NSW Resources
Resources Regulator

NSW GOVERNMENT

Working at Heights – Hazards and Controls

Small Mines Roadshow

February / March / April 2025

Working at Heights - Legislation

Worker Falling:

Work Health and Safety Regulation 2017 clause 78 Management of risk of fall.

Work Health and Safety Regulation 2017 clause 79 Specific requirements to minimise risk of fall.

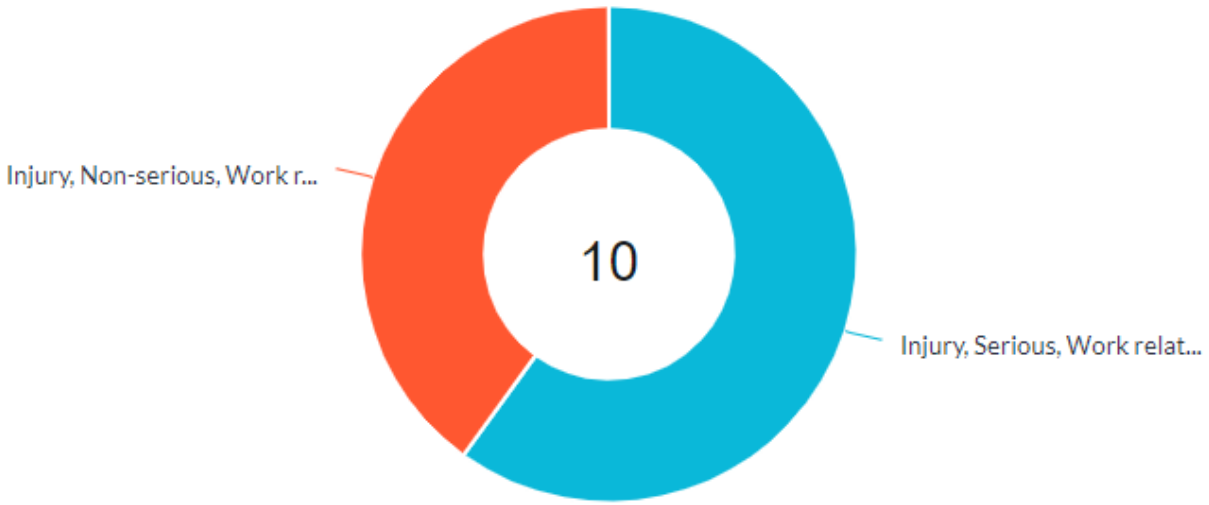
Work Health and Safety Regulation 2017 clause 80 Emergency and rescue procedures.

Object Falling:

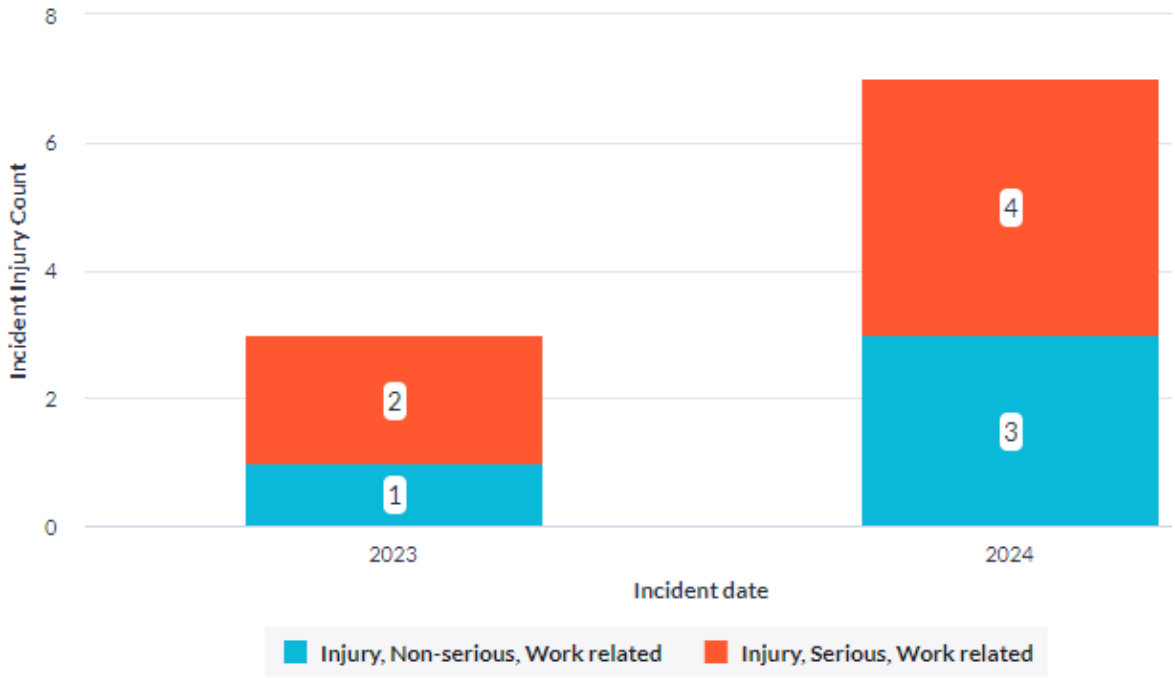
Work Health and Safety Regulation 2017 clause 54 Management of risk of falling objects.

Work Health and Safety Regulation 2017 clause 55 Minimising risk associated with falling objects

Working at heights – Nov 2023 to Nov 2024 Incidents (fall from height, hit by falling object)



6 x Serious incidents
4 x Non-serious incidents



Working at heights – Hierarch of controls

Hierarchy of controls

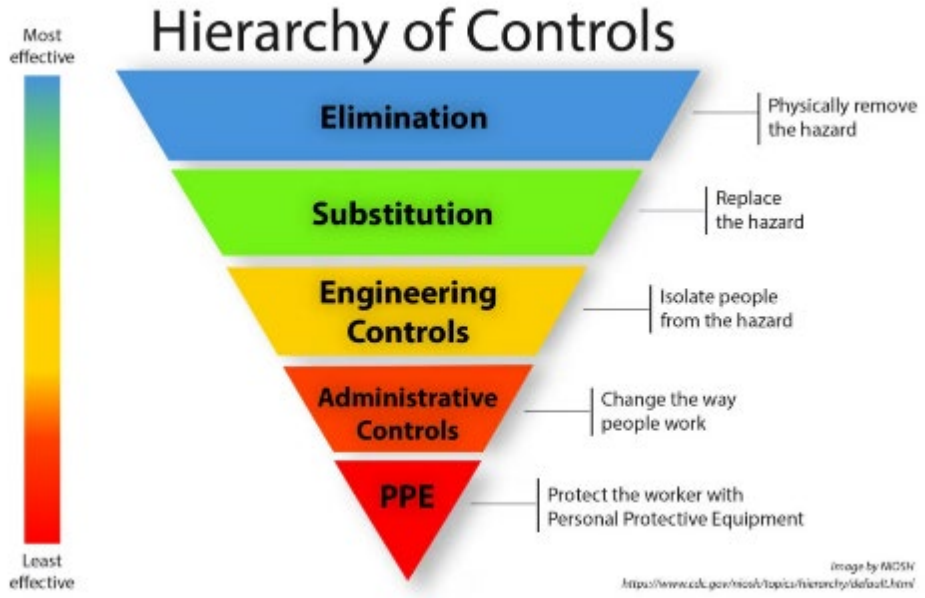
We need to remove the human element – more hard controls

Not remove the humans

But help them as they will make errors

Investigations need to stop blaming the workers

But need to look at the systems, work design and equipment.



For any worker at height there is a National competency RIIOHS204A – Work safely at heights (or depths).

Best to prevent a fall

AS1657 Fixed platforms, walkways, stairways and ladders – Design, construction and installation.

CONTENTS

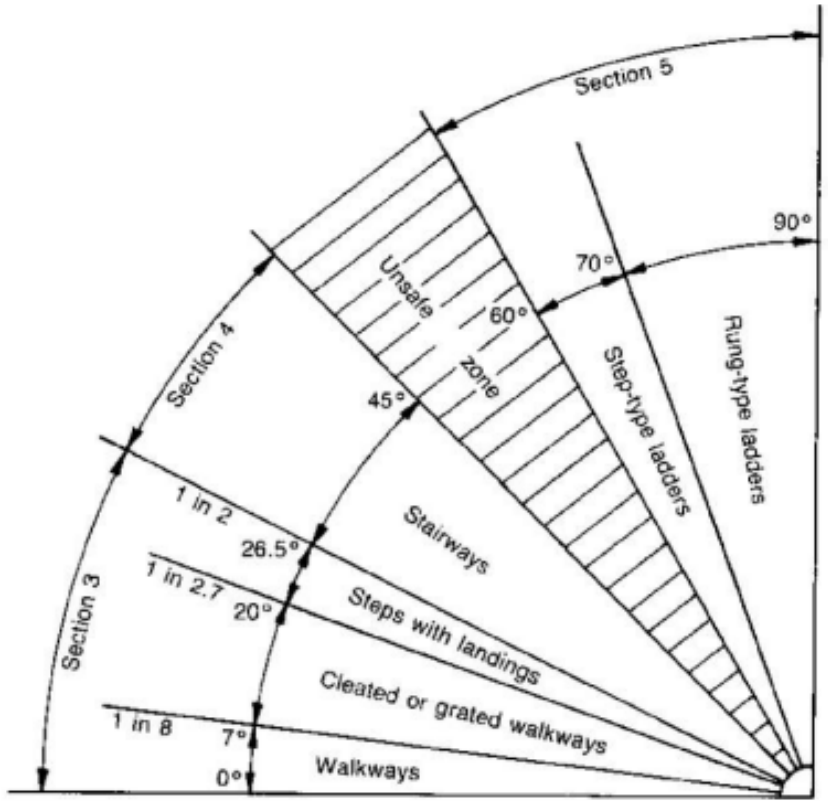


FIGURE 1.1 LIMITS OF SLOPE

Poor compliance – is this accepted on your site?

Heavily corroded walkway treads

Heavy material build up

Poor compliance – were these identified on pre-starts?

Heavily corroded grid mesh

Cracked handrail

Poor compliance

Ladder base not secured

Exposed fall area & build up

Poor compliance

Portable access platform but no fall protection from top of container

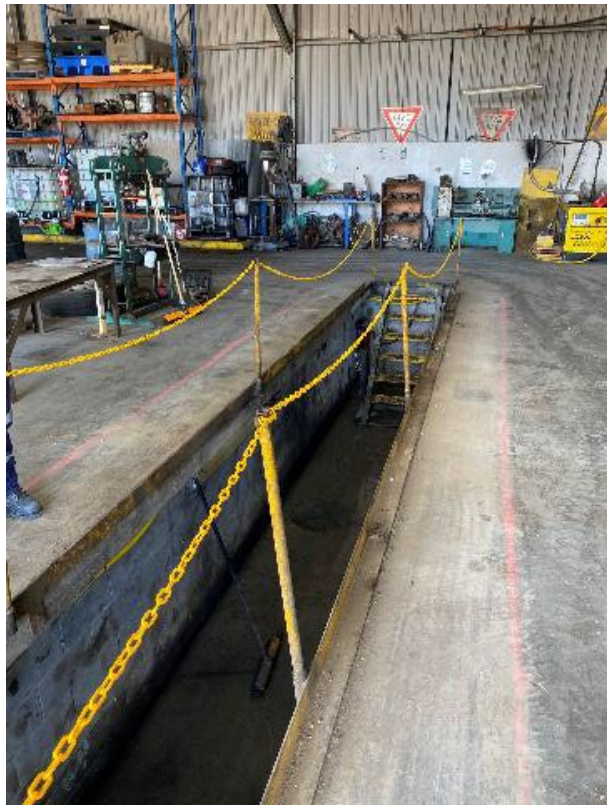
Igloos on containers are more common now but is fall from height or dropped objects from the top of the containers risk assessed and controlled?

Improvements can always be made

Missing handrail & no head clearance to moving belt

Removable handrail fitted & guarding fitted to underside of belt

Initially poor design, but easily and inexpensively fixed



Plastic chain around pit edge

Access now limited to prevent unintended access

PPE normally used on platform but easily modified - HOC

No fall protection on platform

Handrails and kickplates fitted around the platform.

Kickplates also help to provide containment for dropped tools.

Self-closing gates to be fitted and working effectively

Gate is jammed open

Gate is jammed open

OEMs often have options

No fall protection around engine bay

OEM option easily fitted

Screen entry platforms (potential fall hazard into chute)

Typical screen chute cover

Access platform in standby mode

Access platform in standby mode

Screen entry platforms (potential fall hazard into chute)

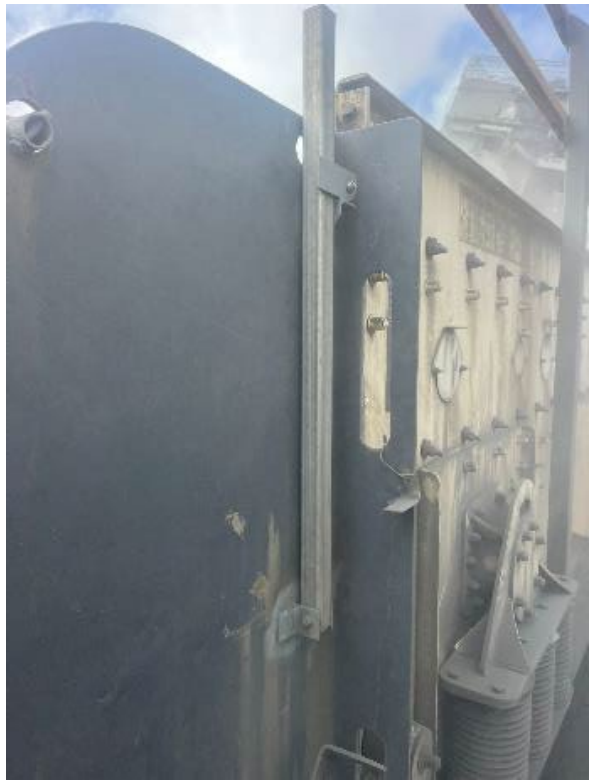
Chute cover moved but platforms still prevent worker access to fall zone

Platforms dropped down into place to cover the fall zone

Screen entry platforms (potential fall hazard into chute)

Access platform in standby mode

Access platform in standby mode

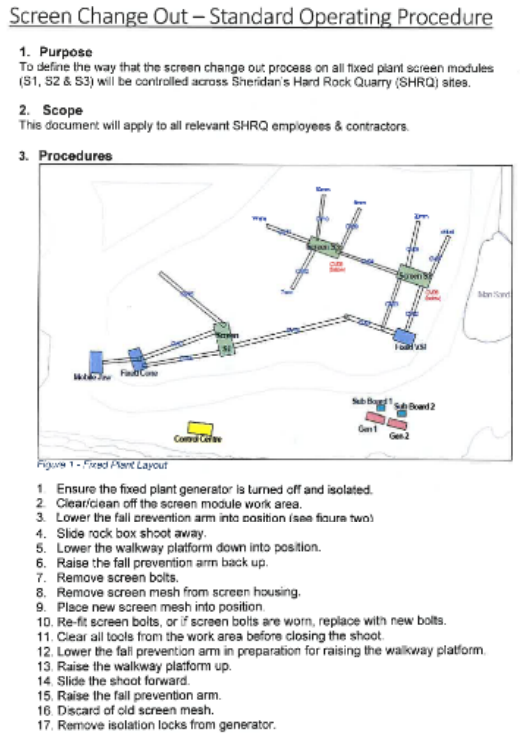


Bar ready to be lowered into place to prevent entry to exposed chute

Screen entry platforms (potential fall hazard into chute)

Bar lowered into place to prevent access

Platforms dropped down into place to cover the fall zone



Screen Change Out – Standard Operating Procedure

1. **Purpose**
To define the way that the screen change out process on all fixed plant screen modules (S1, S2 & S3) will be controlled across Sheridan's Hard Rock Quarry (SHRQ) sites.

2. **Scope**
This document will apply to all relevant SHRQ employees & contractors.

3. **Procedures**

Figure 1 - Fixed Plant Layout

1. Ensure the fixed plant generator is turned off and isolated.
2. Clear/clean off the screen module work area.
3. Lower the fall prevention arm into position (see figure two)
4. Slide rock box shoot away.
5. Lower the walkway platform down into position.
6. Raise the fall prevention arm back up.
7. Remove screen bolts.
8. Remove screen mesh from screen housing.
9. Place new screen mesh into position.
10. Re-fit screen bolts, or if screen bolts are worn, replace with new bolts.
11. Clear all tools from the work area before closing the shoot.
12. Lower the fall prevention arm in preparation for raising the walkway platform.
13. Raise the walkway platform up.
14. Slide the shoot forward.
15. Raise the fall prevention arm.
16. Discard of old screen mesh.
17. Remove isolation locks from generator.

SOP developed and workers trained

Elevated Work Platforms (EWPs) – Boom type

Self-propelled and truck mounted types.
Operator qualification is High Risk Work Licence: Boom Type Elevating Work Platform 11 m or greater (WP).
Safety Harness is needed with energy absorbing lanyard and attached to an approved anchor point in the basket.

Elevated Work Platforms (EWPs) - Telehandler

Safety Harness is needed with energy absorbing lanyard and attached to an approved anchor point in the basket.

Elevated Work Platforms (EWPs) -Telehandler Qualifications

	Under 3t Forks/Hook/Jib	Over 3t Forks	Over 3t Hook/Jib	EWP basket >11m	Slewing any capacity
NSW	DOC/GC	DOC/GC	CN,C2,C6,C1,C0	WP	C2,C6,C1,C0
QLD	DOC/GC	DOC/GC	CN,C2,C6,C1,C0	WP	C2,C6,C1,C0
NT	DOC/GC	DOC/GC	CN,C2,C6,C1,C0	WP	C2,C6,C1,C0
WA	DOC/GC	DOC/GC	CN,C2,C6,C1,C0	WP	C2,C6,C1,C0
TAS	DOC/GC	DOC/GC	CN,C2,C6,C1,C0	WP	C2,C6,C1,C0
ACT	DOC/GC	CN,C2,C6,C1,C0	CN,C2,C6,C1,C0	WP	C2,C6,C1,C0
VIC	DOC/GC	CN,C2,C6,C1,C0	CN,C2,C6,C1,C0	WP	C2,C6,C1,C0

DOC/GC –Duty of Care training

C2/C6/C1/C0 - High Risk Work Licence: Mobile Slewing Crane (≤20t, ≤60t, ≤100t, >100t)

CN - High Risk Work Licence (HRWL): TLILIC0040 - LICENCE TO OPERATE A NON-SLEWING MOBILE CRANE (GREATER THAN 3 TONNES CAPACITY)

WP - Class High Risk Work Licence: Boom Type Elevating Work Platform 11m or greater

Nationally Recognised Unit of Competence **RIIHAN309F Conduct telescopic materials handler operations**

Forklifts

Operator qualification is High Risk Work Licence: Forklift truck (LF).

Safety Harness is needed with energy absorbing lanyard and attached to an approved anchor point in the basket.

Slewing and Non-Slewing- Telehandlers, Forklifts & Cranes

Common issues:

- Outriggers not used to provide stability.
- Articulating a machine can quickly change the centre of gravity leading to rollovers.
- Poor ground conditions including slopes can quickly change the centre of gravity leading to rollovers.
- Travelling with a load on changes the dynamics of the machine and also changes the centre of gravity, particularly on articulating machines.
- Operators may be HRWL qualified, but they may not be competent in the task.
- Operators may not be competent or familiar with how to fit, or lock on, an attachment resulting in it falling off – NOT IDEAL IF IT'S A WORK BASKET.
- Lack of detailed and documented procedures.
- Lack of management of risk when the task changes or a problem occurs.

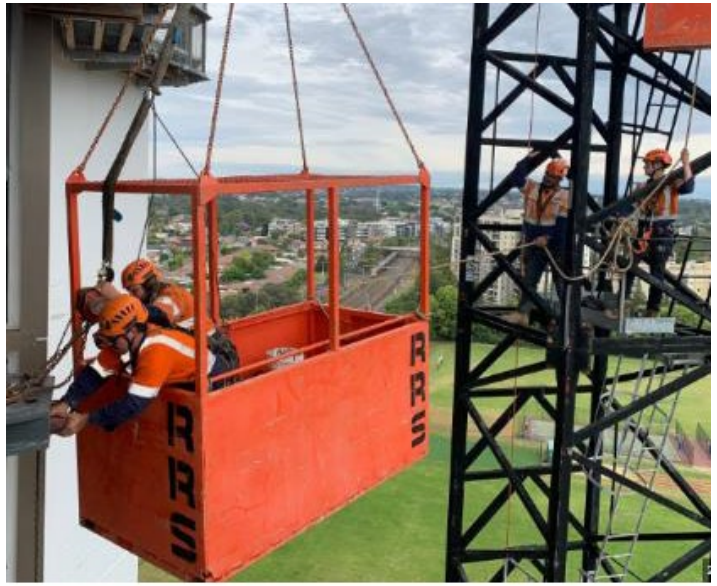
Elevated Work Platforms (EWPs) – Scissor and vertical lifts

- Self-propelled and tow around types.
- Operator qualification is deemed competent to operate safely.
- Safety harness is not needed.

Elevated Work Platforms (EWPs) – Anti-crush bars

This bar automatically stops the machines motion when pressure is applied
For example, when leaned on by the operator or hitting a nearby structure.
It can also activate an alarm.

Cranes with Work Boxes



Safety Harness is needed with energy absorbing lanyard and attached to an approved anchor point in the basket.
Qualifications are with the crane operator and dogman/rigger not the worker in the basket.

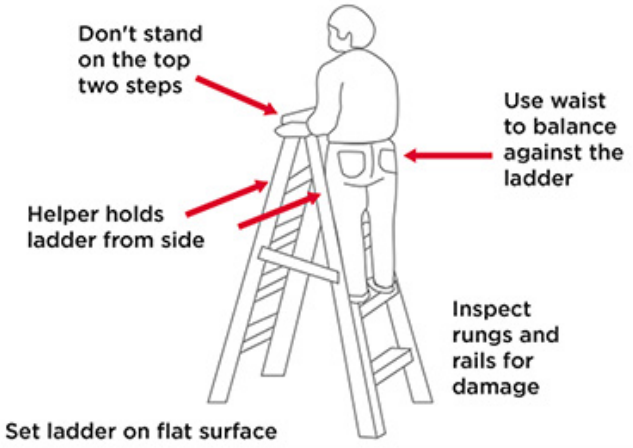
Pre-start Inspections

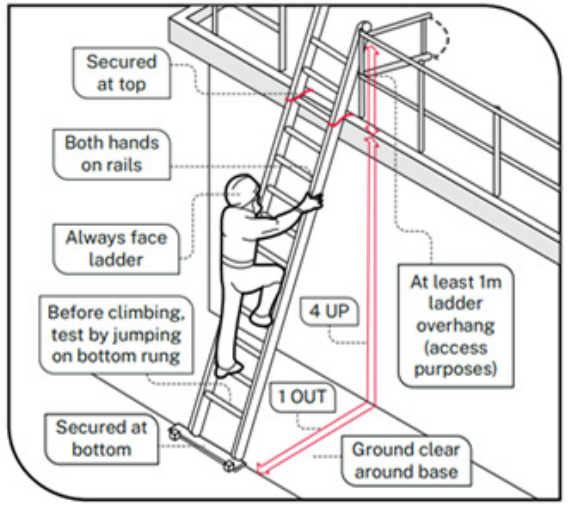
- Need to be specific for the machine and follow the manufacturer's instructions.
- Person completing the pre-start needs to be competent in the task (Not just a HRWL).
- Confirm that the machine and attachment are designed and engineered to work together.
- Pre-starts must include both the machine as well as the attachment, paying particular attention to the adequacy and security of the attachment to the machine.
- Confirm that the task is within the rated limits of the machine and the attachment.
- Ensure all safety related devices are operational.

Ladders

Each year there are dozens of serious incidents in NSW workplaces where workers have fallen from ladders. Most of these incidents involve a ladder being used incorrectly or inappropriately.

- Only use ladders for simple access jobs or for a short duration but NOT for repetitive tasks.
- It's best to work from ground level whenever possible.
- Always consider alternatives to ladders (steps or permanent access systems).





Work platforms

- Self-closing gate at top of stair to prevent falling back and fall protection at the front.
- Can be moved by hand or forklift.
- Can be designed with removable sections to allow access from either side.
- Need to be engineered and designed to appropriate Australian Standards.

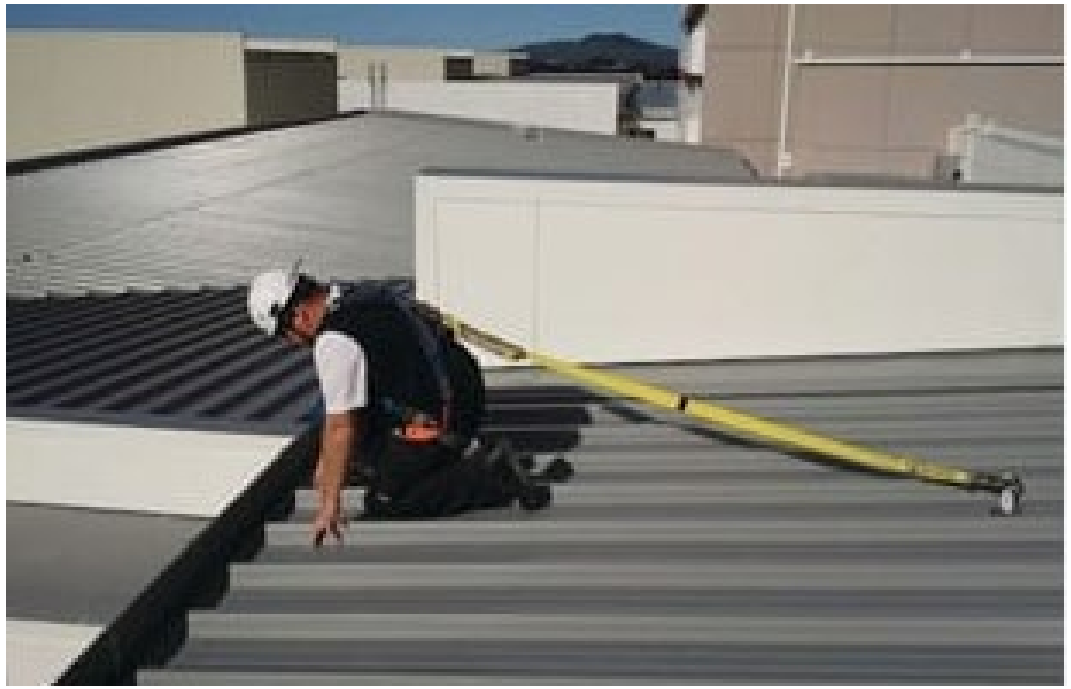
Scaffolding

Can be small and simple or more customised design. Qualification is required when a person or object could fall more than 4 metres from the platform or structure. Basic scaffolding (SB), Intermediate scaffolding (SI), Advanced scaffolding (SA)

Harnesses and lanyards

Safety Harness

Fall Restraint (rope) Lanyard



Prevention from falling (fall restraint)

Harnesses and lanyards

Fall Arrest (shock absorbing) Lanyard

Fall Arrest (retractable system) with Rescue Device Attachment

Lanyard anchor points

Temporary anchor point

Permanent anchor point

Lanyard anchor points

Transportable anchor systems can be moved around in workshops or out into the quarry

Static line anchor systems for larger areas such as on a roof

Tool lanyards and tethers

Some examples to show how tools (objects) can be prevented from being dropped and falling onto others

To summarise

- Try to prevent a fall by having good permanent access systems.
- There are many different systems to make working at heights safer.
- Ensure inspections identify defects and repairs are completed.
- Need to look for opportunities to improve.
- Ensure ALL workers, including contractors understand the systems, the systems are documented, and workers are trained and competent.

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Questions?

Thank you