



# Integrated labour inspection in construction

## OSH inspection

# Good site safety & health - not down to luck

OSH needs to be considered at

Start of project -the design stage

Continuously throughout the project

Ensured by:

Clients

Employers and their representatives  
(Safety officer/manager/supervisors)

Workers and their representatives

Labour inspectors

# Inspectors role

- Ensure compliance with law
- Provide advice on compliance
- Identify gaps in law

Through -  
site visits, information  
awareness raising campaigns, etc.




# OSH Inspection

Opening meeting conducted with site management, worker representatives may be present


- To explain purpose of visit
  - What topics will be covered
  - What activities will be inspected
  - Whether the complete site will be inspected
  - What documentation will be examined
- Advise those present of the need to discuss matters with workers and/or their representatives without site management being present

# Sequence of events


- 
- No set sequence of activities to follow:
  - OSH inspections may commence with examination of paperwork, have risks been identified and responsibilities documented
    - Safety plans, systems of work, risk assessments etc.

Inappropriate to examine paperwork if unsafe system of work has been identified - rectify this then examine paperwork

# Inspectoral actions

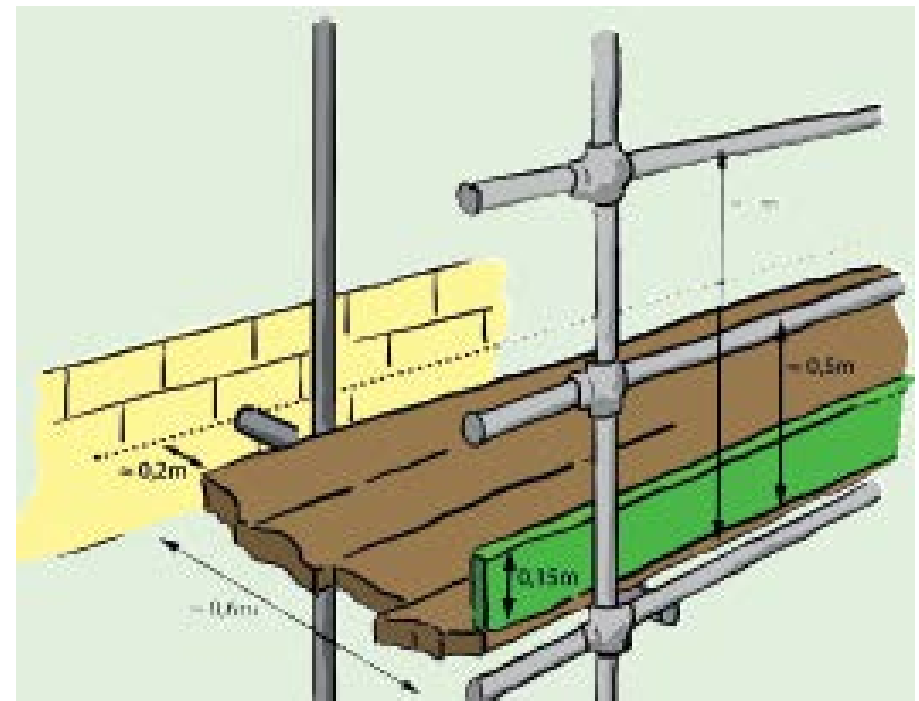
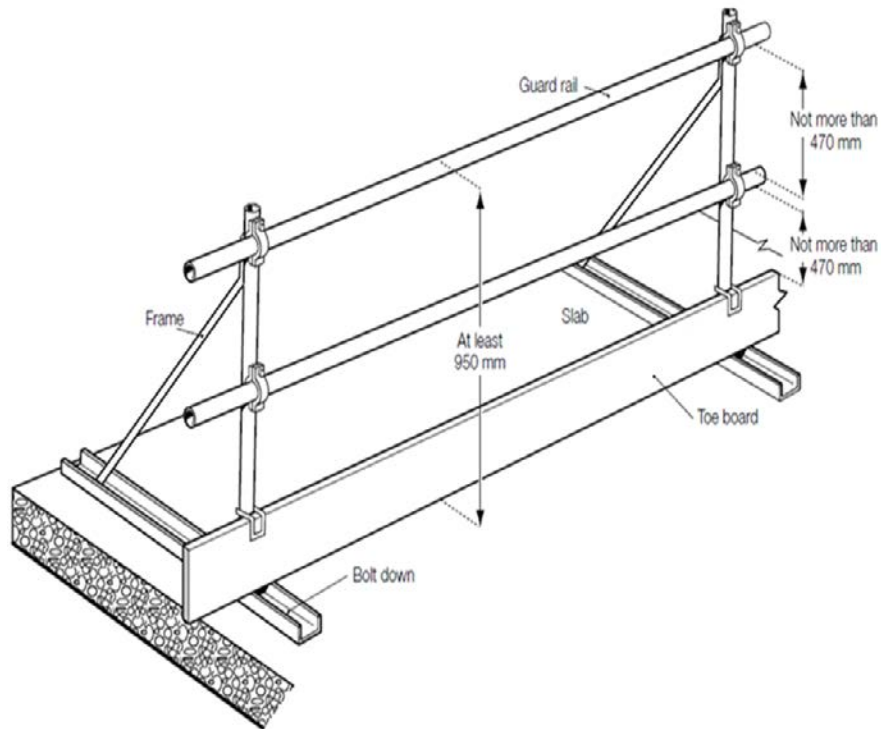
- 
- Question those in control as to how they plan and coordinate activities on site, for example:
    - What measures are taken to ensure all contractors aware of site safety rules?
    - What measures are taken to enforce site safety rules?
    - How does the principal contractor ensure machinery and equipment brought onto site is safe?
    - What measures are taken to ensure systems of work are safe?

# Common hazards

- 
- Work at height
  - Transport
  - Excavations
  - Noise
  - Hand arm vibration
  - Asbestos
  - Etc. etc.
  - Electricity
  - Material handling
  - Falling materials
  - Hand tools
  - Machinery
  - Dusts/fumes
  - Etc. etc.

# Control measures

## Prevent falls – edge protection

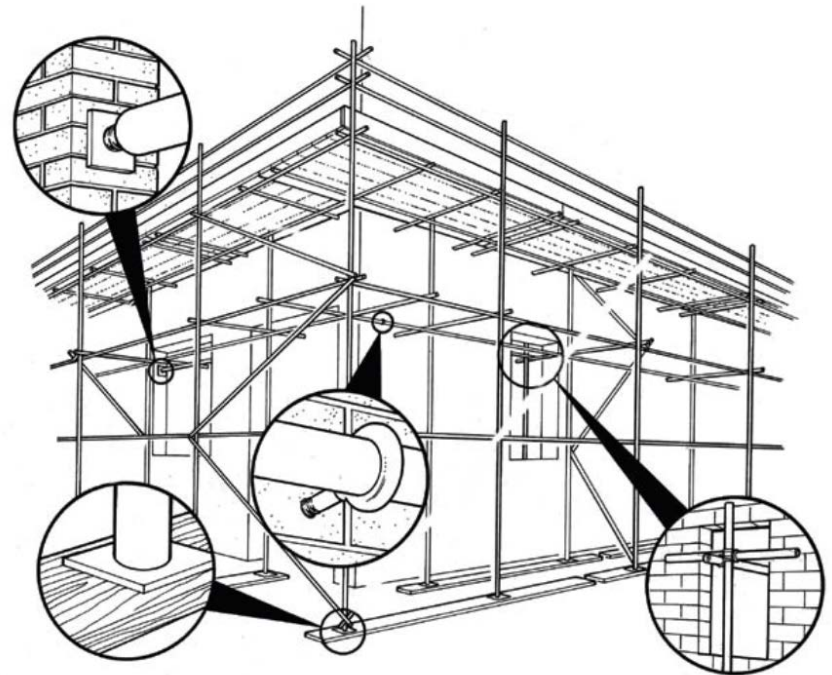




# Control measures

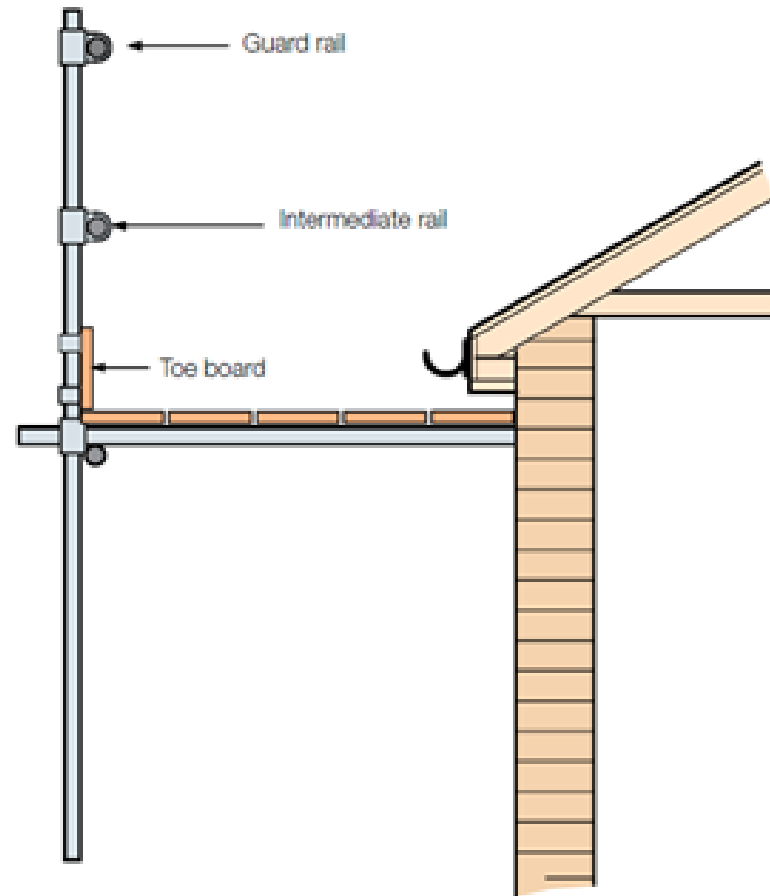
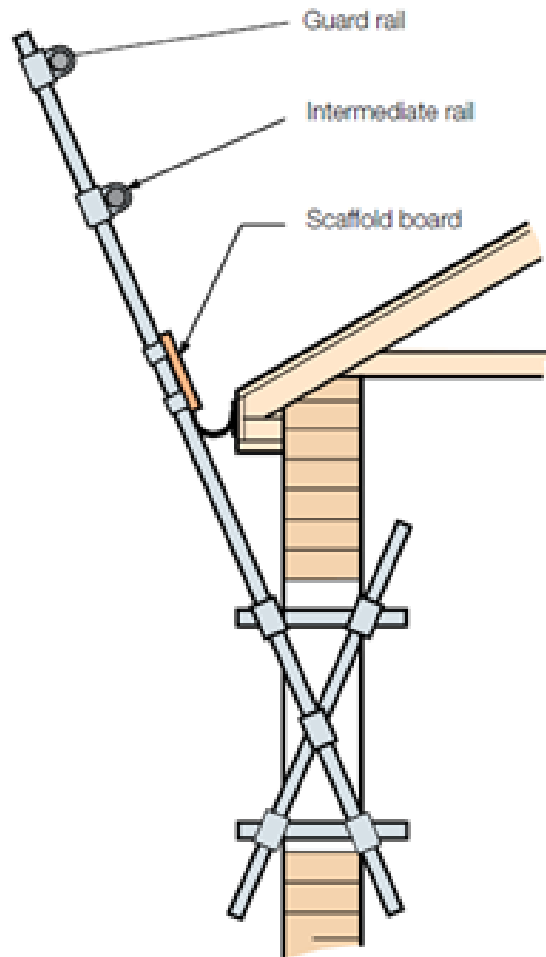
## Prevent falls – edge protection

- Erected by competent person
- Regularly examined to ensure remains safe
- Based on firm level foundation
- Edge protection
- Bracing
- Footplates
- Ties
- Fully boarded working platforms 600mm wide provide safe access and adequate work area
- Safe means of access



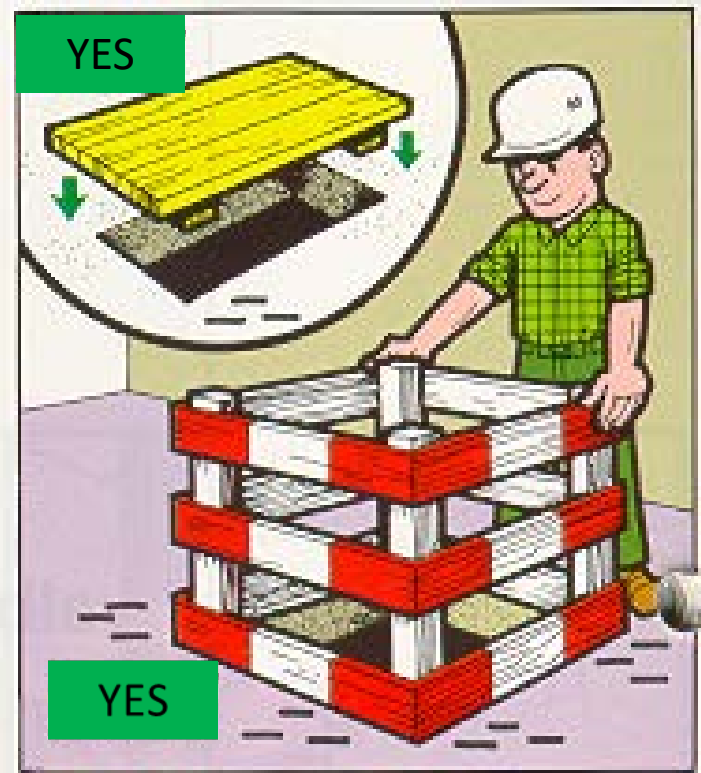
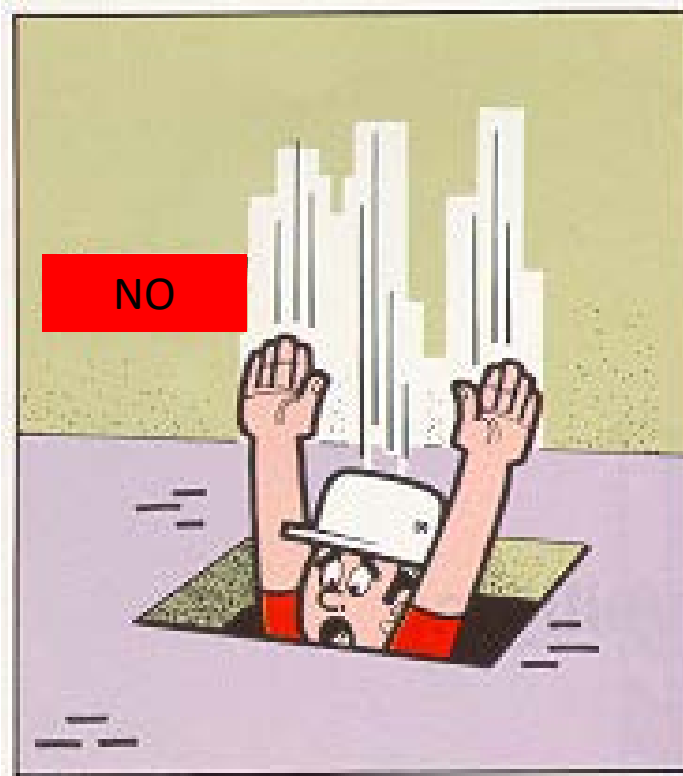
# Control measures

## Prevent falls – edge protection



# Floor openings

- Floor openings require fencing or covering



# Control measures - PPE

- Hard hat – falling material from scaffolding, lifting operations, material kicked into trench etc.



- Footwear steel toecaps and protective midsoles – falling material and sharp objects penetrating the sole
- High visibility clothing – being struck by vehicles



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## Conducting Labour Inspections on Construction

A guide for labour inspectors



# Conducting Labour Inspections on Construction - A Guide for Labour Inspectors (2017)



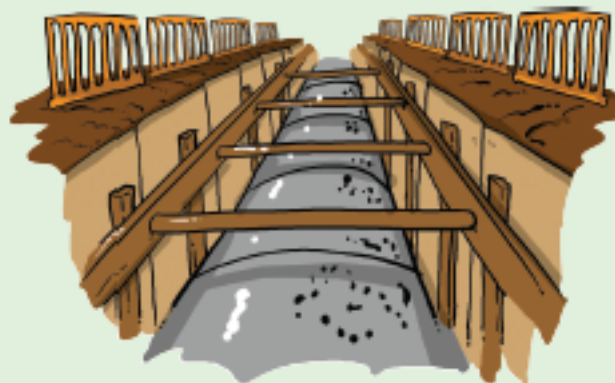
# WORK SAFELY IN EXCAVATIONS AND TRENCHES



Excavating or trenching work can be highly dangerous and may lead to death or severe injuries if not carried out safely. The hazards presented by this work include burial, falls from height or being struck by objects falling into the excavation, drowning, striking underground services (e.g. gas, electricity and water), as well as asphyxiation or poisoning caused by fumes entering the excavation.

To reduce these risks, adequate precautions should be taken to include:

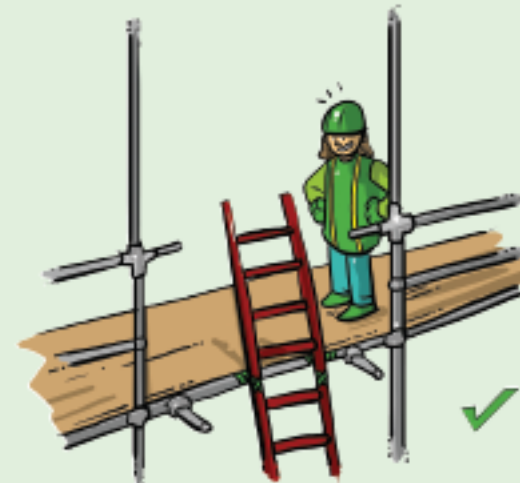
- Checking for underground services before work commences
- Shoring of the excavation sides or ensuring they are at a suitable angle to prevent the sides collapsing or material falling onto workers in the excavation or trench
- Measures to prevent persons, materials or objects falling into the excavation or trench or the inrush of water into the excavation / trench
- Maintaining an atmosphere fit for respiration
- Measures to enable workers to leave the excavation or trench safely
- Avoiding vehicular traffic near the excavations or trenches or ensuring it is kept to a minimum



The sides of the excavation or trench should be supported by timbering or other suitable means or sloped and battered back to a safe angle of repose to prevent a collapse. The type of support necessary and angle of repose will depend upon the type of excavation, the nature of the ground and the groundwater conditions.



To avoid the risk of workers falling into the excavation or trench, suitable barriers (double guard rails) should be erected to prevent falls.



**ATTENTION:** Shoring or other means of supporting excavations and trenches should be conducted under the supervision of a competent person. The removal of any supporting mechanisms should also be conducted under the supervision of a competent person.

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Before beginning an excavation:

All work should be planned and the method of excavation and the appropriate type of support identified

The stability of the ground should be verified by a competent person

A competent person should check that the excavation will not affect adjoining buildings, structures or roadways

The position of all the public utilities such as underground sewers, gas pipes, water pipes and electrical conductors should be verified

If necessary, the gas, water, electrical and other public utilities should be disconnected or rerouted

If underground pipes, cable conductors, etc., cannot be rerouted or disconnected, they should be fenced, supported and adequately marked or otherwise protected

If necessary, land should be cleared of trees, boulders and other obstructions

An analysis of possible contamination of the land by harmful chemicals or gases, or by any hazardous waste material such as asbestos should be made



The collapse of the sides can result from:

- An angle of inclination greater than the natural angle of slope
- An increase in weight due to overloads in the areas bordering the ridges of the slope
- Infiltration of water
- Vibrations due to machinery or vehicles
- Existence of overloads in neighbouring areas

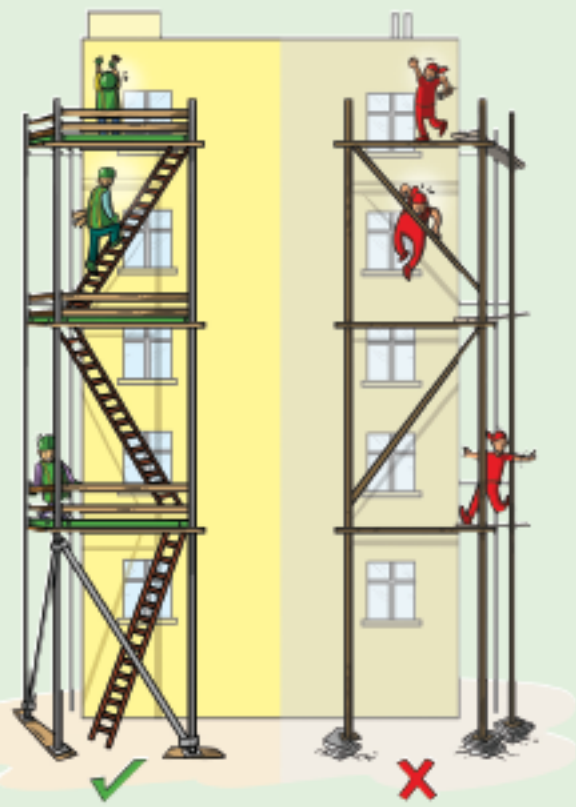


To avoid the collapse preventive measures should be taken:

- Change (decrease) the slope of the sides of the excavation
- Prevent water from infiltrating (drainage systems)
- Install blankets to protect the embankment structure (mortar / concrete)
- Avoid vibration and overloads
- Regularly inspect the slope and the surrounding area

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# PREVENT FALLS - WORK SAFELY AT HEIGHT



Working with scaffolds

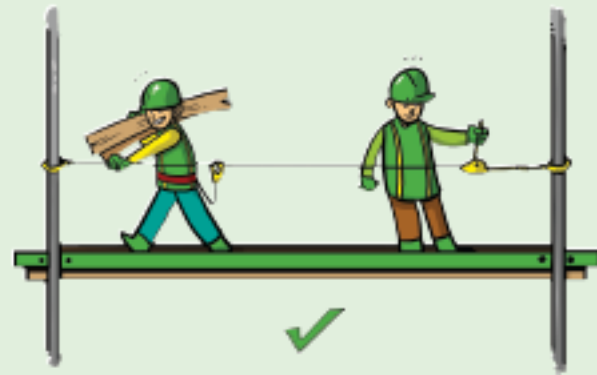
## Working with scaffolds

Falling from height may cause death or permanent disability.

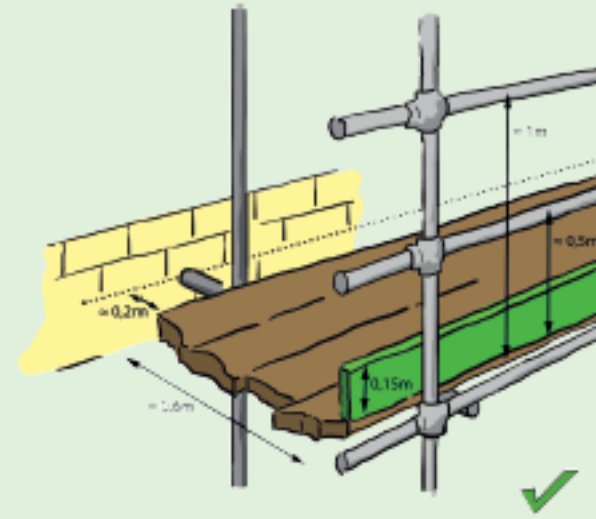
All work places where there is a risk of falling e.g. floor openings, building edges, lift shafts, roofs etc. require suitable control measures to prevent workers from falling, or where this is not possible, measures to mitigate the consequences of a fall.

Preventing a fall can be achieved by double guard rails, floor coverings, safety harnesses coupled to lanyards that prevent workers from reaching unprotected edges (fall restraint), etc... The addition of a toe board prevents objects falling from the working platform onto workers below.

Mitigating the consequences of a fall can be achieved by safety nets, soft landing systems, safety harnesses coupled to energy absorbers to prevent workers hitting objects or the ground below (fall arrest), etc...



All scaffolding and other working platforms should be erected and checked by competent workers before first use and on a regular basis to ensure they remain safe. Records of these checks should be made.



The working platform on scaffolds should be fully boarded. A platform 600mm wide provides safe access and a suitable work area.

During erection and dismantling of scaffolding workers should ensure precautions are in place to prevent falls for example advanced guard rails or work harness with a means of fall arrest.



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Safe means of access must be provided to the scaffold at all levels. Ladders used for access should be securely fixed on both sides to prevent them from slipping. The ladders should extend at least 1 meter above the working point to provide a secure handhold.



When using mobile scaffolds or platforms, always lock the wheels to prevent inadvertent movement - edge protection should be to the same standard as other scaffolds.



**CAUTION:** In addition to the initial safety inspections scaffolds should also be inspected after any alteration, interruption in use, exposure to adverse weather, seismic conditions or any other occurrence likely to have affected their strength or stability to ensure they remain safe to use.

Medical examinations may be required to assess the capacity of workers to work at height.



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# PERSONAL PROTECTIVE EQUIPMENT HELPS YOU STAY SAFE AND HEALTHY



## Personal Protective Equipment

Suitable personal protective equipment must be provided and maintained by the employer, at no cost to the worker, to protect against the risk of accident or injury to health. Workers should be instructed on how to correctly use the personal protective equipment and know how to detect and report any faults.

The personal protective equipment must suit the user; consider its size, fit and weight. Workers must make proper use of the equipment; those who help chose the equipment are more likely to use it.

All equipment must be maintained, kept dean and stored in a safe place when not in use. When damaged it must be replaced.

Information on the specific type of personal protective equipment to use depends on the result of risk assessments.

Normally they should be worn whenever a worker is on site and always when they are in an area where work is being undertaken overhead. These areas should be clearly marked with safety signs.

## Face And Eye Protection



Goggles, face screens, face shields or other suitable devices should be used when workers are likely to be exposed to hazards that may result in injuries to the eye or face.

For example when exposed to flying particles or dust, chemicals, light or other radiation and in particular during welding, flame cutting, rock drilling.

## Head Protection



## Hearing Protection

Appropriate earmuffs or earplugs should be used when working with or near noisy machinery or all the time when working at a noisy part of the site.



Safety helmets or hard hats should be used to protect their head from injury due to falling or flying objects, or from striking against structures.

**CAUTION:** If you have to shout to make yourself heard by someone about 2 metres away it is likely you will damage your hearing if you do not wear protection even when exposed for short periods of time. Consider if the source of noise or exposure time can be reduced.

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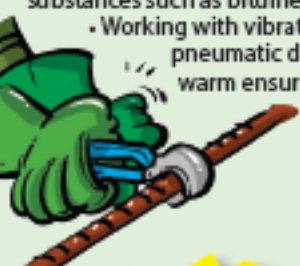
## Hand Protection

The type of gloves to use depends on the hazards generated by the work activity; for example use grip gloves when handling stone, use heavy duty gloves for other operations, like steel-fixing.



Hand protection should normally be used when operations involve:

- Contact with rough, sharp or jagged surfaces
- Contact with or splashes from hot, corrosive or toxic substances such as bitumen and resins
- Working with vibrating machines such as pneumatic drills to keep your hands warm ensuring blood circulation thus reducing the risk of disease



## Foot Protection

Safety footwear is used to mainly protect against two types of hazards:

- Sharp objects penetrating through the sole of the shoe, such as nails
- Falling objects crushing toes



The type of safety shoe or boot will depend on the terrain and the nature of the work. The main requirements are that they have a solid toe cap (to protect against materials being dropped) and steel midsoles (to protect against sharp objects penetrating the sole) and provide good grip. Ankle support may also be required. Waterproof footwear can conform to these requirements as well as protecting the wearer from coming into contact with liquids including cement.

## Waterproof Clothing

Waterproof clothing and head coverings should be used when working in adverse weather conditions to keep workers warm and dry.



## High Visibility Clothing

Reflective clothing or other reflective devices should be used when there is exposure to danger from moving vehicles.



## Respiratory Protection



Whenever there is exposure to harmful substances in the atmosphere respiratory protective equipment should be worn. The type of equipment will be dependent on the hazard, the worker and the working conditions.



## Fall Prevention And Fall Arrest

Full body safety harnesses with independently secured lanyards should be used where protection against falls cannot be provided by other appropriate means, e.g. guard rails or to supplement them.

Fall prevention systems prevent workers getting into positions where they can fall; requires harness coupled to a lifeline/lanyard of a defined length attached to an appropriate anchorage point.

Fall arrest systems do not prevent a fall but reduce the distance a person can fall; they require a body harness, energy absorber, a lanyard attached to an appropriate anchorage point preferably above the worker.



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# WORK AT HEIGHT CAN BE CONDUCTED SAFELY

## Working on roofs

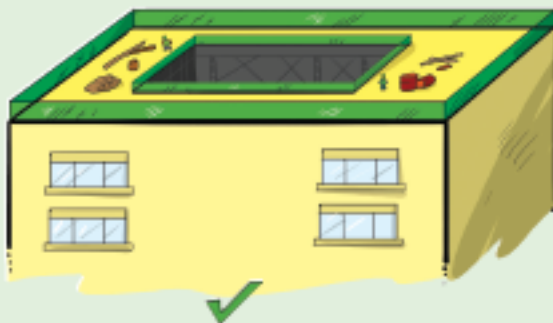
When working on roofs without safety measures, falls may occur:

- From the edges of the roofs
- Through gaps or holes in the roofs
- Through fragile roofing material and roof lights

All roof work should be pre-planned, properly supervised and only undertaken by workers with the necessary knowledge and competence for such work. All workplaces from where there is a risk of falling should be adequately guarded.



Working on roofs

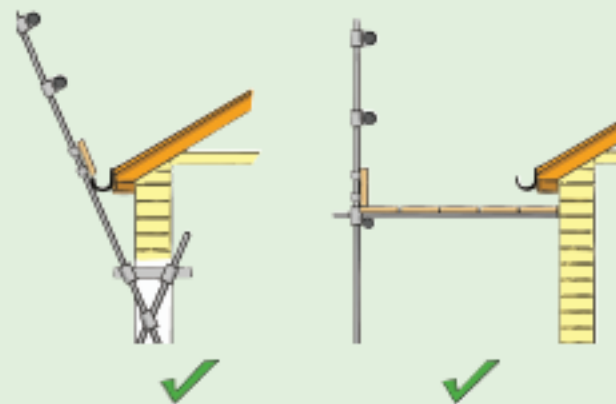


Wherever guard-rails and toe-boards cannot be provided alternative measures are required, for example safety nets or safety harnesses attached to secure anchor points.



Control measures to prevent workers from falling may include an upper guard rail at approximately 1 meter and an intermediate guard rail at a height of approximately 0.5 meter above the working platform. A toe board should also be present to prevent objects falling on to persons below.

When work is being carried out on sloping roofs, sufficient and suitable edge protection at eaves level will normally be required.



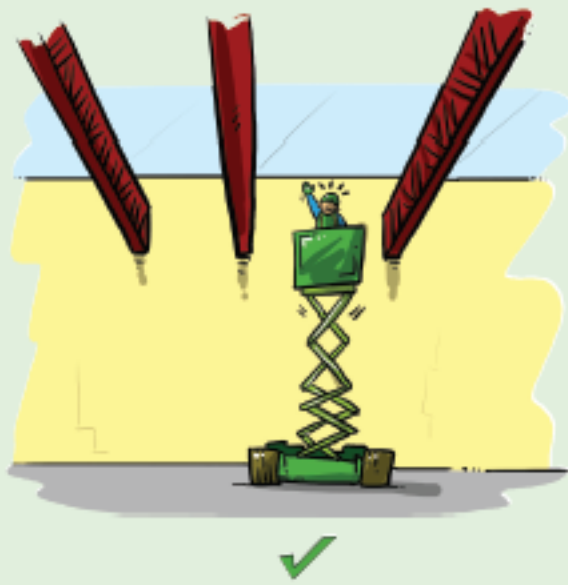
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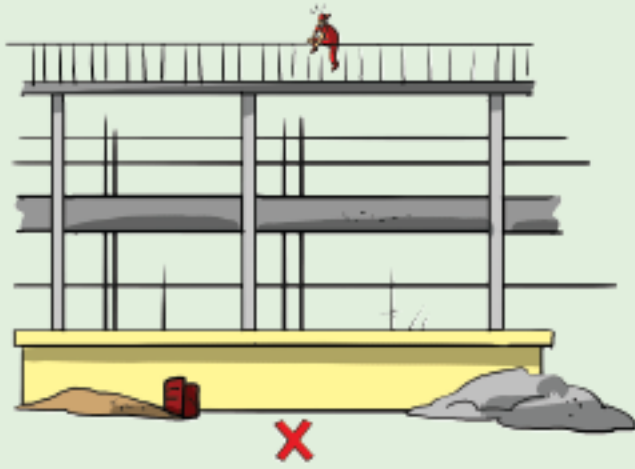
CAUTION If the roof contains fragile material, place crawling boards, coverings or other suitable control measures to prevent workers falling through the roof.



When erecting steel framed industrial roofs, the risk of falls can be reduced by providing a mobile elevated working platform.



360° protection is required at all work areas where there is a risk of falling. This is achieved by double guard rails, toe-boards and ensuring a minimum gap between the working platforms and any structure. Safety netting and safety harnesses can also be used to enhance safety. However these do not prevent a fall but mitigate the consequences of the fall.



**'Insert contact details of participating organizations'**

# WORK AT HEIGHT CAN BE CONDUCTED SAFELY



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