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## Risk of serious injury when assembling structural steel at ground level

### What happened?

A steel fabricator working on a commercial construction site suffered significant injuries after a structural steel I-beam fell on them.

The worker was assembling sections of a large steel I-beam at ground level when another worker moving some mobile plant struck the I-beam, causing it to tip and fall.

### What's the risk?

Structural steel beams assembled on the ground can become unstable and fall without warning.

Beams are often large (600 mm–900 mm high when on their side) and can topple if not properly supported.

Common risk factors include:

- beams not adequately supported during assembly
- contact from moving plant or equipment
- increasing beam size and weight on modern construction projects.

### What you need to do

Before starting work, PCBUs/businesses should carry out a site-specific risk assessment to identify instability risks and put controls in place.

Effective controls may include:

- using props attached to the beam
- installing a cradle or engineered support system
- setting up exclusion zones to keep other workers clear of potential fall areas, and reduce the risk of mobile plant coming into contact with unstable objects.

You should also:

- ensure beams are supported at all times during assembly
- manage plant movements to prevent accidental contact with beams
- consider sequencing work to minimise exposure to unstable items.