**12. Hazards of Working on Rooftops**

**12.1 Working on Rooftops**

**12.1.1** Works on rooftops are potentially hazardous work at heights; due consideration should be given to eliminate the need for persons to work on rooftops (e.g., working from bottom of roof, providing alternative work platforms like scaffolds or MEWPs).

**12.1.2** There are many potential fall hazards when working on rooftops that include:

• Falling over an unprotected edge (e.g., open side at roof access point);

• Falling through a fragile roof surface (e.g., skylight, corroded roof sheets);

• Falling through openings on roofs (e.g., incomplete roofing, roof hatches); and

• Slips and falls off pitched roofs (e.g., wet or smooth pitched tile roofs).

(Refer to WSH Guidelines on Working Safely on Roofs, WSH Council, for more information).

**12.1.3** It is critical to ensure that all persons assigned to perform works on rooftops are competent. If introducing inexperienced workers, ensure that they have undergone formal training and fully understand the

hazards and the fall control measures before they go onto a roof. Inexperienced workers should work in areas where the supervisor can see and communicate with them at all times.

**12.2 Working on Pitched Roofs**

**12.2.1** Any person working on a pitched roof, or is required to access a pitched roof in the course of his work shall be protected at all times against any sliding or falling from the roof.

**12.2.2** Persons should not walk or work directly on tiles or slates unless additional fall control measures are in place.

**12.2.3** Suitable and adequate fall control measures shall be considered. This includes, and is not limited to:

• Installation of temporary edge protection, for example, guard-rails, scaffold edge fall protection (see Fig 12.1);

• Installation of proper access to work areas, for example, roof ladders, gangway (see Fig 12.2);

• Installation of proper work platform to provide persons with a flat work platform on an inclined roof, for example, roof brackets;

• Personal fall prevention system that allows persons to access their work areas while utilising 100

percent tie off (see Fig 12.3); and

• Other measures that can be effectively deployed to reduce the distance of a potential fall, for

example, safety net.

**12.3 Working on Fragile Roofs**

**12.3.1** Fragile roof surfaces refer to parts of the roof that are not designed to bear load; thus, persons standing on fragile and brittle roofs are at risk if the roofs break and give way under the loading of the persons’ weight. These roofs typically include those that are constructed from moulded or fabricated materials such as cellulose cement roof sheets, glass, fibreglass, acrylic or other similar synthetic materials.

**12.3.2** Some materials may become fragile eventually due to wear and damages may lead to early failure or the sheets and fixings have reached the end of their usability period. All roofs should be treated as fragile until a competent person has confirmed they are not.

**12.3.3** Fragile roofs should be identified and clearly communicated to any persons accessing the roof. In addition, the following information should be made available to any persons, including contractors that may access the fragile roofs:

• The material the existing roof is made of;

• The age of the existing roof;

• Any previous modifications to the roof;

• Any repairs carried out in the past (e.g., partial repair using “patching”);

• Any parts where the material could be of different properties (e.g., skylights);

• Any existing safe access methods to the roof; and

• Any areas where access is prohibited.

**12.3.4** If a person is required to work on or from a roof that is fragile and can break easily, it is important to ensure that:

• Before the roofing work is carried out, the brittle or fragile areas are identified and the stability of the structure and soundness of the roof is assessed as part of the risk management process;

• The worker is informed that it is a fragile or brittle roofing;

• Safe access to the work area is provided to enable workers to step directly onto a safe platform or area (e.g., using crawler boards);

• Work is carried out from a working platform that is located and constructed to allow work to be

performed safely (see Fig 12.4);

• An adequate fall arrest system is installed and used;

• There is another person present at all times when work is being performed on a brittle roof in case

there is an emergency;

• Training and instruction have been provided to workers on precautions to be taken;

• Warning signs are displayed at access points to any work area where fragile material is present (see Fig 12.5); and

• Other measures that can be effectively deployed to reduce the distance of a potential fall, for

example, safety net.