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1. **OBJECTIVE**

The objective of this procedure is to outline the responsibilities and processes for prevention of falls from one level to another.

2. **SCOPE**

All personnel accessing PPA controlled areas or undertaking PPA controlled works are required to comply with this procedure, including employees, contractors, and licensees.

Working on, over, in or near water shall not be defined as working at height, refer to the Working On, Over, In or Near Water Procedure for further guidance.

3. **DEFINITIONS**

<table>
<thead>
<tr>
<th>TERM</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catch platform</td>
<td>A temporary platform located below a work area, generally constructed of scaffolding components.</td>
</tr>
<tr>
<td>Competent person</td>
<td>In relation to the doing of anything, means a person who has acquired, through training, qualification and experience, the knowledge and skills required to do that thing competently.</td>
</tr>
<tr>
<td>Fall from Height</td>
<td>Where a person falls from one level to another.</td>
</tr>
<tr>
<td>Fall Injury Prevention System</td>
<td>A system designed to prevent or arrest a person's fall from one level to another and minimise the risk of injury or harm.</td>
</tr>
<tr>
<td>JHA</td>
<td>Job Hazard Analysis, a method of identifying hazards and assessing the risks associated with a task and implementing control measures to enhance the safety of all personnel.</td>
</tr>
<tr>
<td>Permit Authoriser</td>
<td>A person appointed by the PPA Maintenance Manager to authorise work at height and issue associated permits.</td>
</tr>
<tr>
<td>Permit Holder</td>
<td>A person involved in the task who accepts the permit from the permit authoriser and ensures all details on the permit are implemented.</td>
</tr>
<tr>
<td>Safety Net</td>
<td>A net used to limit the distance of fall of personnel or objects by catching them before they reach the next level.</td>
</tr>
<tr>
<td>Safety Mesh</td>
<td>Galvanised steel mesh securely fixed beneath roofing to prevent personnel falling from one level to another.</td>
</tr>
<tr>
<td>Spotter</td>
<td>The person whose sole duties are to control the restricted area, observe personnel at height, and raise the alarm in the event of an emergency.</td>
</tr>
</tbody>
</table>
### TERM DEFINITION

<table>
<thead>
<tr>
<th>TERM</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>For the purpose of this procedure, means a person who is supervising a work group who is conducting work at height.</td>
</tr>
<tr>
<td>Work at Height</td>
<td>Any situation where a person is at risk of falling from one level to another and sustaining an injury.</td>
</tr>
</tbody>
</table>

### 4. RESPONSIBILITIES

<table>
<thead>
<tr>
<th>ROLE</th>
<th>RESPONSIBILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers, Superintendents and Supervisors</td>
<td>Personnel under their control are aware of, understand and comply with the requirements of this procedure.</td>
</tr>
<tr>
<td>Employees and contractors</td>
<td>Comply with the requirements of this procedure.</td>
</tr>
<tr>
<td>Licensees</td>
<td>Managers and those in supervisory positions must understand and comply with the requirements of this procedure, and seek advice from PPA’s Health and Safety Department should they not understand any of the requirements. They also must ensure their personnel comply with the requirements of this procedure.</td>
</tr>
</tbody>
</table>

### 5. HAZARD AND RISK ASSESSMENT

Prior to the execution of any work a risk assessment shall be carried out in accordance with the Hazard Management Procedure. The principles of the Hierarchy of Controls shall be used, that is, PPE is used as a last priority control measure. All personnel shall continuously monitor and review control measures to ensure that they remain effective in reducing the risk of fall.

#### 5.1 Working at Height Permit

All work that is undertaken where there is potential to fall two or more metres, a fall injury prevention system is used, or where determined by risk assessment, requires an approved Working at Height Permit.

All details on the permit shall be filled out and submitted to a PPA Permit Authoriser with the relevant JHA. The permit must be reviewed and approved by the PPA Permit Authoriser before work can commence.
5.1.1 Permit Currency

Each Permit shall be valid for the duration of the associated JHA (no greater than seven day or night shifts). Where the activities are required to carry over from day shift to night shift or vice versa by a different workgroup, the oncoming workgroup shall conduct a new JHA and apply for a new Permit accordingly. Working at height in hours of darkness shall be avoided wherever practicable.

5.1.2 Working at Height Permit Issue and Transfer

The Working at Height Permit must be approved by the Permit Authoriser and accepted by the Permit Holder before any person can work at height. The Permit Authoriser and Permit Holder cannot be the same person.

A Working at Height Permit may be transferred from one Permit Holder to another i.e. where the Permit Holder is called away to another job.

5.1.3 Permit Cancellation and Completion

A Permit Holder can return a Working at Height Permit to the Permit Authoriser under two conditions:

- cancellation – where works are incomplete, and the area is not yet safe to return to normal operations; or

- completion – where all associated tasks are complete and the area has been made safe to return to normal operations.

Prior to returning a Working at Height Permit the Permit Holder must inspect the work area to confirm all person/s, equipment, and material have been removed. If any equipment or materials are present, or the work area is otherwise in a condition unable to be returned to service, this shall be noted on the permit before returning to the Permit Authoriser.

5.1.4 Lost Working at Height Permit

In the event the Working at Height Permit is lost the Permit Holder shall:

- advise the work group that the Permit has been lost and request them to exit the work area and not to re-enter;

- install adequate signage prohibiting any unauthorised entry to the work area; and

- carry out a thorough search for the Permit, including contacting all persons who may have had control of the permit since the time it was issued.
A new permit may be raised once a Permit Authoriser is satisfied the existing permit is lost and not likely to be found. The new permit shall be marked to indicate it is a replacement permit.

6. TRAINING AND COMPETENCY

All personnel required to work at height shall undergo task specific instruction prior to engaging in the task. Instruction shall include:

- safe system of work to prevent falls, including how the systems installed prevent falls;
- correct selection, fitting, use, care, maintenance and storage of personal protective equipment; and
- response plan relevant to the task.

All personnel undertaking work where a permit is required, Permit Holders, and Permit Authorisers shall complete and be deemed competent in a nationally recognised course for working safely at heights. Work safely at heights training shall be completed within the last 2 years and as such be renewed at two yearly intervals.

Personnel required to carry out work identified as high risk by WorkSafe shall hold a valid high risk work licence (HRWL) for that class of work i.e. Boom-type Elevated Work Platform (WP) and Basic Scaffolding (SB). Personnel who are a passenger only in an Elevated Work Platform (EWP) shall hold a current nationally recognised course for working safely at heights; they don't need to hold a HRWL WP.

Personnel engaged as spotters on the ground shall be appropriately trained to carry out their duties. Where this involves spotting operators in an EWP from the ground, they shall hold the appropriate license to operate the EWP in the event the operator becomes incapacitated.

Permit Authorisers shall be deemed competent in all aspects of fall prevention, conversant in all aspects of this procedure, and have the written delegation of the PPA Maintenance Manager to authorise permits.

7. ACCESS AND EGRESS

Where personnel are required to work in areas where there is the risk of falling from one level to another a safe method for people to get to and from and move around that work area shall be provided. This should take into account the tools and equipment which people will be required to carry to, from and around the work area and areas where plant is being used. Where mobile work platforms are used as methods of access/egress to a work area conditions shall meet those described in section Appendix 1 of this procedure.
8. EDGE PROTECTION

Wherever practicable edge protection shall be installed to any edge such as that of a scaffold, fixed stair, landing, suspended slab, bunker, formwork or falsework, where a person is at risk of falling two or more metres.

Edge protection must have:

- a top rail positioned between 900mm and 1100mm above the working surface and capable of withstanding a force of 0.55kN at any point; and either

- a mid rail and a toe board;

- a toe board and mesh panel made of wire not less than 3mm in diameter and holes not greater than 78mm x 50mm to fill the space between the top rail and toe board; or

- where a toe board is not practicable, a bottom rail which prevents personnel from falling and a drop zone erected to control dropped objects in accordance with Section 19.

A program to delineate unprotected edges of wharves and bunkers with yellow hatched ground markings shall be implemented and maintained. A fall injury prevention system must be used whilst in these marked areas, except where there is water below and personnel are wearing a Personal Flotation Device.

9. FALL INJURY PREVENTION SYSTEMS

Where edge protection is not practicable, there is a risk of fall of two or more metres, or deemed appropriate by risk assessment, a fall injury prevention system shall be used. All Fall Injury Prevention Systems must comply with the relevant Australian Standard (refer to section 22).

9.1 Restraint Systems

Wherever practicable, a Restraint System shall be the preferred system over Fall-Arrest. Restraint Systems are designed to limit horizontal movements from an anchorage point or a horizontal life line or life rail so that the user is totally restrained from reaching a position where either a free fall or limited free fall is possible.

A restraint system comprises an anchorage point(s), static line or restraint line of appropriate strength and length, and a harness. All restraint equipment and anchorages shall be fall-arrest rated to prevent falls in failed situations. As a minimum, the restraint line shall have a personal energy absorber attached to it, or have integral energy absorbing properties rated to the relevant Australian Standard.

When using a restraint system personnel shall ensure:

- they can maintain secure footing without having to tension the restraint line and without the aid of any other hand hold or lateral support;
• the static lines are fitted with an industrial shock absorber when required; and
• the restraint system manufacturer's tag identifies compliance to the relevant Australian Standard.

9.2 Fall-arrest Systems

Fall-arrest systems are designed to arrest a fall and should only be used instead of a restraint system if any of the following situations apply:

• the user is required to reach a position where either a free fall or limited free fall is possible to carry out the task;
• the user has a restraint line that can be adjusted in length so that a free fall position can be reached;
• there is a danger of the user falling through the surface (e.g. unsecured or brittle roofing material);
• the slope is over 15 degrees; or
• there is any other reasonably likely misuse of the system which could lead to a free fall.

Personnel shall give consideration to additional hazards which can be introduced when using a fall arrest system i.e. swing down, swing back and suspension trauma.

9.3 Anchor Points

All permanently fixed anchor points shall be inspected by a competent person at not less than twelve monthly intervals. In addition height safety users must visually inspect anchor points prior to use.

Anchorage shall meet load bearing capacities and inspected in accordance with the relevant Australian Standard.

All impaired anchorages shall be:

• tagged to indicate it is not to be used; and
• not used after repair until it is inspected by a competent person who can confirm that it is safe to use.

9.4 Alternative Anchor points

In situations where fixed anchor points are not available, alternative anchor points such as mobile plant shall be used. Personnel shall ensure anchorages are deemed structurally adequate.
Where mobile plant is used as an alternative anchor point and personnel are attached to that anchor point:

- the plant shall be positively isolated, ensuring no hydraulic parts can move during the task;
- the gears in park and the handbrake on;
- personnel shall not be positioned in the operator’s seat;
- the start key shall be kept in the spotter’s possession; and
- an out of service tag shall be placed on the steering wheel.

Note: All work that is undertaken using an alternative anchor point shall be reviewed and approved by a PPA supervisor prior to commencing.

### 9.5 Maintenance of Fall Injury Prevention Systems

All equipment shall be maintained, with inspections and examination of all components by a competent person at regular intervals to ensure continued efficiency and durability.

#### 9.5.1 Inspection Frequencies

All fall injury prevention system equipment shall comply with the below inspection schedule, as a minimum, unless otherwise specified at more regular frequencies by the manufacturer.

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>INSPECTOR</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal equipment including harnesses, lanyards, connectors, fall-arrest devices including common use devices</td>
<td>Competent personnel</td>
<td>Before and after each use</td>
</tr>
<tr>
<td>Harnesses, lanyards, associated personal equipment, fall-arrest devices (external inspection only), ropes and slings</td>
<td>Height Safety equipment inspector</td>
<td>3 monthly</td>
</tr>
<tr>
<td>Anchorages—drilled-in type or attached to timber frames</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchorages—other types</td>
<td>Height Safety Equipment Inspector</td>
<td>12 monthly</td>
</tr>
<tr>
<td>Fall-arrest devices—full service</td>
<td>Height Safety Equipment Inspector</td>
<td>12 monthly or more frequently dependent on manufacturers recommendations</td>
</tr>
</tbody>
</table>
### FALL PREVENTION PROCEDURE

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>INSPECTOR</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal and vertical lifelines - steel rope or rail</td>
<td>Height Safety Equipment Inspector</td>
<td>12 monthly or more frequently dependent on manufacturers recommendations</td>
</tr>
<tr>
<td>Horizontal or vertical lifelines fibre rope webbing</td>
<td>Height Safety Equipment Inspector</td>
<td>6 monthly</td>
</tr>
<tr>
<td>All items of personal and common use equipment</td>
<td>Height Safety Equipment Inspector</td>
<td>Upon entry or re-entry into service</td>
</tr>
<tr>
<td>All items which have been stressed as a result of a fall.</td>
<td>Height Safety Equipment Inspector</td>
<td>Before further use</td>
</tr>
</tbody>
</table>

All equipment shall be inspected within two weeks of its inspection due date. Equipment used under harsh conditions, e.g. in wet, dusty, abrasive or corrosive environment shall be inspected more frequently as determined by risk assessment.

#### 9.5.2 User Inspection (Competent Person)

All personnel shall inspect all personal and common use equipment before and after each use in accordance with the above table. Inspection shall be by sight and touch. It shall include the opening of any equipment where access is provided, to ensure that internal components are in satisfactory condition. This requirement includes the opening or removal of temporary rope or line protectors, to enable rope to be properly inspected. Operation of the locking mechanism on fall-arrest devices shall also be checked.

#### 9.5.3 Testing and Tagging

Each item of equipment mentioned in the above table, inspected by a height safety equipment inspector, shall have a service tag for recording the last date it was fully serviced and the date by which the next service is due.

Equipment inspected at 3 monthly intervals shall comply with the RGBY tagging system as follows:

- **Red**: Dec - Feb
- **Green**: Mar - May
- **Blue**: Jun - Aug
- **Yellow**: Sep - Nov
Contractors and licensees can follow their own colour coding schedule but they shall be on a 3 monthly basis.

**9.5.4 Equipment Register**

All inspections except user inspections are to be documented in accordance with the relevant Australian Standard.

To ensure the traceability of maintenance records, an equipment register shall be kept for each item of equipment mentioned in the above table, and include the following details:

- manufacturer’s, supplier’s or installer’s name and address;
- manufacturer’s batch number;
- serial or identifying number;
- year of manufacture;
- location equipment is stored/Location of Anchor point;
- details of recommended connections to harnesses;
- type of anchorage line to be used;
- suitability and limitations on various usages;
- date of purchase;
- date first put into service; and
- dates and details of inspections and services.

Documents relating to the maintenance and service history of each item of equipment shall be freely available to operators and users for at least the life of the item.

**9.5.5 Welding and the protection of fall injury prevention systems**

Personnel using a fall injury prevention system and the system itself shall be protected from hot particles and sparks to avoid damage to the integrity of the system. Items such as fire retardant harnesses and lanyards, lanyards with a cable wire core or fire retardant blankets shall be used to provide protection.

**10. SCAFFOLDING**

Scaffolding systems shall be designed, constructed, erected and maintained in accordance with the relevant Australian Standard (refer to section 22).
Management shall ensure formal inspections are carried out and records are maintained for scaffolds under their control, in accordance with the relevant Australian Standard.

10.1 SCAFF TAG SYSTEM

A Scaff tag system shall be employed from the time scaffold erection activities commence.

The competent person/certified scaffolder shall place a Scaff tag card holder in a prominent place on the scaffold with the words “Do Not Use Scaffold” clearly visible, as soon as practicable after commencing erection of the scaffold.

On completion of the scaffold erection, and following modifications to and inspections of scaffold, the competent person/certified scaffolder shall complete the green side of a Scaff tag, and place it in the Scaff tag card holder with the completed green side facing outwards. This indicates the scaffold is safe for use, provided the tag has been filled in within the last 30 days.

Modifications shall only be carried out by a competent person/certified scaffolder. Prior to modifying a scaffold, the competent person/certified scaffolder shall:

- remove the Scaff tag from the card holder;
- fold the Scaff tag in half so the yellow side is facing out;
- replace the folded Scaff tag in the upper half of the card holder so “Do Not Use Scaffold” is clearly visible; and when the modifications /inspections are completed; and
- complete all relevant sections of the back of the Scaff tag.

Personnel shall inspect the Scaff tag prior to utilising any scaffold. Where a Scaff tag is not in place, or indicates the scaffold has not been inspected in the last 30 days, the scaffold shall be marked “Do Not Use Scaffold”, and the matter reported. The scaffold shall be inspected by a competent person/certified scaffolder, and a Scaff tag attached, prior to the removal of the Out of Service Tag.

11. MOBILE WORK PLATFORMS

Elevated work platforms and personnel carrying devices can be used as temporary platforms to access work areas and provide protection for personnel working at height.

The mobile work platforms described in this section shall not be utilised in circumstances where the wind speed exceeds the manufacturer’s recommendations or 12 metres per second (23 knots) where the manufacturer has not specified. Where plant is not fitted with a device for measuring wind speed, personnel shall contact the Vessel Traffic Service Centre to verify wind speeds.
11.1 Scissor Lift Type Elevated Work Platform

Scissor type elevated work platforms (also known as scissor lifts) are not defined as high risk and therefore not subject to a Working at Height Permit, and the use of harnesses is not mandatory.

Whilst working in a scissor lift it should not be manoeuvred along the ground whilst elevated, due to the risks posed by the ‘leverage factor’ – where centimetres at ground level can translate to metres of sudden/unintended movement at the platform level. Where it is not practicable to lower the platform to traverse the ground, the associated risks shall be recorded in the risk assessment, and a spotter assigned to observe the workers overhead.

11.2 Boom Type Elevated Work Platform (EWP)

Boom type elevated work platforms (EWP) shall be inspected, operated and maintained in accordance with the manufacturer’s instructions, or where this is not practicable, in accordance with the relevant Australian Standards (refer to section 22).

To prevent falls whilst working from an EWP operators must:
• be trained and competent in the operation of EWP and hold a National High Risk Work Licence (WP Class); and
• use the platform on a solid level surface unless designed for rough terrain.

All personnel engaged in the activity must:
• be trained and competent in the use of fall arrest equipment and response procedures;
• wear a safety harness and lanyard assembly to provide fall arrest in the event of component failure in accordance with AS 1418.10. The lanyard shall be as short as possible and attached directly to the designated anchor point and not the handrail; and
• if used to access a work area, conditions set out in Section 5.9 of AS 2550.10 Cranes Hoists and Winches – Safe Use – Mobile elevating work platforms, are met.

All work undertaken on an EWP must engage a spotter to monitor persons and equipment whilst working at height, who shall be appropriately trained, competent and licensed in accordance with Section 6.

Refer to the Working On, Over, In or Near Water Procedure for further guidance when using a boom type elevated work platform over water.
11.3 Workboxes and Man cages

Workboxes and man cages shall be inspected, operated and maintained in accordance with the manufacturer’s instructions and where this is not practicable, in accordance with the relevant Australian Standard (refer to section 22).

To prevent falls whilst working from a workbox or man cage immediately above land personnel must wear a safety harness and lanyard assembly in accordance with AS 1418.17. The lanyard shall be as short as possible and attached directly to the designated anchor point and not the handrail.

Refer to Working On, Over, In or Near Water Procedure for further guidance when using a workbox over water.

11.4 Forklift Trucks

Forklifts fitted with personnel carrying devices (i.e. man cages or work boxes) can provide a safe means of raising personnel to an elevated work area. Personnel carrying devices shall be engineer-designed and constructed in accordance with the relevant Australian Standard (refer to section 22) and used in accordance with their design parameters.

To prevent falls whilst working from a personnel carrying device fitted to a forklift, personnel shall:

- ensure the parking brake is set, the controls are in neutral, the mast is vertical, and all controls are ideally immobilised except lift and lower;
- ensure the man cage or work box is secured fitted to the forklift;
- remain in the personnel carrying device at all times;
- not use any other device to gain additional height;
- close the safety gate when in the elevated position; and
- wear a safety harness and lanyard assembly in accordance with the relevant Australian Standard. The lanyard shall be as short as possible and attached directly to the designated anchor point and not the handrail.

11.5 Spotter

Spotters are to control the restricted area, observe personnel at height, and raise the alarm in the event of an emergency. A Spotter may perform ‘other duties’ when spotting a EWP or scissor lift once the plant has been placed in emergency stop provided that:

- the spotter can maintain regular visual contact of personnel working inside the basket;
- stays within the work area;
can promptly respond in an emergency situation; and

the ‘other duties’ are associated with the task they are spotting for.

12. LADDERS

Ladders may be used in work activities without the need for fall protection or a Working at Height Permit provided the following requirements are met:

- when ascending or descending a ladder both hands and feet must be used, the person must face the ladder and maintain three points of contact at all times, moving one rung/step at a time;

- ladders comply with the relevant Australian Standard (refer Section 22); and

- leaning or stretching away from the ladder is not necessary to perform the task.

12.1 Fixed Ladders

Fixed ladders must be installed in accordance with the relevant Australian Standard.

The angle of slope should be between 70 degrees and 75 degrees to the horizontal, and the ladder should be no greater than 6 metres in length. In no case may the ladder overhang the person climbing the ladder.

If the angle is more than 75 degrees, or the distance between levels is greater than 6 metres, a safe system of work to prevent falls should be provided such as a permanent fall-arrest system. Where such a system is not installed, the ladder shall be risk assessed and suitable controls implemented.

Where a user could fall more than 6 metres a ladder cage or other type of enclosure should be fitted to prevent a sideways fall from the ladder. Ladder cages shall not be relied upon as the only means of fall prevention. Response plans must consider limitations imposed by ladder cages.

12.2 Portable Step Platform Ladders

The use of step platform ladders is preferred over portable ladders. Where work requires the use of both hands a step platform ladder shall be used where ever practicable. Where it is not practicable the hierarchy of controls must be considered to reduce the risk to as low as reasonably practicable.

Step platform ladders should only be used if:

- the height of the work is compatible with the height of the platform;

- there are guard rails around three sides of the platform;
• the guard rails are inspected for damage prior to confirm they have not been damaged in transit or storage;

• the step platform ladder is unable to move whilst personnel are working on it; and

• the step platform ladder complies with the relevant Australian Standard.

12.3 All Other Portable Ladders

Personnel shall only be permitted to work from portable ladders, where:

• a spotter is used where the user’s feet are positioned more than 2 metres above the ground;

• when traversing the user shall always have two feet and one hand, or one foot and two hands on the ladder; and

• when working from the ladder the user shall maintain 3 points of contact.

Where these requirements cannot be met, such ladders may only be used for access and egress to a work area with appropriate edge protection.

When using either a single or extension portable ladder, personnel shall ensure that:

• the distance from the ladder base to the base of the support wall is as close to 25% of the working length of the ladder as practicable. Where the ratio is smaller, additional controls shall be considered and documented;

• the ladder is located on a firm footing and secured into position to prevent slipping or sideways movement;

• if being used to approach a platform, the ladder protrudes at least 900 mm beyond the landing for the platform;

• the ladder is not suspended from a parapet hook. Where risk assessment determines additional protection is necessary, fall arrest systems shall be considered; and

• all portable ladders meet the minimum requirements set out in the relevant Australian Standard.

Portable ladders should only be used where the use of safer systems is not reasonably practicable.

13. HOLES AND OPENINGS

All holes and openings where there is a risk of a person falling through shall be protected as follows:

• holes or openings in concrete floors shall, where practicable, be protected with embedded wire mesh and covered with material of adequate strength to prevent personnel or things entering or falling through;
• holes or openings in any other type of (non-concrete) floor shall be covered with material of adequate strength to prevent entry by objects or persons and be fixed securely to the floor;

• holes or openings covered with wire mesh shall be installed in accordance with specifications outlined further in the OHS Regulations;

• the wire mesh covering must not be used as a work platform and may only be removed when installing services. Only the part of the wire mesh that allows access for installation can be removed and the area shall be demarcated. In addition, wire mesh shall also be covered to prevent things falling through; and

• all hole and opening covers shall be sign posted with the words “DANGER – HOLE BENEATH”.

14. GRID MESH AND CHECKER PLATE

Where grid mesh or checker plate panels have become dislodged and there is a risk of personnel falling through, barricading shall be erected in accordance with Demarcation and Barricading procedure to restrict access until repairs are complete, and access to areas with missing panels shall be restricted to only repair work.

Grid mesh and checker plate flooring shall be securely fixed, in accordance with the manufacturer’s specifications, to a supporting structure.

15. BRITTLE OR FRAGILE SURFACES

Brittle or fragile surfaces may include those made from of asbestos, cellulose cement roof sheets, glass, fibreglass, acrylic or other similar synthetic moulded or fabricated material used to sheath a roof or in a roof.

Surfaces identified as potentially brittle or fragile shall be inspected to assess their integrity, and shall be sign posted at all access points with “DANGER – FRAGILE ROOFING – USE WORKING PLATFORM”.

All personnel required to work on brittle or fragile roofing shall:

• be informed that the roof is wholly or part brittle or fragile; and

• be provided with a safe working platform and safe access.

Where it is not possible to provide a safe working platform or any other means to prevent personnel from falling through fragile or brittle roofing, management shall ensure that:

• safety mesh is securely fixed directly over the top or directly underneath the brittle or fragile areas;

• barriers are securely fixed and adequately maintained around the brittle or fragile areas to prevent access; or
16. CEILING SPACES

When working in ceiling spaces consideration shall be given to the risk of falling through plasterboard and from man holes during access and egress. Personnel shall ensure they only step on beams and maintain three points of contact when manoeuvring around the ceiling space. Where practicable and deemed by risk assessment additional controls shall be put in place to reduce the risk of fall.

17. FREIGHT TRANSPORT AND GENERAL PLANT

Personnel undertaking work involving the transport of freight shall give consideration to prevention of falls when accessing and egressing vehicles and plant, handling oversized cargo, and loading and unloading, before commencing work.

Safe systems of work shall be developed, with the aim of carrying out as much work as possible at ground level.

Engineering controls shall also be considered to provide safe access and egress to vehicles and plant. Such engineering controls include but are not limited to steps, permanent access ladders, walkways, loading gantries, guard rails and slip resistant surfaces or coatings that render the surface trip or slip free.

Personnel required to, tie down or cover loads on large transport vehicles, shall avoid methods which require them to access to top of the vehicle.

18. INDUSTRIAL ROPE ACCESS SYSTEMS

Where all other methods of access are deemed unsuitable, industrial rope access systems may be used by a competent person to gain access to a work area by vertical suspended ropes (abseiling).

All industrial rope access equipment shall be used, inspected, maintained and stored in accordance with the relevant Australian Standard (refer to section 22).

19. CONTROL OF OBJECTS AT HEIGHT

When conducting work at height control measures shall be taken to prevent objects from falling and ensure the safety of personnel below. Such control measures may include but are not limited to:

- the use of tool lanyards, attached by a karabiner to the equipment loop on a harness or a suitable structure, when using tools at height;
- laying drop mats over grid mesh and surfaces with opening where objects may fall through;
• use of plastic or metal containers to hold items at height (not cardboard);
• use of controlled methods to mobilise tools and materials to the work area, i.e. davit/overhead crane or pulley system;
• installation of toe or kick boards on scaffolding and platform structures;
• installation of catch platforms beneath working platforms; and
• installation of safety nets or mesh beneath working platforms, grid mesh, fragile roofing and other structures where objects may fall from height.

Where there is a potential for objects to fall from height, barricading and signage shall be erected in accordance with the Demarcation and Barricading Procedure to delineate personnel from drop zones. Consideration shall be given to the distance tooling may deflect off structures when dropped, and the exclusion zone determined by risk assessment.

20. EMERGENCY PREPAREDNESS

A response plan shall be developed, prior to work commencing, with consideration for the following:

• assessment of work area to deem as safe prior to commencing response;
• possible incidents and injuries that could occur whilst undertaking the task;
• emergency equipment and first aid facilities required for each potential incident and injury;
• external emergency services that may be required and how to make contact with them;
• the role each person will play within the work group during a response;
• the training and competency of personnel in implementing the response plan and the use of relevant emergency equipment; and
• personal protection for personnel within the response team.

Consideration for response plans shall be referenced in the Job Hazard Analysis (JHA) as a control.

20.1 Suspension Trauma

When developing response plans consideration shall be given for suspension trauma, which may occur when a person has an arrested fall.

When a person is suspended and caught in an upright, vertical position and the harness straps cause pressure on the leg veins, blood flow to the heart may be reduced and
result in fainting, restriction of movement or loss of consciousness, all within a few minutes.

Suspension trauma can lead to renal failure and eventually death, depending on a person's susceptibility. The condition may be worsened by heat and dehydration.

A quick rescue of personnel suspended in a full body harness is vital. Personnel should be capable of conducting a rescue of a fallen worker and be familiar with rescue equipment and plan.

21. RECORD KEEPING

All records shall be managed in accordance with the Record Keeping Plan.

22. RELEVANT LEGISLATION

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23. REFERENCES

Demarcation and Barricading Procedure

Hazard Management Procedure

Record Keeping Plan

Working On, Over, In or Near Water Procedure

Working at Height Permit

24. PROCESS OWNER

The Health and Safety Manager has overall responsibility for this Procedure

Date approved: 12 February 2018  Review date: 12 February 2020
Version: 3  Approved by: General Manager Corporate Affairs & Governance
APPENDIX 1

Section 5.9 of AS 2550.10 Cranes Hoists and Winches – Safe Use – Mobile elevating work platforms

Personnel shall not enter or leave the platform when elevated (except in an emergency) unless each of the following conditions are met:

- risk analysis shows that this means of access is safer than all other means of access;
- the structural adequacy of the landing area has been established, and the landing area is clear;
- the risk of falling from the landing area is considered and controlled;
- the working envelope of the MEWP is at least 1.2 times greater than that required to access the landing (e.g., if the landing is positioned 10 m vertically and 5 m horizontally from the support surface, then the work platform shall be able to access a point located 12 m vertically and 6 m horizontally (see Figure 1);
- the work platform floor is capable of being located within 300 mm vertically of the landing (see Figures 1 and 2);
- where the work platform is located over the landing, the landing point is not less than 2 m from the edge of the structure, unless a safety harness is properly worn and attached to a suitable anchorage, where any potential fall is in excess of 2 m (see Figure 1); and
- where the work platform is located adjacent to the landing, the maximum gap between the platform and landing does not exceed 100 mm, and access and egress does not take place unless a safety harness is properly worn and attached to a suitable anchorage on the structure (see Figure 2).

NOTE: When egressing from a MEWP, where a person is required to use a fall arrest system and remain connected to an anchorage at all times, the MEWP should incorporate a double lanyard.

The base controls are tagged to indicate the equipment is in use and to caution against interference.

The resulting deflection that occurs when access and egress is performed at elevated positions are assessed and allowed for.

NOTE: To avoid excessive deflection, scissor lifts should be placed end on, when the work platform is positioned adjacent to a landing.
Figure 1 Height and Reach Requirements for MEWP'S Position Above the Landing
Figure 2 Maximum Dimensions for Location of the Work Platform Adjacent to Landing