

## Prevent falls from open sides

Open sides without proper barricades and lack of safe access are common safety lapses leading to fall-from-height incidents, where workers have suffered serious injuries or even lost their lives.

In the upcoming months, the Ministry of Manpower will be conducting inspections targeting work-at-height infringements in the construction, marine, and transport and storage industries.

Protect your workers from falling over open sides by including the following measures adopted by many companies, into your fall prevention plan:

- **Conduct a toolbox briefing before starting work.** Alert workers to onsite risks and remind them how they can work safely at heights. New workers are to complete work-at-height training and a site orientation before being deployed to work at height.
- **Close off all open sides.** Install guardrails and/or barricades along the perimeter of open sides. The edge protection must be able to withstand a weight of 100kg applied in any direction. Refer to Figure 1 for the required dimensions for edge protection.

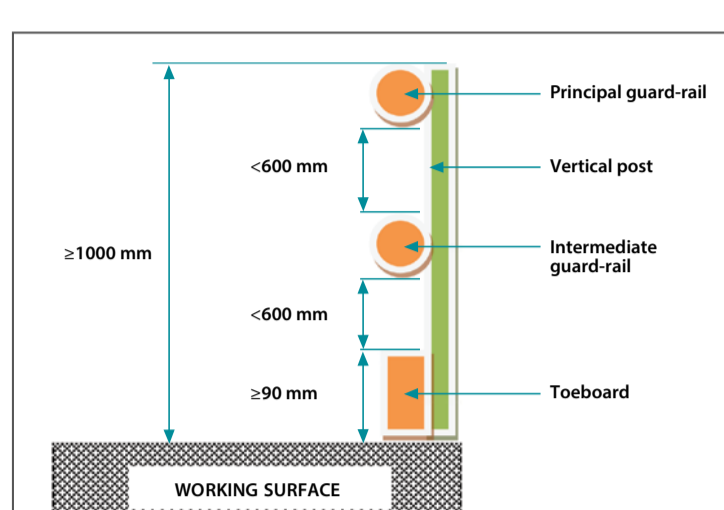


Figure 1: Required dimensions for edge protection.

- **Install a travel-restraint system.** This restricts the movement of workers and keeps them at a safe distance from any open sides if edge protection is not feasible.
- **Equip workers with fall-arrest equipment.** If a travel restraint system is not feasible, each worker must wear a full-body harness with connecting lanyards OR a self-retracting lifeline.
- **Secure anchor points.** Identify and/or provide suitable anchor points for each worker to hook their lanyards on to while they work at height. Never deploy workers to work at height at sites where there are no suitable anchor points. Refer to Figures 2, 3 and 4 on the various types of secure anchor points.

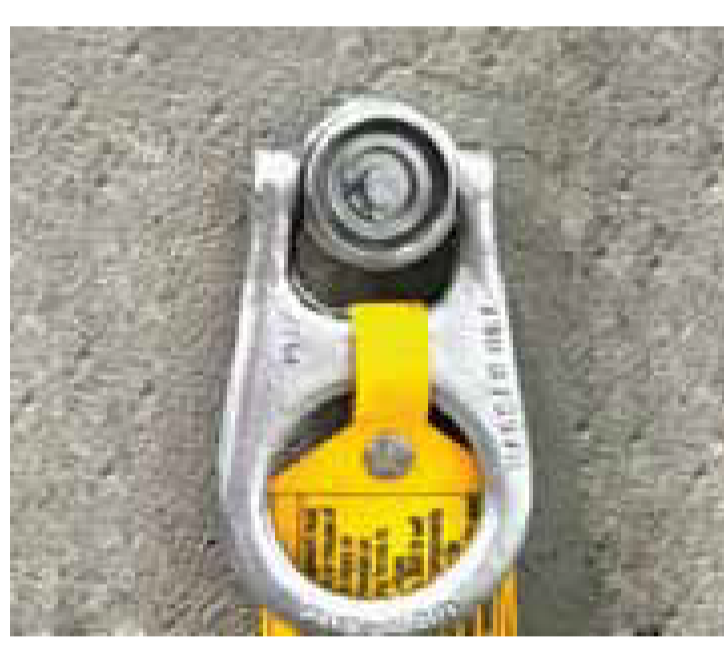


Figure 2: Bolt anchor point.



Figure 3: Horizontal lifeline.



Figure 4: Anchor sling around a structural element.

- **Ensure 100% tie-off.** Provide workers with a twin-tailed double lanyard (refer to Figure 5) and train workers how to use the double lanyard such that they are hooked to at least one anchor point or lifeline at any time.

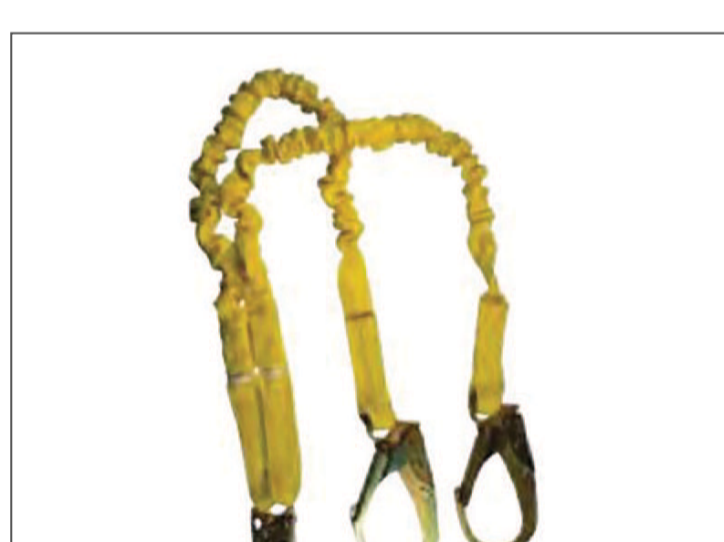


Figure 5: Twin-tailed double lanyard.

- **Maintain good workplace housekeeping.** Ensure work areas and designated walkways are clear of obstructions. Store loose tools and materials away from open sides as these can fall and strike persons below, or cause workers working near an open side to trip and fall.

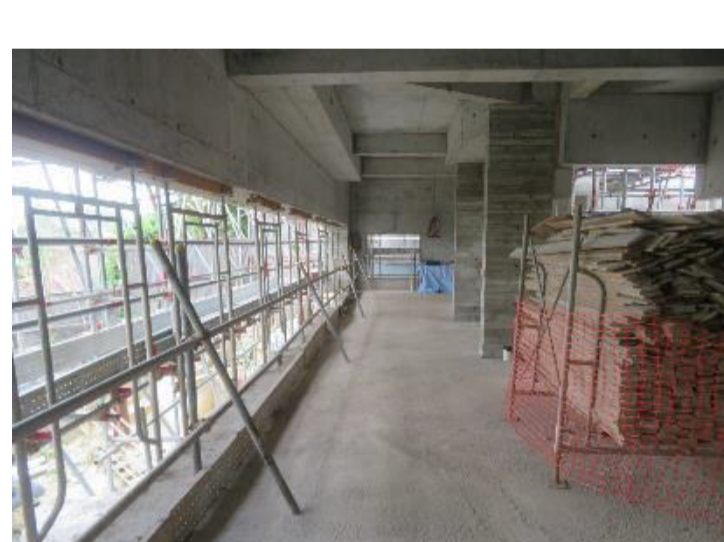


Figure 6: Keep area near open sides clear.

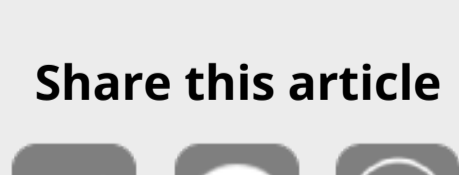
- **Implement a permit-to-work (PTW) system.** Implement a PTW for work-at-height activities where a worker could fall more than three metres. This ensures onsite checks are carried out to confirm risk controls are in place and effective before the work is authorised to proceed.

### For more information:

**Workplace Safety and Health Act**  
[\(Work at Heights\) Regulations 2013](#)

**Workplace Safety and Health Council**  
[Code of Practice for Working Safely at Heights](#)  
[WSH Guidelines on Anchorage, Lifelines and Temporary Edge Protection Systems](#)  
[WSH Guidelines on Personal Protective Equipment for Work at Heights](#)  
[Case Studies: Accidents Involving Work at Heights.](#)

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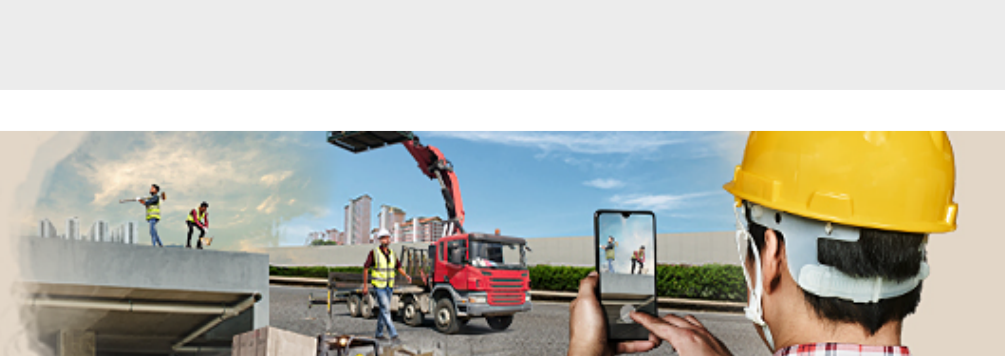
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