AS 4687.1:2022

Temporary fencing and hoardings

Part 1: General requirements



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Galvanizers Association of Australia
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National Association of Testing Authorities Australia
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Temporary Fencing Association of Australia

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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 requirements for the design, installation, testing and storage of temporary —

(a) fencing;

(b) pedestrian barriers;

(c) hoarding; and

(d) pool fencing.

These are collectively referred to as temporary barriers and are intended to limit unauthorized access to restricted areas.

This document also provides alternative ways to achieve conformance, either through design or physical testing.

This revision was initiated following a coronial inquiry, with the goal of creating harmonization across a range of jurisdictions.

The major changes in this edition are as follows:

(i) Additional guidance has been provided for determination of wind actions.

(ii) The test methods set out in AS 4687:2007 have been elaborated upon.

(iii) Where the previous edition was a performance testing standard, this revision provides alternative ways to achieve conformance, adding a design analysis approach.

(iv) Division of the previous edition of the document into a series of four parts, comprising the following:

(A) AS 4687.1: *Temporary fencing and hoardings, Part 1: General requirements*.

(B) AS 4687.2: *Temporary fencing and hoardings, Part 2: Temporary fencing and temporary pedestrian barriers*.

(C) AS 4687.3: *Temporary fencing and hoardings, Part 3: Temporary hoardings*.

(D) AS 4687.4: *Temporary fencing and hoardings, Part 4: Temporary swimming pool fences*.

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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Temporary fencing and hoardings

Part 1: General requirements

Section 1 Scope and general

1.1 Scope

This document specifies requirements for the design, installation, testing and storage of temporary —

(a) fencing;

(b) pedestrian barriers;

(c) hoarding; and

(d) pool fencing.

These are collectively referred to as temporary barriers, and are intended to limit unauthorized access to restricted areas.

This document also provides alternative ways to achieve conformance, through design analysis, physical testing or a combination of both.

This document applies to equipment that is relocatable and reusable, and not permanently fixed to other structures.

This document also provides detailed guidance for the calculation of wind actions on the equipment covered by this document.

This document does not cover equipment that is designed to prevent falls, such as temporary edge protection.

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:

NOTE Documents for informative purposes are listed in the Bibliography.

AS 1720.1, *Timber structures, Part 1: Design methods*

AS 3566.1, *Self-drilling screws for the building and construction industries, Part 1: General requirements and mechanical properties*

AS 3600, *Concrete structures*

AS 4100, *Steel structures*

AS 5216, *Design of post-installed and cast-in fastenings in concrete*

AS/NZS 1170.0, *Structural design actions, Part 0: General principals*

AS/NZS 1252 (all parts), *High strength steel fastener assemblies for structural engineering—Bolts, nuts and washers*

AS/NZS 1664.1, *Aluminium structures, Part 1: Limit state design*

AS/NZS 4600, *Cold-formed steel structures*

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AS ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

1.3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

1.3.1
action
set of concentrated or distributed forces which can cause stress or deformation

1.3.1.1
imposed action
live load
applied load that is not permanent and that can be variable

1.3.1.2
permanent action
dead load
self-weight of the temporary barrier including all attached materials, permanent equipment and fittings

1.3.2
design wind speed
wind speed for use in design, adjusted for average recurrence interval, wind direction, geographic position, surrounding environment and height

1.3.3
bracing
attachment to the temporary barrier to which counterweights can be added so that it has a larger footprint to aid in stability

Note 1 to entry: A brace may also refer to a structure that is attached to the fence and tied back to an existing structure to aid in stability.

1.3.4
connection
structural elements used for joining different members of a temporary barrier

Note 1 to entry: These may include fasteners (e.g. screws, nails, bolts), sleeved members, clamps, couplers, hinges, welding, brackets, adhesives, and adhesive tapes.

1.3.5
counterweight
anchor block
feet
item used to maintain the stability of the temporary barrier when under load

Note 1 to entry: For example, a mass applied to the base of the temporary barrier. Stabilizing mass with holes for receiving the legs supporting the panel and maintaining the panel in vertical alignment.

1.3.6
framing
structure that supports a hoarding panel

Note 1 to entry: This is a generalized term and framing may be made up of uprights, studs, channels, bracing and their connections.

1.3.7
hoarding panel
material fixed to the uprights or vertical framing that forms the face of the temporary hoarding

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1.3.8
internal space
space within engineered structures in which hoardings are constructed in order to protect the hoarding from the influence of external environmental elements

1.3.9
may
indicates the existence of an option

1.3.10
modular system
system constructed with standardised products or components

1.3.11
shall
indicates that a statement is mandatory

1.3.12
should
indicates a recommendation

1.3.13
solidity ratio
ratio of solid area to total area of the structure

1.3.14
supplier
body corporate, firm or a person who supplies materials, goods or equipment by way of sale, lease, exchange or hire, whether as a principal or agent for another

1.3.15
temporary barrier
temporary fencing, temporary pedestrian barriers, temporary hoarding and temporary pool fencing

1.3.16
temporary fencing
modular, permeable, free standing, fencing system erected around a site to separate the public from the site

1.3.17
temporary hoarding
modular, impermeable, free standing hoarding system with 100 % cover from ground level, erected around a site to separate the public from the site, generally with a design life of no more than one year

1.3.18
temporary pedestrian barrier
modular, permeable, free standing directional barrier for pedestrian traffic management, protecting the public from hazards and delineating access zones

1.3.19
temporary pool fencing
modular, permeable, free standing, fencing system erected around a pool site to separate the public from that site

1.3.20
temporary fencing panel
frame constructed with at least two vertical posts connected with top and bottom horizontal rails, with permeable infill material

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1.3.21
upright
vertical framing element of a hoarding, to which panels are secured

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Section 2 General requirements

2.1 Pathways to conformance

Pathways of conformance to this document include design analysis, physical testing, or a combination of design analysis and physical testing.

The static design actions used in the design analysis are equivalent to those used to determine the test loads in the appendices of other parts in this series.

A report shall be available with all temporary barriers, indicating which pathway or pathways have been followed to conform to this document. See Clause 4.8 and Clause 5.2 for reporting requirements.

2.2 Re-usability

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

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