



Work at Height Procedure

Brief description

This Procedure provides guidance on managing the risk of a person falling from height and the risk of a person being injured from objects falling from height.

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Contents

1	Terms and definitions	3
2	Introduction	6
2.1	Purpose	6
2.2	Scope	6
2.3	Objectives	6
3	Work at height	6
3.1	Safe working at heights	6
3.2	Control measures for the risk of an object falling	7
3.3	Control measures for risk of a person falling	8
3.4	Anchorage Points	13
3.5	Inspections	13
3.6	Elevating work platforms	14
3.7	Workbox	16
3.8	Scaffolding	17
3.9	Portable ladders	17
3.10	Approval of alternative methods for work at height	19
3.11	Training	19
3.12	Purchase of work at height equipment	19
3.13	Emergency response	19
4	Roles and responsibilities	19
5	Appendices	21
5.1	Appendix 1 – Related documents	21
5.2	Appendix 2 – Revision history	23

1 Terms and definitions

In this Procedure:

“Anchorage Point” means Anchorage Point means a device or thing by which a lanyard, Static Line or other line may be attached to a building or other structure, and includes the part of the building or structure to which the device or thing is attached.

Examples:

- (a) A stainless steel eyebolt, set in a concrete floor, to which a lanyard may be attached;
- (b) A sling around a steel I beam, with padding under the sling, joined by a shackle or other joining device to which a lanyard may be attached;
- (c) A plate for a travel restraint system fixed by screws to a roof component to which a lanyard may be attached.

“Attachment Device” means a hook, karabiners, or other devices used to connect a harness to an anchorage point.

“Competent Person” means a person who has acquired through a combination of training, qualification and experience, the knowledge and skills to perform a specified task and has been assessed that they can perform that task in a safe way.

“Edge Protection” means a barrier to prevent access to a work area or to prevent a person falling which has been erected along the edge or an opening in the surface of a building or other structure or from the surface from which work is to be done and is adequately fixed and capable of withstanding the weight of a person falling against or leaning on it.

“EWP” means elevating work platform.

“Fall Arrest System” means fall arrest system means plant or material designed to arrest a fall. Example – An industrial safety net, a catch platform, a safety harness system (other than a system that relies entirely on a restraint technique system).

“Fall-arrest Device” means a self-locking device meeting the requirements of AS/NZS 1891.3 whose function is to arrest a fall.

“Fall-arrest Harness System” means fall arrest harness system means a system that:

- (a) is designed to arrest the fall of a person using it and eliminate or minimise the risk of injury to the person as the fall is arrested; and
- (b) consists of a harness attached to:
 - (i) a device to absorb the energy of the falling person attached to a lanyard that is attached to a static line or anchorage point; or
 - (ii) a line that:
 - (A) has a device that automatically locks the line, and absorbs the energy of the falling person; and
 - (B) is attached to a static line or anchorage point; or
 - (iii) a lanyard that:

- (A) has a device that travels along a line or rail, automatically locks onto the line or rail, and absorbs the energy of the falling person; and
- (B) is attached to a static line or anchorage point.

“Fall Prevention” means fall prevention devices includes:

- (a) a secure fence;
- (b) edge protection;
- (c) working platform;
- (d) covers.

“Fall-Protection PPE” means harnesses and attachment devices used to manage the risks of falls, for example a Fall-arrest harness system.

“Free Fall” means any fall or part of a fall where the person falling is under the unrestrained influence of gravity over any fall distance, either vertically or on a slope on which it is not possible to walk without the assistance of a handrail or hand line. For a fall-arrest harness system, this means a vertical fall before the system starts to take load and is more than 600 mm but not more than 2 metres.

“Industrial rope access systems” means industrial rope access systems are used for gaining access to and working at a workface, usually by means of vertically suspended ropes. Although fall-arrest components are used in the industrial rope access system, the main purpose of the system is to gain access to a work area rather than to provide backup fall protection.

“kN” means Kilo newton.

“Lanyard” means an assembly consisting of a line and components which will enable connection between a harness and an anchorage point. It may incorporate an energy absorbing component. A tool lanyard is a line to connect a tool to a person, structure or static line to eliminate the potential for the tool to fall.

“PCBU” means person conducting a business or undertaking.

“Shadow of Load” means the line of energy that a Suspended Load would fall if the lifting device failed.

“Rescue Plan” means a documented list of steps on how to initiate a rescue response in the event of a fall.

“Static Line” means a flexible line, to which a lanyard is attached, supported by at least 2 Anchorage Points located so that the angle between the horizontal and an imaginary straight line between any Anchorage Point and the other or nearest Anchorage Point is:

- (a) if the manufacturer of the flexible line has specified the size of the angle - not more than the size specified; or
- (b) if the manufacturer has not specified the size of the angle - not more than 5°.

“Supported Load” means a load that cannot fall in the event of a lifting equipment failure as it is supported by either: an engineered support/structure, held by adequate weld or bolting; secured by rated chain, slings and shackles attached to fixed structure; or resting on suitable dunnage.

Supported load examples:

- (a) Gearbox that has been temporarily supported on suitable dunnage;
- (b) Dozer once supported on the engineered stands in the workshop;
- (c) GTU supported by approve beams;
- (d) Tank sitting on its supports that will not fall if bolts removed;
- (e) Load that is restrained by rated fixed length chain and shackles;
- (f) Pulley mounted on a vertical beam that been bolted sufficiently to support the load.

Note: Supported load risks are assessed using the normal GPC assessment of risk process.

“Suspended Load” means a load that is temporarily lifted by lifting equipment without any intervention to make the load a ‘Supported Load’.

Suspended Load examples:

- (a) Gearbox being lifted by a crane;
- (b) Raised blade of a dozer or a load on a forklift;
- (c) Shore brow being lifted by a crane;
- (d) Conveyor belt lifted by a crane if personnel are required to work directly it and its supports.

Note: a load in a stable landed position where it can no longer fall vertically is no longer suspended. The risk of it falling over should be considered using the normal GPC assessment of risk.

“Type 1 Fall Arrest Device” means Type 1 device (includes rope and rail grabs) The Type 1 device is attached to a fixed vertical or substantially vertical rail or a fixed vertical flexible line and can move up and down the rail or line at a predetermined maximum rate to follow the movement of the user. The user is connected via a short lanyard to the activating lever which locks the device in the event of a fall. A typical use of a Type 1 device is as a ladder fall-arrest system, using a rigid rail or a flexible line attached to the ladder.

“Type 2 Fall Arrest Device” means Type 2 device (also known as fall-arrester, inertia reel, self-retracting lifeline). The Type 2 device is generally attached to an anchorage point and pays out a line which is attached to the user’s harness. The line is controlled by a spring loaded reel which adjusts the line length as the wearer moves up and down in the course of the work. Under fall-arrest conditions the reel locks by means of the inertia-reel or similar mechanical principal.

“Type 3 Fall Arrest Device” means the Type 3 device is similar to the Type 2 with the addition of a winching mechanism.

“Workbox” means a personnel carrying device designed to be supported by a crane, hoist, forklift truck or other mechanical device to provide an elevated work area for persons working from the box. It consists of a platform surrounded by an edge protection system.

“Work at Height” means any work performed at a level that is above the ground or performed away from solid construction capable of supporting workers, material and other loads applied to it.

Terms that are capitalised and not otherwise defined in this Procedure are defined in the GPC Corporate Glossary Instruction (as listed in Appendix 1 – Related documents).

2 Introduction

2.1 Purpose

The WHS Regulation requires that a PCBU must manage the risk of a fall from one level to another and the risk of objects falling from height and causing injury to persons below. The purpose of this Procedure is to provide guidelines for how these risks are managed at GPC.

2.2 Scope

This Procedure covers all tasks and activities performed by Employees, Contractors and port users at sites owned and controlled by GPC.

2.3 Objectives

The objectives of this Procedure are to:

- specify a standard of working at height risk management practices in order to control the risk of a person falling from one level to another and the risk of objects falling; and
- specify a standard of working at height equipment that is maintained and applied in accordance with legislative requirements and industry best practice.

3 Work at height

3.1 Safe working at heights

The WHS Regulation - Part 4.4 has specific requirements regarding the management of fall hazards. These requirements must be implemented by workplaces.

The WHS Regulation does not differentiate between height distances. Requirements apply to all fall hazards from one level to another, regardless of the distance from the ground, including the use of low level platforms and ladders.

Risks of a fall must be controlled when a person is required to be within two metres of an unprotected edge or opening in the surface. Additional controls can be implemented beyond two metres as identified in the relevant risk assessment. When working in an elevated location, the risk of objects falling and causing injury to those below must also be managed. Where reasonably practicable, the requirements for persons to work at height should be eliminated. If elimination is not possible, then the risk must be minimised by:

- assessing the work to identify potential hazards that may result in a fall of an object or person;
- identifying suitable control measures to minimise the risk of a fall of a person or object and make sure the control measures are implemented prior to commencing work;
- planning the work to minimise the potential interaction between workgroups;
- ensuring all equipment used for working at height is inspected and certified for use; or
- persons performing work at height must be trained and competent.

Exemptions may be available following a formalised process detailed in section 3.1(a).

Where a fall risk is created from removing flooring and/or edge protection, the additional requirements of the GPC Temporary Removal of Flooring and/or Edge Protection Procedure must be followed.

(a) Exemptions

Where there is a requirement to work within two metres of an unprotected edge without work at height controls, a risk assessment must be conducted detailing the scope of work to be performed, the potential fall risk and proposed control measures. The risk assessment must be approved by the relevant Executive General Manager prior to work proceeding. Examples of where such exemptions may apply include:

- work on wharfs/jetties or adjacent to ponds/dams;
- mowing near an unprotected edge; and
- tying up vessels.

3.2 Control measures for the risk of an object falling

Where there is a risk of an object falling from height with the potential to strike and injure a person below, the risk must be either eliminated or minimised using any of the following methods.

(a) Physical barriers / containment screening

A physical barrier between the floor and handrails is installed at the elevated work area to contain objects to the work area. This could include, but is not limited to: steel mesh, structural ply, hoarding, conveyor belt, insertion rubber, steel plate, scaffold planks etc.

Grid mesh is not a suitable physical barrier when the size of an object, tool, equipment etc. has the potential to fall through the grid mesh.

During the installation, modification or removal of barriers or screening, controls shall be used to prevent components from falling and ensure that those installing, modifying or removing the barriers or screening are not exposed to a risk of a fall.

(b) Tool lanyards

Tool lanyards prevent tools from falling from the work level or restrain a dropped tool. Lanyards could be anchored to the body or a structure. If anchored to the body, then the lanyard must contain a breakaway link so if a tool is dropped or caught in moving machinery, the link severs and releases the tool. This safety feature reduces the risk of the worker being harmed.

(c) Gantry / catch platform / catch nets

If a gantry, catch platform or catch net is used as a control measure, it shall be erected to an appropriate design that is strong enough for the circumstances in which it is used and be able to prevent an object that may hit it from entering the adjoining area.

During the installation, modification or removal of gantries, catch platforms or nets, controls shall be used to prevent components from falling and ensure that those installing, modifying or removing the gantries, catch platforms or nets are not exposed to a risk of a fall.

(d) Barricades

As far as practicable, all non-essential persons and equipment must be kept clear of any work area(s) where there is a risk of being struck by a dropped or falling object. Barricading for work at height hazards (including objects falling) must be carried out in accordance with the Barricades Procedure.

(e) Suspended loads

Persons are not permitted to access under a Suspended Load. All Suspended Loads, including their line of energy, are to be risk assessed and controlled. Refer to the GPC Lifting Operations Procedure for further guidance.

Alternate methods of work must be employed to avoid working under a Suspended Load, including:

- work methodology such that persons are clear of the line of energy until the load is supported or the exposure to a Suspended Load is no longer a risk; and
- implementing controls such that the load becomes a Supported Load.

3.3 Control measures for risk of a person falling

Eliminating the need to work from height is the most effective protection. If the working at heights cannot be eliminated then control measures to prevent a person falling are in order of priority:

- a hard barricade;
- a fall protection cover placed over an opening, and secured to prevent movement; or
- a fall restraint system.

If fall prevention control measures are not practicable, then the following control measures to arrest a fall must be implemented:

- a fall arresting platform; or
- a Fall-arrest Harness System.

Provisions must be made for users to install, approach and connect onto a fall protection system without being exposed to a fall risk situation.

Where work at heights requires the use of personal fall protection (including a fall restraint system, a fall arresting platform or a Fall-arrest Harness System), a JSA is required to be developed and signed by the work group before work commences.

(a) Hard barricade

Hard barricading to prevent access to a fall risk must be installed as per the Barricades Procedure.

(b) Fall protection cover placed over an opening

A fall protection cover placed over an opening must be able to withstand the impact of a fall onto it of any person and be securely fixed in place to prevent it being moved or removed accidentally and must not be used as a working platform.

When creating the opening and installing fall protection cover, the person must be protected from a fall either through work methodology or higher level of controls relevant to the risk.

Penetrations

Any penetration with dimensions of more than 100mm x 100mm, or a diameter more than 100mm, is to have suitable controls implemented to prevent a potential injury. If the penetration is large enough for someone to fall through then the risk must be managed according to section 3.3 of this Procedure. Penetrations smaller than this must be covered if a risk assessment identifies a potential risk of medium or greater.

(c) Fall restraint systems

Where a fall protection cover or hard barricading cannot be utilised, a fall restraint system is the preferred control measure. Fall restraint systems must be set up to physically prevent the wearer from reaching an unprotected edge.

Fall restraint systems must only be used where the user can maintain secure footing without having to tension the restraint line and without the aid of any other hand hold or lateral support. When determining whether secure footing can be maintained, consider the:

- slope of the surface;
- surface and supporting material type; and
- surface texture and whether it is likely to be wet, oily or otherwise slippery.

A fall restraint system is not suitable in the following applications and a Fall Arrest System must be implemented if higher controls are not reasonably practicable:

- The user can reach a position where a fall is possible.
- The user has a restraint line that can be adjusted in length so that a fall position can be reached.
- There is a risk the user may fall through the surface, for example fragile roofing material.
- The slope is over 15 degrees.
- If there is any other reasonably likely use, or misuse, the system that could lead to a free fall.

Typical fall restraint technique is illustrated in Figure 1.

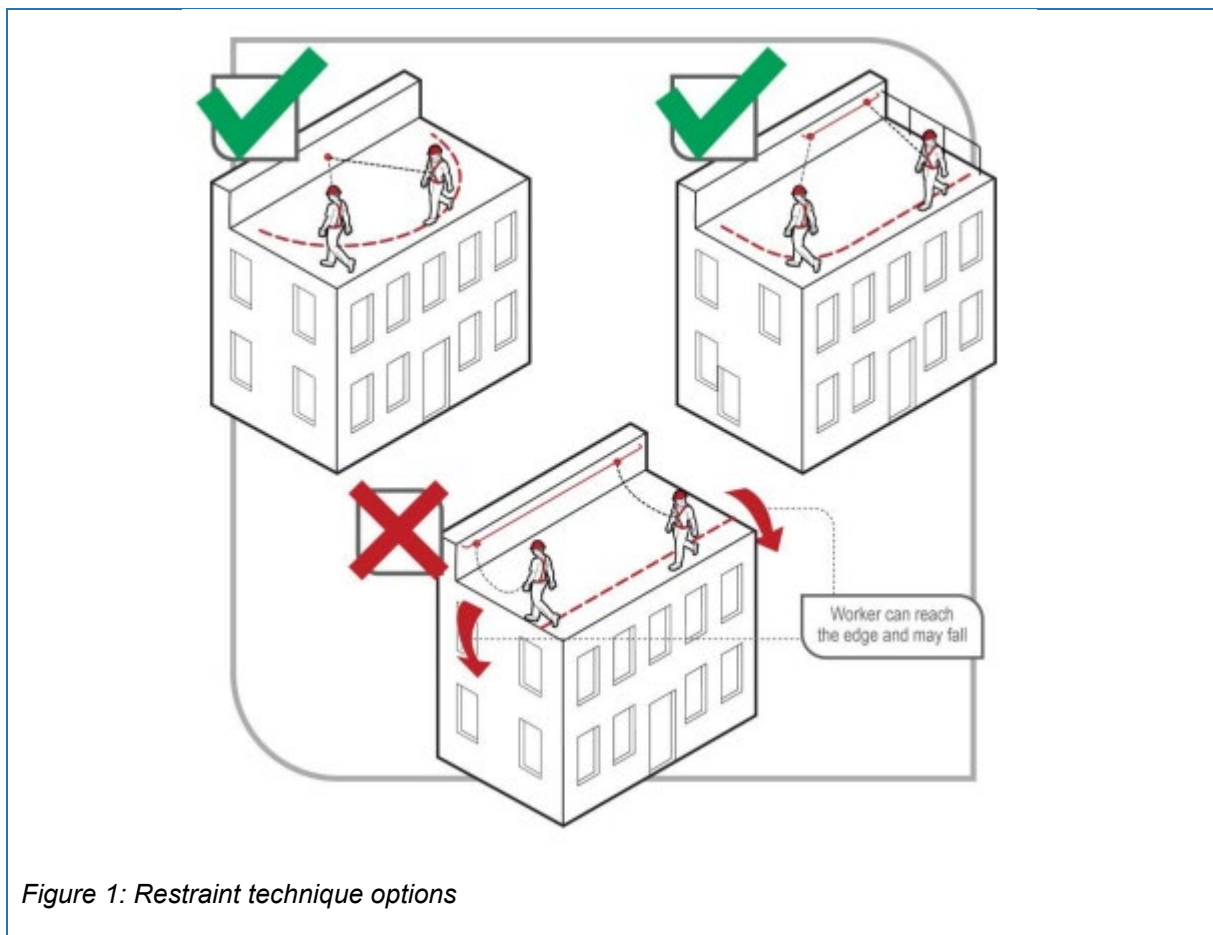


Figure 1: Restraint technique options

(d) Fall-arrest Harness Systems

Fall-arrest Harness Systems must only be used where no other reasonably practicable option is available and where its use is in accordance with an approved JSA or Safe Work Instruction.

Where a Fall-arrest Harness System is used, teams must make sure:

- pre-existing medical conditions, such as epilepsy or vertigo, are considered prior to a person using a Fall Arrest System;
- a Rescue Plan has been developed to recover the individual in the event of a fall;
- the Rescue Plan must be documented on the GPC Work at Height Rescue Plan Template;
 - contractors and port users may use their own template if approved by their GPC Representative;
- there is at least one other person on the job site who is familiar with, and able to enact, the Rescue Plan;
- a trained, competent and dedicated standby person is assigned to continuously monitor the worker using the system;
- a communication system has been established that enables the work crew to adequately summon help in an emergency; and

- persons are trained and competent in the safe use and application of Fall-arrest Harness Systems.

Fall-arrest Harness Systems must be installed and maintained in accordance with the instructions of the manufacturer or supplier, a qualified engineer or competent person.

A harness worn for fall arrest must be fitted with suspension trauma straps. Fall arrest harnesses ordered through GPC will be supplied with suspension trauma straps as standard. Replacement straps can also be purchased separately.

A suitable energy absorber must be a part of, or installed to, a lanyard assembly. The lanyard assembly (including lanyard, energy absorber and attachment fittings) should be as short as practicable and not more than two metres in total length when used in conjunction with a Fall-arrest Harness System.

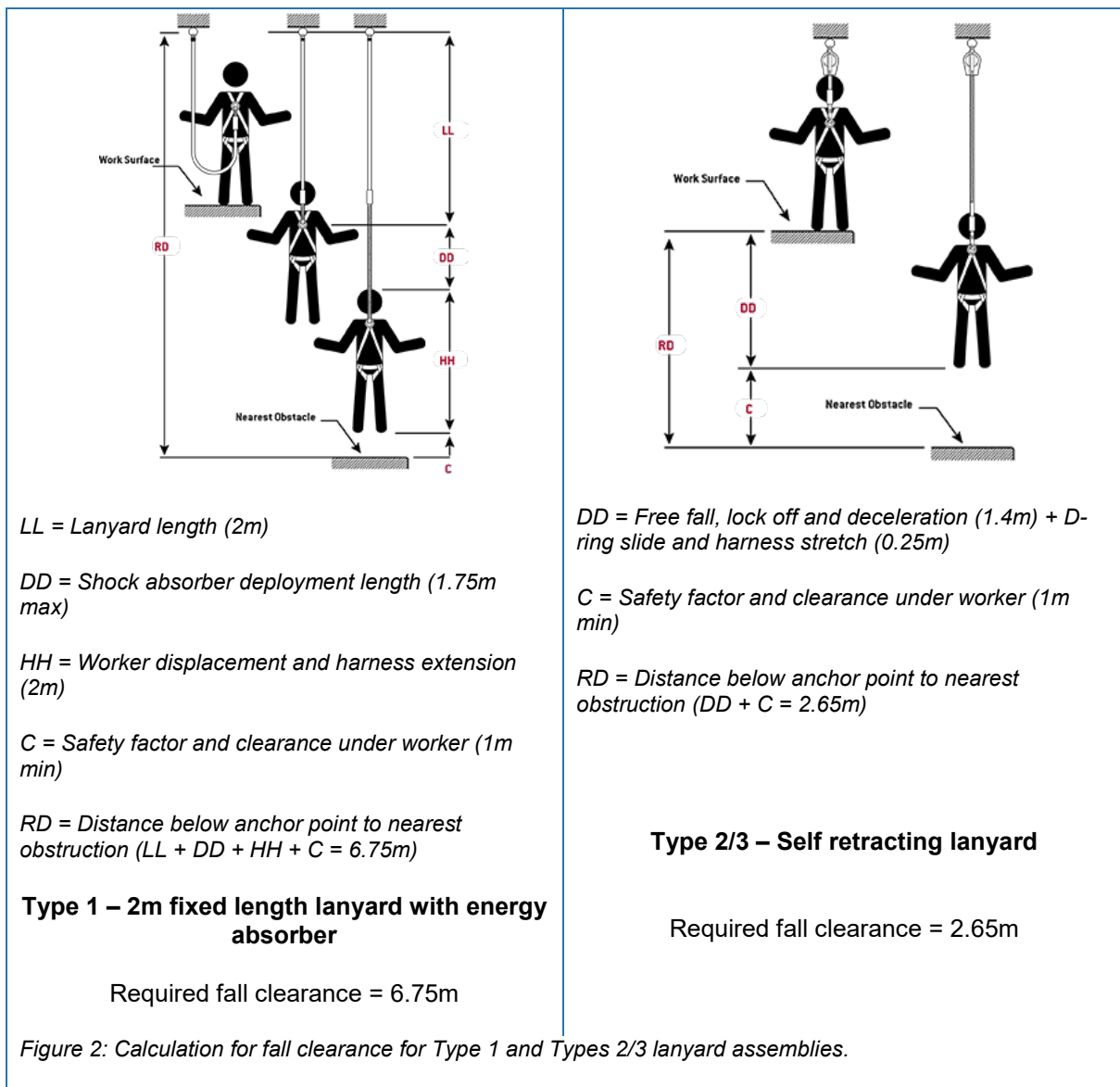
The person using the Fall-arrest Harness System must ensure that:

- no part of the system can come into contact with anything that could affect the safe use of the system;
- following any chemical contamination that occurs during use, the entire device must be washed in accordance with manufacturer recommendations and tagged out until inspection by a competent person deems the equipment safe for continued use;
- if the system has been used to arrest a fall, the system must be tagged out and not be used again unless its manufacturer or a competent person has inspected it and deems the equipment safe for continued use; and
- there is enough distance available for a person using the system to fall with sufficient clear space to prevent the person hitting an object, the ground or another surface.

Factors to be considered in determining the minimum required fall clearance are:

- the height and position of the Anchorage Point;
- the length of the lanyard, including any slack in the Static Line;
- any stretching of the lanyard or Static Line when extended by a fall;
- the length of the energy absorber when extended by a fall;
- the person's height;
- residual clearance – at least 1 metre; and
- any other relevant factor.

Figure 2 highlights the fall clearance required for Type 1 (2m fixed length lanyard) and Types 2/3 (inertia reel) assemblies.



(e) Fall arresting platforms

The use of fall arresting platforms to “catch” a person can only be used where it is not possible to eliminate the fall or provide a more reliable means of fall protection.

The platform should be of robust construction and designed to withstand the maximum potential impact load. Scaffold components may be used. Two common types of fall arresting platforms include catch platforms and industrial safety nets.

Catch platforms

Catch platforms should:

- incorporate a fully planked out deck;
- be positioned so the deck extends at least two metres beyond all unprotected edges of the work area, except where extended guard railing is fitted to the catch platform;
- be positioned as close as possible to the underside of the work area – the distance a person could fall should be no more than one metre; and
- always be used with an adequate form of edge protection.

Industrial safety nets

Industrial safety nets used as a means of catching a person are to:

- be designed by an engineer or competent person;
- be installed and used in accordance with the manufacturer's or supplier's safety instructions;
- be made of material that is of sufficient strength to catch a person and be designed to minimise injury to a person once they have fallen into the net;
- have energy absorbing qualities that reduce the shock to a person falling into the net;
- have sufficient tension and clearance to prevent a person who falls from contacting or striking any surface or structure below the net;
- be as close as possible to the platform or level at which the person could potentially fall, but no more than two metres below the working area; and
- be inspected after installation, relocation or repair on site and prior to persons working in a position where they could fall onto the net.

3.4 Anchorage Points

Anchorage Points may be selected or constructed. Each Anchorage Point of the system, including Anchorage Points supporting a Static Line, must have a capacity of at least:

- Fall restraint 15 kN (one person)
- Fall arrest 15 kN (one person)
- Fall arrest 21 kN (two people)

No more than two people may be attached to an Anchorage Point or Static Line at any time.

Permanent Anchorage Points shall be engineer designed, approved and labelled in accordance with AS1891.4. Signage must be provided for each temporary Anchorage Point in place for longer than one month.

Permanent anchor points must be inspected 12 monthly unless manufacturer requirements suggest otherwise. All permanent anchor points and their inspection history must be recorded on a register.

Each Anchorage Point of a fall restraint or Fall-arrest Harness System must be located so that the user can connect their lanyard or Attachment Device to the system prior to moving into a position where they will be at risk of a fall from height.

Anchorage points of a Fall-arrest Harness System should be located above head/shoulder height and as close as practical to vertical above the worker to reduce the pendulum effect and impact trauma.

All Anchorage Points must be inspected by the user prior to each use.

3.5 Inspections

The user shall inspect all components of a fall restraint and Fall-arrest Harness System (i.e.- harness, lanyard, energy absorber and Anchorage Point) before and after each use.

A competent person must conduct documented inspections and services as per Table 1:

Table 1: Inspection and service requirements for personal fall protection systems.

Equipment	Inspection interval	Service
Harness	6 month	N/A
Lanyard	6 month	N/A
Static Lines	6 month	6 month
Fall Arrest Devices (e.g.: Inertia Reel, Belay)	6 month	12 month or manufacturer recommendation
Ropes	6 month	N/A
Anchor Points (permanent)	12 month	N/A

A record of inspections must be recorded in the working at height equipment register. With the exception of Anchor Points, the item must then be tagged with the appropriate colour tag as indicated in Table 2. These tags confirm the inspection has occurred and that at the time of inspection the equipment is safe for use. Equipment tagging is to be carried out in accordance with Execution Guide Inspection Tagging of Slings, Height Safety and Lifting Equipment.

Table 2: Inspection tag colour code for personal fall protection systems.

Tag Colour	Inspection period
Purple	April to October
Orange	November to March

The year of the inspection must also be recorded on the inspection tag.

If any component of the system shows evidence of wear or weakness that may affect the systems safety, the defective component must be tagged out of service and not be used. If the defective component cannot be repaired the component must be destroyed and the work at height equipment register updated to reflect removal of equipment from service.

3.6 Elevating work platforms

EWPs, including boom-type, scissor lifts and vertical mast lifts, must be used in accordance with AS 2550.10 Cranes, hoists and winches - Safe use, Part 10: Mobile elevating work platforms and comply with personal fall protection and dropped objects management requirements, as stated in this Procedure.

General requirements for safe work from EWPs are:

- Workers must be licensed and familiarised when operating boom-type EWPs with a boom length of 11m or more.

- The work area of the EWP must be adequately set up such that other workers and activities do not inadvertently impact on the safe operation of the EWP. This may require traffic management plans, barricading and signage if normal traffic flow is expected to be impacted.
- Persons inside the basket of an EWP must use a Fall Arrest System consisting of a full body harness, that is connected to a suitable anchor point located in the basket by either:
 - A Fixed length lanyard fitted with a shock absorber; or
 - A retractable lanyard.

The lanyard should be as short as possible to minimise the risk of ejection.

- The lanyard assembly (fixed or retractable) must be attached to the rear dorsal of the harness.
- A documented Rescue Plan that includes the use of a spotter who is trained and competent in the use of ground controls of the EWP and any other emergency rescue systems detailed in the Rescue Plan.
- All persons must stand on the floor of the platform only, not on the handrails or items such as ladders, scaffolding or boxes.
- Required tools and equipment must be located within the confines of the basket / platform and must not exceed the safe working limits of the EWP.
- Maintenance and service inspection records must be maintained in the machine log book located with the machine.

(a) Working over water

A safety harnesses must be worn and attached to an approved anchor point within the basket when working over water.

(b) Exiting an EWP basket/platform in an elevated position

Persons shall not enter or leave the basket/platform when it is elevated, except in an emergency, unless each of the following conditions are met:

- a risk assessment shows that this alternative means of access is safer than all other means of access; and
- the structural adequacy of the landing area has been established and the landing area is clear; and
- where the landing is at the edge of a structure:
 - the maximum gap between the platform and landing shall not exceed 100mm and
 - the platform shall be secured (e.g. tied) to a suitable point on the landing and access and egress must not take place unless there is a double hook-up of the safety harness to suitable Anchorage Points at all times; or
- where the landing is an area away from the edge of a structure the landing point shall not be less than two metres from the edge of the structure, where any potential fall; and

- the base controls shall be tagged to indicate the equipment is in use and to caution against interference.

3.7 Workbox

Workboxes must be designed according to AS 1418.17 Cranes (including hoists and winches)
– Design and construction of workboxes.

- A workbox will 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 will be attached to the anchorage by a fall arrest lanyard and harness system unless the workbox is fully enclosed. This includes when working over water. When working in fall arrest, the rescue plan must take into consideration access to workers in the workbox in the event of an emergency or lifting equipment power supply failure.
- Use of crane workboxes will comply with AS 2550.1 Cranes, Hoists and Winches—Safe Use—General Requirements.
- A workbox fitted to a forklift must be securely attached to the forklift carriage and designed and constructed in accordance with AS 2359 Powered Industrial Trucks. Persons will not be raised on the tynes of forklift trucks or a pallet.
- The workbox, lifting attachments and records will be checked by a competent person before use.
- Slings / lifting attachments on the workbox need to be rated and moused.
- The lifting hook must be moused.
- Lifting equipment shall not travel while people are in the workbox, unless in the immediate work area and movement is required to safely perform the required work.
- Workers will remain within the workbox while they are being lifted or suspended. They will not enter or leave the workbox when it is suspended except in an emergency, unless the same requirements are met as detailed in 3.6 (b) Exiting an EWP basket/platform in an elevated position.
- The lifting equipment is suitably stabilised at all times while the workbox is used.
- The operator of the lifting equipment remains at the controls at all times while persons are located in a workbox.
- An effective means of communication between any person in the workbox and the operator is provided.
- Directions to the lifting equipment operator must only be provided from the workbox by a person holding a dogging licence.
- No other device (for example, ladder or pallets) can be used to gain additional height from a workbox.
- The safety gate must be inward opening and self-locking and kept shut when in the elevated position.
- A workbox will not be suspended over persons.

- Cranes used to lift workboxes must have and use 'drive up' and 'drive down' controls on both hoisting and luffing motions, have an anti-two block device and not be de-clutched allowing free-fall.

3.8 Scaffolding

The requirements for the safe management of scaffolds is detailed within the GPC Safe Use of Scaffold Procedure.

3.9 Portable ladders

Portable ladders, including platform ladders, step ladders, single and extension ladders, are primarily designed to be used as a means of access and egress.

Ladders should be selected to suit the work to be carried out. In doing this, workers should consider the duration of the work, the physical surroundings of where the work is to be carried out and the prevailing weather conditions. Depending on the specific task and how it is carried out, platform ladders should provide an improved level of fall protection over traditional step or single ladders as they include a small working platform and a partial or full handrail.

All portable ladders must be:

- suitable for the task;
- load rated of at least 120kg and marked as such;
- manufactured for industrial use and marked as such; and
- designed in accordance with AS 1892 Portable Ladders.

(a) Purchase and inspection of ladders

On purchase of a portable ladder, it must be inspected and logged in the ladder register by the relevant Supervisor or delegate.

Portable ladders must be inspected annually by a competent person, recorded in the register and tagged to indicate compliance.

A Portable Ladder Register and Portable Ladder Inspection Checklist template is available.

All portable ladders must also be inspected by the user:

- before each use;
- after mishaps, drops or impacts; and
- if it has been exposed to excessive heat or a corrosive substance.

Any portable ladder that is identified as being damaged or has parts missing is to be tagged out of service until repaired or destroyed and the ladder register updated to reflect removal of equipment from service

(b) Safe work practices for use of portable ladders

The following safe work practices must be adopted when using portable ladders:

- Observe the manufacturer's instructions affixed to the side of the ladder at all times.

- Ladders must not be used to support a platform.
- If a single or extension ladder is to be used on poles they need to have a device fitted near the top of the ladder to fit to the shape of the pole.
- Ladders must not be longer than 6.1m if single ladders, and not longer than 7.5m if extension ladder unless used for electrical work.
- Extension ladders must be placed so that the angle between the ladder and the horizontal is at least 70° but not more than 80° (approximate ratio of 1m horizontal to 4m vertical) when in use, and extend 1 metre above the surface being accessed.
- The person using the ladder must ensure that the bottom of the ladder is on a stable surface and the rungs of the ladder are approximately level.
- Single and extension ladders can be prevented from slipping by securing the ladder at the top, bottom or both. Stepladders or other ladders where it is not possible to secure the ladder may require a second person to 'foot' the ladder for added stability.
- When erected, if the ladder is exposed to pedestrian or vehicle traffic, then it shall be barricaded and sign posted to protect it from collision.
- Use slip resistant footwear when ascending and descending ladders.
- The person using a ladder must face the ladder and have their hands free at all times to grip the stiles when climbing or descending the ladder. Alternative systems must be used to bring items of equipment up or down the ladder, i.e. ropes or tool belts, etc.
- The user must ensure adequate controls are implemented when ladders are used to gain access above a protected edge.
- The user is not to stand higher than the second tread before the top plate of a step ladder (with the exception of the three rung ladders).

(c) Safe work off portable ladders

It is preferable that work at heights be performed from scaffolds or EWPs rather than from a ladder. Ladders must only be used as a working platform for light work of short duration that can be carried out safely following these guidelines:

- Keep your centre of gravity over the ladder – don't reach out.
- Three (3) points of contact must be maintained. When working off a ladder, have two feet and one other point of contact (hand or thighs leaning against ladder).
- If three (3) points of contact cannot be maintained, then a Fall-arrest Harness System must be worn with the lanyard attached to a suitable Anchorage Point – not the ladder.
- When the only practical way to carry out a job over 1.8 metres in height is through the use of an extension ladder, the ladder should be securely tied at the top through the ladder stiles and at least one rung, and the bottom of the stile shall rest upon a solid foundation giving support at the base which should prevent movement in any direction.
- Only use ladders of non-conductive materials when performing electrical work.

3.10 Approval of alternative methods for work at height

Alternative methods for work at height include, but are not limited to, a boson's chair, swing stages and industrial rope access. If these methods are to be used they must meet the requirements of the WHS Act and WHS Regulation, and relevant Australian Standards. Guidance on industrial rope access systems is available in AS/NZS 4488 Industrial Rope Access System series.

A documented risk assessment must be conducted by the person proposing the method and must be approved by the relevant Manager.

3.11 Training

All workers using, installing and maintaining personal fall protection systems must have completed, and maintain, nationally accredited work safely at height training. In addition, employees must also complete the GPC Work at Heights System Training and maintain this competency. The GPC Work at Heights System Training must be conducted as per the GPC Job Specific Mandatory Training Matrix.

3.12 Purchase of work at height equipment

A selection of work at height equipment has been approved for use on site and is detailed in the Approved Purchasing List of Personal Fall Protection and Equipment for Work at Height List.

All purchased equipment must be as per this list and must be inspected upon receipt to ensure conformity to the purchase order specifications. The equipment must be logged in the equipment register and tagged prior to first use.

3.13 Emergency response

A Rescue Plan must be documented on the Rescue Plan template for any work intending to use a Fall-arrest Harness System. The plan must be endorsed by the relevant Supervisor prior to commencing work. Persons must ensure the rescue plan is effective.

Persons who may be required to enact the Rescue Plan must be trained and competent to do so.

4 Roles and responsibilities

Role	Responsibilities
Executive Leadership Team	<ul style="list-style-type: none">• Ensure that GPC has adequate resources and systems in place for the supply of suitable working at height equipment and training in the appropriate use of such equipment.• Provide adequate resources to ensure the effective monitoring and management of the requirements of this Procedure.• Ensure compliance to this Procedure throughout GPC.
Managers	<ul style="list-style-type: none">• Ensure that established systems are promoted, understood and complied with.

Role	Responsibilities
	<ul style="list-style-type: none"> • Conduct inspections to ensure working at height equipment is being used effectively and the Procedure is being met. • Manage non-conformances with this Procedure.
Superintendents, Specialists or project managers	<ul style="list-style-type: none"> • Ensure that training is provided for the safe use of working at height equipment. • Ensure that appropriate investigations are conducted into the non-conformance with this Procedure. • Conduct inspections to ensure working at height equipment is being used effectively and this Procedure is being met. • Manage non-conformances with this Procedure.
Supervisors, Contract Supervisors, GPC Representatives	<ul style="list-style-type: none"> • Conduct inspections to ensure working at height equipment is being used effectively and this Procedure is being met. • Ensure that working at height equipment is readily accessible to all Workers. • Ensure Workers are conducting risk assessments to determine adequate controls required for tasks. • Ensure Workers are instructed in the correct use and are competent with work at height equipment. • Manage non-conformances with this Procedure. • Approve contractor and port user rescue plans for fall arrest situations.
GPC Safety Department	<ul style="list-style-type: none"> • Provide relevant advice in the managing risk of falls. • Monitor compliance to this Procedure. • Support team leaders in the interpretation of legislation and the application of this Procedure. • Keep abreast of legislative requirements and standards relating to managing risks of falls and share relevant information to work groups.
Employees, Contractors, Workers and port users	<ul style="list-style-type: none"> • Attain and maintain training and competency in the correct use of working at height equipment to be used. • Report any defective or damaged working at height equipment supplied by GPC to their Supervisor / Superintendent / GPC Representative.

Role	Responsibilities
	<ul style="list-style-type: none"> • Not wilfully or recklessly damage, interfere or misuse working at height equipment. • Comply with this Procedure. • Take reasonable care for their own safety.

5 Appendices

5.1 Appendix 1 – Related documents

(a) Legislation and regulation

Key relevant legislation and regulation, as amended from time to time, includes but is not limited to:

Type	Legislation/regulation
State Acts	<p><i>Work Health and Safety Act 2011 (Qld)</i></p> <p><i>Work Health and Safety Regulation 2011 (Qld)</i></p>
Other	<p>Managing the risk of falls at workplaces Code of Practice</p> <p>Scaffolding Code of Practice</p> <p>AS/NZS 1353.2:1997 Flat synthetic webbing slings – Care and use</p> <p>AS/1666.2:2009 Wire-rope slings – Care and use</p> <p>AS/NZS 1891.1:2007 Industrial fall-arrest systems and devices – Harnesses and ancillary equipment</p> <p>AS/NZS 1891.2:2001 Industrial fall-arrest systems and devices – Horizontal lifeline and rail systems</p> <p>AS/NZS 1891.2 Supp 1:2001 Industrial fall-arrest systems and devices – Horizontal lifeline and rail systems – Prescribed configurations for horizontal lifelines</p> <p>AS/NZS 1891.3:1997 Industrial fall-arrest systems and devices - Fall-arrest devices</p> <p>AS/NZS 1891.4:2009 Industrial fall-arrest systems and devices - Selection, use and maintenance</p> <p>AS/NZS 4142.1:1993 Fibre ropes – Care and safe usage</p> <p>AS/NZS 4497.2:1997 Round slings – Synthetic fibre – care and use</p>

Type	Legislation/regulation
	AS 1892 Portable Ladders
	AS 1418.17 Cranes (including hoists and winches) – Design and construction of workboxes
	AS 2550.1 Cranes, Hoists and Winches—Safe Use—General Requirements
	AS 2550.10 Cranes, hoists and winches - Safe use, Part 10: Mobile elevating work platforms
	AS 5532 Manufacturing requirements for single point anchor devices used for harness based work at height
	AS 2359 Powered Industrial Trucks
	AS 1657 Fixed Platforms, Walkways, Stairways and Ladders
	AS/NZS 4488 Industrial Rope Access System series

(b) Gladstone Ports Corporation documents

The following documents relate to this Procedure:

Type	Document number and title
Tier 1: Policy	#365624 Safety Policy
Tier 2: Standard/Strategy	#854303 Safety Management Framework Standard
Tier 3: Specification/ Procedure/Plan	#123526 Barricades Procedure #1268891 Temporary Removal of Flooring and/or Edge Protection Procedure #1528257 Safe Use of Scaffolds Procedure #1497376 Lifting Operations Procedure
Tier 4: Instruction/Form/ Template/Checklist	#1260121 Work at Height Rescue Plan #1370630 Portable Ladder Register Template and Portable Ladder Inspection Checklist #538929 RGTCT and BPT Lifting Equipment Register #1847988 Execution Guide Inspection Tagging of Slings, Height Safety and Lifting Equipment #1621179 GPC Corporate Glossary Instruction

Type	Document number and title
Other	#1263232 Approved Purchasing List of Personal Fall Protection and Equipment for Work at Height List Standard #1892444 Portable Ladder Register (GPC Master)

5.2 Appendix 2 – Revision history

Revision date	Revision description	Author	Endorsed by	Approved by
05/06/2017	Document re-written	Tony Young, Safety Manager	CEO	CEO
29/08/2019	Three yearly document review and update	Tony Young, Safety Manager	CEO	CEO
04/07/2020	Amendment to suspended loads requirements	Tony Young, Safety Manager	Ged Melrose, Acting Operations General Manager	Ged Melrose, Acting Operations General Manager
05/08/2020	Legal review by HSF (minor formatting changes accepted). No material change to context or intent.	Tony Young, Safety Manager	Rowen Winsor, People Community & Sustainability General Manager	Tony Young, Safety Manager
22/05/2023	3 yearly review	Kirsty Iszlaub, Safety & Training Specialist - Systems	Tony Young, Safety & Training Manager	Richard Haward, Executive General Manager Safety & ESG
18/09/2023	Further context added to some items to support interpretation and align barricading and lifting operation requirements.	Kirsty Iszlaub, Safety & Environment Systems Lead	Tony Young, Safety Manager	Richard Haward, EGM Safety & ESG