



National  
Operational  
Guidance

Hazard

**Unguarded edges**



**NFCC**  
National Fire  
Chiefs Council

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## Hazard - Unguarded edges

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### Hazard Knowledge

An unguarded edge is generally defined as a floor, gallery, balcony, roof or area that people can access, where there is no solid wall or raised rail and no intermediate guard rail to offer protection from falling.

Personnel at an incident may encounter unguarded edges around areas such as

- Roofs, including access hatches
- Cliff edges and embankments
- Docks
- Quarries
- Loading bays
- Openings around equipment
- On-site machinery
- Pits
- Ramps
- Modes of transport, such as flatbed trailers

Guards around edges may have been severely damaged in an incident, as in the case of a serious fire in a tall building, or they could have been removed to allow for works. The safety of personnel in these situations should be of paramount importance to incident commanders.

Personnel attending heritage buildings need to consider that while these building often have guards to prevent falls, these can be considerably lower than in modern buildings. Inadequate or poorly fitted guards can be present in any area or type of structure.

There can be occasions where personnel can be exposed to multiple hazards that have conflicting control measures and requirements for personal protective equipment (PPE), such as an unguarded edge near a body of water. Control measures for each hazard would require the individual to wear equipment that may not be compatible; for example a lifejacket for bodies of water and a harness for personal fall protection.



## Control measure - Safe system of work:

## Unguarded edges

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### Control measure knowledge

All personnel have a duty to take reasonable care of their own health and safety, and that of any other person. This can be through identifying and communicating hazards they encounter to other responders and they must inform the incident commander of these hazards so that they can review their tactical plan.

Signage is a good form of hazard indication. Unguarded edge signs include the following image, often supplemented with words such as 'Drop' or 'No edge protection'.



Warning sign for fall or drop

Incident commanders should inform everyone at the incident of the hazards and the control measures in place.

Where possible, a temporary physical barrier should be erected to provide collective protection to personnel. Where it is not possible to avoid working near an unguarded edge, it is essential that a safe system for work at height is established; refer to safe system of work: Work at height.

Establishing appropriate cordons in the early stage of incident can prevent personnel being unnecessarily exposed to unguarded edges. Incident commanders should establish an inner cordon and consider exclusion zones taking into account:

- Incident type
- Possible objects falling
- Weather conditions

A barrier such as a guard rail of any height may not be sufficient to prevent a fall from height, for example if personnel are wearing breathing apparatus (BA) that will raise their centre of gravity. Also, a lower barrier may be sufficient if personnel are able to keep low, lay down or crawl, rather

than stand. Ultimately the incident commander's risk assessment should consider if the barrier is sufficient for the person and the task to be carried out. It may be necessary to put in place other measures such as additional temporary barriers or using an aerial appliance.

At any incident, sufficient measures should be identified or established to provide personal fall or collective protection, to minimise the distance or consequences of a fall. Personal protection includes using rope-based systems.

Practical examples of collective protection include safety nets and soft-landing systems, such as airbags installed close to the level of the work. These may be found in industry, such as at construction sites. These systems should not be relied on unless the responsible person is able to provide assurance of their capability.

If there are conflicting control measures or requirements for PPE, the incident commander, following a risk assessment and using professional judgement, should identify the course of action. This could be to wait for specialist teams trained for such circumstances. Alternatively, they could use the control measures for unguarded edges, along with control measures for water rescue if someone enters the water.

## Strategic actions

Fire and rescue services must:

- Make appropriate equipment available to prevent personnel falling from unguarded edges

Fire and rescue services should:

- Consider providing equipment to create temporary barriers
- Consider providing appropriate equipment to minimise the impact of a fall from unguarded edges

## Tactical actions

Incident commanders should:

- Select the most appropriate PPE and other equipment for the hazards and activities identified when working near unguarded edges



- Review the suitability of existing barriers or guard rails
- Review the suitability of any existing collective protection