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Work Health and Safety

MANAGING THE RISK OF FALLS AT WORKPLACES

Falling from one level to another is a major workplace hazard and is the most common cause of death from traumatic injuries in construction. Fall hazards occur in all industries and most fatalities occur from a relatively low height. It is vital to secure the health and safety of workers by undertaking adequate risk management.

This film will show you how to identify fall hazards, assess the risks, control the risks, and implement and maintain controls.

IDENTIFY FALL HAZARDS

Use the code of practice to help recognise and identify all physical locations and tasks that could cause harm due to a fall.

Using a checklist is helpful. Walk around the workplace and talk to the workers to find out where work is carried out that could result in falls. Consultation with workers and their health and safety representatives is a critical part of managing work health and safety risks as they usually know of the hazards associated with their work and the risks they face.

Also ensure that there is safe access and egress for work being performed at height.

In some situations technical advice may be needed to check the stability of structures or load bearing capacity.

Review previous injuries and ‘near miss’ incidents related to work at height that have occurred at the workplace and at other similar workplaces.

ASSESS THE RISKS

Once it has been identified that a person could fall from one level to another while working, the associated risk must be understood by considering how far would the person fall, where would they fall and the potential severity of any injury.

Also consider which and how many workers are likely to be at risk and how often this is likely to occur.

Its important to take account of aspects that increase the risk including:

- Adequacy of inspection and maintenance, for example of scaffolding;
- Falling objects, where work is to be done above workers;
- Weather conditions;
- Ladders - where and how being used - Ladders must only be used when it is not reasonably practicable to use a safer method;
- Adequacy of training to perform the task safely; and
- Adequacy of emergency procedures.

The risk assessment will help determine if there is a low, medium or high risk and whether existing control measures are adequate. If the business is responsible for a number of different work areas or workplaces and the fall hazards and risks are the same, a single generic risk assessment can be made. A risk assessment is unnecessary if you already know the risk and how to control it.

In Construction if there is a risk of falling two or more metres, the risk assessment process must be documented in the form of a safe work method statement.

CONTROL THE RISKS

Where controls are found to be inadequate following the risk assessment, steps must be taken to eliminate or at least minimise the risk of the fall. In dealing with fall hazards, the business must try to carry out the work on the ground or on a solid construction but if this does not eliminate or minimise the risk they must consider control measures using the preferred order of control in which the measure with higher protection and reliability is considered first. In addition, personal protective equipment appropriate to the control measure being used and the tasks being undertaken must be provided and used.

WORK ON THE GROUND

Working on the ground is the first priority to eliminate fall hazards, for example, prefabrication of roofs at ground level, or the forced collapse of a brittle and fragile roof to facilitate work at ground or near ground level.

WORK ON A SOLID CONSTRUCTION

Working on a solid construction will provide an environment where the likelihood of a fall is minimised as it will be structurally capable of supporting the work, will have perimeter edge protection such as guard rails; openings and holes will be made safe immediately after they are formed, and there will be a safe and suitable means of access and egress.

FALL PREVENTION DEVICE

A passive fall prevention device does not require fall prevention action by a worker. Examples are:

- Temporary work platforms such as scaffolds with guard rails and toe boards, and elevating work platforms. Work should not be performed on a trestle platform that is over two metres above the ground unless edge protection is incorporated. Alternatives to trestle ladders should be considered.
- Guard rails at edges;
- Barriers to cordon-off areas where edge protection is not provided and workers are not permitted to access;
- Safety mesh for roof installers which should always be used in conjunction with appropriate edge protection, guardrails or individual fall-arrest systems; and
- Building maintenance units. as it is important to consider how maintenance, repairs or cleaning will be undertaken.

WORK POSITIONING SYSTEM

Work positioning systems enable a worker to be positioned and safely supported during the work. Examples are industrial rope access systems and travel restraint systems.

Industrial rope access systems require a high level of operator competency and supervision and so should only be used where it is not reasonably practicable to use an elevated work platform, building maintenance unit or a scaffold platform.

A travel restraint system may consist of a harness that is connected by a lanyard to a suitable anchorage point although fall arrest rated equipment can be used as a restraint system. The system must be set up to prevent the wearer from reaching an edge from where a fall may occur. Physical barriers such as a guard rail should be used in preference to a travel restraint system to prevent the user from approaching an unprotected edge because travel restraint anchorage points are not designed for the impact loads applied in the event of a fall.

FALL ARREST SYSTEM

A fall arrest system is designed to prevent or reduce the risk of an injury to a worker in the event of a fall. Examples that do not incorporate a harness are safety nets and catch platforms. Scaffolds can provide simple catch platforms.

Ladder and tower safety systems can be installed to provide continuous fall protection. An alternative is the use of a double lanyard so that the person climbing can always be connected and if there is a fall it will be a short distance. But they are not suitable for frequent use.

Fall arrest systems, incorporating a full body harness and lanyard, should be installed so that the distance a person can fall is minimised - remembering that the maximum allowable distance a person can fall before the fall-arrest system takes effect is 2 metres.

All components of a fall arrest system must be compatible – do not 'mix and match'. It is essential that all equipment is correctly maintained, with inspections and examination of all components by a competent person at regular six month intervals. Checks before work starts would include inspecting all fall prevention equipment and hardware –and if there are any doubts it must be taken out of service and inspected by a competent person.

'Swing down' and 'Swing back'

Care must be taken to ensure the individual fall arrest system will not allow contact with the ground as a result of the length of the lanyard and positioning of the anchor and not allow the user to swing back into the building. Precautions should be taken to ensure that the arrest line or lanyard will not be damaged or fail if it comes into contact with any edge during a fall.

Inertia reels

Individual fall arrest systems may incorporate an inertia reel which attach to an anchorage point and pay out a line that is attached to the D ring of the person's harness. Under fall-arrest conditions, the reel locks in position by the same principle as a car seatbelt. To prevent swing back, ensure that the worker does not go outside the 30 degree zone under the inertia reel. Lanyards should not be used in conjunction with inertia reels as this can result in free fall up to 2 metres prior to the fall being arrested.

ADMINISTRATIVE CONTROLS

Administrative controls, which include training, require a high level of supervision. Examples are:

- 'No go' areas and other signage to warn of a fall hazard.
- Permit to work systems to ensure that only competent persons have access.
- Organising and sequencing of work so that other people are not working above or below each other at the same time.
- Developing Safe work method statements.

Emergency procedures

As part of administrative controls, the business must establish emergency and rescue procedures relating to the use of all risk control measures. This will include:

- Access to competent first aiders and first aid equipment and facilities.
- Establishment and testing of an emergency rescue procedure. A worker should not use a fall arrest system unless there is at least one other person on the site who can rescue them if they fall.
- Information, training and instruction in the emergency and rescue procedures.

IMPLEMENT AND MAINTAIN CONTROLS

A fall prevention plan will identify what action needs to be taken to introduce the controls, who will be responsible for taking the action and by when.

The controls must be reviewed regularly to make sure they work as planned. The review process should include a planned program of inspections and maintenance for the fall prevention systems. The review will include consulting workers and their health and safety representatives concerning:

- Are the control measures working effectively?
- Are all fall hazards identified?
- Has instruction and training provided to workers on the use of fall prevention systems been successful?

The business must review and as necessary revise risk control measures before any alteration is made that is likely to result in a fall, or if requested by a health and safety representative or after a notifiable incident occurs.

CONCLUSION

Fall hazards are found in many workplaces. Falls can also occur at ground level into holes or service pits. The consequences of falls may be severe and can result in death.

Make sure that workers know about fall hazards, and that the risks have been assessed and are being properly controlled. If you're not sure if controls are adequate, get advice from a consultant or from your regulatory authority.