



Health and Safety Bulletin No. 17

Falls through fragile roofs and roof openings

Date: 16 December 2024

Background

In 2024, there have been three fatal incidents relating to workers falling through fragile roof materials or roof openings, while either replacing roofing sheets or while cleaning roofs and gutters.

- In August 2024, a worker fell through a fragile (plastic type) roofing sheet while replacing fragile roofing sheets on a large shed.
- In October 2024, a roof plumber fell through the roof of a factory unit while replacing sheets with plastic type roofing sheets.
- In October 2024, a worker was cleaning gutters and roof tiles at a residential property when he fell through the fragile roofing sheet of a patio.

In the last three years, WorkSafe has also received notification of several serious incidents relating to workers falling from roofs or through fragile roofing sheets of patios. These incidents have resulted in serious injuries to workers, including fractures and spinal injuries.

Fragile roof materials may include acrylic, polycarbonate or other plastic roofing sheets, glass sheets, asbestos and other fibre cement roofing sheets, corroded metal sheets, skylights and other roofing materials that are not load bearing.

Investigation findings

Investigations into these incidents found some common factors, including:

- hazards of working on or around fragile roofing and near roof openings were not identified
- risk assessments in relation to falls from heights were not conducted
- safe work method statements for high-risk construction work, where a person could fall more than two metres, were not conducted
- alternative work methods to eliminate the need to enter the fragile roof were not considered
- use of elevating work platforms to avoid standing on the roof was not considered
- installation of temporary work platforms (crawling boards) and roof ladders was not considered
- barriers, such as edge protection (guard rails) or covers, were not applied

- safety mesh, to protect the worker from falling through fragile roofing, was not present or not installed in accordance with the instructions of the manufacturer
- use of travel restraint systems was not considered
- fall arrest systems were not considered or used, including catch platforms, safety nets and individual fall arrest systems with harnesses, lanyards and adequately installed anchor points
- work positioning systems were not considered or present
- lack of working at heights training or provision of appropriate information, instruction, training or supervision to minimise the exposure to the hazard of falling from height.

Summary of hazard

Falls from height are a major cause of death and serious injury at workplaces. The risk of falling is common for many work activities, including construction, and building management and maintenance.

Not all areas on a roof are safe to walk on or fall onto if you stumble or lose balance. Even plastic sheeting that is claimed to be trafficable can become brittle over time and is highly reliant on correct installation to be trafficable.

When working on existing roofs, dirt and debris can make it harder to notice plastic sheeting, especially if it has the same profile as the surrounding sheeting.

Roof sheeting profiles, surface changes, debris, moisture and obstructions on roofs can make it more likely that a person will stumble and deviate from their intended travel path.

Working near fragile roof surfaces or roof openings while replacing roof sheets and working near skylights can be extremely hazardous, but the risks can be managed.

Measures for controlling the risk

Control measures to prevent a person from falling through a fragile roof or opening include, but are not limited to:

- eliminating the risk, where practicable, by doing all or some of the work on the ground or from a solid construction
- using a passive fall prevention device, such as elevating work platforms, scaffolds, edge protection or covers, that are secured and labelled with warning signs or safety mesh
- installing temporary work platforms, walkways and roof ladders as appropriate
- installing safety mesh under fragile roof sheets to prevent internal falls through a roof
- planning the work to avoid accessing non-trafficable areas
- using a work positioning system, such as restraint technique, to ensure workers are within a safe area
- using a fall arrest system, such as a harness, which has adequately installed and maintained anchorage points, along with training and instruction in the use
- installing a catch platform or safety nets to reduce the risk of injuries in the event of a fall
- providing information and training in relation to the hazard and the risk of falls from heights.

Actions required

Before commencing work on an existing roof, carry out an inspection and risk assessment to determine the:

- need to enter the roof for the particular work activity
- presence and condition of plastic roof sheeting and other brittle roof sheeting, such as asbestos cement sheeting and skylights
- presence and integrity of safety mesh. Safety mesh is designed to prevent internal falls through a roof. If securely fixed, safety mesh provides fall protection for roof installers and offers long-term protection against falling for maintenance and repair workers
- presence and condition of suitable anchor points on the roof.

Whether the structure is existing or under construction, consider skylights and plastic roof sheeting as non-trafficable areas, unless certified as trafficable. Even then, ensure that the installation has been checked and proven to comply with trafficable installation instructions.

Where non-trafficable roofing materials are present, provide appropriate fall prevention or protection measures and develop work methods to prevent people from stepping or falling onto non-trafficable surfaces.

To ensure the necessary control measures are being applied as the work progresses, an ongoing review of the work should also be carried out.

Designers or businesses who construct structures have a duty to incorporate reasonably practicable risk controls in the design of the structure, for example, the installation of safety mesh or anchor points.

Businesses who commission construction work also have an obligation to consult with the designer to ensure, so far as is reasonably practicable, that the risk to health and safety arising from the design during the construction work is either eliminated or minimised.

Businesses and property managers, who engage contractors to work on roofs, also have a duty to ensure, so far as is reasonably practicable, the safety of workers. This includes control measures listed under 'Measures for controlling the risk' above.

Further information

Work Health and Safety Commission

- [Managing the risk of falls at workplaces](#): Code of practice

WorkSafe

- [Managing the risk of falls at workplaces](#): Information sheet
- [Prosecution summaries](#)