Standard

Work at Heights

Contents

1. Introduction

The term safe working at heights refers to the systems and procedures used by Contact to manage the risks and hazards associated with work activity being undertaken on any surface or at any elevated position where a person or object can fall.

This standard looks at these risks and seeks to clarify the minimum requirements expected when undertaking work for Contact. The WorkSafe NZ publication Best Practice Guidelines for Working at Height in New Zealand and the Dropped Objects Prevention Scheme (www.dropsonline.org) have been consulted during the development of this standard and provide more detailed height safety guidance.

2. Scope

The Safe Working at Heights standard applies to all:

- Contact employees and all contractors engaged directly or indirectly by Contact or working on Contact controlled sites.
- Contact sites, projects, facilities, activities, and contractor activities; and,
- work at height, regardless of the nature and duration of the work.

3. Requirements

Height safety is managed in Contact assets by the provision of permanent edge protection and fall prevention equipment. Removal of permanent equipment (that increases the risk of height safety) can only be performed subsequent to completing the Floor Grate / Handrail / Fixed Ladder Removal Certificate, and establishment of temporary controls.

All work at height **MUST** be subject to a risk assessment based on the:

- nature of the work to be undertaken; and
  exposure of workers to the risk Controls will be established on the following hierarchy:
- elimination.
- substituting (wholly or partly) the hazard with something that lessens the risk.
- isolating the hazard to prevent any person coming into contact with it.
- implementing engineering and /or administrative controls; and,
- ensuring the provision and use of suitable personal protective equipment (PPE).

Control measures **MUST** be:

- fit for purpose.
- suitable for the nature and duration of the work; and,
- installed, set up, and used correctly.

All sites where there is potential for a rescue from heights **MUST** have appropriate:

- rescue equipment.
- emergency response plans; and,
- first aid provisions.

4. General requirements

Fall Prevention

This section outlines a range of controls to isolate or minimise the potential for harm resulting from a fall. Fall prevention systems can include but are not limited to the following controls:

- temporary edge protection.
- scaffolding.
- elevated work platforms (EWP's).
- safety mesh.
- fall arrest systems; and,
- fall restraint systems.

Temporary Edge Protection

Edge protection is used to prevent persons, objects, or materials from falling.
In areas where the likelihood of a fall exists edge protection should be used.
Examples include:

- perimeters of working places.
- openings.
- excavations, trenches, and pits where there is brittle material that cannot safely support the weight of a person.
- formwork or false work.

Edge protection may involve:

- a proprietary (engineered) system.
- materials to form guardrails and/or physical barriers.
- erected scaffolding that supports a temporary edge-protection system; or,
- a combination of solutions.

Note: Cones, barrier tape, chains, ropes, or signage etc., do not constitute edge protection in themselves.

Scaffolding

Scaffolds are a common way to provide a safe work platform. There are a wide variety of scaffolding systems available.
All scaffolds **MUST** be:

- designed and constructed in accordance with the WorkSafe NZ publication: Scaffolding in New Zealand, Good Practice Guidelines: 2016
- erected, altered, and dismantled by persons who have been trained and have suitable experience with the type of scaffolding being used.
- inspected and tagged as 'Safe to Use' by a suitably qualified person prior to use after erection or alteration and at a frequency no longer than weekly once in service.
- clearly identified as unsafe if in the process of being erected, altered, dismantled or if a defect is identified.
- notified to WorkSafe if over five meters high in accordance with the regulations; and,
- checked prior to use by any work party (refer scaffolding check list).

All scaffolds **MUST** have:

- if free-standing the height to the top-most platform not greater than three times the minimum base dimension.
- safe access.
- stable foundations and stable and safe work platforms providing enough room to work.

In addition, mobile scaffolds **MUST**:

- only be used on stable level surfaces.
- have all castors locked when in use.
- only be repositioned when all tools and equipment are removed or secured, and all workers have dismounted.
- only be used around overhead power lines when a safety observer is in place.

Kitset scaffolding systems may be used provided they:

- meet the appropriate manufacturing standard and are in good condition.
- are erected in accordance with the manufacturer's instructions by competent persons; and,
- are inspected and tagged as 'Safe To Use' prior to use by a competent person.

Note: Training and competency assessment with respect to kitset scaffolding may be undertaken on-site by a qualified scaffolder. Records of this training must be maintained.

For further information the Scaffolding Good Practice Guideline can be found here:
https://www.worksafe.govt.nz/topic-and-industry/working-at-height/scaffolding-in-new-zealand/

Elevated Work Platforms (EWP's)

Where EWP's are used to gain temporary access for people or equipment to inaccessible areas for the purpose of working at heights, a risk assessment **MUST** be undertaken to identify appropriate controls.

Commonly used EWP's include:

- scissor lifts
- self-propelled and trailer mounted boom lifts
- vehicle extension arms (i.e., truck mounted boom lift)
- forklift platforms
- crane lift platforms (man cage)
- swing stages / suspended work platforms

EWP Rules

The following rules **MUST** be adhered to when using EWP's:

- EWP's **MUST** have current certification (inspection and certification is required on a 6 monthly basis).
- persons operating mobile plant and equipment and undertaking work at height **MUST** be trained, competent and authorised to do so.
- all persons operating EWPs with certified anchor points **MUST** wear and attach a fall-arrest or fall-restraint device in accordance with the appropriate part(s) of AS/NZS 1891.
- compliance with inspection and maintenance work according to the manufacturer's requirements.
- safe working loads **MUST** not be exceeded.
- prestart checks are undertaken by the operators prior to use.
- a safety observer **MUST** be in place when EWP's are being used for work at height.
- all tools and equipment **MUST** be secured to prevent dropped objects; and,

- compliance with AS 2550.10-2006 Cranes, hoists, and winches - Safe use - Mobile elevated work platforms and AS/NZ 1891

Harnesses are required at all times for the following EWP's:

- self-propelled boom
- mounted lift
- truck mounted

The nature of the design of boom style EWPs, where the boom arms move beyond the base, has an inherent hazard where the booms may act as a catapult during an incident. This significant risk is always there, so a full body harness and lanyard must be used at all times, correctly connected to the manufacturer's approved anchor point.
In all cases the lanyard should be adjusted as short as possible. All harness anchor points in boom lifts are designed for full fall arrest systems and the loads specified by the standards.

For scissor lifts a harness should be worn unless a risk assessment has clearly demonstrated that the work can be undertaken without a harness and there is no risk of falling. If harnesses are required, the equipment must be fitted with certified anchor points.
When working on or in the vicinity of live or electrical equipment a safe working distance of greater than four meters must be established. A safety observer must be stationed to ensure this distance is maintained.

For further information the Best Practice Guidelines for Working at Height can be found here: http://www.worksafe.govt.nz/worksafe/information-guidance/all-guidance-items/best-practice-guidelines-for- working-at-height-in-new-Zealand

Fall Restraint and Fall Arrest Systems

Before work is undertaken using restraint or arrest systems a risk assessment must be undertaken. This must include an assessment of the anchoring system to ensure it is capable of withstanding the shock loading of all attached individuals.

Fall restraint.

A total restraint or work positioning system can be used where a person could fall is exposed to the risk of a fall where the edge is unprotected. Total restraint or work positioning systems prevent the wearer from reaching a position at which there is a risk of free or limited free fall.

The system consists of equipment rated for a fall - such as a full body harness that is connected by a lanyard or safety line to a suitable anchorage point or horizontal lifeline. Where this is the chosen method of control the user /s **MUST** be trained in the use of the equipment and be deemed competent.

Refer to AS/NZS 1891 for further information on restraint systems.

Fall Arrest

Fall-arrest systems are only to be used where total restraint or work positioning systems or edge protection are not practical.

A fall-arrest system is an assembly of designed, interconnecting components that would prevent a person who falls from height from contacting the ground.

Components of a fall restraint system comprise:

- anchorage point(s).
- a static line or restraint line of appropriate strength and length; and,
- a harness or restraint belt.

Where this is the chosen method of control the user /s **MUST** be trained in the use of the equipment and be deemed competent.

A safety observer **MUST** be in place when a fall arrest system is being used. The observer may be another member of the work party, provided the observer is not performing the same task as the person being observed and is in a position to initiate the emergency response plan.

When working with fall arrest equipment an emergency plan **MUST** be completed and rescue equipment **MUST** be available for the work party.

The industrial rope access system (IRAS) is a twin-rope system used to provide access to a work area. Work activity undertaken using this specialist skill generally involves a high risk and the use of specialist contractor services. A careful risk assessment should be undertaken when considering work which requires the use of an industrial rope access specialist.

Where employed all equipment **MUST** be used in accordance with the manufacturer's instructions and meet the requirements of both the WorkSafe NZ/IRAANZ publication Best Practice Guidelines for Industrial Rope Access and AS/NZS 4488:1997.

For further information refer to: APPENDIX B: Legislation, Approved Codes of Practice and Standards.

Safety Mesh

Safety mesh is the preferred system for protecting construction workers against falling through a roof while they are laying roof sheets. If securely fixed, it also provides fall prevention for maintenance and repair workers. Safety mesh should be used in conjunction with appropriate edge protection as outlined in this document.
Safety mesh should comply with AS/NZS 4389:2015 Safety Mesh. This specifies the minimum requirements for the design, construction, testing and installation of safety mesh for use in domestic, commercial, and industrial building applications.

Ladders

Ladders, whether fixed, portable or step ladders, do not offer fall protection and therefore should be the last form of work access equipment to be considered. Ladders or stepladders may be used for low-risk and short- duration tasks. The user should maintain three points of contact with a ladder or stepladder to reduce the likelihood of slipping and falling.

Where use of ladders falls outside normal practice it **MUST** be subject to a risk assessment and additional controls may be required. Examples of these include:

- placing a step ladder on top of a scaffold platform.
- using ladder access adjacent to a handrail (therefore exposing the user to a fall from a greater height).

Ladders being used as a temporary means of access **MUST** extend one metre above the step-off surface and be tied off. The two top treads of a stepladder **MUST** not be used for standing on. Personnel using ladders at a height of over 500mm **MUST** ensure three points of contact at all times with their center of gravity over the middle of the ladder.

Where ladder access is used, items such as tools or equipment **MUST** not be carried by hand. Provisions for the use of material hoists, enclosed tool bags, or tool belts, **MUST** be considered.

Purpose-built platform ladders with fitted handrails may be used as work platforms provided, they meet the requirements of AS/NZS 1892.1.1996

All sites must maintain a register of their portable ladders, and these **MUST** be inspected and tagged as safe to use on a 6-monthly basis.

Dropped Objects

Where the risk of a dropped object has been identified this **MUST** be minimised through processes which may include ensuring that:

- tools and equipment are prevented from falling by use of lanyards secured to either the user or the workplace.
- tools, lanyards, and attachment points **MUST** be inspected before use to make sure they are fit for purpose and do not compromise the effectiveness of the tools or user safety.
- only the tools and equipment specifically required are taken to the workplace.
- hand tools are taken aloft in a tool bag or container designed for the purpose, and which leave both hands free.
- other tools and equipment are lifted in such a way that they are secured from falling.
- PPE is secure.
- physical barriers on work platforms such as kick boards, netting or mesh are considered where it is safe to do so.
- exclusion zones are set up beneath the work area appropriate to the work height and with due consideration of the potential deflection or ‘bounce’ of a dropped object.
- checks are made to ensure the grating is secure and a covering is used where there is the potential for small items to fall through; and,
- good housekeeping is maintained, and tools and equipment are secured against weather events.

All holes and openings (other than lift wells, stairwells, or vehicle inspection pits) with a potential drop hazard **MUST** be protected with barriers sufficient to control the risk of fall. Any holes or coverings should be indicated by signage at the opening.

5. Purchase, Hiring, Inspection and Maintenance

Systems **MUST** be established for purchasing, hiring, marking, registering, and inspecting

all equipment used for height safety, including ladders. The Lifting and Height Equipment Register and Working at Height check sheet are provided for support. Height safety equipment **MUST** be removed from service if:

- it has been used to arrest a fall.
- there is no legible serial number.
- it shows any defects, such as excessive wear, cuts, or abrasions; and,
- it has come to the end of its recommended life span according to the marked expiry date and relevant Australian and New Zealand standard.

Height safety equipment **MUST** be subjected to periodic inspection and servicing, where applicable, at either the manufacturer's recommended intervals or as per AS/NZS 1891.4:2009, whichever is the lesser interval.

6. Freight and Transport

Trucks and tankers, when required, **MUST** have handrails compliant with AS/NZS 1657:1992 engineered into their design. Step, handhold positions and handrails on vehicle and mobile equipment **MUST** be inspected regularly and maintained as part of an inspection schedule.

7. Training and Competence

Only authorised, competent persons may perform those tasks associated with the height and drops safety system.

An assurance system for personnel managing and executing the height safety system **MUST** be implemented to establish competence and will include:

- critical tasks and competence standards defined for each identified critical job role.
- personnel training appropriate to the tasks to be undertaken, based on unit standards which have been established.
- competence assessments to be conducted by appointed and qualified assessors.
- periodic reassessment of competence; and,
- alternative equivalent training to any unit standard may be recognised, subject to approval by the competency assessor.

APPENDIX A: Glossary

Term	Definition
Anchorage	A component cast or fixed into a building or structure for the purpose of attaching a scaffold or safety line. A rigid or flexible line secured to an anchorage point along which a fall arrest device travels, or a flexible line which unreels from a fall arrest device.
Anchorage points	The means for attaching a lanyard, lifeline, or other components of the system to a secure point.
Barrier to restrict access	A physical or visual barrier is a rope, tape or another visual prompt suspended at height to act as a boundary around a work area to prevent access to a hazard. It should be at least two meters away from a height hazard and the roof slope is less than 10 degrees.
Competent person	A person who, after the necessary combination of training and experience, has been successfully assessed by competence assessors on the application of the acquired knowledge and the execution of skills, to ensure that the person can correctly and safely perform specified tasks.
Crane-lifted work platform (man cages)	The equipment where employees carry out their work that is attached to a crane's hook block.
Edge protection	A structural edge protection system that may comprise posts, rails, infill panels, toe boards or a combination thereof, that is designed to provide protection against people or objects falling off the edge of an elevated surface.
Elevating work platform (EWP)	A telescoping device, scissor device or articulating device (or any combination of these devices) used to move personnel, equipment, or materials to and from work locations above a support surface.
Fall-arrest harness (safety harness)	An assembly of interconnected shoulder and leg straps, with or without a body belt, and used where there is likelihood of free or restrained fall.
Fall arrester	A mechanical device such as an inertia reel, which arrests a fall by locking onto the lifeline, at the same time allowing freedom of movement.

Fall-arrest system	A form of fall protection that involves safely stopping a person who is already falling. A fall-arrest system is a series of components designed to safely arrest a worker's fall, preventing the worker from striking the next lowest level and minimising the possibility of serious injury. These systems **MUST** include the following four elements: 1. anchorage – a fixed structure or structural adaptation, often including an anchorage connector, to which the other components of the fall-arrest system are rigged. 2. body wear – a full-body harness worn by the worker. 3. connector – a subsystem component connecting the harness to the anchorage, such as a lanyard 4. deceleration device – a subsystem component designed to dissipate the forces associated with a fall-arrest event. An assembly of interconnected components comprising a harness connected to an anchorage point or anchorage system either directly or by means of a lanyard or pole strap, and whose purpose is to arrest a fall in accordance with the principles and requirements of AS NZS 1891.
Falsework	Falsework is any temporary structure, in which the main load bearing members are vertical, used to support permanent structures, used to support a permanent structure and associated elements during the erection until it is self-supporting.
Formwork	Formwork is best described as "A structure which is usually temporary but can be whole or part permanent, it is used to contain poured concrete to mould it into required dimensions and support until it is able to support itself.
Free fall	Any fall or part of a fall where the person is falling 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.
Hazard	A situation or thing that has the potential to cause death, injury, or illness to a person; and includes a person's behavior where that behavior has the potential to cause death, injury, or illness to a person (whether or not that behavior results from physical or mental fatigue, drugs, alcohol, traumatic shock, or another temporary condition that affects a person's behavior).
Height safety	Any work activity being undertaken on any surface or at any elevated position where a person or object can fall.
Height safety equipment	Equipment including, but not limited to: • harnesses • lanyards, slings, and anchor straps • static lines and inertia reels
Industrial rope access system (IRAS)	A twin-rope system used to provide access to a work area. A work positioning harness or seat is attached to one rope and a fall-arrest harness is attached to the other rope.

Job Safety & Environmental Analysis (JSEA/JSA), Job Hazard Analysis (JHA) or Hazard ID	A risk assessment process that identifies hazards associated with a job, task, or scope of work in order to: evaluate the risk associated with each hazard; determine appropriate risk control strategies to minimise harm to people, the environment or the plant; achieve a risk level as low as is reasonably practicable (ALARP).
Lanyard	A flexible line, rope or strap used to connect the containment device of a fall safety system to an anchorage or lifeline.
Lifeline	A heavy line used to transfer an anchorage site to a more convenient or secure site while providing horizontal or vertical freedom of movement.
Protective environment	The use of scaffolding, permanent railing, total restraint, edge protection or other means of protecting people or objects from falling.
Restrained fall	A fall or the arrest of a fall where the person suffering the fall is partially restrained by a device such as a pole strap or is sliding down a slope on which it is normally possible to walk without the assistance of a handrail or hand line.
Risk	The effect of uncertainty on our objectives.
Scafftag	A specific tag holder and card that when fixed to a scaffold, identifies the status of the scaffold in respect to its use and inspection details.
Safety Observer	Competency requirements include: • familiarity with the job • the ability to communicate with the equipment operator. • be able to enact the emergency plan (if required) • the ability to operate equipment and have access to manual controls. • to be able to accurately judge minimum approach distances
Scaffolding	Any advanced scaffolding, basic scaffolding, or suspended scaffolding or any framework or structure, of a temporary nature, used or intended to be used for: a. the support or protection of persons carrying out construction work or work connected with construction work, for the purpose of carrying out that work. b. the support of materials used in connection with any such work, and includes: i. any scaffolding constructed as such and not dismantled, whether or not it is being used as scaffolding. ii. any coupling, device, fastening, fitting, or plank used in connection with the construction, erection, or use of scaffolding

Term	Definition
Total restraint or work positioning system	Devices used to restrain a person from reaching an edge from which they may fall. Items include harnesses, anchors, static lines, and lanyards. Movement is restricted to the extent that it prevents a person going near the open edge or from falling.
Work at height	Working at a place, above or below ground level, where a person could be injured if they fell from that place – that is, falling from one level to another. Access and egress, except by a staircase in a permanent workplace to, or within a place of work can also be work at height. Work at height does not include a fall at the same level (for example, falling or slipping at ground or floor level).

APPENDIX B: Legislation, Approved Codes of Practice and Standards

Legislation		
Health and Safety at Work (General Risk and Workplace Management) Regulations 2016		
Health and Safety at Work Act 2015		
Approved Codes of Practice and Guidelines		
Good Practice Guidelines for Scaffolding in New Zealand	https://www.worksafe.govt.nz/topic-and-industry/working-at-height/scaffolding-in-new-zealand/	
Best Practice Guidelines for Working at Height	https://www.worksafe.govt.nz/topic-and-industry/working-at-height/working-at-height-in-nz/	
Best Practice Guidelines for Industrial Rope Access	https://worksafe.govt.nz/dmsdocument/3212-industrial-rope-access-in-new-zealand-best-practice-guidelines	
Best Practice Guidelines for Elevating Work Platforms	https://www.worksafe.govt.nz/topic-and-industry/working-at-height/mobile-elevating-work-platforms/mobile-elevating-work-platforms/	
Safe Working with ladders and Stepladders	https://www.worksafe.govt.nz/topic-and-industry/working-at-height/safe-working-with-ladders-and-stepladders-construction/	
Standards (as acknowledged in the Codes of Practice and Guidelines)		**Standard Number**
Scaffolding		
Scaffolding Part 1: General requirements		AS/NZS 1576.1:2019
Scaffolding Part 1: Prefabricated and tube-and-coupler scaffolding		AS/NZS 1576.3:2015
Guidelines for scaffolding		AS/NZS 4576.1995
Cranes		

Cranes, hoists, and winches - Part 10: Mobile Elevating Work Platforms	AS/NZS 1418.10:2011 AS/NZS 1418.1
Cranes, hoists, and winches	AS/NZS 2550.9:1996 AS/NZS 1418.9:1996
Fall-Arrest	
Industrial fall-arrest systems and devices - Harnesses and ancillary equipment	AS/NZS 1891.1:2020
Industrial fall-arrest systems and devices - Horizontal lifeline and rail systems	AS/NZS 1891.2:2001
Industrial fall-arrest systems and devices - Selection, use and maintenance	AS/NZS 1891.4:2009
Edge Protection	
Temporary edge protection	AS/NZS 4994.1:2023
Temporary edge protection - Roof edge protection - Installation and dismantling	AS/NZS 4994.2:2023
Temporary edge protection - Installation and dismantling for edges other than roof edges	AS/NZS 4994.3:2023
Ladders	
Portable ladders - Selection, safe use, and care	AS/NZS 1892.5:2000
Industrial Rope Access Systems	
Industrial rope access systems - Specifications	AS/NZS 4488.1:1997
Industrial rope access systems – Selection, use and maintenance	AS/NZS ISO 22846.2:2020

Appendix C: Additional documentation

Contact Documentation	
Protect @ Contact Essential Work at Heights	DMS 10000023832