Glossary of Terms

Active Fall Protection – A work operation where individuals must take action to use equipment either to prevent them entering a fall hazard area, or to arrest their fall. (for example, a fall-arrest or fall restraint system).

Anchor – Device connected to an anchorage, and to which the connecting system is attached. These devices can include single point anchors, anchor slings or horizontal systems.

Anchorage – A secure element, system, or structure to which an anchor is attached or to which the connecting fall protection system or equipment is directly attached.

Anchorage Line – A rigid rail or flexible line secured to an anchorage point along which a type 1 fall-arrest device travels, or a flexible line which unreels from a fall-arrest device.

Anchor Sling – A sling designed to be placed around a structural element to form an anchorage.

Arrest Force – The force imposed upon the worker and the anchorage point the moment the fall-arrest system stops the fall. It is measured in kilo newtons (kN).

Competent Person – A person who has, through a combination of training, education and experience, acquired knowledge and skills enabling that person to correctly perform a specified task.

Connection Point – A secure point on a fall-arrest device to which a lanyard may be attached.

Descender – A device for attachment to a line to enable a person to descend the line in a controlled manner and at a controlled rate.

End Anchorage – The anchorage at each end of each horizontal lifeline system which is designed to resist both the lateral tensile forces developed in the line and the directly applied forces at right angles to the line resulting from an arrested fall.

Energy Absorber – An attachment which, by design, reduces the deceleration force imposed by a suddenly arrested fall. (see also Personal Energy Absorber)

Fall-arrest Device – A self-locking device meeting the requirements of AS/NZS 1891.3, whose function is to arrest a fall.
There are three types: Type 1 fall-arrester device, Type 2 and Type 3 fall- arrest devices (see definitions on following page).

Fall-arrest Harness – Is a full-body harness designed to safely arrest a fall after it has occurred by distributing dynamic forces across the shoulders, thighs, and pelvis. It forms part of a personal fall-arrest system, used in conjunction with connectors, energy absorbers, and a certified anchorage.

Fall-arrest System – An assembly of interconnected components, including a full body harness, connecting subsystem and anchorage or anchorage system, configured to arrest a fall and limit forces on the user and structure.

Fall Factor - a ratio used to describe the severity of a fall, calculated by dividing the distance a person falls by the length of the connecting lanyard or rope system. It indicates the potential forces generated during fall arrest, with higher fall factors resulting in greater loads on the worker and system. In practice, fall factor is used to assess system design and minimise fall distance and arrest forces.

Fall Indicator – A visual indicator that shows the fall-arrest system or device has been used to arrest a fall.

Force – Measured in technical terms in Newtons (N). The weight of something in Newtons (N) is calculated by multiplying its mass in Kilograms (kg) by the value of Gravity, which is 9.81 (m/s2). A Kilogram (kg) is a unit of mass (i.e. the weight of a static object).
Force = Mass x Acceleration
For rough calculation purposes:
1000N = 1kN 1kN = 100kg 10kN = 1000kg

Free Fall – The uncontrolled descent of a person under the influence of gravity, occurring when no effective restraint or support is present to limit the fall distance prior to activation of a fall protection system. It includes any vertical or sloping fall where the person is not being held or supported by a restraining or positioning system.

Free Fall-arrest – the process by which a personal fall-arrest system engages to stop a free fall, decelerating the falling person and bringing them to a controlled stop.

Full Body Harness- is a body support device designed to distribute fall- arrest forces across the shoulders, thighs, and pelvis in the event of a fall. It is the primary component of a personal fall-arrest system and is intended to minimise injury by ensuring forces are spread across the strongest parts of the body.

Height Safety Equipment Inspector – A person who is competent in the skills needed to detect faults in height safety equipment and to determine remedial action.

Height Safety Manager – A person who is competent in the selection, design, manufacture or installation of height safety systems or equipment, or the development of control measures or work practices.

Height Safety Operator – A person who is able to perform harness-based work at height under the direct supervision of a height safety supervisor.

Height Safety Supervisor – A person who is competent in the skills needed to perform harness-based work at heights, to supervise other operators including those at entry level and to participate in first response rescue.

Horizontal Life-Line System – is a fall-protection system installed generally horizontally between two or more structural supports. It may be flexible or rigid and may be designed for fall restraint, fall arrest or work positioning. The system may incorporate lifelines, anchors, intermediate supports, travellers and energy-absorbing components. Its performance depends on the complete system design, including structure, configuration, deflection and required clearance.

Horizontal Rail System – A structurally rigid rail for the attachment of a lanyard or personal fall arrest device via a mobile attachment device and having a slope not exceeding the system manufacturer's recommendation or, in the absence of such recommendations, three degrees.

Horizontal Traveller – A mobile attachment device that runs along a horizontal lifeline or horizontal rail system, allowing a worker to move along the system while remaining continuously connected to fall protection. It is designed to maintain uninterrupted attachment during movement across a work area and must be compatible with the specific lifeline or rail system in use.

Intermediate Anchor – An anchor supporting a horizontal lifeline other than at its ends.

Karabiners/Carabiners – a metal connector with a spring-loaded gate and an integral locking mechanism, designed to connect components within a personal fall protection system or to an anchorage point. They are used to link equipment such as lanyards, harnesses, and lifelines, providing a secure and efficient connection interface.

Karabiners are manufactured in a range of shapes, sizes, and gate-locking configurations to suit different applications and loading conditions. They must be self-closing and either self-locking or manually locking and designed so they can only be opened through at least two deliberate consecutive manual actions, thereby reducing the risk of accidental opening during use.

Karabiners/Carabiners, Screwgate - Screw gate karabiners require the user to manually screw the gate locked after closing. While cost-effective, they pose several risks:

- Can unlock due to vibration
- Gate sleeve may be unintentionally rotated during contact with structure or equipment (rollout)
- Easy to forget to lock under pressure

Karabiners/Carabiners, Double Action - Double-action karabiners automatically lock upon gate closure and require two deliberate manual actions (e.g., twist and push) to open.

Karabiners/Carabiners, Triple Action - Triple-action designs require three separate actions (usually lift, twist, then push) to open the gate, providing additional security against accidental opening. This reduces the likelihood of gate disengagement from rope or structure contact.

Lanyard – a flexible connecting device used in a personal fall-arrest system that incorporates an energy-absorbing element designed to reduce the forces transmitted to the worker and anchorage during a fall. It connects a full-body harness to a suitable anchorage point or lifeline system and allows controlled movement within a defined working area.

Limited Free Fall / Limited Free Fall-Arrest – a fall in which the distance a person is able to fall is intentionally restricted by the configuration of the personal fall protection system, such that the fall is controlled to a specified maximum length before arrest occurs. It is typically achieved through the use of appropriately adjusted lanyards, energy absorbers, or system design that minimises fall distance and impact forces.

Locking Traveller (incline) – A device designed to arrests a fall on surfaces up to an angle of 30 degrees.

Passive Fall Protection – A system where the equipment provides fall protection, such as the installation of edge protection, scaffolding, safety

nets, safety mesh, elevating work platforms, catch platforms, etc and individuals using the system do not have to take the action to use equipment specifically designed to prevent falls.

Personal Energy Absorber (Deceleration Device) – A device or component used in conjunction with a harness which, by design, reduces the deceleration force imposed by a suddenly arrested fall. (AS/NZS 1891.1 Clause 1.4.11)
An energy absorber designed to be used in series with a fall-arrest harness and lanyard to reduce the deceleration force imposed by a suddenly arrested fall. The maximum force allowed to be transmitted is 6kN.

Personal Fall-arrest System (PFAS) – A system designed to arrest an accidental fall and consists of some or all of the following:

- anchorage
- anchor
- lifeline
- self-retracting lifeline
- lanyard
- rope grabs
- wire grabs
- rail system
- shock absorbers
- harness (full body)

Pole Strap (Work Positioning Strap) – A work positioning strap designed to be placed around a pole and attached at two points on each side of a line worker's body belt, or a fall-arrest harness while the wearer is working on the pole.

Restrained Fall – a fall in which a person's movement is partially limited by a restraint or positioning system, reducing the distance or extent of the fall but not fully preventing the person from losing balance or support. The system restricts progression toward a fall hazard, however a degree of uncontrolled movement may still occur before the restraint is fully engaged or the fall is arrested.

Restrained Fall-arrest – refers to a fall scenario in which a person is partially restricted by a fall protection system but still experiences a fall event that is ultimately arrested by a fall-arrest system. In this situation, a restraint or positioning element may limit the extent of movement toward

a hazard, but does not fully prevent the fall, requiring the fall-arrest system to engage and safely stop the descent.

Restraint Line – A line used to restrict the horizontal movement of the wearer and not designed for either free or restrained fall.

Restraint Technique – A method of controlling a person's movement by use of a system that prevents the person from reaching a position where a fall can occur.

Retrieval Strap – An upper torso harness designed for the attachment of a line in a rescue situation and not designed for either free or restrained fall.

Risk Assessment - The systematic process of identifying hazards, analysing and evaluating the risks arising from those hazards, and determining appropriate control measures to eliminate the risk so far as is reasonably practicable, or, if elimination is not possible, to minimise the risk.

Safety Factor – This factor accounts for complex and variable dynamic forces and unknowns, such as rope ageing, metal fatigue, abrasion, bending and structure contact. It can, for example, be used to work out:

- the ratio of the ultimate strength of the material to the permissible stress;
- the ratio between the weakest link in the system compared to the maximum expected load; or the minimum breaking load and the safe working load.

  Formulas SF = BF SWL = BF BF = SF X SWL SWL SF
  (SF is Safety Factor, BF is Breaking Force and SWL is Safe Working Load)

Safe Work Method Statement (SWMS) – A documented procedure for high-risk construction work that identifies hazards, assesses risks, and specifies control measures to eliminate or minimise risks so far as is reasonably practicable, including the method, sequence, and responsibilities for the work.

Scaffold Hook - Scaffold hooks are a larger variant of snap hooks, typically with an opening gate width of 50–60 mm. Designed for anchoring to larger structures such as:

- Scaffold tubes
- Pipe rails
- Steel mesh and cable tray
- Structural steelwork

Self-Retracting Lifeline - A personal fall protection device that allows free movement by automatically extending and retracting a line, while immediately locking and arresting a fall in the event of sudden acceleration. It is designed to minimise free fall distance and reduce fall-arrest forces transmitted to the worker and anchorage system.

Snaphook, Double Action – The most common snap hook design, typically requiring palm pressure to release the lock and finger action to open the gate. While convenient, this layout makes the gate vulnerable to inadvertent opening when pressed against flat surfaces (body, wall, or frame). Some manufacturers address this with protruding gate guards or anti- rollout fins, helping reduce unintentional actuation.

Static Line – A horizontal or near horizontal or vertical line to which a user may be attached and which is designed to arrest a fall. The line is connected to a fixed anchorage point at each end and can be made of metal tube or rod, steel wire rope, synthetic webbing or synthetic rope.

Strengths and Loads -

- **Minimum Breaking Load / Strength (MBS/MBL)** - Minimum Breaking Strength is the load above which an item may fail
- **Safe Working Load (SWL)**
  The maximum load (as certified by a competent person) that an item of equipment should be subjected to under particular service conditions.
  The SWL can be lower than the Working Load Limit (WLL) and takes account of the particular circumstances of use.
- **Working Load Limit (WLL)**
  The maximum load that an item of lifting equipment is designed to raise,

lower or suspend, not accounting for particular service conditions that may affect final rating of the equipment. This is the maximum load as specified by the manufacturer.

- **Safety Factor / Safety Co-efficient (SF)**
  The ratio between the Working Load Limit and the Minimum Breaking Strength. The more an item is loaded beyond its SWL, the sooner it is likely to fail. This is accelerated by abrasive conditions.

Total Fall Distance – The total distance a person is likely to fall during both the free and restrained parts of a fall, and includes the maximum dynamic extension of all supporting components.

Total Restraint – A form of restraint where the system physically prevents the user from reaching any position where a fall is possible.

Type 1 Fall-Arrest Device (includes rope, cable and rail grabs) – A fall arrest device that travels along an anchorage line and, when loaded, locks to the line. The user is connected 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 flexible line attached to the ladder.

Type 2 and Type 3 Fall-Arrest Device – Refer to "Self-Retracting Lifeline".
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. When incorporating a retrieval winch, it becomes a Type 3 fall- arrest device

Work Positioning – Use of a system that enables a person to work supported in a harness in tension in such a way that a fall is prevented. (AS/NZS 1891.1 Clause 1.4.19)

Work Positioning Harness – body support device designed to hold a worker in a stable, hands-free position while working at height. It distributes load through the pelvis, thighs, and where applicable the torso, allowing controlled positioning via a tensioned system connected to an anchorage.

Work Positioning Systems – Any equipment other than a temporary work platform, which enables a person to be positioned and safely supported at

a work location for the duration of the task being undertaken at height. Work positioning systems include the use of adjustable lanyards and pole straps along with a full body harness.