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Toolbox Topic

Heights Safety Basics

Important – Those intending to work at height must be trained in the safe management and application of working at heights

TAT-NAT-PRE-0004

What's the Risks?

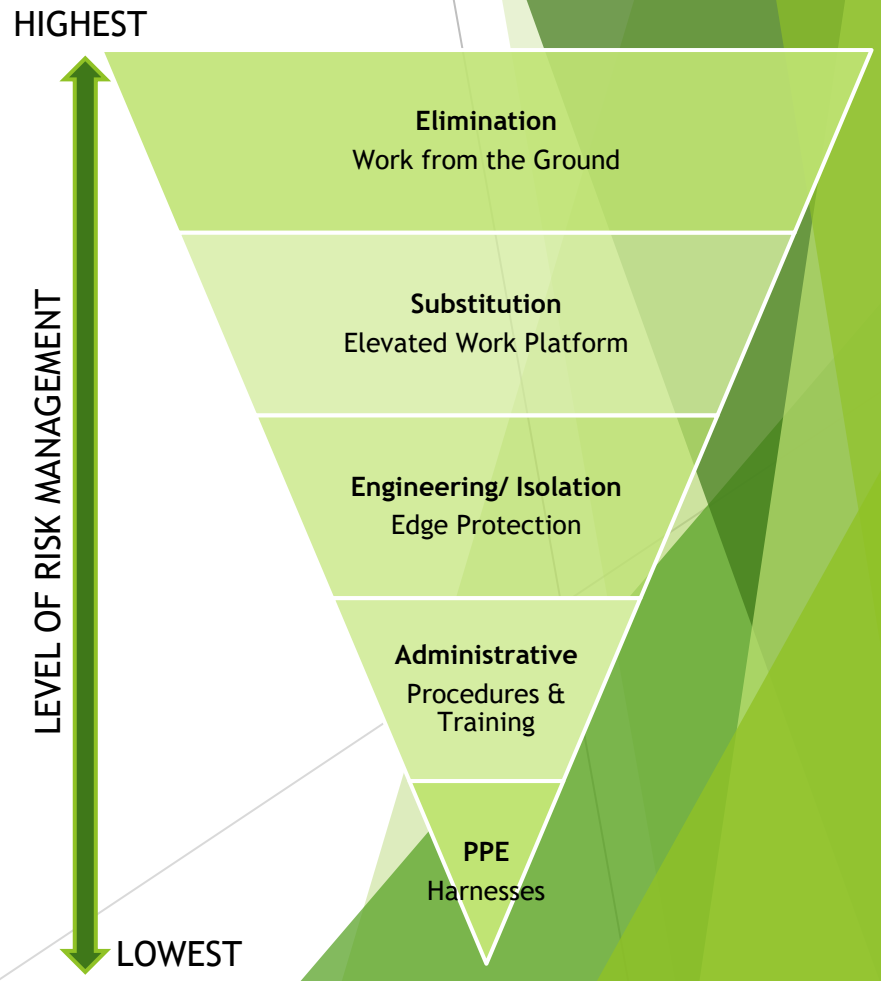
Falls from height remains one of the greatest cause of fatalities in the Australian construction industry, and of the top three causes of worker fatalities of all workplaces in Australia.

It is important to utilise the hierarchy of controls when considering the need to work at height.

Causes of worker fatalities in 2020

Construction industry and mechanism	No. of fatalities	% of fatalities
Falls from a height	48	31%
Being hit by falling objects	24	16%
Vehicle collision	24	16%
Being hit by moving objects	22	14%
Contact with electricity	16	10%
Being trapped between stationary and moving objects	6	4%
Other mechanisms	14	9%
Construction 5 year total	154	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.



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Edge Protection

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Edge protection can be very effective for working at heights for an extended duration which isolates workers going beyond the edge at heights.

Edge protection can be either fixed or temporary.

Temporary edge protection is typically used for:

- Roof construction/ maintenance
- Solar panel installation/ maintenance
- Comms installations/ maintenance
- Painting works

Ladders will be required to access.

Test & Tag Karratha hires and can erect the SiteTech edge protection system seen here.

Ladders

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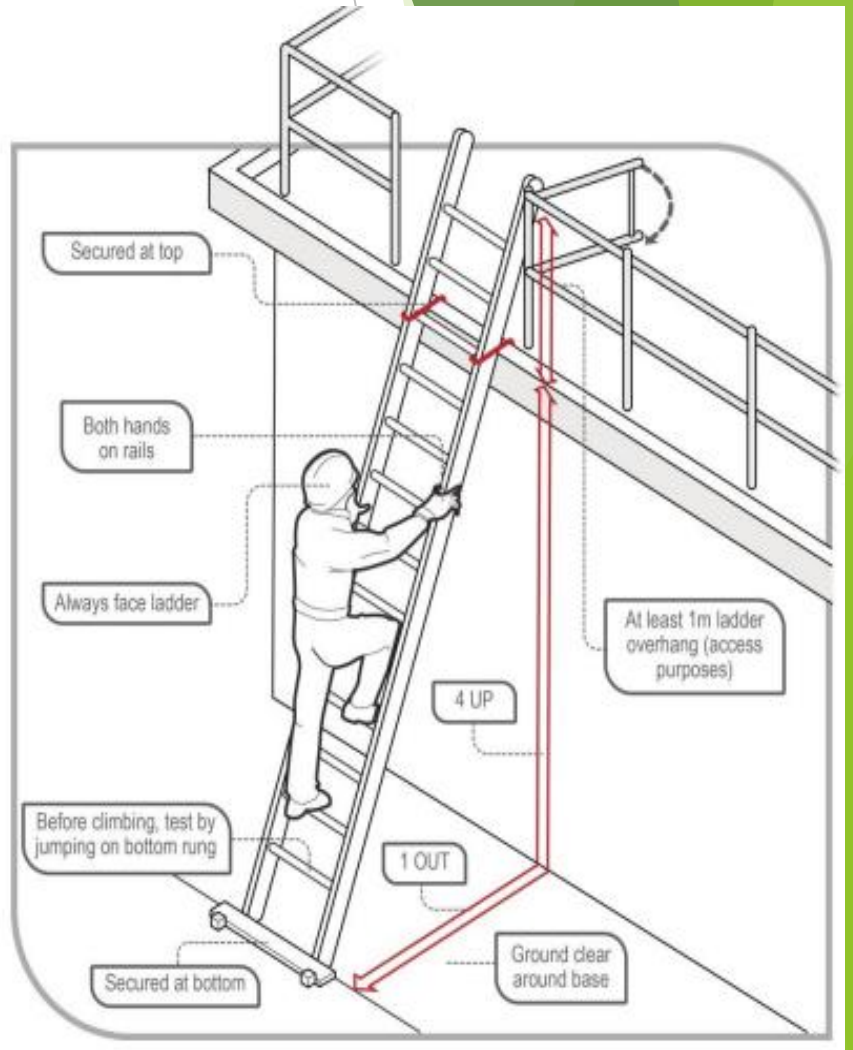
Ladders are a very common working at heights tool used in the workplace and should be selected to suit the work to be carried out, including the duration of the work, the physical surroundings of where the work is to be carried out and the prevailing weather conditions.

Ladders used at a workplace should be set up on a solid and stable surface, and to prevent the ladder from slipping. Single and extension ladders can be prevented from slipping by:

- ensuring the ladder has non-slip feet
- placing ladders at a slope of 4:1 (the distance between the ladder base and the supporting structure should be about 1 metre for every 4 metres of working ladder height), and – securing ladders at the top or bottom, or if necessary, at both ends.

Ensure 3 points of contact when ascending and descending.

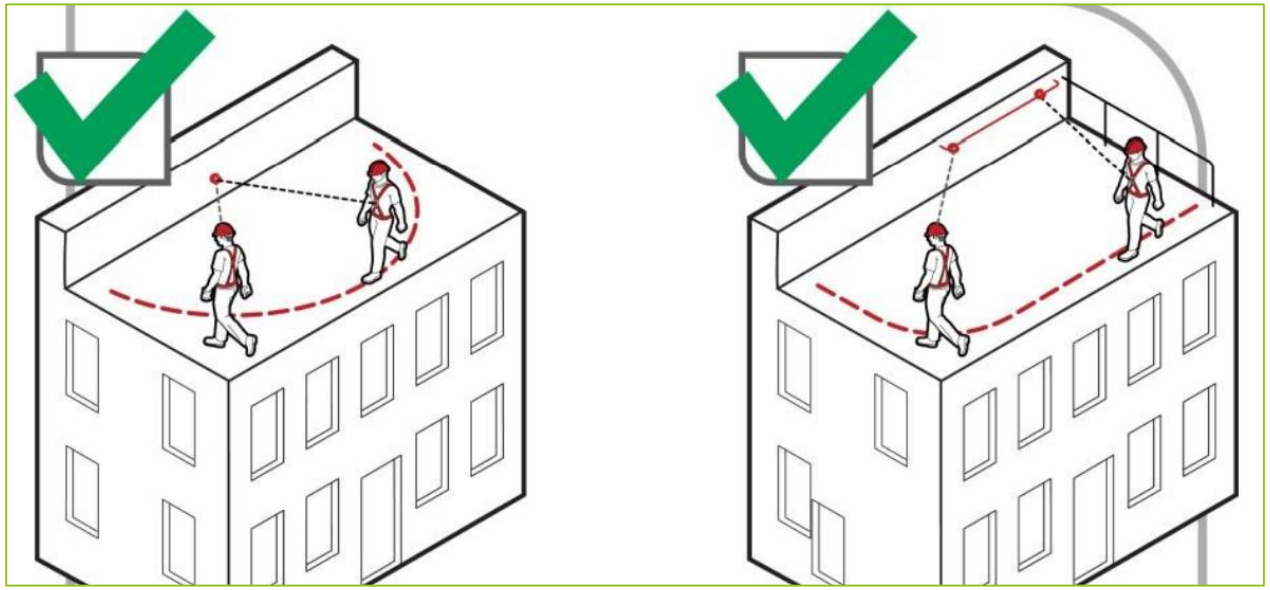


Fall Restraint

Fall restraint is the preferred method when working at heights with no barriers.

Fall restraint “restrains” the person from reaching beyond the edge.

The user must consider the length of their lanyard has to the edge.



Test & Tag Karratha can install the SafetyLink fixed working at heights systems and conduct inspections on already installed systems

Fall Arrest

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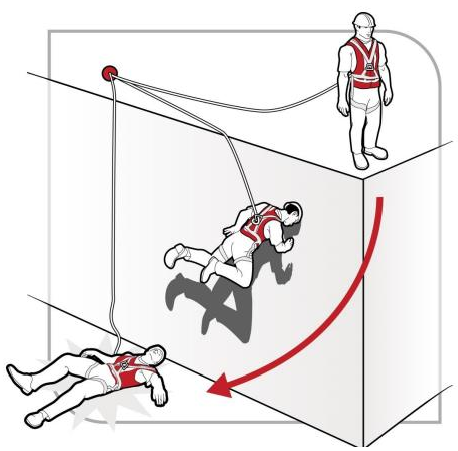
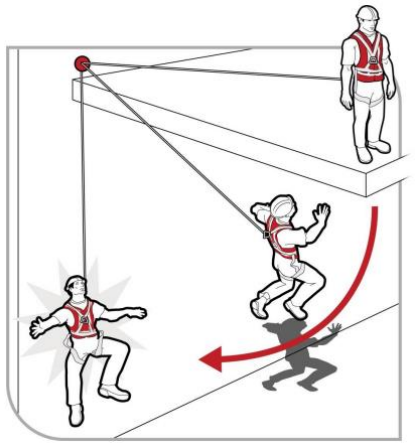
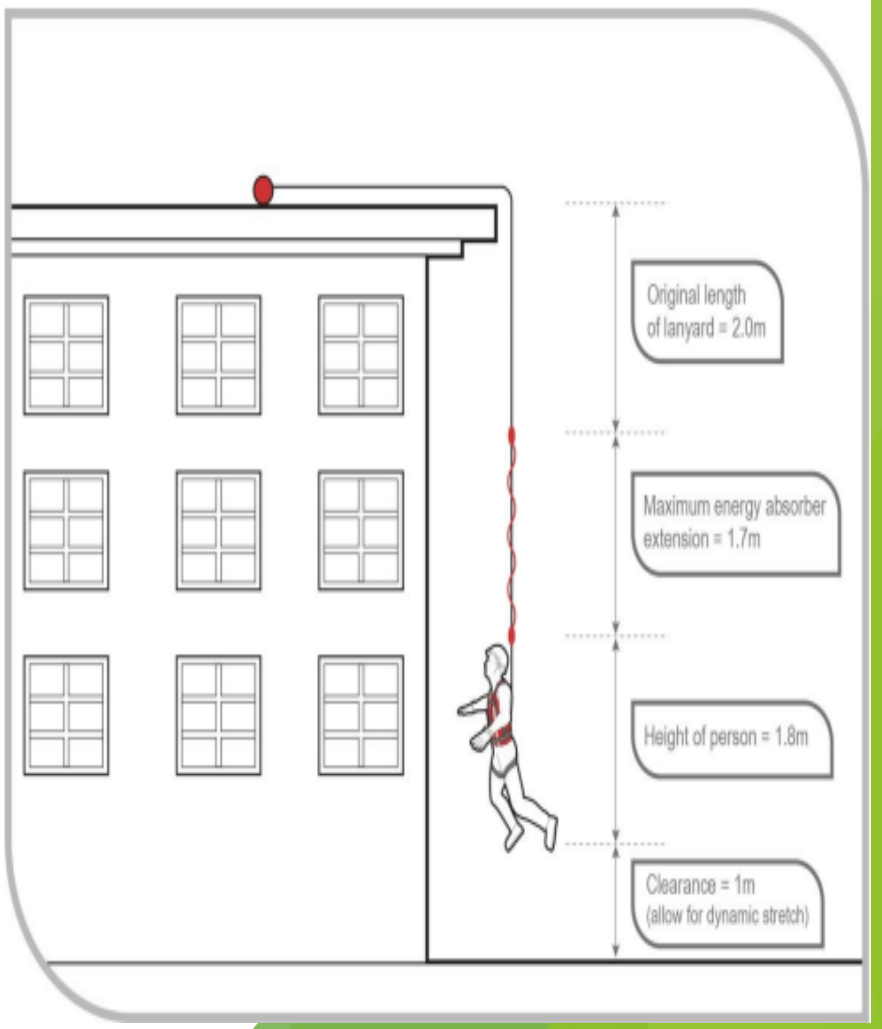
Fall arrest systems, such as catch platforms, safety nets and individual fall arrest systems (including anchorage lines or rails), are intended to safely stop a worker falling an uncontrolled distance and reduce the impact of the fall. These systems must only be used if it is not reasonably practicable to use a fall prevention device or work positioning system or if these higher-level controls might not be fully effective in preventing a fall on their own.

Those working at the edge must consider the pendulum effect with their lanyard length and the length of the shock absorber when deployed.







Harnesses & Lanyards

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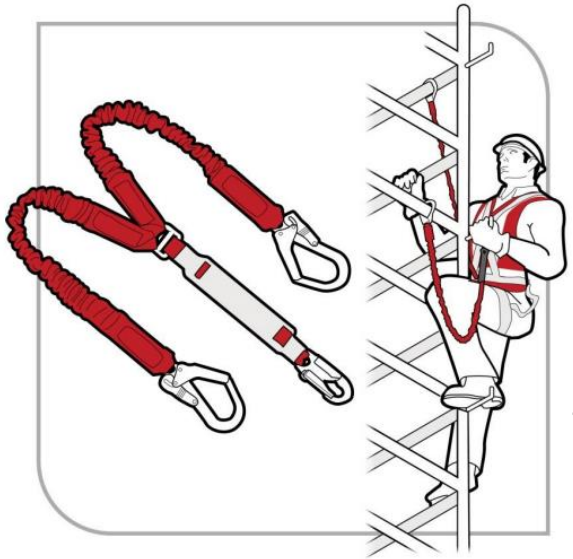
Height safety and harnesses are strictly designed and tested to Australian Standards AS/NZS 1891 in the aim of saving a person's life if they happen to fall.

The harness and attached lanyards to also designed to reduce the impact of being caught from the fall, which can apply up to 15 kilonewtons (15 tonnes) of pressure on the body.

Equipment used for individual fall arrest systems should be designed, manufactured, selected and used in compliance with AS/NZS 1891(set)4 : Industrial fall-arrest systems and devices.

Test & Tag Karratha hires and conducts inspections on working at heights systems



Dropped Objects

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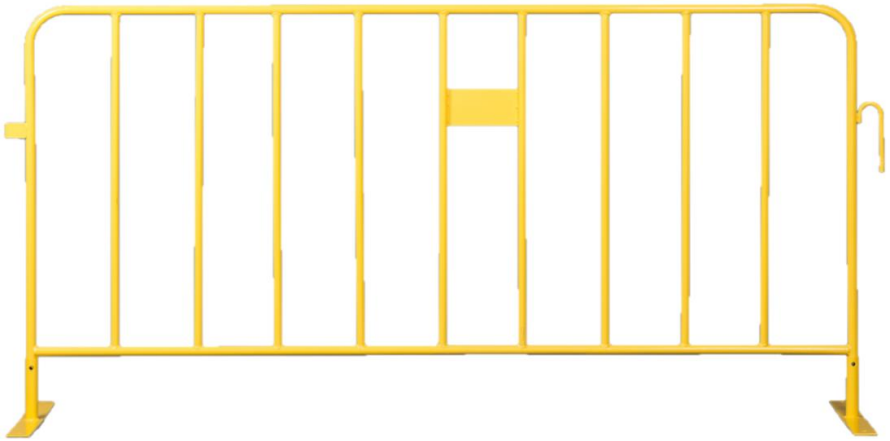
Height safety is more than those working at heights, it must incorporate the risk associated with the potential for dropped objects impacting people and assets below.

Actions to put into place to reduce this risk can include:

- Pausing all work below until working at height is complete
- Barricading the work area below the work being conducted above
- Have nets below those working at height to catch dropped objects
- Attach tools for those working at height to lanyards



Test & Tag Karratha hires and can install temporary barricades to set up drop zones

Inspections

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With working at heights being such a risk to safety, it is extremely important to inspect your working at heights tools and equipment before it is used, and at regular intervals. Failing to do so could cause compromised equipment being put into use.

Test & Tag Karratha conducts required inspections and compliance tagging on all height safety equipment.

Working at Heights Equipment	*Inspection Intervals
Edge protection	Monthly after installation
Portable ladders	6 months
Harnesses	6 months
Lanyards	6 months
Height access ropes	6 months
Installed anchor systems	12 months

*Some workplaces require quarterly inspections

References

Safe Work Australia (2020). *Work-related Traumatic Injury Fatalities, Australia*. Accessed 2022: Work-related traumatic injury fatalities Australia 2020 (safeworkaustralia.gov.au)

Safe Work Australia (2018). Managing the risk of falls at workplaces, Codes of Practice. Accessed 2022: Model Code of Practice: Managing the risk of falls at workplaces (safeworkaustralia.gov.au)

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