

## Scaffolding - Best practice guideline for scaffolding in New Zealand

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## Section 6: Particular scaffolds and scaffolding structures

### 6.1 Mobile scaffolds

A mobile scaffold is a type of free standing scaffold supported on wheels, castors or other devices for ease of movement on a firm level supporting structure. Mobile scaffolds can be erected from a variety of components or systems, including:

- Aluminium prefabricated systems.
- Fibreglass prefabricated systems (non conductive).
- Steel frame scaffolds (H frame).
- System or modular steel scaffolds.
- Tube and fitting scaffolds, etc.

#### Important points

Some important points to remember when dealing with mobile scaffolds include:

- They should be erected, maintained, altered and dismantled by a certificated scaffolder of the correct class if they are more than five metres in height.
- They should be erected, maintained, altered and dismantled by a competent person if less than five metres in height.
- They should be erected to the manufacturer's instructions.
- They should be used on a sound, clear and level surface.

- Ensure working platforms are decked to the full width and adequately restrained against displacement.
- Ensure top and mid guardrails are erected on platforms.
- Erect platform toeboards to prevent items on the platform falling on people below.
- Provide safe means of access to work platforms.
- Where the platform incorporates a hatch door, ensure the hatch is closed except during access or egress.

#### 6.1.1 Stability

All freestanding scaffolds, whether mobile or static, need to be stabilised against overturning forces. Mobile scaffolds in particular are prone to tip over during use for a variety of reasons, including:

- Sudden stops while being moved. This is a key reason why they must not be ridden while being moved.
- Height to the top most platform is greater than three times the minimum base dimension.
- People standing at or near the edge of the platform in conjunction with a sudden movement or action. This creates a temporary high point loading.
- Capacity being based on a distributed load, not a point load at the edge. This means overturning can occur even when the design load capacity of the platform is not exceeded.
- The narrower and lighter the scaffold, the more likely that it will tip over.

#### General principles to improve stability

1. The height of the top working platform must be no more than three times the minimum base dimension of the structure for scaffolds over 1.8 metres in height.
2. The height of the top working platform must be no more than two times the minimum base dimension of the structure for scaffolds under 1.8 metres in height.

These base to height ratios are only acceptable under normal weather conditions. Additional precautions must be taken if adverse weather conditions are expected. Further, it is accepted practice to use rakers, outriggers, or larger base frames to increase the minimum base dimension.

Mobile scaffolds generally need to be braced on all sides. All mobiles must also be plan braced to prevent the tower from deforming in shape (parallelogram), except in the case of a mobile aluminium framed scaffold where the lowest fully decked platform is below 3 metres high.

#### Specific recommendations to improve stability

- Position the scaffold as close as possible to the area being worked on.
- Apply the castor brakes while the scaffold is in use.
- Don't ride the scaffold while it is being moved.
- Maintain the height to width ratio.
- Use outrigger bracing.
- Add weight to the scaffold base to improve stability.
- Establish with the manufacturer exactly what the established safe working load relates to.
- Where possible use alternative more stable equipment, such as a scissor hoist.