

**1 Purpose:**

To minimise the WH&S risks associated with working at heights.

**2 Objective:**

To comply with regulatory standards and contractual requirements.

**3 Target:**

- No incidents or accidents related to working at heights on Bardavcol sites.

**4 Controls:****4.1 RESPONSIBILITIES**

Bardavcol, so far as is reasonably practicable, is responsible for ensuring:

- that this procedure is understood and applied by its staff;
- that appropriate resources are available to enable the identification of hazards, risk assessment, implementation and evaluation of controls; and
- that staff are provided with the tools, training and support required to effectively manage working at heights risks.

Project Managers are responsible for ensuring:

- the implementation of this procedure as appropriate to their project;
- a hazard and risk assessment is conducted to identify tasks involving working at heights;
- adequate controls are implemented to eliminate, or where this is not practicable, minimise risks relating to working at heights;
- working at heights hazards, risks and controls are communicated to workers on the project;
- the effectiveness of controls are evaluated and revised, as appropriate to manage the hazards and risks;
- appropriate resources are available to ensure the identification of hazards, risk assessment and implementation and evaluation of controls; and
- SWMS are prepared for tasks involving working at height equal to or greater than 2 metres or as deemed necessary to manage risks to safety, property damage and the environment.

Supervisors are responsible for ensuring:

- that working at heights hazards and risks are assessed;
- adequate controls are implemented to eliminate, or where this is not practicable, minimise risks relating to working at heights;
- workers are communicated and consulted with on working at heights hazards, risks and controls relevant to the project;
- the effectiveness of controls are evaluated and revised, as appropriate, to manage the hazards and risks;
- SWMS are prepared for tasks involving working at height equal to, or greater than 2 metres or as deemed necessary to manage risks to safety, property damage and the environment; and
- regular inspections of working at heights equipment (i.e. scaffolding, EWP, anchor points, ladders or trestles) are conducted.

Subcontractors are responsible for ensuring:

- that working at heights hazards and risks are assessed in relation to their scope of work and other activities that could impact on their work (i.e. tasks performed another work area);
- adequate controls are implemented to eliminate, or where this is not practicable, minimise risks relating to working at heights;
- workers are communicated and consulted with on working at heights hazards, risks and controls relevant to the project;
- the effectiveness of controls are evaluated and revised, as appropriate, to manage the hazards and

risks; and

- SWMS are prepared for tasks involving working at height equal to, or greater than 2 metres or as deemed necessary to manage risks to safety, property damage and the environment;
- regular inspections of working at heights equipment (i.e. scaffolding, EWP, anchor points, ladders or trestles) are conducted.

Workers are responsible for ensuring:

- compliance with the requirements of this procedure and any implemented controls in relation to working at heights at the project; and
- the Project Team is notified of any hazards, at risk behaviour or improvements required to manage working at heights risks.

#### **4.2 Hazard Identification**

The identification of hazards relating to risk of persons and objects falling from height requires the consideration of a range of factors, including the project scope of work, location, existing structures and any structures to be built. The identification process should involve consultation with workers, subcontractors, client, premises owners and designers. In some situations, advice may be needed from technical specialists, such as structural engineers, to check the stability of structures or load bearing capacity.

Hazards relating to working at heights and the risk of falls can include work:

- on any structure or plant being constructed, installed, demolished or dismantled, inspected, tested, repaired or cleaned;
- on a fragile surface (e.g. roof sheeting, skylights, damaged access structure);
- on a potentially unstable surface (e.g. areas of potential ground collapse);
- using equipment to work at an elevated level (e.g. use of EWPs, scaffold, ladders);
- on a sloping or slippery surface where it is difficult for people to maintain their balance (e.g. wet/muddy access ladders, batters);
- near an unprotected open edge (e.g. near an incomplete staircase); and
- near a hole, shaft or pit into which a worker could fall, or into which an object could fall and strike a worker (e.g. trenches, pits)

Consideration should also be given to hazards relating to:

- 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 capability to support loads, and
  - the slope of work surfaces, for example, where they exceed 7 degrees;
- levels (i.e. where levels change and workers may be exposed to a fall from one level to another);
- structures (i.e. the stability of temporary or permanent structures);
- the ground (i.e. the evenness and stability of the ground for safe support of scaffolding or a work platform);
- the working area (i.e. whether it is crowded or cluttered);
- entry and exit from the working area;
- edges (i.e. protection for open edges of floors, working platforms, walkways, walls or roofs);
- holes, openings or excavations (that require guarding); and
- hand grip (i.e. places where hand grip may be lost)

#### **4.3 Risk Assessment**

Where there is a potential for persons or objects to fall, a risk assessment must be undertaken and documented before commencing the work. Overall project risks are to be documented in the Project Risk Register and task specific risks documented in SWMS. The risk assessment must be reviewed where there is a change in the scope of works or if the risk a fall increases. The risk assessment should consider:

- the hazards associated with the work to be performed;
- what could happen if a fall did occur and how likely it is to occur;
- the potential consequences (i.e. severity of the risk);
- whether any existing control measures are effective;
- what additional measures or actions are required to control the risk;
- how urgently controls need to be implemented to effectively manage the risk.

When assessing the risks arising from each fall/heights hazard, consideration should be given to the following:

- the design and layout of elevated work areas, including the distance of a potential fall;
- the number and movement of all people at the project;
- the proximity of workers to unsafe areas where loads are placed on elevated working areas (e.g. loading areas) and where work is to be carried out above people and there is a risk of falling objects;
- the adequacy of inspection and maintenance of plant and equipment (e.g. scaffolding);
- the adequacy of lighting for clear vision;
- weather conditions, including 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 (e.g. inexperienced workers may be unfamiliar with a task); and
- the adequacy of procedures for all potential emergency situations.

#### 4.4 Controls

Control measures must be developed and implemented based on the outcome of the risk assessment and documented in the Project Risk Register, SWMS or other applicable document. Project wide controls must be communicated through the project induction and communication and consultation on task specific controls managed through the SWMS development, review and induction process.

A Working at Heights Permit must be issued prior to the commencement of any work that involves the following:

- use of a Boom type EWP, or scissor lift greater than 11m;
- use of a work-box;
- a worker wearing a harness (e.g. industrial rope access, fall restraint/arrest systems);
- accessing to the roof of a building/structure; or
- any other situation, as defined in the Project Management Plan.

In general, controls must:

- be selected according to the hierarchy of controls (refer to Table 1 below);
- ensure, where practicable work is completed on the ground or on a solid construction;
- eliminate, where reasonably practicable, the risk of a fall;
- where it is not reasonably practicable to eliminate the risk of falls, apply the hierarchy of hazard controls to reduce the risk of falls to so far as is reasonably practicable and must:
  - provide a fall protection (e.g. edge protection, covers); if not practicable
  - provide a work positioning system; if not practicable
  - provide a fall arrest harness;
- where a fall arrest harness is used, emergency rescue procedures are in place should a fall occur, the

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workers must be trained and instructed in those procedures and the procedures must be regularly tested;

- allow the selection of work methods which prevent work off ladders;
- ensure all working at heights equipment complies with the requirements of the relevant Australian Standards and is fit for purpose (note: all equipment must be checked prior to every use by a person trained in the use of the equipment);
- include equipment inspections undertaken by a person that has the relevant training and experience in the use of the equipment at specified intervals, as required or determined by the project or the manufacturer’s specifications;
- ensure all equipment is registered and tagged to indicate compliance with inspection requirements;
- prevent tools and equipment from falling from height (e.g. tool lanyards, kick boards on scaffold, chin straps);
- restrict or prevent access to areas that falling objects may land in if dropped from upper levels through the establishment and use of exclusion zones barricades and signage;
- ensure all forms of fixed, portable and moveable work platforms and suspended work cages conform to legislative requirements and relevant Australian Standards;
- ensure all persons erecting or dismantling scaffolding or operating elevating work platforms or cages are trained, deemed competent and where necessary certified for the equipment they are using;
- ensure that where persons are erecting or dismantling scaffolding and the risk of fall is 1.8 metres or greater a fall arrest harness system is used or alternative control measure are implemented to prevent a fall;
- ensure all persons tasked to work at heights are medically fit for such work; and
- allow for adequate supervision to be provided for tasks involving work at heights, including no work at height to be undertaken alone.

Table 1: Working at Heights Hierarchy of Control

Level 1: Undertake the work on the ground or from a solid construction									
Wherever possible seek options other than working at height (e.g. work on the ground or from a solid construction)									
Level 2: Undertake the work using a passive fall prevention device									
Undertake hazard and risk assessment to determine the method of work based on height and risk of fall:									
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">▪ Scaffolds</td> <td style="width: 33%;">▪ Perimeter Screens</td> <td style="width: 33%;">▪ Safety Mesh</td> </tr> <tr> <td>▪ Step Platforms</td> <td>▪ Perimeter Guard Railing</td> <td>▪ Protection for trenching works</td> </tr> <tr> <td>▪ Elevated Work Platforms</td> <td>▪ Guard railing edges of roofs</td> <td></td> </tr> </table>	▪ Scaffolds	▪ Perimeter Screens	▪ Safety Mesh	▪ Step Platforms	▪ Perimeter Guard Railing	▪ Protection for trenching works	▪ Elevated Work Platforms	▪ Guard railing edges of roofs	
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▪ Elevated Work Platforms	▪ Guard railing edges of roofs								
Work area to be stable and secure, fitted with perimeter edge protection (e.g., handrail) 900-1100m in height and mid-rail (Refer to AS/NZS 1576 and AS/NZS 4576).									
Level 3: Undertake the work using a work positioning system:									
This includes travel restraint systems and industrial rope access systems.									
Install guard railing, reduce shelf heights, mesh fragile roofs where access to elevated workplaces is regular and establish safe access (e.g., establish fixed ladders and safety harnesses, and anchor points).									
Perimeter screening, fencing, coverings or nets, handrails or other physical barriers that are of adequate height or load bearing to prevent the fall of a worker from an edge or through an opening.									

Level 4: Undertake the work using a fall injury minimisation system

Undertake the work using process control to reduce the likelihood of injury.

Use equipment and/or materials that are intended to prevent or reduce the severity of an injury to a worker if a fall does occur. It can include industrial safety nets, catch platforms and safety harness system. Fall injury minimisation systems should only be used if it is not reasonably practicable to use higher level control measures. Refer to Australian Standard *AS/NZS 1891 - Industrial Fall Arrest Systems and Devices*.

Level 5: Use work platforms or platform ladders

If it is not reasonably practical to use a higher order of control, the use of platform ladders is to be in accordance with the accepted SWMS. Work platforms, including trestles, are to be used with guard rails and climbing steps and worker to maintain 3 point contact when ascending or descending.

### **Fall Prevention Systems/Structure**

If the work cannot be performed on the ground or a solid construction, fall prevention systems/structures must be used to prevent the fall of workers and objects. These systems/structures include temporary work platforms (e.g. scaffold, EWPs, perimeter guard rails).

### **Guard Rails**

Guard rails can be installed 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; and
- at the edges of shafts, pits and other excavations.

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

The guard rail system must be adequate for the potential loads and take into account the number and mass of persons working in the area and the momentum of a falling person(s).

### **Scaffolding**

Scaffolding must be designed and installed appropriate to the activities to be performed and loads, including materials, equipment, tools and workers.

Scaffolding must:

- be erected, altered and dismantled by a licensed scaffolder;
- if any person or object could fall more than four metres:
  - be erected, altered and dismantled by or under the direct supervision of a licensed scaffolder;
  - be inspected by a licensed scaffolder before use, at least every 30 days, after any incident that could affect its stability (e.g. storm) and after any repairs;
- conform to *AS/NZS 4576 Guidelines for scaffolding* and the *AS/NZS 1576 Scaffolding* series;
- be of the same type and not mixed components if it is a prefabricated scaffold, unless the mixing of components has been approved, in writing, by the manufacturer;
- have safe access to and egress from the scaffold;
- have edge protection (hand rails, mid-rails and toe boards) at every open edge of a work platform;
- be maintained to ensure that working platforms are kept clear of debris and obstructions;
- not be altered (e.g. removal of guardrails, planks, toe boards, braces) by unauthorised persons (i.e. alterations must only be performed by an appropriately licensed scaffolder);

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- not be left incomplete or unattended without adequate controls (e.g. danger tags, warning signs, physical barriers) in place to prevent unauthorised access; and
- not be accessed if defective.

Workers that perform work on a scaffold must be advised of the following:

- the safe load limits applicable to the scaffold;
- not to make any unauthorised alterations to the scaffold (such as removing guard rails, planks, ties, toe boards and braces); and
- report any defects or issues relating to the scaffold.

Mobile scaffolds must only be used by workers that are trained and competent in their use and must ensure that the scaffold:

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

### Elevated Work Platforms

Elevated Work Platforms (EWP) include scissor lifts and boom lifts. The type of EWP to be used must be selected with regard to the tasks to be performed, related hazards and consideration of:

- ground conditions (i.e. stability);
- weather conditions (if applicable);
- ventilation (particularly if the EWP is not battery powered);
- access and egress;
- interface with other workers and the public; and
- proximity to overhead services and structures.

Mandatory requirements for the use of EWPs are as follows:

- workers operating the platform must be trained and competent in the use of the specific equipment, the safe use of fall arrest equipment (if applicable) and emergency rescue procedures;
- work must be performed in accordance with a SWMS that has been reviewed and accepted by Bardavcol prior to commencement;
- 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 - 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 must wear a properly anchored safety harness;
- where a safety harness is worn it must be directly attached to the designated anchor point and the lanyard must be as short as possible;
- workers that operate boom-type elevating work platforms with a boom length of 11 metres or more must be licensed.

As EWPs are defined as plant, their use must also satisfy the applicable requirements of Bardavcol's Plant and Equipment Procedure.

### Workboxes

Workboxes must only be used where it is not reasonably practicable to use a EWP or scaffold. They must

comprise of a platform surrounded by an edge protection system that is designed in accordance with AS 1418.17 *Cranes (including hoists and winches) —Design and construction of workboxes*.

The use of a workbox must not proceed unless a task specific risk assessment and SWMS has been prepared and reviewed by Bardavcol.

Mandatory requirements for the use of workboxes are as follows:

- the workbox must not be suspended over persons;  
the workbox must be designed for the task and the lifting equipment (e.g. crane, forklift truck, hoist) to ensure that it is securely attached (*workboxes fitted to a forklift must be securely attached to the forklift carriage and engineer-designed and constructed in accordance with AS 2359 Powered Industrial Trucks*)
- records of the workbox and lifting attachments must be maintained and checked by a competent person before use;
- the workbox must be fitted with a suitable anchorage capable of withstanding the fall forces specified in AS/NZS 1891.4 *Industrial fall-arrest systems and devices—Selection, use and maintenance*;
- workers must be attached to the anchorage by a lanyard and harness unless the workbox is fully enclosed;
- workers must remain within the workbox while they are being lifted or suspended;
- workers must not enter or leave the workbox when it is suspended (except in an emergency);
- the crane, forklift truck or hoist is fitted with the means to safely lower the workbox in an emergency or a power supply failure;
- the crane is suitably stabilised at all times while the workbox is used;  
the crane has 'drive up' and 'drive-down' controls on both the hoisting and luffing motions and those controls are used (*no declutching allowing free fall is to be used while a workbox is in use*)
- resources and equipment are provided to enable an effective means of communication between any person in the workbox and the operator
- the crane is fitted with a safety hook and moused (lashed) accordingly;
- no other device must be used to gain additional height (e.g. ladder);
- safety gates must be self-locking and kept shut while in the elevated position;
- the operator remains at the controls of the crane, forklift truck or hoist at all times;

### Industrial Rope Access Systems

The use of industrial rope access systems to access a workface should only be used where alternatives such as EWPs and scaffold cannot be used safely, or it is not reasonable and practicable.

The main purpose of using an industrial rope access system should be to gain access to a work area rather than to provide backup fall protection.

In the event that industrial rope access systems are to be used, the following minimum requirements apply:

- operators must be trained and competent in the techniques;
- operators must not work alone, in case they require assistance in an emergency;
- industrial rope access systems must only be installed in a location where it is possible to provide prompt assistance or rescue if required;
- all equipment must be checked regularly by a competent person and records of checks maintained;
- prior to use, all fixed anchorage points must be checked by a competent person before attaching the rope access lines;
- a backup system must be used to protect the operator;
- two independently anchored ropes must be used for each person;
- any person within three metres of an unguarded edge must be adequately secured;
- all operators must wear a full body harness;
- resources and appropriate equipment must be provided to ensure that supervisors can communicate

with workers;

- appropriate personal protective equipment is used, subject to a task specific risk assessment (eg. helmets, gloves, hearing protection, goggles and masks); and
- barricades and signposts must be placed on all access areas below the working area and anchorage locations to exclude and alert the public and other workers.

A SWMS must be prepared and reviewed by Bardavcol prior to the work commencing that includes details of emergency rescue procedures and confirmation that workers involved have been consulted with in relation to the hazards, risks and controls.

### Falling Objects

The work at height risk assessment must consider the risk of an object falling from the work area and potential consequences to workers, public, environment and property. This is particularly important for work that involves demolition, work over or adjacent to other construction and public areas (e.g. site compound, footpath, road) and includes the storage and transport of objects (and loads) at height. Controls to prevent the fall of objects must be documented in the applicable SMWS and communicated to workers prior to commencing the work. Controls include:

- Securing loads within containers or using restraint equipment when stored and/or shifted;
- Stacking materials so that they cannot slide, fall or collapse;
- Not exceeding load limits of the equipment that is storing the objects;
- Moving objects using equipment that is suitable for the task and by trained and competent workers;
- Establishing exclusions zones;
- Minimising the storage of materials at height;
- Removing materials that are not required for the task;
- Installing physical barriers (e.g. toe boards); and
- Using chutes when removing waste and other materials.

### Fall Restraint/Arrest Systems

Fall restraint/arrest systems must be used where the work cannot be performed on the ground or a solid construction and it is not reasonably practicable to control the risk through the use of fall prevention systems/structures. In certain situations, restraint/arrest systems may be used in combination with fall prevention structure/systems to ensure that the fall risk is effectively controlled.

### Individual Fall Arrest Systems

Individual fall arrest systems require the worker to wear a harness that is connected to an anchorage point and comprise other components depending on the situation and set-up of the system that is used. The performance of the arrest system relies on the worker wearing and using the equipment correctly, therefore only workers that have been trained and deemed competent are permitted to use individual fall arrest systems. As a minimum, workers that use an individual fall arrest system must have completed *Work Safely at Heights* (RIIWH204D).

The following requirements apply to the safe use of the individual arrest system:

- components of the arrest system (e.g. harness, lanyards, reels) must be inspected prior to every use and immediately following an arrested fall and recorded on the Working at Heights Permit;
- inspections must be conducted in accordance with the manufacturer's requirements and applicable Australian Standards (e.g. AS/NZS 1891)
- periodic inspections must be conducted in accordance with the manufacturer's requirements and applicable Australian Standards (e.g. AS/NZS 1891) and recorded in the Bardavcol and Project Equipment Register that are maintained by the Operations Supervisor and Project Team, respectively (note: Subcontractors and other personnel must provide evidence of these inspections to Bardavcol)



where they are operating for periods greater than 6 months);

- components that are worn or show signs of weakness must be withdrawn from use and replaced (the arrest system must not be used unless all required components are in place);
- anchorage points must:
  - comply with AS/NZS 1891.4;
  - not be used unless it has been tested and approved by a competent person;
  - be inspected before use to assess its condition (if there is any sign of damage/fault it must not be used);
  - be located so that a lanyard of the arrest system can be attached prior to the worker moving to a position where they could fall;
- the location of anchorage points and records of their inspection must be recorded in the Project Equipment Register;
- arrest system that involve the use of a lanyard must ensure that there is sufficient distance between the work surface and any surface below to enable the system to fully deploy (including shock absorbers). (note: the maximum distance a person can free fall before the fall-arrest system take effects is 2 metres);
- the following factors must be considered in the selection of the lanyards:
  - worker's height
  - location and height of the anchorage point;
  - any slack in the horizontal line;
  - any stretching of the lanyard or horizontal life line when extended by a fall;
  - the length of the energy absorber when extended by a fall
- lanyards must not be used in conjunction with inertia reels to prevent the risk of excessive free fall prior to being arrested;
- harnesses must comply with AS/NZS 1891 and be correctly fitted;
- inertia reels must be used in accordance with the manufacturer's specifications and not locked to allow it to support the worker while performing the task;
- only compatible components must be used and in accordance with AS/NZS 1891;
- work should be avoided in locations above the anchorage point to reduce the free fall distance and potential for the lanyard to be caught on obstructions

### Catch Platforms

Catch platforms must:

- incorporate a fully planked out deck;
- be positioned so that the deck extends at least 2 metres beyond all unprotected edges of the work area, except where extended guard railing is fitted to the catch platform;
- always be used with an adequate form of edge protection

### Falling Objects

Control measures to contain or catch falling objects must consider:

- the types of objects that could fall;
- the fall gradient;
- fall distance;
- the strength of any protective equipment or structures to withstand the impact forces of a falling object.

Where mobile plant is required to operate in areas where there is a risk of falling objects, FOPs must be installed.

Other controls to restrain/arrest objects that can be applied include:

- tool lanyards;

- erecting a covered pedestrian walkway; and/or
- erecting a catch platform with vertical sheeting or perimeter screening.

### **Ladders**

Ladders can be used in the following situations:

- for access to, or egress from a work area; or
- to perform light work of short duration where it can be done safely and it is not reasonable and practicable to use a higher order control (e.g. elevated work platform, scaffold).

Ladders must be:

- manufactured for industrial use;
- have a minimum load rating of 120kg;
- selected according the location, duration of the task, ground/surface and weather conditions;
- inspected prior to use to ensure that they are in good working condition and free of faults and damage;
- set-up on firm, stable and level ground;
- positioned at a safe distance from the supporting structure (if applicable);
- the correct size/height to enable safe use/access; and
- used in accordance with the manufacturer's requirements

### **Ladders for Access or Egress**

Where fixed or extension ladders are used for access or egress:

- the ladder must be located on a firm, stable surface
- the ladder must be secured at the top or bottom, with a preference for both ends (where practicable);
- the step-on and step-off points must be free from obstructions;
- the ladder must extend at least one metre above the stepping-off point onto the working platform or access area; and
- fall protection must be provided at the stepping-off and/or stepping-on point.

### **Work performed from ladders**

Where work is required to be performed from a ladder (i.e. it has been demonstrated that it is not reasonable or practicable to use a higher order control), this must done using a platform ladder. The use of an extension or 'A-frame' ladder to perform work is only permitted if it is demonstrated by a risk assessment that it is a safer alternative to a platform ladder (i.e. work performed in congested areas). Step ladders are not permitted.

### **Other requirements**

In general, activities not permitted when using ladders include:

- a) carrying of materials (unless within a tool belt or tether to the worker) or performing work unless three points of contact can be made (with the exception of work performed on the platform of platform ladders);
- b) use of metal or metal reinforced ladders when working on live electrical installations, or where there is a risk of electric shock;
- c) using a ladder to perform arc welding, oxy cutting, quick cut saws or work over other workers;

- d) using tools that require a high degree of leverage force which, if released, may cause the user to over-balance or fall from the ladder (e.g. pinch bars);
- e) multiple workers to be on the ladder at the same time;
- f) use of a ladder near a 'live' edge of an open floor, penetration or beside edge protection;
- g) reaching such that the worker's torso is outside of the ladder frame;
- h) facing away from the ladder when going up or down, or when working from it
- i) standing on a rung closer than 900 mm to the top of a single or extension ladder

Activities (f)-(i) may be permitted if:

- additional and appropriate fall protection equipment is used in conjunction with the ladder;
- SWMS for the task clearly document the controls that must be implemented;
- it can be demonstrated that the use of higher order controls are not reasonably practicable; and
- the Project Manager reviews and approves the SWMS.

Additional controls must be implemented when ladders are used:

- in plant/vehicle/pedestrian access areas, including roads, footpaths, doorways;
- on scaffolding or an elevated work platform 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.

#### 4.5 Training and Competency

Bardavcol must ensure that workers and subcontractors involved with working at heights are adequately trained for the type of work being carried out. The level of training obtained must be demonstrated with a relevant certificate, ticket or licence and confirmed prior to the commencement of work. This may be done prior to, or as part of the project induction.

As a minimum, all workers required to work where there is a potential to fall must:

- complete the project induction;
- be trained and understand the Work at Heights Permit process;
- be trained and understand the applicable safe system of work (eg. safe work method statement, standard operating procedure, risk assessment); and
- be trained on the equipment to be used and emergency response and rescue procedures (note: this may form part of the SWMS induction)

For defined high risk work (i.e. erection of scaffolding, installation of anchor points, use of fall arrest systems), workers must possess competencies as defined in the relevant Australian Standard and WHS legislation. Common 'work at height' activities and minimum competencies are listed below.

Activity	Minimum Competency
Elevated Work Platform – scissor <11 metres	Operate Elevating Work Platform (RIIHAN301D) Familiarisation training (for the specific EWP used)
Elevated Work Platform – boom <11 metres	Operate Elevating Work Platform (RIIHAN301D) Familiarisation training (for the specific EWP used)
Elevated Work Platform – boom >11 metres	Class WP Licence (high risk licence) Familiarisation training (for the specific EWP used)
Scaffolding (erection, alteration)	Basic (Class SB), Intermediate (Class SI) or Advanced (Class SA) Scaffolding, according to the

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	scaffolding work to be performed
Wearing a harness (including use of a fall arrest system)	Work Safely at Heights (RIIWH5204D)
Working from a workbox	Work safely at heights (RIIWH5204D)

**5 Permits/Licences:**

Equipment licenses as appropriate  
 Certificates of competency as appropriate  
 Potentially for working at heights permit depending on location of site

**6 Emergency Response:**

Whenever there are risks from working at height, appropriate emergency procedures, facilities and equipment (including first aid) must be established and provided. Typical injuries from falls can include unconsciousness and occluded airway, impalement, serious head or abdominal injuries and fractures. In developing emergency procedures, the different types of emergency and rescue scenarios that might arise and the working at heights hazards and controls identified in the project risk register must be considered.

When establishing emergency procedures, the following must be taken into account:

- location of work area;
- access to work area;
- need for emergency services;
- response times of emergency services;
- communications;
- type and location of rescue equipment;
- training requirements and competence of workers and rescuers; and
- appropriate first aid.

Once established, emergency procedures must be tested to confirm their effectiveness, the suitability of rescue equipment and identify opportunities for improvement. The testing of emergency procedures must be documented and actions taken to implement corrective actions or improvements opportunities that are identified

*Arrested Falls*

If the work at heights to be performed involves the use of a fall arrest system additional emergency response requirements must be considered by the project team and included in the project emergency response plan, SWMS and referenced in the applicable Working at Heights Permit.

These additional requirements are necessary given the increased risk associated with arrested falls and the quick response that is required to avoid serious injury and fatality.

Workers must

- never work alone when using a harness as fall protection;
- use a harness that allows legs to be kept horizontal;
- have access to foothold straps or an alternative method of placing weight on their legs; and
- be trained on emergency response procedures, equipment that is to be used to perform the work and in response to an emergency and movements to be performed (where possible) in the event that they or a worker is suspended in a harness.

**7 Program Inspection and registers:**

As per manufacturer’s requirements.  
 Check any equipment log books and service tags.

**8 References:**

Work, Health & Safety Act, SA 2012  
 Work, Health & Safety Regulations, SA 2012  
 COP under SA WHS Laws 2012:  
   How to Manage Work Health and Safety Risks  
   Construction Work  
   Managing the Work Environment and Facilities  
   Managing the Risks of Falls at Workplaces  
 AS/NZS 4576 Guidelines for Scaffolding  
 AS/NZS 1576 Scaffolding series  
 AS/NZS 1891 Industrial fall arrest systems and devices series

### Defenitions

<b><i>EWP</i></b>	Elevated work platform which includes a boom lift and scissor lift
<b><i>Fall</i></b>	a fall by a person from one level to another.
<b><i>Falling Object</i></b>	an object falling on a person if the falling object is reasonably likely to injure the person.
<b><i>Fall Prevention Device</i></b>	any equipment designed to prevent a fall for temporary work at heights and once in place does not require any further adjustment by workers using the device
<b><i>Licensed Scaffolder</i></b>	a worker that holds a High Risk Work Licence for scaffolding work applicable to the type of scaffolding work performed (i.e. Class SB (Basic), Class SI (Intermediate) or Class SA (Advanced) High Risk Work Licence)
<b><i>Risk of a fall</i></b>	<p>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:</p> <ul style="list-style-type: none"> <li>• in or on plant or a structure that is at an elevated level;</li> <li>• in or on plant that is being used to gain access to an elevated level;</li> <li>• in the vicinity of an opening through which a person could fall;</li> <li>• in the vicinity of an edge over which a person could fall;</li> <li>• on or in the vicinity of a surface through which a person could fall;</li> <li>• on or near the vicinity of a slippery, sloping or unstable surface; or</li> <li>• in any other place from which a person could fall.</li> </ul>
<b><i>Temporary Work Platform</i></b>	a working platform, other than a permanently installed fixed platform, used to provide a working area for the duration of the job that prevents workers from falling (e.g. scaffold, EWP)
<b><i>Working at heights</i></b>	a term used to describe a scenario where people or objects are at risk of falling from, into or through one level to another.

### 9 Tools/Forms:

[FO 113 Safety Inspection](#)  
 FO 111 Induction Register  
[FO 124 Site Induction Form](#)  
[FO 37 Safe Work Method Statement Template](#)  
[FO 38 SWMS Review Form](#)