Working at Heights Procedure

1 July 2026

Contents

1 Purpose

A PCBU (person conducting a business or undertaking) has more specific obligations under the WHS Regulations to manage the risk of a fall by a person from one level to another, including requirements to:

1 ensure, so far as is reasonably practicable, that any work involving the risk of a fall is carried out on the ground or on a solid construction

2 provide safe means of access to and exit from the workplace

3 minimise the risk of falls so far as is reasonably practicable by providing a fall prevention device, work positioning system or a fall arrest system.

This procedure defines **the principles and minimum requirements for managing working at heights hazards** and the processes by which safe access and working at heights is controlled.

Accessing elevated locations and undertaking work activities at heights present specific hazards that often cause significant injuries and loss of life throughout many workplaces. Injuries and loss of life also occur as a result of falls that have traditionally been considered as 'minor' and/or from heights considered as 'low'.

The company recognises that a range of work activities are undertaken throughout its operations which involve height-related hazards such as those listed below, and as such aim to implement effective working at heights procedures and provide proactive means of controlling working at heights related hazards including:

- falls from heights
- falling objects
- unprotected edges
- uncovered excavations
- brittle, fragile, uneven or slippery rooftops or work surfaces
- incorrect use of personal fall protective equipment or height access equipment.

PBPL authorised persons under the PBPL permit to work system are responsible for reviewing the planning component of Working at Heights Control Form, risk registers and risk assessments before authorising the commencement of height access work.

Supervisors are responsible for:

- coordinating height access and work in accordance with the Working at Heights Control Form and risk assessment requirements
- implementing all planned and necessary controls to ensure safe height access / work
- monitoring working at heights hazards and control methods throughout the access / work
- ensuring that only trained / competent people who have been instructed about height hazards and safety requirements, access and working at heights.

2 Scope

This procedure applies to all PBPL employees and work activities across the organisation.

3 Definitions

Term	Definition
PCBU	Person Conducting a Business or Undertaking, responsible for managing WHS risks.
Fall Zone	Area within 3 metres of an unprotected edge on a flat roof or elevated surface.
Edge Protection	Physical barrier (e.g., guardrails) installed to prevent falls from height.
Fall Arrest System	A system designed to stop a person after a fall, limiting impact forces to ≤6 kN.
Travel Restraint System	A system that prevents a person from reaching a position where a fall could occur.
Catch Protection	Safety nets or platforms are installed to catch a person if they fall.
Permit to Work	Formal authorisation required before commencing specified working at heights tasks.
Competent Person	An individual trained and experienced to perform tasks safely and inspect equipment.
Anchorage Point	A secure point for attaching fall protection equipment, complying with AS 5532 strength requirements.
Pendulum Effect	Swinging motion that occurs when a person falls while anchored away from a vertical line above their position.
Limited Free Fall	A fall distance equal to or less than 600 mm before arrest by the system.
Free Fall	A fall distance greater than 600 mm and up to 2 m before arrest by the system.

4 Competency

Only employees or suppliers/contractors who have been trained with respect to working at heights hazards and controls are to access or work at heights, supervise work tasks at heights, or carry out retrieval / rescue roles.

As there are a range of working at height scenarios and activities performed by our people, not everyone will be required to be trained to the same level. Following is a summary that may be used as a guide to determine training needs:

Training Type	Target Group / Working at Heights Activities
Working at heights system awareness	**People who undertake basic access at height activities such as:** ▪ accessing fixed ladders and elevated platforms with edge protection for maintenance purposes ▪ accessing or working from fit for use scaffolding ▪ access at heights via scissor lifts that do not require harnesses to be worn ▪ access or work on rooftops that do not require a fall zone to be entered (an area within 3m from an unprotected edge on a flat roof).
Harness appreciation and basic working at heights	**People are required to use harnesses in basic working at heights activities and scenarios such as:** ▪ access or working at heights via elevating work platforms that require users to wear fall arrest harnesses ▪ access or working at heights via the use of fixed travel restraint and harness systems (that require users to wear fall arrest harnesses and make a basic connection to a proprietary static line system).
Working at heights and retrieval	**People are required to set up and use a range of working at heights systems, including:** ▪ temporary travel restraint & fall arrest systems ▪ working from fall arrest systems within fall zones ▪ the selection and use of non-prescribed/signed anchor points ▪ the need to plan, implement and undertake self and single person retrieval techniques, inclusive of equipment selection, set up and use.

5 Design Issues

Where possible during the planning of new facilities, procurement of new plant or modification of existing PBPL assets, locations are to be designed in a way that ensures they have a means of safe access and edge protection and where practicable, do not require the use of personal fall protection equipment for access, maintenance, cleaning or other purposes. Furthermore, the following items are to be considered to minimise height related hazards:

Where practicable, plant is to be designed so that it can be accessed, inspected, maintained and controlled from ground level.

- Where possible, plant or work areas required to be located at height are to be designed so that they can be accessed via fixed platforms, walkways or stairs that incorporate edge protection.
- Any contract for the design, refurbishment or construction of a building or major plant item that will require access throughout its life is to specify overall compliance with Australian Standards, inclusive of the following where applicable:
- *AS 1657 – Fixed Platforms, Walkways, Stairways and Ladders – Design, Construction and Installation*, inclusive of the need to implement a hierarchy of access preferences that includes the following, wherever possible:
    - fixed platform or walkway with edge protection
    - fixed stairway with edge protection
    - fixed inclined ladder with handrails
    - fixed vertical ladder with travel restraint system
    - fixed vertical ladder with ladder cage
- AS/NZS 1891.2 – Industrial Fall-Arrest Systems and Devices: Horizontal Lifeline and Rail Systems (including all amendments and supplements).

6 Accessing and Working at Height

a Wherever possible, accessing locations at height is to be via a safe manner that provides people with a work platform and edge protection that is fixed or in-situ. This may include:

b an existing work platform or stair access way

c an elevating work platform such as a scissor lift or boom lift

d a fixed scaffold or work platform, or a mobile scaffold.

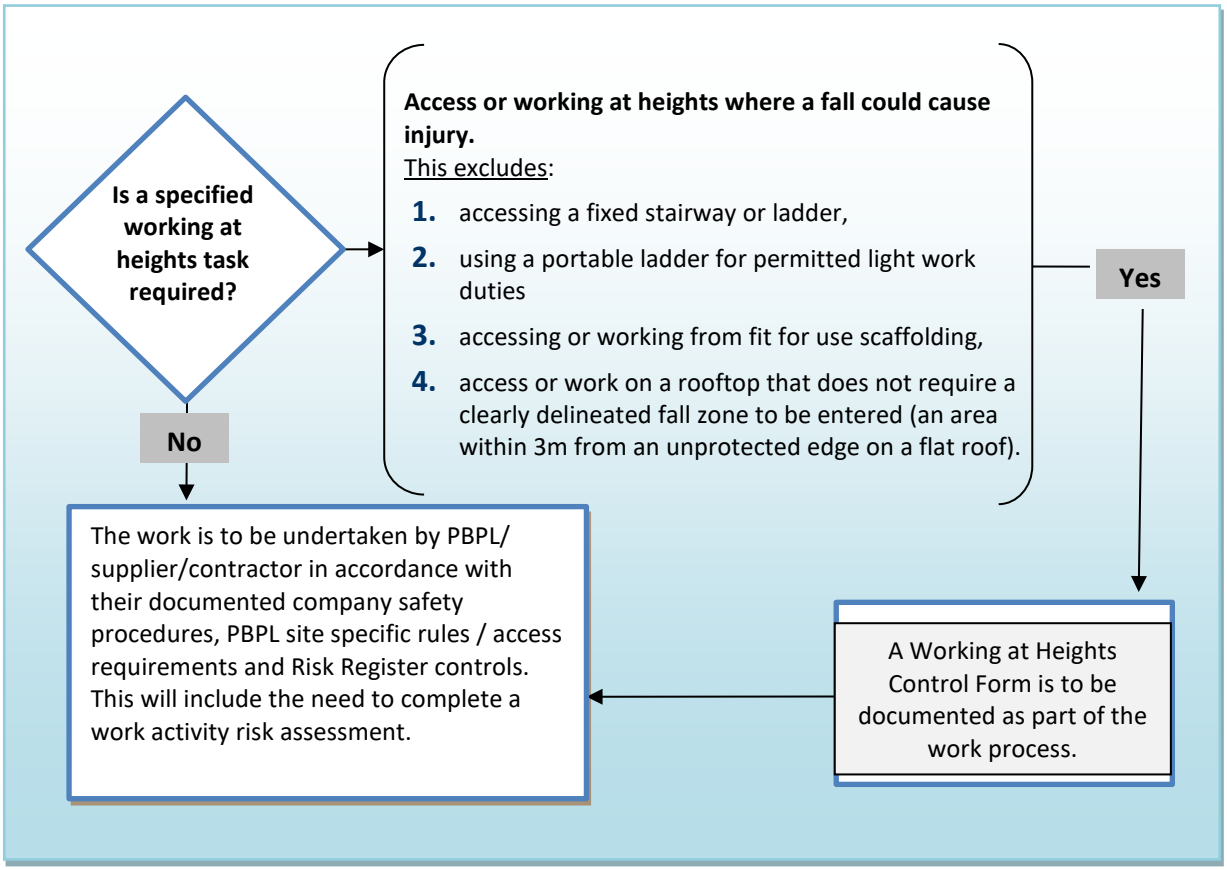
e In situations where this is not practicable, fixed ladders and portable ladders such as single ladders, extension ladders or step ladders are to be used. For further details in relation to specific portable ladder requirements, specifications, placement and usage information, refer to relevant information contained in this procedure.

f A control method for working at height must be implemented.

g Where practicable, working at height hazards are to be controlled in accordance with the order of preferences as listed in the following table:

	Control Option Preference	Description
1	**Eliminate the Height Access**	**Eliminate the need to access the location at height.** Examples include: ▪ relocation of an item or device from a position at height to ground level ▪ redesign of an item or device enabling it to be lowered to allow for access, inspection, repair etc ▪ use of an extension handle to enable a location at height to be reached from ground level.
2	**Edge Protection or Cover**	**The provision of controls or a means of access that provide protection or a barrier that prevents access to an exposed edge or unprotected location at height.** Examples include: ▪ installation of scaffolding to reach a location at height ▪ use of an elevating work platform to access a location at height ▪ installation of temporary edge protection or guardrails along a roof edge or unprotected location at height ▪ installation of a cover over a roof, grate, or floor opening. *Note: Often, the means by which these controls are established may require a lower order working at height control to be used as well.*
3	**Fall Protection**	**The use of personal protective equipment that either prevents a fall or reduces the severity of a fall.** Examples include: ▪ use of an industrial rope access system ▪ use of a travel restraint system ▪ use of a fall arrest system.
4	**Catch Protection**	**The provision of controls that enable a falling person to be caught without hitting the ground or a structure that would cause injury.** Examples include: ▪ use of a catch platform or catch net below the location at height.
5	**Temporary Exclusion Warning**	**The provision of a temporary exclusion control to provide a warning to people about an exposed edge or fall from height hazard.** Examples include: ▪ use of barrier tape and signage adjacent to an unprotected edge or floor opening ▪ use of barrier tape to designate a rooftop no access zone ▪ use of barrier tape around an excavation ▪ use of a safety observer / spotter to provide warning.

a As part of implementing working at height controls, a Permit to Work Form, Working at Heights Control Form and written Risk Assessment is to be documented in accordance with the following:



b PBPL employees or suppliers/contractors are to consider the following points as part of pre-planning and completion of the Working at Heights Control Form and risk assessment:

- identified hazards relating to accessing the location at height;
- the nature of work location, including environmental / weather issues;
- the nature of the work activities to be undertaken at heights;
- personal fall protection equipment or other access equipment issues;
- anchorage selection issues;
- the need for multiple people and means for safe communication;
- the need to plan for retrieval / rescue contingencies.

7 Use of Ladders

All extension or single ladders should only be used as a means of access to or egress from a work area. Single or extension ladders are to be used for the purpose for which they are designed, have a minimum load rating of at least 120kg and be manufactured for industrial use.

Single or extension ladders must not be used to support a weight greater than that for which it is designed and are not to be longer than:

- Single ladder – 6.1m
- Extension ladder – 7.5m

Extension ladder used to do electrical work – 9.2m. Platform ladders and FRP/fibreglass ladders are permitted for tasks where electrical hazards exist or where stability is required for extended light work. All ladders must comply with AS 1892 series, including FRP/fibreglass variants for electrical isolation.

Single or extension ladders are not to be used to support platforms unless they are purpose-built trestle ladders.

Single or extension ladders are to be placed so the ladder is not too close or too far from the support structure—the distance between the ladder base and the supporting structure should be about one metre for every four metres of working ladder height (4:1 ratio) and the ladder is to extend at least 1m above the platform level.

Single or extension ladders must be designed in accordance with the following Australian Standards depending on their use and type of construction material:

- AS 1892.1 – Metal
- AS 1982.2 – Wood
- AS 1892.5 - Fibreglass (FRP)

Single or extension ladders are to be adequately secured against displacement whilst in use. This is to be achieved by people holding ladders while others climb, or by tying off ladders at the top and bottom where practicable. People are to ensure that the structure supporting the top of the ladder is capable of withstanding the load.

All ladders are to have firm, level footing and erected such that the rungs are appropriately level. Makeshift foundations (i.e. planks, bricks, etc.) are not to be used. Only one person is to access a ladder at any one time and excessive tools, materials, etc are not to be carried in the hands while climbing.

A person on a ladder must not reach out from the ladder, causing instability and is to keep three points of ladder contact at all times, (two hands one foot or two feet one hand), unless the person is holding a section of the structure that is stable.

Portable step ladders are only to be used in the fully opened position and be of a length that ensures a person's feet are not positioned any higher than the third highest tread during use.

Ladders are not used:

- to undertake anything but “light work” activities for limited time periods on the ladder (Light work refers to short-duration tasks (generally less than 15 minutes) that do not require heavy lifting, excessive reaching, or the use of power tools while on the ladder.)
- in access areas or within the arc of swinging doors

- on working platforms to gain height above a protected edge
- to erect temporary platforms between step-ladders or on to other workplace equipment and materials
- if damaged or defective.

8 Edge Protection and Cover Requirements

Edge protection and covers are to be used where possible to address fall from height hazards where elimination is not practicable. In particular, work tasks that require the following are specifically suited to the use of edge protection and cover controls:

- raised platforms and roof edges to be unprotected for extended periods where people access is required as part of the work
- lifting of floor panels
- removal or modification of handrails.

Edge protection erected as a means of preventing falls from height is to:

- be erected and used in accordance with manufacturer instructions or the instructions of an engineer or competent person
- be designed to withstand the downward or outward force of the impact of a fall against it by a person
- have a rail or component that is between 900 and 1100mm in height above the platform or other surface
- have another rail or rails or sturdy mesh, etc between the surface and the top rail/component of the edge protection.

If the edge protection consists of rails, it must have:

- another rail or rails fitted so that there is not more than 450mm between any rail and its nearest rail or between the lowest rail and any toe board; and
- either:
    - a bottom rail fitted no more than 250mm or less than 150mm above the platform or other surface
    - a toe board for the platform or other surface, that is at least 150mm high and fitted below all rails of the edge protection.

During maintenance tasks in the area where walkways or platforms may be modified, any opening with dimensions of more than 200mm x 200mm or a diameter more than 200mm is to have a fall protection cover fitted to it to prevent a potential fall from height. As deemed appropriate, openings with dimensions smaller than the above are also to be covered.

Note: Permanent access is to be in accordance with AS 1657 – Fixed Platforms, Walkways, Stairways and Ladders.

Where a fall protection cover is used to protect persons from falling into an opening, it must:

- be able to withstand the impact of any person who may stand or fall on it
- be securely fixed in place to prevent it being moved or removed accidentally.

9 Personal Fall Protection Equipment Requirements

No person using personal fall protection equipment as part of a fall arrest system is to work in isolation.

All people who use personal fall protection equipment are to be trained in the safe selection, inspection and use of the equipment and methods of work required.

People using personal fall protection equipment are to do so in accordance with specific instructions or requirements specified by the equipment or system's manufacturer/supplier.

Specific pre-use inspections, maintenance and fitting protocols are to be ensured by all users as detailed within the Inspection, Maintenance and Fitting of Working at Heights Equipment section in this procedure.

Where personal fall protection equipment must be used, where practicable, it is to be implemented such that the following fall situations in order of preference are an outcome of the system:

- total restraint (via a travel restraint system) – fall not possible
- restrained fall
- limited free fall – free fall distance equal to or less than 600mm
- free fall – free fall distance >600mm and up to 2m.

Note: Refer also to Appendix 1 – Personal Fall Protection Extracts, which provides additional diagrams and explanations in relation to these fall situations.

9.1 Travel Restraint

A travel restraint system erected as a means of preventing falls from height is to:

- be installed by a competent person
- have an anchorage point that complies with the new strength and testing requirements as captured in AS 5532.
- only be used by those who have been trained in the safe and correct use of the system
- be inspected as per the requirements in the Inspection, Maintenance and Fitting of Working at Heights Equipment section in this procedure by a competent person with a written record of the inspection maintained for a period that is the lesser of, the life of the system, or a period of 4 years.

A travel restraint system's purpose is to generally limit the horizontal movement from an anchorage point or a horizontal life line so that the user is totally restrained from physically reaching a position where either a free or limited free fall is possible. As such, a travel restraint system should be substituted with a fall-arrest system where a fall over an edge is possible, or:

- the user can reach a position where a fall over an edge is possible, including a pendulum effect situation where a person accesses a location not perpendicular to the edge
- the user has a restraint line that can be adjusted in length such that a free fall position can be reached, (apart from proprietary restraint devices that can be purposely handled and securely relocated/adjusted as part of work positioning)
- there is danger of the user falling through the surface
- there are any other reasonably likely misuses of the system which could lead to a free fall.

9.2 Fall Arrest

Anchorage points for fall-arrest harness systems are to:

- be located so that the user can connect their lanyard or device to the system prior to moving into a position where they will be at risk of a fall from height,
- be designed by an engineer, or be inspected and approved for safe use by a competent person prior to work commencing,
- have a capacity of at least 15kN for one-person, single point system or 21kN for two persons, single point system (refer also to Appendix 1 which provides additional anchorage information).

Fall arrest harness system components are to be inspected as per the requirements in the Inspection, Maintenance and Fitting of Working at Heights Equipment section in this procedure by a competent person with a written record of the inspection(s) maintained for a period that is the lesser of, the life of the system, or a period of 4 years.

The fall arrest system's device/component to absorb the energy of a fall must be able to limit the force applied to the user to not more than 6kN.

Users of fall arrest harness systems are to implement controls that ensure components of the system are protected from potential friction, damage and chemical substances and liquids that may have adverse effects, during use and a potential fall situation. This may include the use of padding around rough anchorages, covers over sharp edges, and covers on plant or areas that contain contaminants.

Fall distance and the potential for pendulum effect are to be assessed to ensure that there is enough distance available for a person who may potentially fall into the system to avoid them from hitting an object, the ground or other protruding item. Lanyard length once extended, position of the user in relation to their anchor point and potential lateral swing that may occur are some of the main factors to consider in relation to fall distance considerations.

Note: Refer also to Appendix 1 which provides additional diagrams and information in relation to fall distance considerations.

A safety belt (restraint belt, line-workers' body belt, work positioning sit harness, ladder belt, etc) is not to be used in a fall arrest system application to arrest a person who may fall more than 600mm. A fall arrest harness is to be used.

During the use of a fall arrest harness system the free fall distance is to be reduced as far as possible. That is, a lanyard assembly is to be as short as practicable and the working slack length short enough to ensure that a fall of a user of not more than 2m, when used in conjunction with a fall arrest system, will result.

Users of fall arrest harness systems are to ensure that components are compatible. The use of non-compatible components can lead to ineffective equipment use and connection that can result in falls from height.

Note: Refer also to Appendix 1 which provides additional diagrams and information in relation to types of fall arrest system devices, their use, and potential hazards.

No work involving the use of a fall arrest harness system is to take place unless suitable planning has been undertaken and provisions been made for the retrieval/rescue of a person from the system immediately after a fall. This includes:

- ensuring that there is a written procedure for the retrieval of a fallen person where the scenario presents specific rescue/retrieval complications or difficulties
- ensuring that there is additional retrieval equipment/devices provided as required
- ensuring that an adequate number of workers are present to perform a retrieval/rescue

- ensuring that suitable retrieval/rescue training has been undertaken by those working at heights.

Horizontal static lines are to be designed, installed and maintained in accordance with AS/NZS 1891.2 – Industrial Fall-Arrest Systems and Devices, Part 2: Horizontal Lifeline and Rails Systems.

9.3 Catch Protection

Industrial safety/catch nets used as a means of catch protection are to be used as a last resort only, where edge protection and personal fall protection equipment are impracticable.

Industrial safety/catch nets used as a means of catching a person who may fall are to:

- be designed by an engineer or competent person
- be installed and used in accordance with the manufacturers 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.

Industrial safety/catch nets are to be installed so that they have sufficient tension and clearance to prevent a person who falls from contacting or striking any surface or structure below the net.

Industrial safety/catch nets are to be installed so that they are as close as possible below the platform or level at which the person could potentially fall.

Nets are not to be used in locations or environments where they may be damaged due to the presence of chemicals or heat.

Nets are to be inspected after installation, relocation, or repair on site and prior to people working in a position where they could fall onto the nets.

9.4 Temporary Barricading and Signage

Using temporary barricading and signage to provide warning and exclude access to an area is the least preferred method of protecting people from falls and one that should only be used where it is not practicable to implement other fall from height controls.

Where barricade mesh/tape and signs are used to provide a means of exclusion around a penetration or exclusion from an unprotected edge, it is to be located at least 3m from the outside of the edge at which a fall can occur and be erected at a suitable and visible height (e.g. 900 – 1000mm).

Exclusion zone set up, and people access is only to be undertaken on surfaces that are trafficable and do not present a hazard for people to fall through the surface or any gaps, spaces, openings, excavations etc.

People must wear personal fall protection:

- when accessing an area, excluded or otherwise that is less than 3 metres from an unprotected edge
- when setting up an exclusion zone that requires a worker to access or work in an area less than 3 metres from an unprotected edge.

During work activities or regular inspection of the work, measures are to be taken to ensure that barricades do not become unattached and left lying on the floor or work platform.

10 Inspection, Maintenance and fitting of Working at Height Equipment

10.1 Inspection & Maintenance

Prior to setting up or using a personal fall protection system, competent users are to inspect all equipment and anchorages to ensure that a safe system can be established.

As part of inspection tasks, no person is to use any component of any personal protection system, including anchorages if a component shows evidence of wear or weakness to an extent that may affect the system's safety. Where such a fault is identified, it is to be reported to the relevant supervisor and marked via a tag that describes the item as being not fit for safe use or service.

If, during any working at heights activity, a person or supervisor identifies a faulty or unsafe means of access, personal fall protection equipment, or the environment becomes unsafe, people that are placed at risk due to such an issue are to cease work activities immediately until the equipment or situation is altered and deemed safe to re-start work.

All edge protection, barricade tape, penetration covers, signage, etc required to be used are to be inspected, deemed fit for safe use and deemed to be safely in place by the Supervisor and/or people involved in the working at heights tasks, prior to and during all working at heights activities.

As a general guide, only personal fall protection equipment that is in compliance with *AS/NZS 1891* is to be purchased, used and maintained at PBPL.

Note: This is necessary for fall arrest harnesses whereas some other equipment items and devices from overseas locations may be deemed as acceptable.

To ensure equipment is adequately inspected, personal and common use equipment is to be inspected in accordance with Tables 1-3.

Also, refer to the following guidance tables that highlight various fall protection components and the conditions or faults that need to be checked as part of inspections.

Recording requirements for personal fall protection equipment are to be maintained in accordance with Table 4.

The Personal Fall Protection Equipment Register is to be used to document the inspection and maintenance process as described in Tables 1-4.

Note: Resources and time are to be made available to ensure that formal periodic inspections are undertaken, recorded, and managed by on-site equipment users.

10.2 Table 1 – Summary of Inspection Requirements

(From AS/NZS 1891.4:2025 – Table 9.1)

Activity	Application
Inspection by operator before and after each use *(Not required to be documented)*	• Personal equipment including harnesses, lanyard assemblies, connectors, fall-arrest devices and common use devices such as ropes, slings, fall-arrest devices, mobile attachment devices, etc.
3-monthly inspection by competent person *(Required to be documented on Register)*	• Fall-arrest devices – external check only.
6-monthly inspection by competent person* *(Required to be documented on Register)*	• Belts, harnesses, lanyard assemblies and associated personal equipment.
12-monthly inspection/service by competent person* *(Required to be documented on Register)*	• Permanently installed anchorages. • Fall-arrest devices – full service including dismantling where indicated. • Horizontal lifelines and rails, including integral components and permanently installed mobile attachment devices.
In accordance with other Standards	• Ropes and slings.
Inspection on entry or re-entry into service	• All items of personal and common use equipment.
Inspection after a fall-arrest (and before further use)	• All items which have been stressed as a result of a fall. (Should also be removed from service and inspected by the manufacturer prior to re-use or discarded if clearly damaged).
**** Or more frequently if recommended by the manufacturer or supplier.***	

10.3 Table 2 – Inspection of Belts and Harnesses Checklist (From AS/NZS 1891.4:2025– Appendix C)

Component	Conditions or Fault to be Checked
Webbing	• Cuts or tears • Abrasion damage especially where there is contact with hardware • Excessive stretching • Damage due to contact with heat, corrosives, or solvents • Deteriorations due to rotting, mildew, or ultraviolet exposure
Snap hooks and karabiners	• Distortion of hook or latch • Cracks or forging folds • Ear at swivels and latch pivot pin • Open rollers • Free movement of the latch over its full travel • Broken, weak or misplaced latch springs (compare if possible with a new snap hook) • Free from dirt or other obstructions
D-rings	• Excessive 'vertical'' movement of the straight portion of the D-ring at its attachment point on to the belt, so that the corners between the straight and curved sections of the D become completely exposed. ***Note:*** *Excessive vertical movement of the ring in its mounting can allow the nose of larger snap hooks to become lodged behind the straight portion of the D, in which position the snap hook can often accidentally 'roll out' of the D under load.* • Cracks, especially at the intersection of the straight and curved portions • Distortion or other physical damage of the D-ring • Excessive loss of cross-section due to wear
Buckles and adjusters	• Distortion of other physical damage • Cracks and forging laps where applicable • Bent tongues • Open rollers
Sewing	• Broken, cut or worn threads • Damage or weakening of threads due to contact with heat, corrosives, solvents, dirt or mildew
Ropes	• Cuts • Abrasion of fraying • Stretching • Damage due to contact with heat, corrosives, solvent, etc. • Deterioration due to ultraviolet light or mildew
Chains	• Physical damage • Security of attachments to snap hooks, rings, and similar components

10.4 Table 3 – Inspection of Fall-Arrest Devices – Checklist (From AS/NZS 1891.4:2025 – Appendix D)

Component	Conditions or Fault to be Checked	
Rope or webbing including anchorage lines for Type 2/3 devices	• Cuts • Abrasion or fraying • Stretching • Damage due to contact with heat, corrosive, or solvents • Excessive dirt or grease impregnation • Anchorage of the anchorage line to the anchorage point (Type 1 devices) • Anchorage of the rope end to the drum when the rope is fully extended (Type 2/3 devices)	
Fall-arrest device body	**Mounting ring**	• Physical damage or wear, especially at any pivot points • Cracks, especially in corners • Mounting security
	Body	• Physical damage such as significant dents, distortion or corrosion • Presence of foreign bodies such as small stones within body (to be checked without dismantling) • Loose or missing screws, nuts or similar objects (external check only)
	Fall-arrest indicator (if fitted)	• Position of the clutch compression indicator button (fitted only to rewind drums with steel rope) • Signs of activation
	Correct-use labels and service label or tag	• Presence and legibility
Locking mechanism and rope guides	• Excessive wear or ridging on externally visible rope guides • Secure locking and holding of rope-locking mechanism when the rope is given a sharp tug • Free running of rope through the anchorage with no tendency to stick or bind, and on rewind drum anchorages, complete rewinding of the rope without loss of tension	
Hardware	• Condition and locking action of any associated snap-hooks or links	

10.5 Table 4 – Equipment Record Requirements

Item to be Recorded	Harnesses, line workers body belts and assemblies	Lanyard assemblies and pole straps	Type 1 fall-arrest devices including anchorage line	Type 2/3 fall-arrest devices	Mobile attachment devices	Fixed anchorages, horizontal lifelines and life rails
Manufacturer's, supplier's or installer's name and address	Yes	Yes	Yes	Yes	Yes	Yes
Manufacturer's batch number	Yes	Yes				
Serial or identifying number			Yes	Yes	Yes	Yes
Year of manufacture	Yes	Yes	Yes	Yes	Yes	
Details of recommended connections to belts or harnesses		Yes	Yes	Yes		
Type of anchorage line to be used			Yes			
Suitability, load ratings and limitations on various usages	Yes	Yes	Yes	Yes	Yes	Yes
Date of purchase	Yes	Yes	Yes	Yes	Yes	
Date first put into service	Yes	Yes	Yes	Yes	Yes	Yes
Dates and details of inspections and services	Yes	Yes	Yes	Yes	Yes	Yes
Date to be removed from service	Yes	Yes	Yes	Yes		

10.6 Labelling, Marking & Signage

As determined by *1891.4:2025*requirements and as the equipment item permits, labels, and signs on personal fall arrest equipment are to be permanently marked or labelled to indicate their purpose, correct use, limitations, and any other relevant information to ensure safe use.

These permanent markings or labels are to be legible throughout the life of the equipment. Where the equipment is too small or information is likely to be worn away, copies of this information are to be maintained and readily accessible for review.

Descriptive and instructional signs are also required for fixed installations such as anchorages and horizontal lifelines to control possible overloading and advice on correct use.

Specific details are to be in accordance with the table of requirements below:

Fixed Installation	Requirements
Anchorages	**Signs are to be installed for each anchorage point, which may be in place for a period longer than a month, that shows the following information:** • Name of installer and installation date, or if an existing structure has been verified, the name of the certifier and the certification date. • The heights purpose category for which the anchorage is suitable, refer also to the table in Appendix 1 (Strength Requirements for Anchorages). • The ultimate strength rating if less than 15kN, (in this case, words to the effect that the anchorage is not to be used for fall-arrest are to be added to the sign). • The maximum number of people (not more than two), who are permitted to be connected to the anchorage at any one time. ***Note:*** *At permanent installations, the information may either be shown on signs at each anchorage point or alternatively, on a plan prominently displayed at the entry to the area.*
Horizontal Lifeline or Rail	**A system information plate is to be displayed at each regular entry point to a permanently installed horizontal lifeline or rail system, with the following:** • Manufacturer's and installer's name and installation date. • A unique identification number. • An instruction that a personal energy absorber or fall arrest device with energy absorbing properties must be used. • Any special instructions for use, including the number of users allowed on the system or on any one span at once. • Servicing requirements and instructions, together with inspection and servicing intervals and the dates on which they are to be carried out. • The month and year by which the system should be taken out of service unless it has been re-certified by a competent person in accordance with manufacturer's instruction as safe for continued use. This date shall be not more than 10 years from the date of original installation not more than 5 years from any subsequent re-certification.

10.7 Fitting

Personal fall protection equipment items are only to be used and fitted in the manner for which they have been designed. As part of this requirement, users are to consider aspects such as the following:

- proper fit and tightness of harnesses
- correct orientation and alignment of attachments and fall arrest devices
- correct compatibility of items (correct rope dimension for attachment devices and fall arrest devices)
- suitable placement of ropes, knots and attachments to avoid friction, damage and incorrect loading
- ensuring only compliant items are used (not self-made / adjusted items or modified items).

11 Supervising Suppliers/Contractors

As part of establishing contractual arrangements for suppliers/contractors to access PBPL locations and working at heights, PBPL is to provide the following information to suppliers/contractors as appropriate for the scope of work:

- this Working at Heights Procedure
- access to the appropriate Risk Register
- access to a copy of the Working at Heights Control Form
- access to a copy of the Permit to Work Form
- access to necessary drawings, plans / maps relating to locations at height
- the identity of relevant PBPL people who may authorise specified working at heights tasks that require a Permit.

As part of OH&S related documentation typically requested of suppliers/contractors procured to undertake work for PBPL, suppliers/contractors are to provide the following details with respect to access and working at heights:

- content confirming that all people involved with working at heights activities are adequately trained and competent to undertake the type of height access and work tasks required
- content confirming that all equipment, travel restraint / fall arrest devices, retrieval equipment, etc have been adequately maintained, inspected and tested
- content confirming that all people involved with accessing and working at heights are aware of the intended scope of work, nature of the locations at height and PBPL's working at heights access and work expectations
- content relating to specific working at heights methods that will be undertaken.

12 Accessing and Working at Heights

A person conducting a business or undertaking has more specific obligations under the WHS Regulations to manage the risk of a fall by a person from one level to another, including requirements to:

- ensure, so far as is reasonably practicable, that any work involving the risk of a fall is carried out on the ground or on a solid construction
- provide safe means of access to and exit from the workplace
- minimise the risk of falls so far as is reasonably practicable by providing a fall prevention device, work positioning system or a fall arrest system.

A method of control for working at height must be implemented.

Suppliers/contractors must obtain PBPL access authority prior to undertaking a specified working at heights task, outlined as follows:

Access or working at heights where a fall could cause injury.
This excludes:

- accessing a fixed stairway or ladder,
- using a ladder for permitted light work duties,
- accessing or working from fit for use scaffolding,
- access or work on a rooftop that does not require a clearly delineated fall zone to be entered (an area within 3m from an unprotected edge on a flat roof).

This authority is to be recorded within the Permit to Work Form once the supplier/contractor has completed relevant pre-work planning. The identity of the PBPL person responsible for authorising such access is to be communicated to the supplier/contractor prior to access preparations or work commencing.

Following access and working at heights, the completed Permit to Work Form, Working at Heights Control Form and Risk Assessment is to be returned to the PBPL authorised person for filing purposes.

13 Non-Compliance

Breaches of this procedure may result in disciplinary action being initiated in accordance with PBPL's Code of Conduct.

14 References

- *Queensland 2024–2025 WHS legislative amendments, including Managing the Risk of Falls and Construction Work Code of Practice.*
- *Safe Work Australia Code of Practice: Managing the risks of falls at Workplaces (Updated May 2023).*
- *AS 5532:2025*
- *AS/NZS 1891(2025) Industrial Fall Arrest Systems and Devices Series (Parts 1-4)*
- *Part 1: Safety Belts and Harnesses*
- *Part 2: Horizontal Lifeline and Rail Systems*
- *Part 3: Fall-arrest Devices*
- *Part 4: Selection, Use and Maintenance*
- *AS 1892.1 Portable Ladders, Part 1 – Metal*
- *AS 1892.2 Portable Ladders, Part 2 – Timber*
- *AS 1892.5 Portable Ladders, Part 5 – Selection, Safe Use and Care*
- *AS 1657 Fixed platforms, walkways, stairways and ladders – Design, construction and installation*

15 Appendix 1 – Characteristics of Various Restraint/Fall Situations

This appendix provides guidance on restraint and fall-arrest systems, anchorage strength requirements, and typical applications in compliance with:

- ***AS/NZS 1891 series (2025)*** *– Industrial Fall-Arrest Systems and Devices (Parts 1–4)*
- ***AS 5532:2025*** *– Manufacturing and testing requirements for single-point anchor devices*
- ***Queensland Code of Practice: Managing the Risk of Falls at Workplaces (2024–2025)***
- ***Safe Work Australia Code of Practice (Updated May 2023)***

Restraint / Fall Situation	System Description	Minimum Equipment & Anchorage Requirements [Note 1]	Typical Application
Total restraint – a fall is not possible	Anchorage and lanyard/line length prevent user reaching any fall-risk position.[Note 2]	Restraint belt or harness; fixed-length restraint line; anchorage ≥ **6 kN** ultimate strength.	Work on flat surfaces or platforms where slope ≤ 15° and no edge exposure.
Restrained fall only	A combination of anchorage placement and restraint line or pole-strap length which will permit only a restrained fall on a pole or a sliding fall on a roof [Note 2]	Work positioning harness; pole strap; anchorage ≥ **6 kN**.	Pole work or sloping roofs (>15°) where vertical fall over edge cannot occur.
Limited free fall	A combination of anchorage placement and lanyard length which will permit only a limited free fall (≤600mm).	Work positioning harness; short lanyard; anchorage ≥ **12 kN** or compliant horizontal lifeline/rail.	Rope access or short lanyard applications where fall distance is minimal.
Free fall	Fall-arrest system limits free fall to ≤ **2 m**.	Full-body fall-arrest harness; energy-absorbing lanyard or Type 2/3 device; anchorage ≥ **15 kN**.	Any situation where a free fall >600 mm is possible.

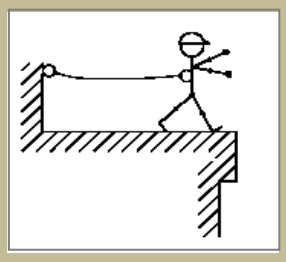
Note 1: *Fall protection work practices not in accordance with this Standard, in particular, the use of non-complying personal equipment (e.g. lanyards without energy absorbers), may create fall-arrest forces which will exceed the anchorage strengths specified in this Table.*

Note 2: *Assumes that misuse of the system will not occur, e.g. it is not possible for an operator on a roof to fall through the roof or for a longer restraint line than intended to be used.*

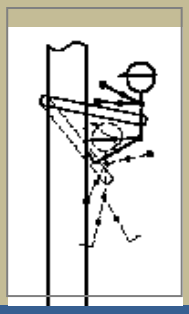
Requirements:

1. *Energy absorbers must limit arrest force to ≤ 6 kN.*
2. *All Components must be compatible and inspected per AS/NZS 1891.4:2025.*
3. *All anchorage points must comply with AS 5532:2025 strength and testing requirements.*

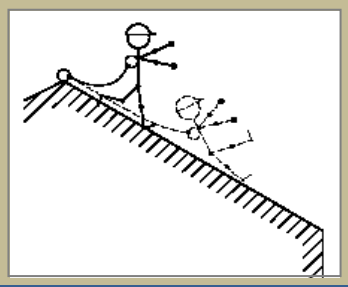
Typical Restraint/Fall Situations



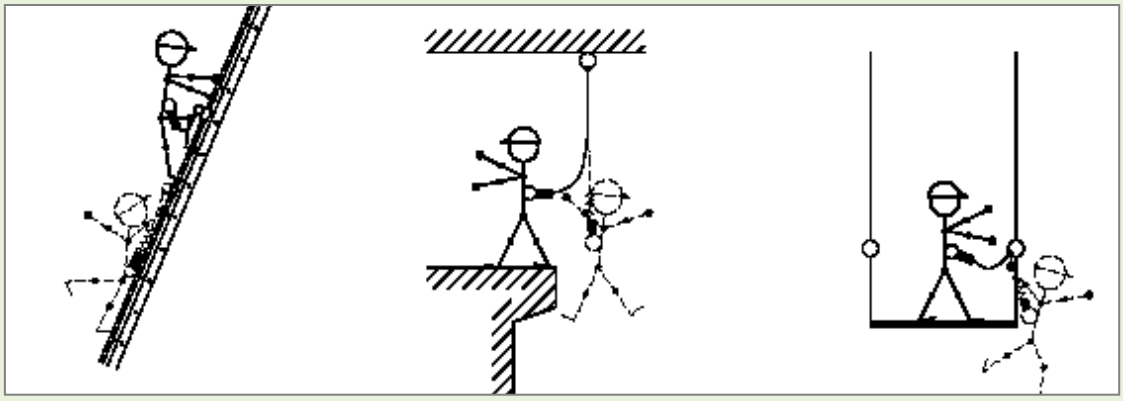
Total Restraint – Fall Not Possible



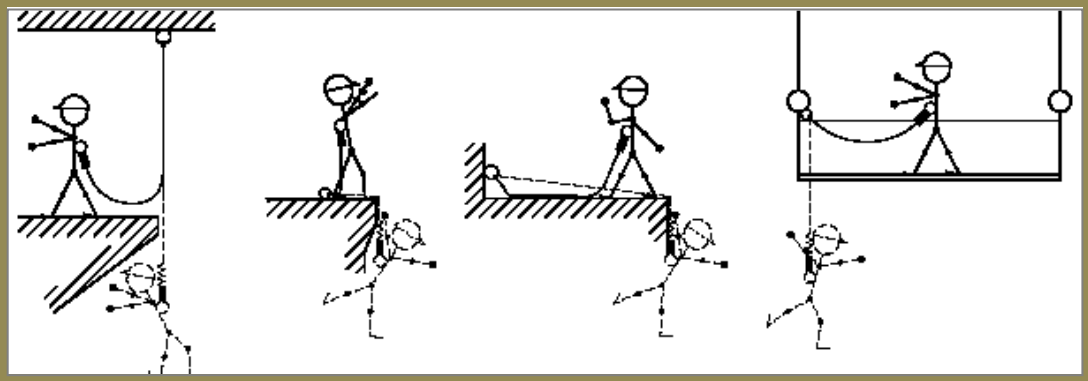
Restrained Fall – On Pole



Restrained Fall – On Roof Slope

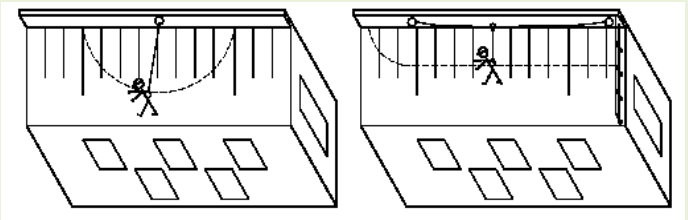


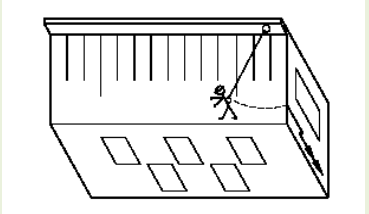
Limited Free Fall – Free-fall Distance 600mm or less



Free Fall – Free-fall Distance >600mm and less than 2m

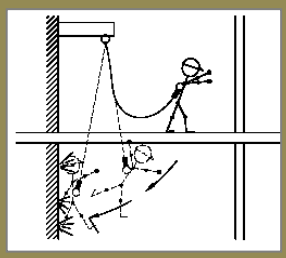
Use of Restraint Systems



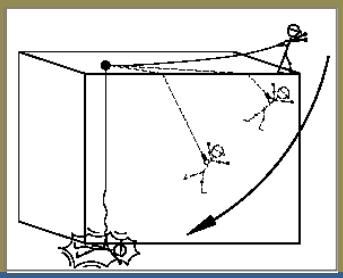


Acceptable – User Cannot Reach Edge	Unacceptable – User Can Reach Edge

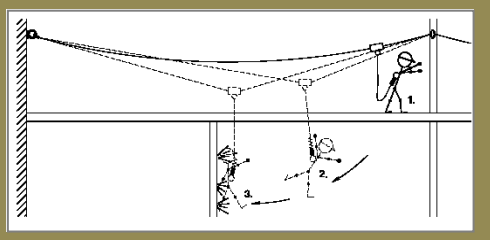
Pendulum Effect Situations



Anchorage Not Directly Above User

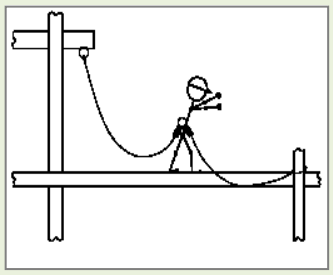


Anchorage not Perpendicular from Edge Location of the User

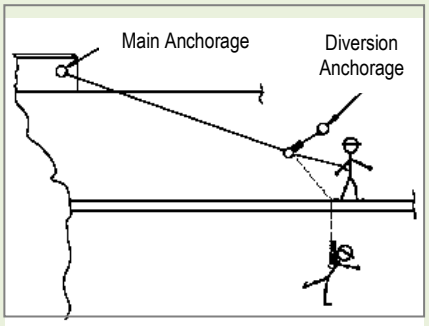


Fall From a Horizontal Lifeline

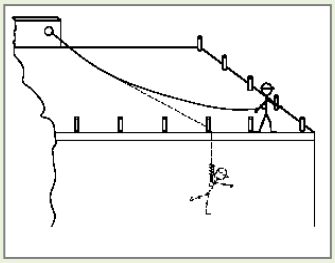
Pendulum Effect Controls



Use of Dual Anchorages

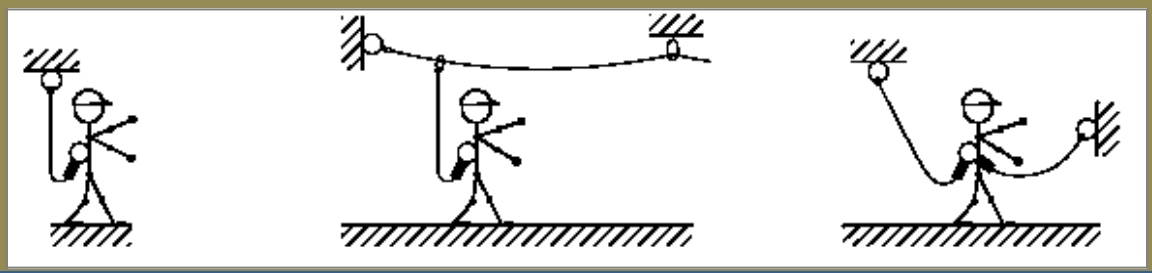


Use of a Diversion Anchorage



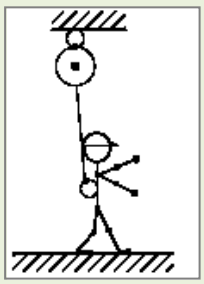
Use of End Stops

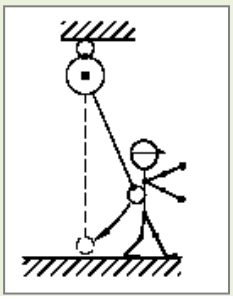
Typical Lanyard Configurations – Ideal Range



The above pictures include connection to arrest points on the fall arrest harness with suitable shock absorbers fitted

Configurations Using Type 2 or 3 Fall-Arrest Devices





15.1 *Strength Requirements for Anchorages*

Purpose of Anchorage ***All anchorages must comply with AS 5532:2025 strength and testing requirements and be verified by a competent person prior to use.*** ***Anchorage selection must consider retrieval/rescue feasibility as part of pre-work planning.***		Ultimate Strength in Direction of Loading (minimum kN) Note 1
Single Point Anchorage	Free fall-arrest – one person	15
	Free fall-arrest – two persons attached to same anchor	21
	Limited free fall-arrest (including rope access anchorages)	12
	Restrained fall-arrest – restraint line anchorage	6
	Total restraint only – no risk of a fall	6
Horizontal Lifelines Note 2	End anchorages	Considerably > 15 Note 3
	Intermediate anchorages (diversion < 15°)	12
	Intermediate anchorages (diversion 15° or more)	12 + Note 4

Energy absorbers must limit arrest forces to ≤ 6 kN, and all components must be compatible and inspected per AS/NZS 1891.4:2025

Note 1: *As far as practicable all single point one-person anchorages should meet the 15kN requirement regardless of primary purpose.*

Note 2: *Refers to fall arrest only. Lifelines used for total restraint only are not addressed here. Advice should be sought from manufacturers. Horizontal lifelines must be designed, installed, and re-certified in accordance with AS/NZS 1891.2:2025, with signage indicating maximum users and re-certification dates.*

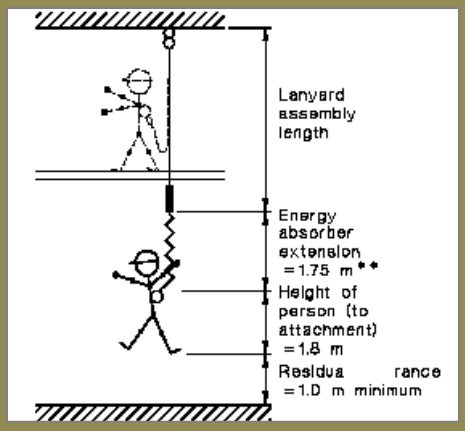
Note 3: *Particular care required to ensure adequate strength anchorages are used. Anchorage strength shall be set out either in manufacturer's instructions or in prescribed configuration tables. It will usually be considerably greater than the 15kN required for single point anchorages.*

Note 4: *Horizontal component of forces induced during a fall-arrest (multiplied by a safety factor of 2.0) is to be added.*

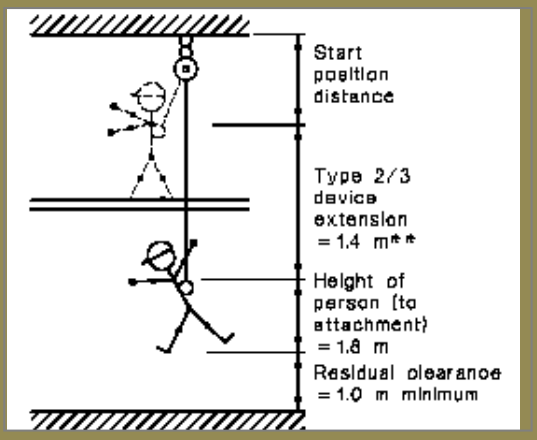
15.2 Calculation and Estimation of Fall Clearance Factors

Fall Distance Factor	Description / Considerations
Anchorage deflection	Fixed single anchorage: 0 (unless the structure being used as an anchor is likely to deflect under loading). Horizontal or vertical rail: 0 (as above) Horizontal lifeline: ▪ pre-determined performance system: as advised by the manufacturer ▪ prescribed configuration system: ☑ overall line length <10m: 0.7m ☑ overall line length 10 – 30m: 1.1m ☑ overall line length 30 – 100m: 1.3m ☑ overall line length >100m: 1.5m
Static length of lanyard	If a lanyard forms part of the fall-arrest system, its overall static length including personal energy absorber in unextended state needs to be considered.
Start position of fall-arrest device	Where a Type 1, 2 or 3 fall-arrest device is used, the vertical distance of the worst case start position of the device below the anchorage point, lifeline or rail is to be included. The start position is to be: ▪ the lowest point on the anchorage line a Type 1 device is likely to reach during normal work, or ▪ the lowest point the attachment point of the anchorage line of a Type 2 or 3 device on the operator's harness is likely to reach during normal work.
Extension or travel of fall-arrest equipment	Extension or travel of other items of fall-arrest equipment, where used, is to be taken into account as follows: ▪ personal energy absorber: 1.75m or otherwise as specified by the manufacturer, ▪ type 1 fall-arrest device: 1.0m or otherwise as specified by the manufacturer, ▪ type 2 or 3 fall-arrest device: 1.4m or otherwise as specified by the manufacturer, ▪ flexible lanyard: if the lanyard comprises a long synthetic rope, webbing strap, or is made of dynamic rope, etc. that it is liable to appreciable extension under loading – the extension obtained either by calculation or test loading under a load of 6kN. ▪ long anchorage line: if the anchorage line of a type 1 fall-arrest device is so long or the anchorage line of a type 2 or 3 fall-arrest device has been extended prior to a fall so much that either are liable to appreciable extension under loading – the extension obtained either by calculation or test loading under a load of 6kN.
Height of user	The height of the attachment point on the operator's harness above his/her foot level when standing upright is to be considered. An allowance of 1.8m, which will also allow for some movement in the harness will usually be a sufficient estimate. Additional allowance is to be made for extension straps or elasticised harnesses where appropriate.
Lateral offset of anchorage point	Where the anchorage point is laterally offset from the user's position prior to a fall, additional distance is to be allowed for as a result of the user swinging downward and toward a position directly below the anchorage point, (see also, the diagrams below).
Residual clearance	A minimum allowance of 1.0m is to be made for residual clearance **(AS/NZS 1891.4:2025**.)

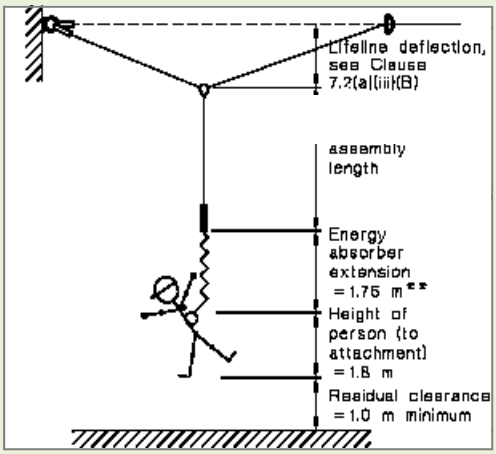
Determination of Minimum Required Fall Clearance



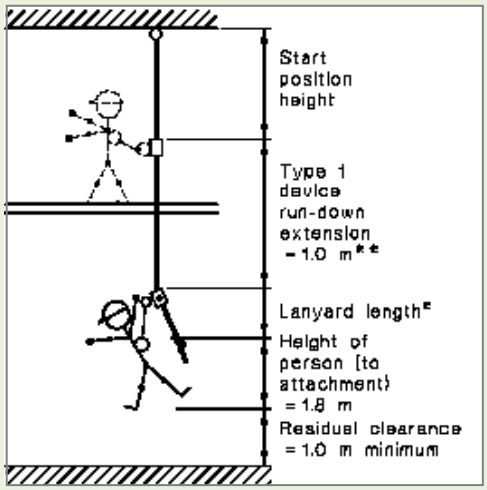
Single Anchor Point –
Lanyard Assembly with Energy Absorber



Type 2 or 3 Fall-Arrest Device

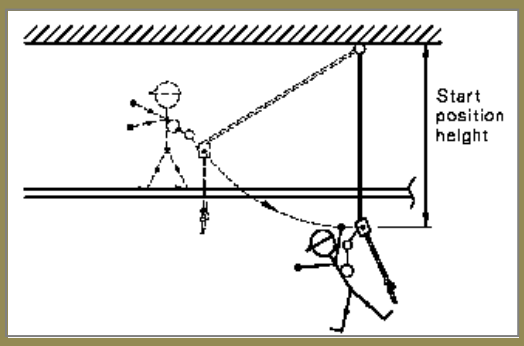


Horizontal Life Line –
Lanyard Assembly with Energy Absorber

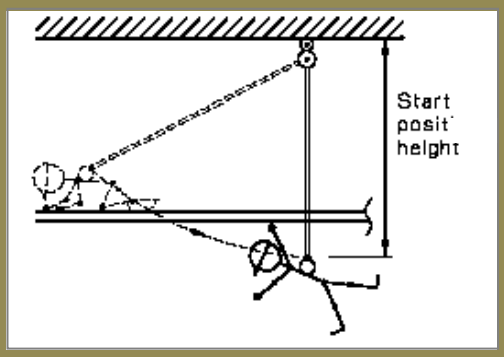


Type 1 Fall-Arrest Device on Flexible Line

Effect of Lateral Offset When Using a Fall-Arrest Device

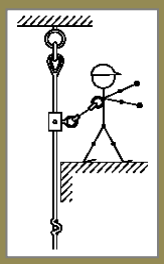
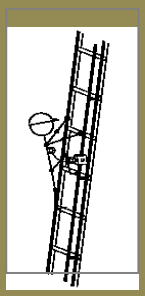
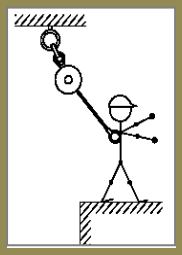
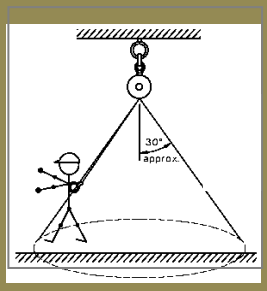


Type 1 Fall-Arrest Device



Type 2 or 3 Fall-Arrest Device

Fall Arrest Devices	
Type 1 Device	**A fall-arrest device which travels along an anchorage line, locks to the line when loaded and can only be loaded in the direction of the line.** Such a device may be fixed to a 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 typically connected via a short lanyard (i.e. less than 300mm) to the activating lever which locks the device in the event of a fall. They include fall-arrest rope grabs and rail grabs.
Type 2 Device	**A fall-arrest device from which a spring-loaded anchorage line pays out, and which locks when loaded and releases when the load is removed.** Such a device incorporates a line that 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 principle. They include fall-arresters, inertia reels and self-retracting lifelines.
Type 3 Device	**A fall-arrest device from which a spring-loaded anchorage line pays out, which locks when loaded, but may be wound back as a winch after loading and locking.** Such a device is similar to the Type 2 device with the addition of a winching mechanism which permits retrieval of a wearer who has suffered a fall or is otherwise in distress.

Typical Fall Arrest Devices			
			
Type 1 Fall-Arrest Device on a Flexible Line	**Type 1 Fall-Arrest Device on a Rigid Rail**	**Type 2 Fall-Arrest Device**	**Limit of Operation of a Type 2 or 3 Fall-Arrest Device (unless otherwise specified by the manufacturer) *Type 2 shown***

Marking of Fall-Arrest Devices	***Fall-arrest devices are to be clearly and permanently marked/labelled with the following:*** ▪ *name, trademark or other means of identification of the manufacturer,* ▪ *manufacturer's serial number and year of manufacture,* ▪ *which anchorage lines are intended for use with the device and warning that it is unsafe to use others,* ▪ *if appropriate, an indication of the required orientation in use,* ▪ *if appropriate, an indication that the device meets AS/NZS 1891.3 (clause 2.2.5) with regard to its use in potentially flammable or explosive atmospheres,* ▪ *for devices which require an external energy absorber in order to meet the maximum peak fall-arrest force requirement, a marking as follows – "THIS DEVICE IS NOT FITTED WITH AN INTERNAL ENERGY ABSORBING DEVICE"; and* ▪ *for devices which do not require an external energy absorber in order to meet the maximum peak fall-arrest force requirement, a marking as follows – "THIS DEVICE IS FITTED WITH AN INTERNAL ENERGY ABSORBING DEVICE".*
Acceptance of Overseas Devices	Fall-arrest devices complying with EN 353-1, EN 353-2 or EN 360 are acceptable for use in Australia.