

# 5 RISKS TO LOOK OUT FOR WHEN WORKING NEAR EDGES



What is the risk that temporary work on flat roofs, installation of scaffolding and maintenance of tall electrical pylons can have in common? 'Fall from height' would be correct, however what makes these tasks even more dangerous is carrying out such work near leading edges.



## RISK 1 UNDERESTIMATING DANGER LEVELS

It may sound obvious, but the risk of falling increases whenever a task is undertaken near an edge so having appropriate safety measures in place is paramount. Typical scenarios may include a construction worker moving around a flat roof or a scaffolder installing platforms on the side of a building. In such circumstances, a fall can occur in the blink of an eye for a number of reasons such as tiredness or a momentary lapse in concentration. Even a reaction to an unexpectedly loud noise could cause a worker to slip or lose balance, especially if they are carrying heavy tools or equipment.

**SOLUTION :** Of course, the best solution is to remove the risk entirely by avoiding work near edges. However, when this isn't possible, contractors should collaborate with project designers at an early stage to integrate protective infrastructure such as anchorage points into the work site. After that, it is crucial to select high quality personal fall protection equipment (PFPE) and ensure its correct usage while raising awareness of the risks among workers.

## RISK 2 INSTALLING COLLECTIVE PROTECTIVE EQUIPMENT (CPE) WITHOUT PFPE

CPE, such as guard rails and safety nets, is key to preventing workers from falling over an edge. This type of equipment has traditionally taken precedence over PFPE since it protects all workers equally and at all times, without relying on the individual to take action. However, the installation of the CPE itself can put workers at risk if they are not equipped with PFPE.

**SOLUTION :** Safety levels are strongly enhanced by the use of PFPE that provides constant attachment to an anchor point. This would usually take the form of a shock-absorbing lanyard or self-retracting lifeline (SRL).

## RISK 3 USING THE WRONG ANCHORAGE POINT

An incorrectly-positioned anchor point can expose workers who have fallen whilst wearing PFPE to the so-called 'pendulum' effect, where the worker swings back and forth. This can cause serious injuries if a worker strikes nearby surfaces such as a wall or protruding beam. The wider the angle between worker and anchor point, the longer it will take for them to reach a position directly beneath the anchor in case of a fall, at which point the SRL can arrest the fall.

Failing to consider the vertical clearance under an anchor point can also pose a major risk to workers, as they could potentially hit the ground before the SRL can stop them.

**SOLUTION :** Installing the anchor point directly above the work area and ensuring that the critical angle between worker and anchorage point does not exceed 30 degrees will help prevent such issues. It is also vital to take into consideration the distance needed for the SRL to operate when choosing an anchor point, its location and its distance to the ground.

## RISK 4 USING SRLS THAT AREN'T EDGE TESTED

Using SRLs is key, but it doesn't necessarily equal guaranteed protection if a worker falls over an edge. If the lifeline's webbing or cable comes into forceful contact with an edge, it may tear unless it has passed an edge testing process to demonstrate its resilience. The pressure on the lifeline is of course even greater if the SRL has been anchored horizontally (at ground or shoulder level) rather than vertically (overhead).

**SOLUTION :** When it is not possible to position anchor points overhead, for example when working on a flat roof or on a scaffolding structure being assembled from the ground up, it is vital to ensure that the SRL is fully edge tested for use in horizontal applications.

## RISK 5 USING POORLY-MAINTAINED EQUIPMENT

The condition of PFPE may deteriorate as a result of heavy usage and outdoor exposure. Consequently, workers can be seriously injured in falls using equipment that initially passed safety standards but no longer offers the same level of protection. This is because worn and damaged equipment will not perform as designed in the event of a fall.

**SOLUTION :** Regular inspection practices are essential and should include the process of bending the webbing over a pipe or mandrel, from one end to the other. By slowly rotating the webbing, it is possible to check the entire circumference for cuts, snags, breaks or evidence of long-term degradation, such as swelling, discolouration, cracks, brittle surfaces and hardness. Webbing components should be washed, carefully dried and stored away from excessive heat, fumes, steam or corrosive agents.