity of workers to unsafe areas where loads are placed on elevated working areas, and where work is to be carried out above people and there is a risk of falling objects;
* adequacy of inspection and maintenance of plant and equipment (e.g. scaffolding);
* adequacy of lighting;
* weather conditions – rain, wind, extreme heat or cold;
* suitability of footwear and clothing for conditions;
* suitability and condition of ladders, including where and how they are being used;
* adequacy of current knowledge and training to perform the task safely;
* adequacy of procedures for potential emergency situations.

Risk assessments must be documented for all work at heights activities. Where required a Standard Operating Procedure (SOP) / Standard Work Procedure (SWP) may be developed (e.g. safe use of a ladder; cleaning gutters).

## Controlling the risk

When managing the risk of falls, PCBUs should eliminate the exposure of the risk of falls wherever possible (that is, work at ground level or on solid construction).

If unable to work at ground level, PCBUs will need to minimise the exposure to falls by providing a safe system of work using lower level risk control measures. PCBUs should use the hierarchy of controls (see [**CSH&W SA Definitions**](http://www.cshwsa.org.au/definitions/)) when considering lower level control measures. Examples of lower level risk control measures include:

* fall prevention device (such as installing guard rails);
* work positioning system (e.g. industrial rope access system);
* fall restrain systems;
* fall arrest system – when fall-arrest systems are used, the person must be identified who will establish emergency procedure, including rescue procedures.

If there is a risk of a fall from one level to another, then work cannot proceed until suitable controls are approved and in place. These controls must be documented in a risk assessment. Refer to [**Hazard Management Procedure (14)**](https://www.cshwsa.org.au/download/820/). The risk assessment must:

* be developed and implemented for identified hazards, where workers are exposed to a fall from one level to another;
* address the potential exposure of other workers and the public by works conducted, where a person or object could fall from one level to another that is likely to cause injury;
* apply to working at heights on a construction site where workers are exposed to a fall;
* address the issue of high winds affecting worker safety.

Managers / supervisors must ensure that the workplace is monitored to ensure that control measures remain appropriate to protect workers and others on site.

## Work on the ground or on a solid construction

Working at ground level is the most effective way to protect workers from the risk of falls. Working on a solid construction also minimises falls hazards significantly. A solid construction is an area that is structurally capable of supporting workers, material and other loads applied to it; is provided with barriers around its perimeter and around any openings a person could fall through; has an even, accessible surface and gradient; and has a safe means of entry and exit.

* **Structural strength:** work surfaces must be able to withstand the weight of workers, materials, tools and equipment safely. If unsure about any particular surface, have a structural engineer assess the safe load capacity of the surface before use.
* **Barriers (or edge protection):** in order to prevent a person or an object falling over edges and into holes barriers should be provided on relevant parts of a solid construction. These include:
* the perimeters of buildings or other structures;
* mezzanine floors;
* openings in floors;
* the open edge of a stair, landing, platform or shaft opening.

Managers / supervisors must ensure effective barriers are provided for workers, to eliminate any risk of falls. The perimeter barrier should be of sufficient strength to withstand the force of someone falling against it. The top of the edge protection should be between 900 mm and 1100 mm above the working surface. If a guard rail system is used it should also have mid-rails and kickboards (toeboards) or wire mesh in-fill panels. Refer to [**Managing the risk of falls at workplaces Code of Practice**](https://www.cshwsa.org.au/download/6069/).

* **Protection of openings and holes:** managers / supervisors and workers must ensure that any holes or openings that pose a falls risk to workers and others have appropriate controls in place (such as properly covered or appropriate barriers in place, danger signs placed nearby). Openings and holes must be made safe, as soon as they are formed. Material used to cover an opening or hole should be fixed in place and labelled to alert others as to what lies beneath;
* **Entry and exit:** workplaces must have safe means for people to enter, leave and move around the work area. Surfaces must be non-slip, free from trip hazards and not exceed a gradient of seven (7) degrees (1 in 8 gradient), so as to minimise the risk of falling.

## Fall prevention devices

Fall-prevention devices are equipment designed to prevent workplace falls from heights. When fall-prevention devices are used at worksites managers must refer to the [**Managing the risk of falls at workplaces Code of Practice**](https://www.cshwsa.org.au/download/6069/)to obtain specific safety controls.

**Temporary work platforms are designed to provide protection from falls** in temporary work areas (see [**CSH&W SA Definitions**](http://www.cshwsa.org.au/definitions/)).

### Scaffolding

Scaffolding is a very effective means of protecting workers from falls. However, there are specific requirements that apply to some types of scaffold under the WHS Regulation. Managers / supervisors must:

* not allow the use of a scaffold from which a person or object could fall more than four (4) metres unless a competent person provides written confirmation that the scaffold has been completed;
* ensure that the scaffold and its supporting structure is inspected by a competent person before use, after any incident that could affect its stability (such as a severe storm), after any repairs, and at least every thirty (30) days;
* ensure unauthorised access is prevented on scaffolding that is incomplete and left unattended (e.g., by attaching danger tags and warning signs at appropriate locations);
* ensure all scaffolding is erected, altered and dismantled by a competent person;
* prefabricated scaffolds are of the same type and not mixed components, unless the mixing of components has been approved by the manufacturer;
* safe access to and egress from the scaffold is provided;
* edge protection (hand rails, mid rails and toe boards) is provided at every open edge of a work platform.

Where a scaffold is used, workers must:

* be aware of what loads the scaffolds can safely take;
* not make any unauthorised alterations to the scaffold;
* ensure working platforms are kept clear of debris and obstructions along their length;
* never access incomplete or defective scaffolds.

When using a mobile scaffold, workers should ensure it:

* remains level and plumb at all times;
* is kept well clear of powerlines, open floor edges and penetrations;
* is not accessed until the castors are locked to prevent movement;
* is never moved while anyone is on it;
* is only accessed using internal ladders.

See [**Mobile Scaffold Safety Checklist (045F)**](https://www.cshwsa.org.au/download/4262/).

### Elevating work platforms (EWPs)

EWPsinclude scissor lifts, cherry pickers, truck-mounted EWPs, boom lifters and travel towers. The [**Managing the risk of falls at workplaces Code of Practice**](https://www.cshwsa.org.au/download/6069/)provides specific safety considerations in the use of EWPs.

Safety considerations include that:

* + - workers operating the platform are trained and instructed in safe operating procedures for the particular brand and type of equipment, as well as the safe use of fall-arrest equipment and emergency rescue procedures;
    - the platforms are only used as working platforms and not as a means of entering and exiting a work area unless the conditions set out in AS 2550.10 *Cranes, hoists and winches – Safe use, Part 10 Mobile elevating work platforms* are met;
    - unless designed for rough terrain, the platforms are used only on a solid level surface the surface area is checked to make sure that there are no penetrations or obstructions that could cause uncontrolled movement or overturning of the platform;
    - the manufacturer’s or supplier’s instructions are consulted for information on safe operation;
    - persons working in travel towers, boom lifts or cherry pickers wear a properly anchored safety harness;
    - workers are licensed when operating boom-type elevating work platforms with a boom length of eleven (11) metres or more;
    - the Elevating work platform has been inspected at least annually refer [**Guide to inspecting and maintaining elevating work platforms**](https://www.cshwsa.org.au/download/6072/).

### Perimeter guard rails

Guard rails may be used to provide effective fall prevention:

* at the edges of roofs;
* at the edges of mezzanine floors, walkways, stairways, ramps and landings;
* on top of plant and structures where access is required;
* around openings in floor and roof structures;
* at the edges of shafts, pits and other excavations.

Guard rails should incorporate a top rail 900 mm to 1100 mm above the working surface and a mid-rail and a toe board.

Before using a guard rail system, check that it will be adequate for the potential loads. The required load resistance will depend on the momentum of a falling person (e.g., the momentum of a person falling from a pitched roof will increase as the pitch (or angle) of the roof increases).

### Safety mesh

Safety mesh is designed to prevent internal falls through a roof. If securely fixed, safety mesh provides fall protection for roof installers and offers long-term protection against falling for maintenance and repair workers.

Safety mesh does not prevent falls from the edge of a roof or through holes in a roof, so it should always be used in conjunction with appropriate edge protection, guard rails or fall arrest systems.

Safety mesh should comply with AS / NZS 4389 *Safety mesh*, which specifies the minimum requirements for the design, construction, testing and installation of safety mesh for use in domestic, commercial and industrial building applications.

The mesh should be formed from 2 mm diameter wire of not less than 450 MPa tensile strength, welded into a mesh with the longitudinal wires not more than 150 mm apart and the cross wires not more than 300 mm apart. Mesh should be installed by competent persons. Particular care is required to ensure that the mesh is securely connected to the structure and the overlap between adjacent sections of mesh is sufficient to generate the necessary strength to resist the force of a person falling onto it. The safety mesh should be covered by the roof cladding as soon as reasonably practicable after it has been installed.

### Kickboard

Kickboards are also known as kickrails or toeboards. These are intended to provide edge protection on elevated walkways, mezzanine floors etc., where the potential exists for objects to fall on persons who may be in the vicinity below.

Where a need is identified, kickboards should comply with AS 1657 *Fixed Platforms, Walkways, Stairways and Fixed Ladders – Design, Construction and Installation* and be a minimum of 100 mm in height and installed with a maximum of 10 mm gap at the bottom.

## Work positioning systems

A work positioning system uses equipment to support workers in a harness in tension, so that workplace falls are prevented. These systems require a high level of competency by their users.

* + - * **Industrial rope access systems** – primarily used to gain access to a workface, with the aid of vertically suspended ropes. See [**CSH&W SA Definitions**](http://www.cshwsa.org.au/definitions/)for further information. These systems are not specifically fall protection systems and there are numerous safety considerations that must be adhered to. These are specified in the [**Managing the risk of falls at workplaces Code of Practice**](https://www.cshwsa.org.au/download/6069/);
      * **Fall restraint systems** – primarily designed to prevent a worker reaching unprotected edges that present a risk of falling. Restraint techniques require high user-competency. Fall restraint systems can include (but are not limited to):
* harnesses;
* lanyards;
* retractable lifelines;
* rope;
* wire grabs and other certified anchorage points.

## Fall-arrest systems

A fall-arrest system is intended to safely stop a worker falling an uncontrolled distance and reduce the impact of the fall. This system must only be used if it is not reasonably practicable to use higher level controls or if higher level controls might not be fully effective in preventing a fall on their own.

All equipment used for fall-arrest should be designed, manufactured, selected and used incompliance with the AS 1891 *Industrial fall-arrest systems and devices* series of standards.

Key safety considerations in using fall arrest systems are:

* + the correct selection, installation and use of the equipment;
  + that the equipment and anchorages are designed, manufactured and installed to be capable of withstanding the force applied to them as a result of a person’s fall;
  + that the system is designed and installed so that the person travels the shortest possible distance before having the fall stopped;
  + that workers using a fall-arrest system wear adequate head protection to protect them in the event of a fall;
  + that if the equipment has been used to arrest a fall it is not used again until it has been inspected and certified by a competent person as safe to use.

Fall-arrest systems include:

* catch platforms;
* industrial safety nets;
* individual fall-arrest systems, including personal protective equipment (PPE) that allows a worker to work where the exposure to a risk of fall is greater than two (2) metres and includes a fall-arrestor with the lanyard.

Managers / supervisors must only use a fall-arrest system if it is:

* not reasonably practicable to use higher level controls or if higher level controls may not be fully effective in preventing falls on their own;
* compliant with the AS 1891 *Industrial fall-arrest systems and devices* series of standards .

Managers / supervisors should use fall-arrest systems instead of restraint techniques when:

* workers can reach a position where a fall is possible;
* workers have a restraint line that can be adjusted in length, so that a free fall position can be reached;
* there is a danger the user may fall through the surface, for example fragile roofing material;
* the surface slope is over fifteen (15) degrees.

Managers / supervisors should consider the following when implementing fall-arrest systems:

* a rescue plan is in place and has been tested to provide the retrieval of a worker who may fall while wearing harness within five (5) minutes;
* foot straps or similar devices in use (to remove harness strap strain from femoral arteries);
* workers trained in use of fall-arrest, rescue and first aid equipment and techniques;
* workers do not work alone in fall-arrest situations;
* an appropriate risk assessment has been completed and documented;
* equipment used is manufactured and constructed to the required standard (or equivalent, as determined by the standard);
* fall-arrest equipment has been serviced as per manufacturer requirements by a competent person, and is within serviceable date;
* a [**Permit to Work (029F)**](https://www.cshwsa.org.au/download/4220/);
* the distance of free fall is high enough to allow the fall-arrestor to extend and operate as designed;
* correct equipment selection, installation and use;
* in equipment and anchorage design, manufacture and installation, ensure the system:
* is installed and checked by a competent person in accordance with manufacturer instructions AS 1891 *Industrial fall-arrest systems and devices* series of standards. In the absence of manufacturer’s instructions, all system components should be checked annually and documents retained.
* designed to ensure that a person travels the shortest distance possible before stopping the fall.
* that adequate head protection is worn by workers to protect them in the event of a fall. Head protection is not mandatory on all sites. This is based on a risk assessment process and it will be outlined in SWMS, if required
* immediately after it has been used to arrest a fall.

Further information on fall-arrest systems is available in the [**Managing the risk of falls at workplaces Code of Practice**](https://www.cshwsa.org.au/download/6069/)and managers and workers should adhere to specific requirements in the code of practice when using these control measures.

### Anchorage points

Each anchorage point should comply with the requirements in AS / NZS 1891:4 *Industrial fall arrest systems and devices – selection, use and maintenance*.

All anchorages should be tested and approved by a competent person before use. A visual inspection may not reveal the structural integrity of the anchor point (e.g. the bolt may have failed below the concrete surface).

Each anchorage point should be located so that a lanyard of the system can be attached to it before the person using the system moves into a position where the person could fall.

**Inspect the system components**

Each component of the system and its attachment to an anchorage must be inspected by a competent person and records retained:

* after it is installed but before it is used;
* annual inspections;
* immediately after it has been used to arrest a fall.

## Ladders

Ladders are primarily a means of access and egress. If ladders are used, they must be selected to suit:

* the task to be undertaken;
* the duration of the task;
* the physical surroundings of where the task is to be undertaken;
* the prevailing weather conditions.

In a low risk environment such as an office or classroom, a two (2) step domestic ladder with a minimum load rating of 120 kg and made to Australian Standards is acceptable. A three (3) step or above ladder must be industrial rated with a minimum load rating of 120 kg. Refer to the [**Safe Use of Ladders and Stepladders Guideline (014G)**](https://www.cshwsa.org.au/download/4329/) for further information on safe use.

### Portable ladders

Extension or single ladders should generally only be used as a means of access to or egress from a work area. They should only be used as a working platform for light work of short duration that can be carried out safely on the ladder.

#### Positioning of Ladders

Any ladder used at a workplace must be:

* set up on a solid and stable surface;
* set up to prevent slipping;
* placed at a slope of 4:1, and setting up stepladders in the fully opened position;
* secured at the top or the bottom, or if necessary both ends;
* extended at least one (1) metre above the stepping-off point on the working platform, and fall protection at the stepping-off point where people access the working platform.

#### Safe Use of Ladders

When a ladder is used check:

* for faults (e.g. broken rungs, stiles and footing);
* the ladder is the correct height for the task to avoid reaching or stretching;
* the ladder is not placed so that the weight of the ladder and any person using the ladder is supported by the rungs;
* all the locking devices on the ladder are secure;
* materials or tools are not carried while climbing the ladder;
* only light work is undertaken while on the ladder, where three points of contact can be maintained and tools can be operated safely with one hand;
* slip resistant base, rungs or steps are provided;
* slip resistant shoes are worn;
* ladders are not used without additional appropriate precautions:
* in access areas or doorways – if necessary, erect a barrier or lock the door shut;
* on scaffolding or on EWP to get extra height;
* next to power lines unless the worker is trained and authorised and the appropriate ladder is being used;
* in very wet or windy conditions;
* next to traffic areas, unless the working area is barricaded;
* damaged ladders are removed from service immediately and appropriately identified as ‘Out of Service’.

When using ladders do not:

* use any ladder containing metal when working on live electrical installations;
* carry out such work as arc welding or oxy cutting;
* work over other people;
* allow anyone else to be on the ladder at the same time.

Except where additional and appropriate fall protection equipment is used in conjunction with the ladder, it is not safe to:

* use a stepladder near the edge of an open floor, penetration or beside any railing;
* over reach;
* use any power or hand tools requiring two hands to operate, such as circular saws;
* use tools that require a high degree of leverage force which, if released may cause the user to over balance or fall from the ladder;
* face away from the ladder when going up or down, or when working from it;
* stand on a rung closer than 900 mm to the top of a single or extension ladder;
* stand higher than the second tread below the top plate of any stepladder (with the exception of three-rung step ladders).

Guidance on the selection, safe use and care of potable ladders is set out in AS / NZS 1892 *Portable ladders series*.

### Fixed ladders

Fixed ladders should be installed in accordance with AS 1657 *Fixed Platforms, Walkways, Stairways and Ladders – Design, Construction and Installation*.

### Ladder maintenance

Ladders must be checked annually by a competent person in accordance with the manufacturer’s recommendations. [**Ladder Register / Inspection Checklist Register (044F)**](https://www.cshwsa.org.au/download/4261/) can be used for recording the ladder inspections.

Ladders with any of the following faults must be replaced or repaired:

* fibreglass stiles cracked, chipped or severely faded with fibres exposed;
* timber stiles warped, splintered, cracked or bruised;
* metal stiles twisted, bent, kinked, crushed or with cracked welds or damaged feet;
* rungs, steps, treads or top plates that are missing, worn, damaged or loose;
* tie rods missing, broken or loose;
* ropes, braces, or brackets that are missing, broken or worn;
* timber members that are covered with opaque paint or other treatment that could;
* disguise faults in the timber;
* missing, loose, bent or worn fasteners, i.e. rivets, bolts and pins;
* worn or damaged feet, including non-slip material.

## Falls on the Same Level

In order to effectively control slips, trips and falls, risk factors to consider are:

* environmental (floor, steps, slopes etc.);
* contamination (water, food, litter etc.);
* organisational (task, safety culture etc.);
* footwear appropriate for the task being undertaken should be worn;
* equipment (steps, ladders, harnesses etc.);
* individual factors (e.g. information and training, supervision, pedestrian behaviour, vision etc.).

A range of measures will be required to control the hazards.

Guidance on possible control measures is provided in [**Slips, Trips and Falls Guideline (012G)**](https://www.cshwsa.org.au/download/4327/).

### Slips and Trips

Falls on the same level result from slips and trips rather than from elevation contributing to worker injuries.

Slips can occur where there is too little friction or traction between the footwear and the walking surface. Common causes of slips include:

* wet, oily or uneven surfaces;
* occasional spills;
* weather hazards;
* loose, unanchored rugs or mats;
* flooring or other walking surfaces that do not have the same degree of traction in all areas.

Trips happen when the foot collides (strikes, hits) an object, causing a loss of balance and, possibly a fall. Common causes of tripping include:

* obstructed view;
* poor lighting;
* clutter in the way;
* wrinkled carpeting;
* uncovered cables;
* drawers not being closed;
* uneven (steps, thresholds) walking surfaces.

### Control Measures

Slips and trips result from some kind of unintended or unexpected change in the contact between the feet and the ground or walking surface. Good housekeeping, quality of walking surfaces (flooring), selection of proper footwear, and appropriate pace of walking are critical for preventing fall incidents.

### Housekeeping

Good housekeeping is fundamental in the prevention of falls due to slips and trips. It includes:

* cleaning all spills immediately;
* marking spills and wet areas;
* mopping or sweeping debris from floors;
* keeping flooring in good condition;
* removing obstacles from walkways and keeping walkways free of clutter;
* ensuring that vision is not obstructed when carrying or pushing objects;
* securing (tacking, taping, etc.) mats, rugs and carpets that do not lay flat;
* always closing file cabinet or storage drawers;
* keeping working areas and walkways well lit;
* using a torch if entering a dark area where there is no light;
* replacing used light bulbs and faulty switches.

### Flooring

Changing or modifying walking surfaces can assist in preventing slips and trips. Recoating or replacing floors, installing mats, pressure-sensitive abrasive strips or abrasive-filled paint-on coating and metal or synthetic decking can further improve safety and reduce risk of falling. Resilient, non-slippery flooring also prevents or reduces foot fatigue which can contribute to slips. Good housekeeping however must still be maintained in addition to improved flooring surfaces.

### Footwear

In workplaces where floors may be oily or wet or where workers spend considerable time outdoors, prevention of fall incidents should focus on selecting proper footwear with anti-slip properties.

Properly fitting footwear increases comfort and prevents fatigue which improves worker safety.

### Walking behaviour

Adopting a suitable walking behaviour appropriate to the conditions can reduce the risk of slips and trips. Examples include:

* taking time and paying attention to where you are going;
* adjusting your stride to a pace that is suitable for the walking surface and the tasks you are doing;
* when walking down stairs, ensure you have a clear vision and holding hand rail at all times;
* making wide turns at corners.

## Fragile roofing

When working on brittle or fragile roofing material, PCBU must ensure:

* the person is informed that there is fragile roofing or brittle roofing;
* safe access to the work area is provided;
* work is carried out from a safe working platform that is located and constructed to allow work to be performed safely;
* an adequate fall injury prevention system is installed and used;
* there is another person present at all times when work is being performed on a brittle roof in case there is an emergency;
* training and instruction is provided on precautions to be taken and safe access;
* training in rescue techniques has been provided and rescue equipment is readily available for use at the workplace;
* all fragile roofing must be identified at the worksite. Fragile roof signage must be fixed to the walls of buildings where access can be made to fragile roofs. Signs should be made of sheet metal or other approved material that is at least 600 mm by 450 mm with wording and layout as shown (refer to diagram below). Signage shall comply with AS 1319 *Rules for the design and use of safety signs for the occupational environment*).



Refer to **[Fragile Roofing Guidelines (036G)](https://www.cshwsa.org.au/download/6075/)** for specific information.

## Administrative controls

### Restricted Areas

Restricted areas can be an effective method of making sure people are not exposed to hazards. They require clear signs warning people not to access the hazardous area. They can be used to highlight the risks of entry to an area where there is an unguarded hazard, or to areas where work is being undertaken overhead and there is a risk of falling objects.

### Permit to Work Systems

These systems allow only competent persons trained in the use of relevant control measures to work in an area where there is a hazard. Refer to [**Contractor Management Procedure (6)**](https://www.cshwsa.org.au/download/799/) for further information on permit to work.

### Organising and Sequencing of Work

Work should be organised so that people do not interfere with other workers or increase the risk to themselves or others. Plan the work so tasks are not performed for extended periods from a ladder, or so that work at height is minimised in extremely hot or cold weather.

### Standard Work Procedures (SWPs)

SWPs describe the steps involved in safely undertaking the task. It may also include any particular training, instruction and the level of supervision required. Where SWPs have been developed, they must be reviewed every five (5) years or if there have been any changes to the work practice.

## Emergency Rescue Procedures

A PCBU who implements a fall-arrest system as a measure to control risk must establish emergency and rescue procedures.

Workers must be provided with:

* information on emergency rescue procedures;
* procedures in the event of different emergencies such as rescues, accidents or injuries;
* an induction on the emergency rescue procedures;
* training in the emergency rescue procedures;
* training in the use of fall-arrest systems (where used).

The procedures should take into the account the need for:

* a plan and timeframe to carry out any rescues;
* the immediate rescue of a person after an arrested fall, without the need to rely on emergency services;
* the necessary equipment required to carry out a rescue (refer to AS 4142.3 *Man-made fibre rope for static life rescue lines*);
* ensuring that any persons using a fall-arrest system or industrial rope access are not working alone;
* the availability of access to first aid facilities or services, including trained first aiders. The rescue team should include a person or people trained in the provision of first aid so that it can be administered to the fall victim in the event of an injury occurring during a fall;
* the details of additional support facilities, including the location, contact information and availability (open hours) of emergency services, such as fire brigade, ambulance and hospitals;
* an effective and readily available means of communication.

The procedures must be tested so that they are effective. Workers must be provided with suitable and adequate information, instruction and training in relation to the emergency procedures.

For further information to develop a procedure refer to [**Emergency Rescue Procedure Guidelines (013G)**](https://www.cshwsa.org.au/download/4328/).

## Training / Licence requirements

A ‘Licence to Perform High Risk Work’ is required for work at heights where plant is used. Further information can be found on the [**SafeWork SA website**](https://www.safework.sa.gov.au/licence-and-registration/apply-renew/high-risk-work-licences).

Before operators start using Mobile Elevated Work Platforms (MEWPs), training must be provided about its functions and any current safe work methods and emergency procedures.

The minimum standard of training consists of specific criteria that must be addressed to satisfy the five elements below.

1. Plant identification

2. Hazard identification and control

3. Pre and post-start inspections

4. Safe general use

5. Shutdown and post-use inspection

Refer to SafeWork SA [**MEWP Minimum Standards of Training**](https://www.cshwsa.org.au/download/6087/).

Basic working at heights, (e.g. cleaning gutters, changing light globes) where you are using a ladder, instruction / information in the SOP / SWP must be provided. Basic working at heights training must be completed every 3 years.

Where workers are using safety harnesses to work on roofs for working at heights, training / refresher work at heights training should be completed every three (3) years, or dependent on the workers experience and how often they have used their harness.

## Design of plant and structures

Consideration of the potential risk of falls early when designing plant or structures can result in the elimination of such risks. Where elimination is not possible, one way to minimise risks at the design stage is to integrate fall prevention systems into the design.

Safety considerations at the design stage should include:

* safe entry to and exit from any work area;
* designing permanent guard rails or other forms of edge protection (for example, parapet walls) for permanent fall prevention on roofs;
* future maintenance requirements, especially in relation to sloping building exteriors and windows, to ensure maintenance can be carried out safely;
* specifying the strength of roof members and other points to which guard rail, or anchor points for work positioning systems will be fixed;
* safer building design generally, with, for example:
* low-level mounting of roof vents;
* the location of air conditioning units and other roof-mounted plant, such as satellite dishes, away from edges;
* the location of air conditioning and similar plant at ground level;
* the specification of non-fragile material for the roof;
* the use of permanent safety mesh;
* safer gutters, for example, installing large volume gutters and down pipes to minimise the need to access the roof for cleaning, locating the gutters at ground level or away from edges, or the removal of gutters altogether, with a smooth transition from the roof to the walls with the gutters at ground level.
* specific safety requirements for particular workers doing subsequent installation, maintenance or repair work. These groups include:
* people installing and maintaining antennae and satellite dishes;
* contractors servicing air conditioning equipment on the roof;
* window and gutter cleaners and repairers.

## Records

Documents used to manage fall prevention as prescribed by this procedure will be produced in a format that allows tracking for verification and review and be in accordance with requirements detailed in [Document Control Procedure (23)](https://www.cshwsa.org.au/download/896/).

## Review

This procedure will be subject to a planned review by the document owner in accordance with the requirements outline in [Document Control Procedure (23)](https://www.cshwsa.org.au/download/896/).

Other methods for reviewing and evaluating the performance of this procedure will include:

* audit activity;
* investigations;
* performance reports.

# RELATED SYSTEM DOCUMENTS

## Policies & Procedures

Contractor Management Procedure (6)

Document Control Procedure (23)

Emergency Management Procedure (10)

Hazard Management Procedure (14)

Responsibility, Authority & Accountability Procedure (12)

## Forms & Tools

Ladder Register / Inspection Checklist (044F)

Mobile Scaffold Safety Checklist (045F)

Permit to Work (029F)

# REFERENCES

Legislation and other requirements related to this procedure are defined in [Group Legal Register (010T](https://www.cshwsa.org.au/download/4834/)) which can be accessed via the Catholic Safety Health SA internet

## Internal Resources

Emergency Rescue Guidelines (013G)

Fragile Roofing Guideline (036G)

Responsibility, Authority & Accountability Matrix – Managers & Supervisors (023G)

Responsibility, Authority & Accountability Matrix – Officers (024G)

Responsibility, Authority & Accountability Matrix – Workers (025G)

Safe Use of Ladders and Step Ladder Guidelines (014G)

Slips, Trips and Falls Guidelines (012G)

## External Resources

AS 2550.10 Cranes, hoists and winches – Safe use, Part 10 Mobile elevating work platforms

AS 1657 Fixed Platforms, Walkways, Stairways and Fixed Ladders – Design, Construction and Installation

AS 1891 Industrial fall-arrest systems and devices series

AS 4142.3 Man-made fibre rope for static life rescue lines

AS / NZS 1892 Portable ladders series

AS / NZS 4389 Safety mesh

SafeWork SA

Guide to inspecting and maintaining elevating work platforms

# AUDITABLE OUTPUTS

The following examples of records will be used to verify implementation of this procedure:

* Ladder Registers
* Mobile Scaffold Checklists
* Permit to Work forms
* Risk assessments
* Training records