

AS 4687.2:2022



STANDARDS
Australia



Temporary fencing and hoardings

Part 2: Temporary fencing and temporary pedestrian barriers



AS 4687.2:2022

This Australian Standard ® was prepared by CE-008, Chainlink Fabric Security Fences and Gates. It was approved on behalf of the Council of Standards Australia on 8 June 2022.

This Standard was published on 24 June 2022.

The following are represented on Committee CE-008:

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- Australasian Wire Industry Association
- Australian Industry Group
- Australian Institute of Health and Safety
- Australian Security Industry Association
- Bureau of Steel Manufacturers of Australia
- Civil Contractors Federation
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- Galvanizers Association of Australia
- Hire and Rental Industry Association of Australia
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- Swimming Pool and Spa Association of Australia
- Temporary Fencing Association of Australia

This Standard was issued in draft form for comment as DR AS 4687.2:2021.

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ISBN 978 1 76113 844 7

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Originated as AS 4687—2007.
Revised in part and redesignated as AS 4687.2:2022.

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Preface

This Standard was prepared by the Standards Australia Committee CE-008, Chainlink Fabric Security Fences and Gates, to supersede AS 4687:2007, *Temporary fencing and hoardings*.

The objective of this document is to specify minimum requirements for the design, installation and performance of temporary fencing and temporary pedestrian barriers, in order to provide protection to the public.

Temporary fencing is used —

- (a) to restrict unauthorized access to worksites, events and restricted areas;
- (b) to prevent operations within the fenced area from having effects outside of the fenced area; and
- (c) to prevent exposure of the public to hazards within the fenced area.

Temporary pedestrian barriers are used —

- (i) to provide a temporary directional barrier for pedestrian traffic management;
- (ii) to protect pedestrians from hazards; and
- (iii) to delineate access zones.

The major changes in this edition are as follows:

- (A) Additional guidance has been provided for determination of wind actions.
- (B) The test methods have been elaborated upon.
- (C) Where the previous edition was a performance testing standard, this revision provides alternative ways to achieve conformance, adding a design analysis approach.
- (D) Inclusion of new material regarding temporary pedestrian barriers.
- (E) Division of the previous edition of the document into a series of four parts, comprising the following:
 - (i) AS 4687.1, *Temporary fencing and hoardings, Part 1: General requirements*.
 - (ii) AS 4687.2, *Temporary fencing and hoardings, Part 2: Temporary fencing and temporary pedestrian barriers*.
 - (iii) AS 4687.3, *Temporary fencing and hoardings, Part 3: Temporary hoardings*.
 - (iv) AS 4687.4, *Temporary fencing and hoardings, Part 4: Temporary swimming pool fencing*.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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Australian Standard®

Temporary fencing and hoardings

Part 2: Temporary fencing and temporary pedestrian barriers

Section 1 Scope and general

1.1 Scope

This document specifies minimum requirements for the design, installation and performance of temporary fencing and temporary pedestrian barriers in order to provide protection to the public.

Temporary fencing is used —

- (a) to restrict unauthorized access to worksites, events and restricted areas;
- (b) to prevent operations within the fenced area from having effects outside of the fenced area; and
- (c) to prevent exposure of the public to hazards within the fenced area.

Temporary pedestrian barriers are used —

- (i) to provide a temporary directional barrier for pedestrian traffic management;
- (ii) to protect pedestrians from hazards; and
- (iii) to delineate access zones.

1.2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document:

AS 4687.1, *Temporary fences and hoardings — Part 1: General requirements*

1.3 Terms and definitions

For the purposes of this document, the terms and definitions given in AS 4687.1 and the following apply.

1.3.1

installation instructions

procedure which comprehensively describes how to assemble the temporary barrier on site

Note 1 to entry: This includes the position and number of fasteners, upright spacing, all materials, stability systems, bracing system and counterweights required.

1.3.2

plate

support, including spigots, to receive the legs that maintain the panel in vertical alignment for a temporary barrier

Section 2 Temporary fencing

2.1 General requirements

All temporary fencing systems shall be assessed to determine whether they are in accordance with the stability and strength requirements of this section.

2.2 Classes of temporary fences

2.2.1 Stability class

Stability class temporary fencing is suitable for general usage and in applications where the consequence of failure presents negligible risk to persons, property and vehicles.

2.2.1.1 Minimum stability class requirements

Minimum stability class fencing should be plumb, in accordance with [Clause 2.6.2](#).

The following requirements shall be satisfied:

- (a) Fences shall be positioned and installed in such a way to minimize risk to persons, property, and vehicles.
- (b) In the event of a cyclonic warning, temporary fences shall be disassembled or otherwise rendered safe.

NOTE Fences that satisfy this stability class are likely to be unstable in design wind speeds in excess of those specified in [Clause 2.7.4](#).

2.2.2 Importance Level

2.2.2.1 Importance Level 1

Importance Level 1 temporary fencing is suitable for use in applications where failure presents a low risk to human life, or small or moderate economic, social or environmental consequences. Refer to AS 4687.1:2022 Table 4 for information regarding the design site wind speed for Importance Level 1.

2.2.2.2 Importance Level 2

Importance Level 2 temporary fencing is suitable for use in applications where failure presents a medium risk to human life, or considerable economic, social or environmental consequences. Refer to AS 4687.1:2022 Table 5 for information regarding the design site wind speed for Importance Level 2.

2.3 Type of temporary fencing

2.3.1 Temporary fencing systems

Temporary fencing systems shall be:

- (a) Modular and comprised of standardized components.
- (b) Free standing (i.e. not required to be connected to other structures).
- (c) Able to be installed by standardized and repeatable methodologies that are able to be applied in a range of locations and environments.
- (d) Treated to provide weather resistance if used for exterior fencing.

Temporary fencing systems shall —

- (i) have documented scopes of application (including strengths and limitations of the system); and
- (ii) conform, as set out in AS 4687.1:2022 Clause 2.1.

2.3.2 Site-specific temporary fencing

Site-specific temporary fencing shall conform to AS 4687.1:2022 Clause 2.1.

Where site-specific requirements necessitate that temporary fencing be designed for greater load performance than specified in this document, conformance shall be established in accordance to AS 4687.1:2022 Clause 2.1.

NOTE Site-specific temporary fencing can comprise of non-standard components.

2.4 Products and components

2.4.1 Panels

Temporary fencing panels shall be of a minimum height of 1500 mm from ground level to the upper horizontal member.

The maximum distance from ground level to the bottom horizontal member of the panel shall be 200 mm.

The maximum horizontal infill aperture shall be 75 mm.

2.4.2 Foot, base, and counterweight

Footing systems may comprise one or more of the following elements:

- (a) Counterweight.
- (b) Plate.
- (c) Ground anchors.
- (d) In-ground posts.

Footing systems should be manufactured from materials suitable for the intended life of the fencing system.

2.4.3 Couplers and clamps

Clamps, pipe fittings, hinges, and any other securing parts that are used in couplers and clamps, shall not compromise the performance of the temporary fencing.

2.4.4 Bracing

Bracing system components may include one or more of the following:

- (a) Back braces, secured with counterweight block mass.
- (b) Temporary fence panels, installed in a V formation at intervals in the fence line and secured with counterweight block mass or other means.
- (c) Back braces, secured with ground anchors, pegs, screw anchors and driven anchors.
- (d) Back braces, secured with bolted foot-plates.

- (e) Driven support posts, securely fastened to the fence.
- (f) Ground anchors, with positively connected posts or bracing members.
- (g) Laterally aligned temporary fence panels (perpendicular to the fence line), secured with counterweight block mass or other means.

NOTE Where counterweight mass blocks are used, they should be secured to the bracing members.

Bracing systems shall ensure components are secured to the fence to prevent detachment. Bracing systems shall meet the requirements of [Appendices A, B and D](#) as part of the temporary fencing system.

2.4.5 Additional accessories

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

- (a) Height extensions.
- (b) Barbed wire extensions (may require local approval).
- (c) Handrails.
- (d) Dog bars (railing or mesh at the bottom of the fence system).
- (e) Flashing safety lights.
- (f) Site and safety signs.
- (g) Gates.
- (h) Shade cloth and/or advertising signage.

Accessories shall be secured to the fence to prevent detachment.

2.5 Design considerations

In assessing the structural adequacy of a temporary fencing system, the following should be taken into account to determine whether additional or alternative design actions to those specified in AS 4687.1 are needed to provide a serviceable fence:

- (a) Wind actions:
 - (i) Terrain and shielding —
The surrounding terrain and shielding should be taken into account. Features including its undulation and the number of surrounding structures and obstructions can impact wind flow and wind actions on temporary fencing. Refer to the categorizations of terrain in AS 4687.1:2022 Clause 3.4.3 and shielding in AS 4687.1:2022 Clause 3.4.4.
 - (ii) Topography —
The influence of major land surface features should be taken into account. Features including, hills, valleys and plains can influence wind flow and, therefore, the wind actions on temporary fencing. Refer to AS 4687.1:2022 Clause 3.4.5 for how to determine the effect of local topography on the basic wind speed at the site location.
- (b) Any attachments to the fence —
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:
 - (i) Shade-cloth.

- (ii) Various advertising banner materials.
- (iii) Signage, such as corflute, metal, and polypropylene.
- (iv) Acoustic barriers.

The following should be taken into account when calculating the wind actions:

- (A) *Area of the temporary fence panel that the attachment will cover* — The greater the area, the higher the solidity ratio and, therefore, the higher the wind actions.
- (B) *Porosity of the material attached to the fence* — The less air that passes through the material, the greater the solidity ratio and, therefore, the higher the wind actions.
- (c) High risk public areas —
The temporary fencing's level of resistance to overturning should reflect the risk to public safety. [Clause 2.2](#) provides guidance on the selection of fence class for the risk posed by the fence.
- (d) 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.
- (e) Duration of installation —
The duration that the temporary fencing is *in situ* should be taken into account. 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. Refer to AS 4687.1:2022 Clause 4.2.2 for the annual probability of exceedance for ultimate limit state design events.
- (f) Resistance to climbing — Refer to AS 4687.1:2022 Clause 3.3.2 (c) for requirements regarding climbing loads.
- (g) Resistance to lifting panels out of counterweights of assembled fences.
- (h) Resistance to shaking to loosen fencing components.
- (i) Resistance to impact loading — Refer to AS 4687.1:2022 Clause 3.3.2 (a) and 3.3.2 (b) for requirements regarding impact loads.
- (j) Accessories —
When installing accessories (see [Clause 2.4.5](#)) onto temporary fencing systems, the potential of the accessories to alter the dynamics of the system should be taken into account, as they can result in additional wind actions and other de-stabilizing effects.

The system design should take into account the configuration of standard components (e.g. V bracing) or using greater numbers of standard components (e.g. bracing, counterweights) to resist increased loads.

2.6 Installation

2.6.1 General

The temporary fencing system should be installed in accordance with the supplier's fence design and installation instructions. Installation instructions should be sourced from the supplier.