

Safety Share

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Government
of South Australia
Department for Infrastructure
and Transport

Temporary Fencing – Construction Sites

Recent inspections have identified several issues for temporary fencing. The context of this sharing of information is to ensure the security of the workplace is effective. **Regulation 298 of the Work Health & Safety Regulations states: (1) A person with management or control of a workplace at which construction work is carried out must ensure, so far as is reasonably practicable, that the workplace is secured from unauthorised access.**

Site Risk Register - Security of the Workplace

The risks associated with security & public protection measures have been identified, assessed and controlled in accordance with the Hierarchy of Control (HoC).

What to determine

How to secure a workplace is to firstly undertake a risk assessment with the intent to identify and isolate the risks.

In assessing the risk, PCBU's must have regard to:

- The risk to health and safety arising from unauthorised access to the workplace
- The likelihood of unauthorised access occurring (for example, the proximity of the site to places frequented by children, including

The Hierarchy of Control - in context for Security of the Workplace:

Isolation

Where the risk assessment identifies the need to isolate site hazards and the only way to achieve this is with perimeter fencing, the safety and security fencing should:

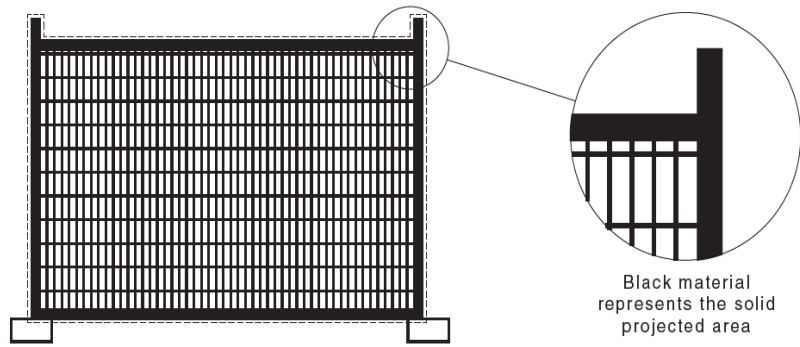
- be constructed from suitable, dedicated materials with no holes or gaps.
- have fence fittings, including clamps securely installed.
- have gates provided with the same level of security as the fence.
- have locks and chains fitted for added site security and safety.
- be closed, secured and safety checked at the completion of each day.
- be difficult to gain access under and to scale over the fence.
- be able to withstand the anticipated loads to which it may be subjected (such as wind forces, persons attempting to scale and vehicle impact loads).
- where a fence consists of discrete panels, the joints should not weaken it and should provide the same level of security as the panels.

schools, parks and shopping centres)

- The extent that unauthorised access to the site cannot be prevented – how to isolate hazards.

Access and Egress

The **entry** and **exit** areas are adequate for **emergency exit and emergency services**. Thoroughfares are well defined and clearly marked.



The site is never static, as conditions change. Remain alert for developing hazards and ensure controls remain effective.



Weather

Wind actions on fences are increased where there are attachments or coverings that increase the solidity ratio of the panels. These attachments or coverings can include:

- Shade-cloth
- Various advertising banner materials
- Signage, such as corflute, metal, and polypropylene
- Acoustic barriers

What has changed

The [Australian Standard for Temporary Fencing and Hoardings - AS4687 \(series\)](#). The updated standard, which was released in June 2022, features revised guidelines which will impact design, construction and costing of temporary fencing and hoardings.

High Public Risk Areas

The temporary fencing's level of resistance to overturning should reflect the risk to public safety. Consider supplier guidance on the selection of fence class for the risk posed by the fence.

- Gateways and end of fence lines

The stability of the fence is decreased at the terminal panels of a line of fence or where gates are installed. Additional bracing should be applied to panels adjacent to gateways, or at the terminal ends of fences.

- Duration of installation

The duration that the temporary fencing is *in situ* should be considered. The longer the duration, the higher the probability of it being subjected to a high wind event which will impose higher wind actions on the temporary fencing.

Recent Inspection Reveals



Unsecured Panels & Vegetation overgrown on perimeter fence

The previous standard allowed design of temporary fences to a wind speed of 15m/s or 54Klm/h (which is commonly exceeded across Australia).

In the updated standards, design requirements are based on the consequence of failure category. Updated design ranges up to 39m/s (140km/hr).



900mm _ Crowd Control Barriers used for deep excavation on school oval

Aust. Standard - Fence Testing

Tests include a simulated climbing test to ensure the fence is secure and will protect against trespassing and unlawful entry. The temporary fencing must meet minimum standards to pass these tests.

The test includes:

- A climbing test that ensures the fence can withstand a 65kg load hanging off it for 3 minutes
- Impacting the fence with a 37kg weight, using 150 joules of impact energy
- A test to ensure that vandals can't get a foot hold, by ensuring the aperture size of the mesh does not exceed 75mm, and that the individual parts of the mesh can sustain loads
- A wind strength test, to ensure that the fence does not overturn when exposed to high winds

Key Requirements

Minimum Height: All temporary fences must be a minimum of 1800mm (1.8 meters) in height. Panels must be at least 1.8 metres tall (larger fences may be required for e.g. demolition projects)

Stability: The fence must remain erect and stable at all times.

Installation: Installation, moving, or altering must be done by a competent and trained installer, following the supplier's installation instructions.

Line & Level: Fencing should be installed to a maximum of 3 degrees out of plumb before additional braces are required.

Wind Loading: The fence design must take into account wind loading, impact tests, and stability.

Climbing Test: The fence must withstand a climbing test, ensuring it can carry a 65kg load for three minutes, and be difficult to climb and crawl under.

Mesh Size: The mesh size must not exceed 75mm to prevent easy climbing.

Maintenance: All fencing components must be in good condition and maintained regularly.

Gates & Joints: be securely connected with no weak points for potential entry.

Store it correctly: When not in use, store the temporary fencing in a stillage. Purpose designed racks keep fence panels neat and tidy and ensure they are stacked safely and do not pose a hazard to others.

Re-usability: Any component that can be re-used on multiple installations should be assessed between installations to determine whether it is fit for further use.

Accessories

Accessories that may be used with temporary fencing systems include the following:

- Height extensions
- Barbed wire extensions (may require local approval)
- Handrails
- Dog bars (railing or mesh at the bottom of the fence system)
- Safety lights
- Site and safety signs
- Gates & Wheels
- Shade cloth and/or advertising signage

Accessories shall be secured to the fence to prevent detachment.

How does banner mesh or shade cloth affect a temporary fence

When shade cloth, banner mesh or scrim is fixed to a temporary fence, it's important to provide additional strength by way of bracing. This ensures the fence retains its structural integrity.

Although it isn't particularly heavy, the nature of shade cloth causes it to catch the wind which can put undue load on the fence. It can cause pulling forces to impact on one side of the fence, and in extreme cases can knock it off balance even if temporary fence feet are holding it down.

It's important to consult a design engineer for the appropriate wind loading criteria for the location. Then, determine the wind region, the fence can be installed with allowances for the weather.



Temporary fencing is more than just a boundary marker; it is an essential safety tool at construction sites. It serves as a physical barrier, effectively delineating the construction zone from public areas it can:

- Prevent Unauthorised Access
- Protect the Public
- Provide Asset Protection