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STANDARDS
Australia



Swimming pool safety

Part 1: Safety barriers for swimming pools



AS 1926.1:2024

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- Australian Institute of Landscape Architects
- Bureau of Steel Manufacturers of Australia Limited
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- Housing Industry Association
- Kidsafe Australia
- Landscape Design Institute (Aust)
- Master Builders Australia
- Master Pool Builders Association Australia
- Royal Life Saving Society Australia
- Swimming Pool and Spa Association of Australia

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Part 1: Safety barriers for swimming pools

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Preface

This document was prepared by the Standards Australia Committee CS-034, Swimming and Spa Pools, to supersede AS 1926.1:2012.

The objective of this document is to specify the requirements for barriers that are intended to restrict the access of young children to swimming pools.

A list of all parts in the AS 1926 series can be found in the Standards Australia online catalogue.

The major changes in this edition are as follows:

- (a) Introduction of new definitions.
- (b) Inclusion of —
 - (i) new diagrams with revision of some existing diagrams reflecting non-climbable zones (NCZs);
 - (ii) wording in AS 1926.1:2012 Ruling in [Clause 2.3.1](#);
 - (iii) section for plants located within an NCZ;
 - (iv) section for marking of gate latches and hinges;
 - (v) section for combined structures forming a barrier;
 - (vi) section covering security of closure of gate latches;
 - (vii) section providing alternative option for windows used as barriers for indoor pool; and
 - (viii) section introduction covering marking of gate latches and hinges.
- (c) Removal of definition and references to gate units.
- (d) Clarification and simplification of clauses.
- (e) Reintroduction of location of latch release being a minimum height of 1 400 mm above any lower foothold.
- (f) Increased cycles and frequency of testing gate components.
- (g) Addition of a new appendix for the testing of glass panels.

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

Notes to the text contain information and guidance. They are not an integral part of the Standard.

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Introduction

Statistical evidence shows that the majority of drowning deaths in private swimming pools involve children under five years of age. For this reason, the requirements established by this document are directed at achieving a barrier that will make it difficult for a young child to gain access to a pool area, whether under, over or through the barrier.

Pool barriers, including the gate and fittings, should be maintained in working order. Non-conforming pool barrier components should be promptly attended to in order to ensure their intended function. This includes making sure that any child-resistant gates and doors always operate correctly and, unless being used to access the swimming pool, they remain closed and latched.

It should be noted that the provisions of this document relate to barriers that are intended to be child resistant but not childproof, as effectiveness of the barrier is dependent on its location, installation and maintenance.

Safety barriers form part of a broader strategy to prevent or reduce deaths of young children by drowning which includes —

- (a) supervision;
- (b) safety barrier conformance inspections;
- (c) water familiarization and swimming lessons;
- (d) first aid — including cardio-pulmonary resuscitation (CPR); and
- (e) public education.

All of these measures work together to restrict the access of young children to swimming pools.

NOTES

Australian Standard®

Swimming pool safety

Part 1: Safety barriers for swimming pools

1 Scope and general

1.1 Scope

This document specifies design, construction, component and testing requirements for barriers that are intended to be permanent structures to restrict the access of young children to swimming pools.

NOTE 1 Public and commercial swimming pools have different human dynamics, such as access for people with disabilities, increased gate usage, crowd behaviour and supervision, and consequently, different requirements apply. Reference can be made to jurisdictional requirements, risk management guidelines or other appropriate resources.

NOTE 2 Maintenance requirements are not included in this document.

This document does not cover the requirements for the construction and installation of temporary pool fencing intended to provide protection to the public and to restrict unauthorized access to swimming pool construction, repair, or renovation sites. Requirements for Temporary Pool Fencing are addressed in AS 4687.4, *Temporary fencing and hoardings — Part 4: Temporary swimming pool fencing*.

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 referenced for informative purposes are listed in the Bibliography.

AS 1288:2021, *Glass in buildings—Selection and installation*

1.3 Terms and definitions

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

1.3.1

barrier

assembly of components, natural or otherwise, that restricts access to the pool

Note 1 to entry: The barrier may include items such as fences, posts and panels, gates, child-resistant windows and doorsets, constructed or natural walls retaining or otherwise, sides of buildings, and balustrades on a balcony, where they form part of the intended barrier.

1.3.2

barrier height

height of the barrier measured vertically from the finished ground level

1.3.3

boundary barrier

dividing barrier between two adjoining properties

1.3.4

child-resistant doorset

barrier installed in a residential building that comprises a door, door frame, self-closing device and latch that is designed to provide access to the swimming pool

1.3.5**child-resistant window**

opening part of a window that is protected in accordance with [Clause 2.6](#)

1.3.6**finished ground level****FGL**

ground level or other permanent stable surface

1.3.7**fixed****securely fixed****affixed****anchored**

attached in a way that prevents removal without a tool or other force

1.3.8**flexible materials and components**

parts of a barrier or materials used in a barrier made with chain link wire mesh, perforated materials, fabric, brushwood and the like

1.3.9**foliage**

leafy part of a plant

1.3.10**foothold**

component or feature that can be used by a young child as a climbing aid by foot

1.3.11**gate**

portion of a barrier, other than a child-resistant doorset, that is designed to provide access through the barrier

1.3.12**grade A safety glass**

glass that meets the requirements of AS 2208

1.3.13**handhold**

component or feature that can be used by a young child as a climbing aid by hand

1.3.14**indoor pool**

pool that is fully enclosed within a residential building or by a separate building

1.3.15**indoor/outdoor pool**

pool that is partly enclosed by a residential building and partly an outdoor pool

1.3.16**inside of a barrier**

side of a barrier facing towards the pool area

1.3.17**latch**

self-latching mechanism that prevents the opening of a closed gate or door without activation of its release device

1.3.18**may**

indicates the existence of an option

1.3.19**non-climbable**

no handholds or footholds or other aids that facilitate climbing

1.3.20**non-climbable zone****NCZ**

zones without handholds or footholds provided in accordance [Clause 2.2](#)

1.3.21**outdoor pool**

pool that is not fully or partly enclosed by a building

1.3.22**outside of the barrier**

side of a barrier facing away from the pool area

1.3.23**pool****swimming pool**

any structure containing water to a depth greater than 300 mm and used primarily for swimming, wading, paddling or the like, including a bathing or wading pool, or spa pool

1.3.24**pool area**

area that contains the pool and is enclosed by a barrier

1.3.25**rigid components**

components of a barrier made of steel, aluminium, wood, glass, acrylic, masonry and the like

1.3.26**shall**

indicates that a statement is mandatory

1.3.27**should**

indicates a recommendation

1.3.28**soft foliage**

pliable, bendable, leafy part of a plant without a rigid structure

1.3.29**within the property**

on a property other than on a property boundary

1.3.30**young child**

child under the age of five years

1.4 Statement of conformity

Manufacturers and suppliers that claim conformity with this document should have evidence available to demonstrate such conformity.

2 Design and construction of elements of a barrier

2.1 General

A barrier shall be designed and constructed so that it will restrict access by young children.

The barrier shall be a permanent structure.

The height of a barrier within the property shall be not less than 1 200 mm on the outside of the barrier.

Barriers may be constructed from any durable material, provided the barrier conforms to the requirements of this document.

A barrier, other than a retaining wall, shall be vertical or lean away from the pool by not more than 15°.

NOTE A barrier should be free of sharp edges, sharp projections, and similar hazards.

2.2 Non-climbable zone (NCZ)

2.2.1 General

The height and radius of the arc of all non-climbable zones (NCZs) (other than NCZ 4) shall be not less than 900 mm. Within an NCZ, there shall be no handholds or footholds, objects or plants that will facilitate climbing.

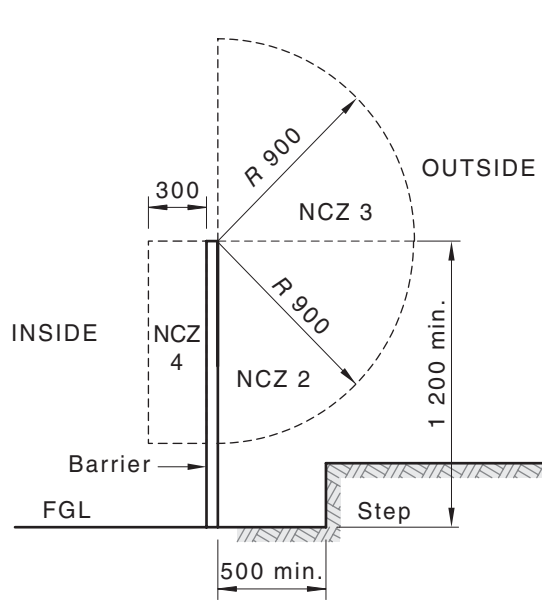
Where NCZs are required, they shall apply to the entire length of the barrier.

2.2.2 Barriers less than 1 800 mm height

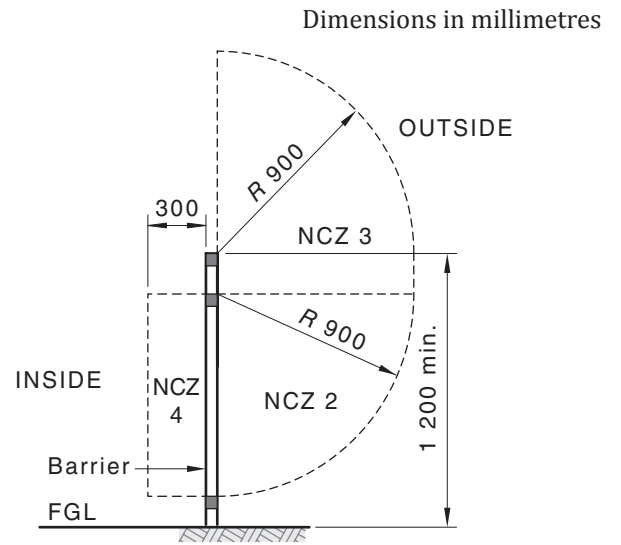
The following NCZs shall be present on all barriers with a height less than 1 800 mm:

- (a) NCZ 1 is a 900 mm vertical plane on the outside face of a barrier. This NCZ may be located anywhere within the perpendicular height of a barrier or, where present, anywhere between horizontal components or handholds and footholds on a barrier (see [Figures 2.1, 2.3, 2.5, 2.7 and 2.9](#)).
 - (b) NCZ 2 is a quadrant on the outside of a barrier created by a 900 mm radius down from the top of NCZ 1 above (see [Figures 2.1, 2.3, 2.5 and 2.7](#)).
- NOTE 1 NCZ 2 is always immediately adjacent to NCZ 1 on all barriers.
- (c) NCZ 3 is a quadrant on the outside of a barrier created by a 900 mm radius up from the top of the barrier. When the top of NCZ 1 is below the top of a barrier, the NCZ 3 shall extend vertically down to the top of NCZ 1 (see [Figures 2.1, 2.3, 2.5 and 2.7](#)). NCZ 3 is applicable only to the space created by the quadrant and does not apply to any item or component on, or that is part of, the barrier.
 - (d) NCZ 4 is required on all barriers with vertical openings 10 mm to 100 mm in width and is a 900 mm high by 300 mm deep rectangular space on the inside of the barrier. It shall align with NCZ 1 (see [Figure 2.1](#)).

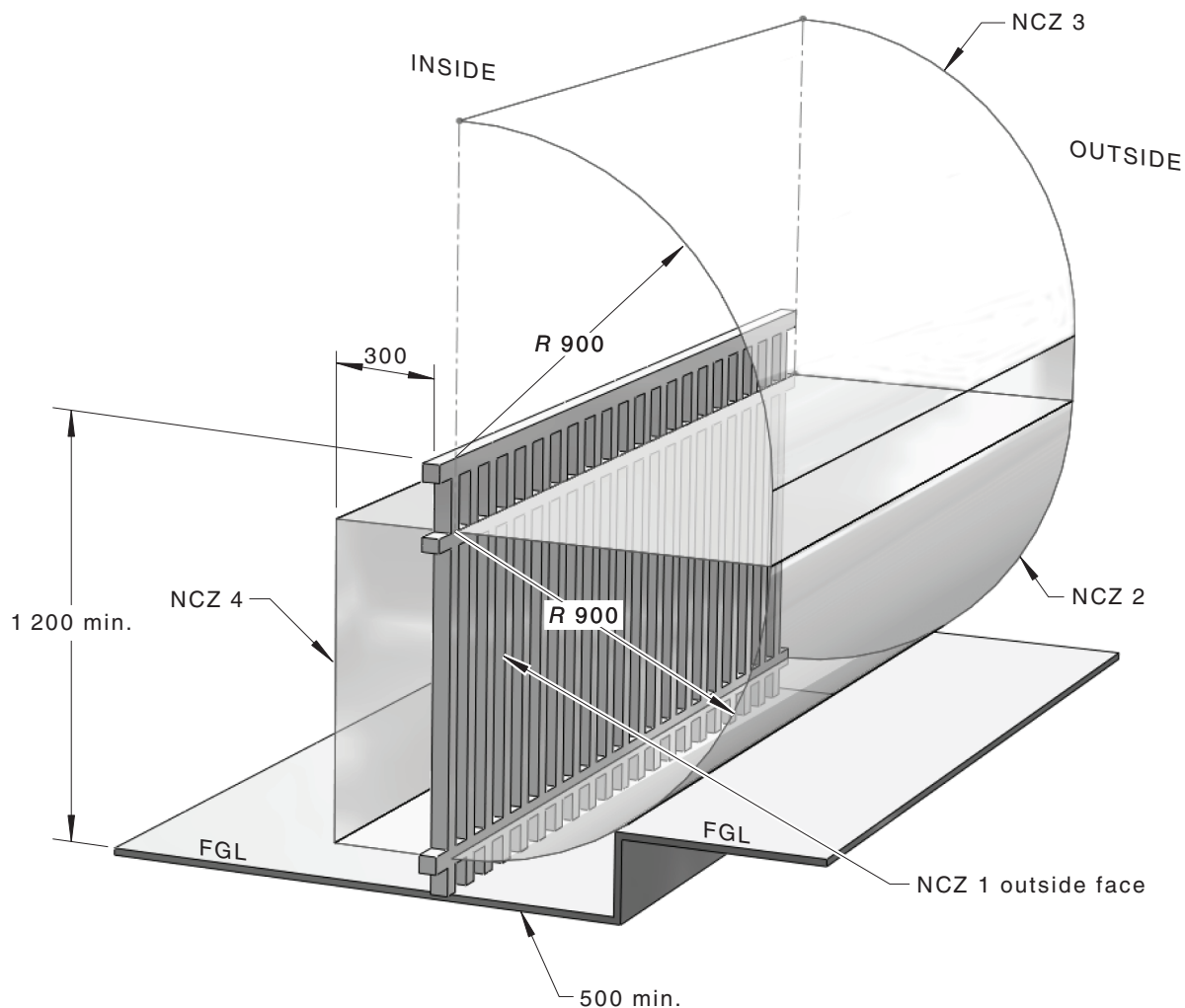
NOTE 2 A barrier component or an item or object on a barrier that would otherwise be climbable is non-climbable if its top surface is sloped at more than 60° to the horizontal plane [see [Figure 2.16\(A\)](#) and [\(B\)](#)].



(a) NCZ 2 at top of barrier



(b) NCZ 2 in middle of barrier



(c) 3D view of NCZs

NOTE The lower radius point of NCZ 2 may be located anywhere on the barrier provided there are no aids for climbing within the arc.

Figure 2.1 — Examples of non-climbable zones (NCZs)

2.2.3 Internal barriers 1 800 mm or greater in height

Internal barriers 1 800 mm or greater in height, measured on the outside of the barrier, shall not require an NCZ on either side.

2.2.4 Boundary barriers

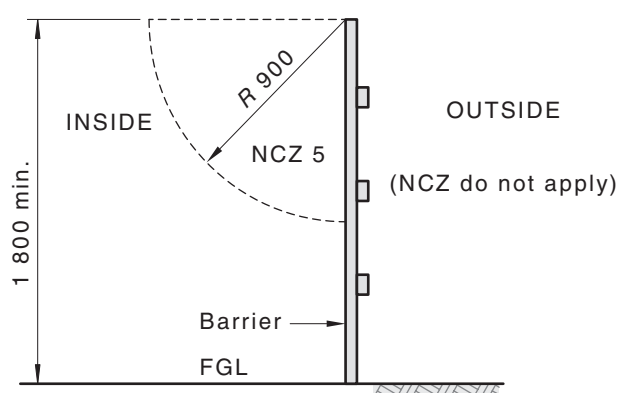
Where a boundary barrier acts as a barrier to a pool, it shall have —

- (a) a minimum height of 1 800 mm on the inside; and
- (b) NCZ 5 formed as a quadrant of 900 mm radius down from the top of the inside of the barrier [see [Figure 2.2\(a\)](#) and [Figure 2.4](#)].

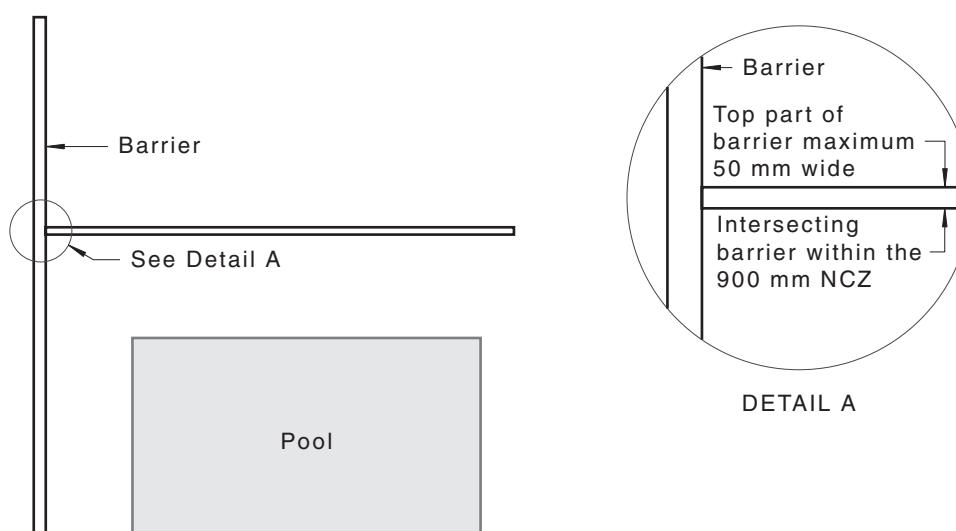
The following also apply:

- (i) NCZ 5 is not invalidated by the intersection of a conformant internal barrier provided —
 - (A) the width of the top rail or surface of the intersecting barrier is a maximum of 50 mm wide at any point within the non-climbable zone; and
 - (B) intersects at an angle of between 45° and 135° to the 1 800 mm boundary barrier [see [Figure 2.2\(b\)](#)].
- (ii) Where the width of the top rail or surface of the internal barrier is greater than 50 mm and is located within the NCZ 5, the height of the lower barrier shall —
 - (A) extend to a minimum height of 1 800 mm; and
 - (B) extend a minimum of 900 mm from the intersection [see [Figure 2.2\(c\)](#)].

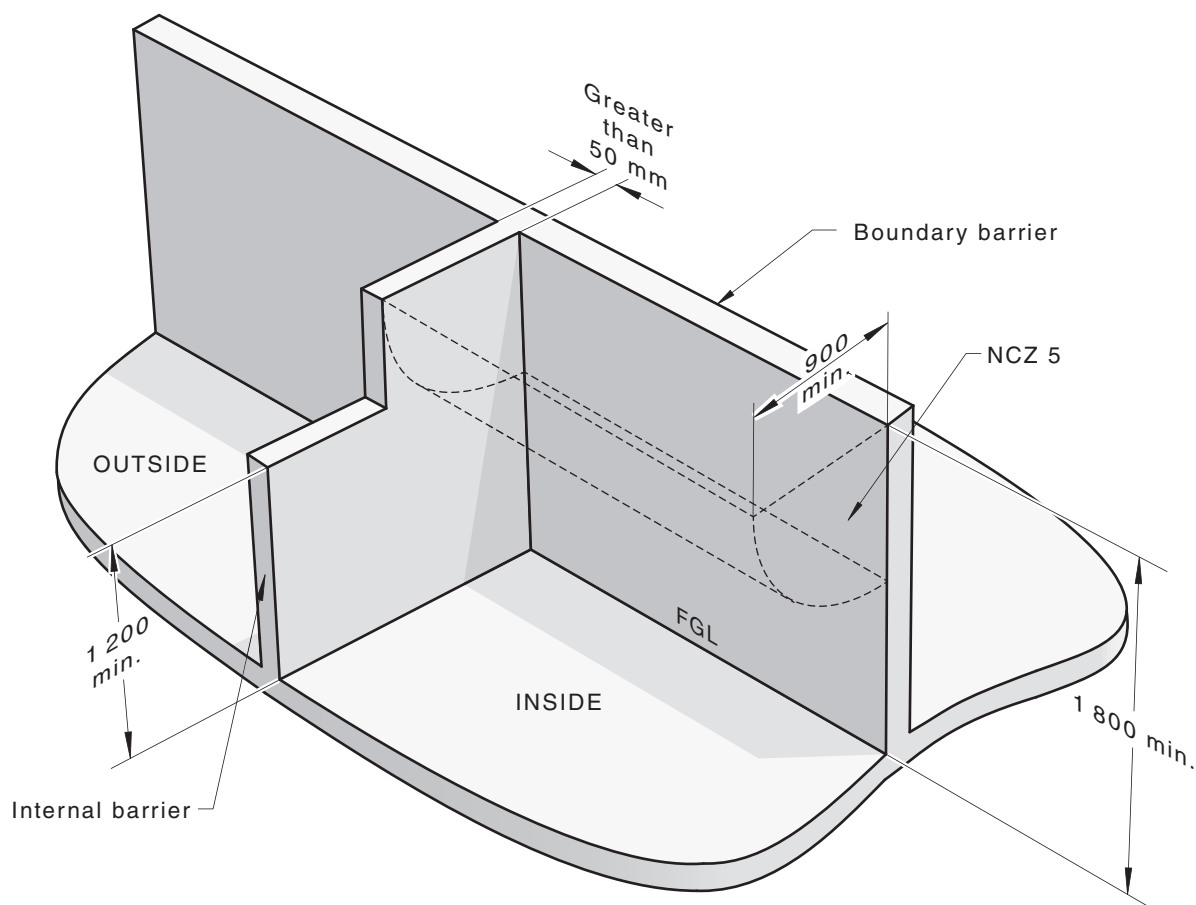
Dimensions in millimetres



(a) Boundary barrier 1 800 mm min.



(b) Intersecting barrier maximum 50 mm wide



(c) Intersecting barrier with top greater than 50 mm in width

Figure 2.2 — Boundary barriers

2.2.5 Intersecting internal barriers and NCZs

Where a barrier with a height less than 1 800 mm intersects with a barrier with a minimum height of 1 800 mm at an angle greater than 90°, the NCZs 1 and 2 on the lower barrier shall extend 900 mm beyond that intersection (see [Figure 2.3](#)).

Where two barriers less than 1 800 mm in height intersect, all required NCZs shall be continuous around any intersecting corner to maintain the integrity of the NCZ.

Diagram illustrating the minimum clearances for Non-Combustible Zones (NCZs) around a building.

- NCZs do not apply** (indicated near the horizontal NCZ).
- 1 800 min.** (minimum height of the horizontal NCZ).
- 900** (minimum width of the vertical NCZ).
- 1 200 min.** (minimum distance between the horizontal and vertical NCZs).
- More than 90°** (angle between the horizontal and vertical NCZs).
- NCZ 1 and 2** (labels for the horizontal and vertical NCZs).
- FGL** (Finished Ground Level).
- Building** (the structure being protected).

Figure 10 is a cross-sectional diagram of a road pavement. It shows a top layer labeled "NCZ 5" with a vertical dimension of 1800 mm. Below this is a layer labeled "FGL" (Flexible Gravel Layer) with a vertical dimension of 100 mm. The bottom layer is labeled "Max 100 mm". A curved line indicates a transition with a radius "R 900 mm".

2.2.6 Plants within an NCZ

EXAMPLE Plants that do not facilitate access to the pool area can include —

- (a) small shrubs, succulents and decorative grasses;
- (b) foliage that is dense, rough, thorned, spiked or irritating;
- (c) tree, palm and fern trunks and branches with rough, thorny or smooth components;
- (d) plants that are fragile and unable to support a young child; and

- (e) plants where foliage conceals thick branches that could support a young child, provided the branches are impractical for a young child to reach or use to climb the barrier.

[SOURCE: Reproduced/Adapted from “Guidelines for pool owners and property agents” (October 2016) © State of Queensland under the CC BY 4.0 licence <https://www.business.qld.gov.au/industries/building-property-development/building-construction/laws-codes-standards/pool-safety/guidelines>]

Dimensions in millimetres

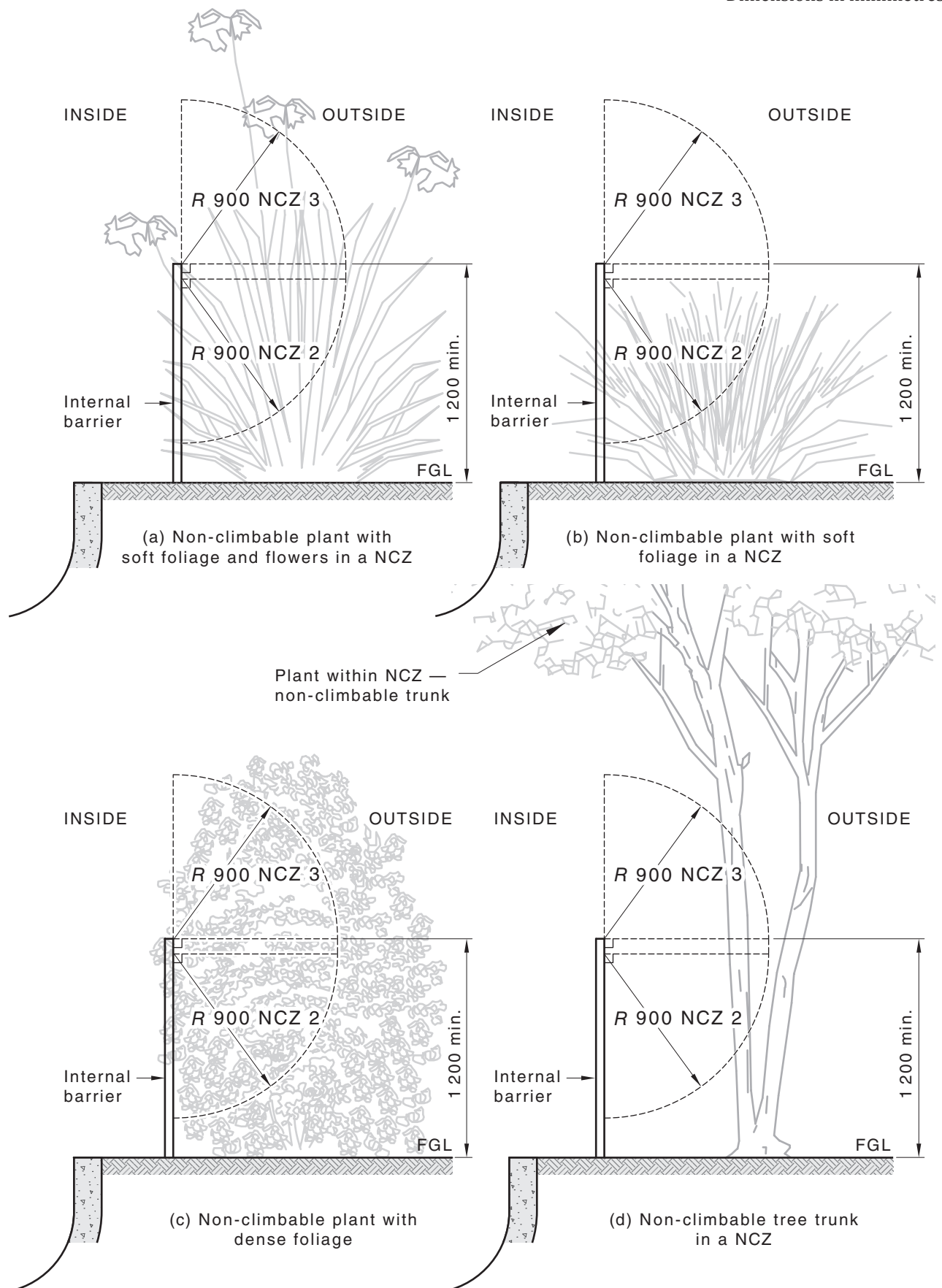


Figure 2.5 — Example of non-climbable plants within NCZs — Internal barrier

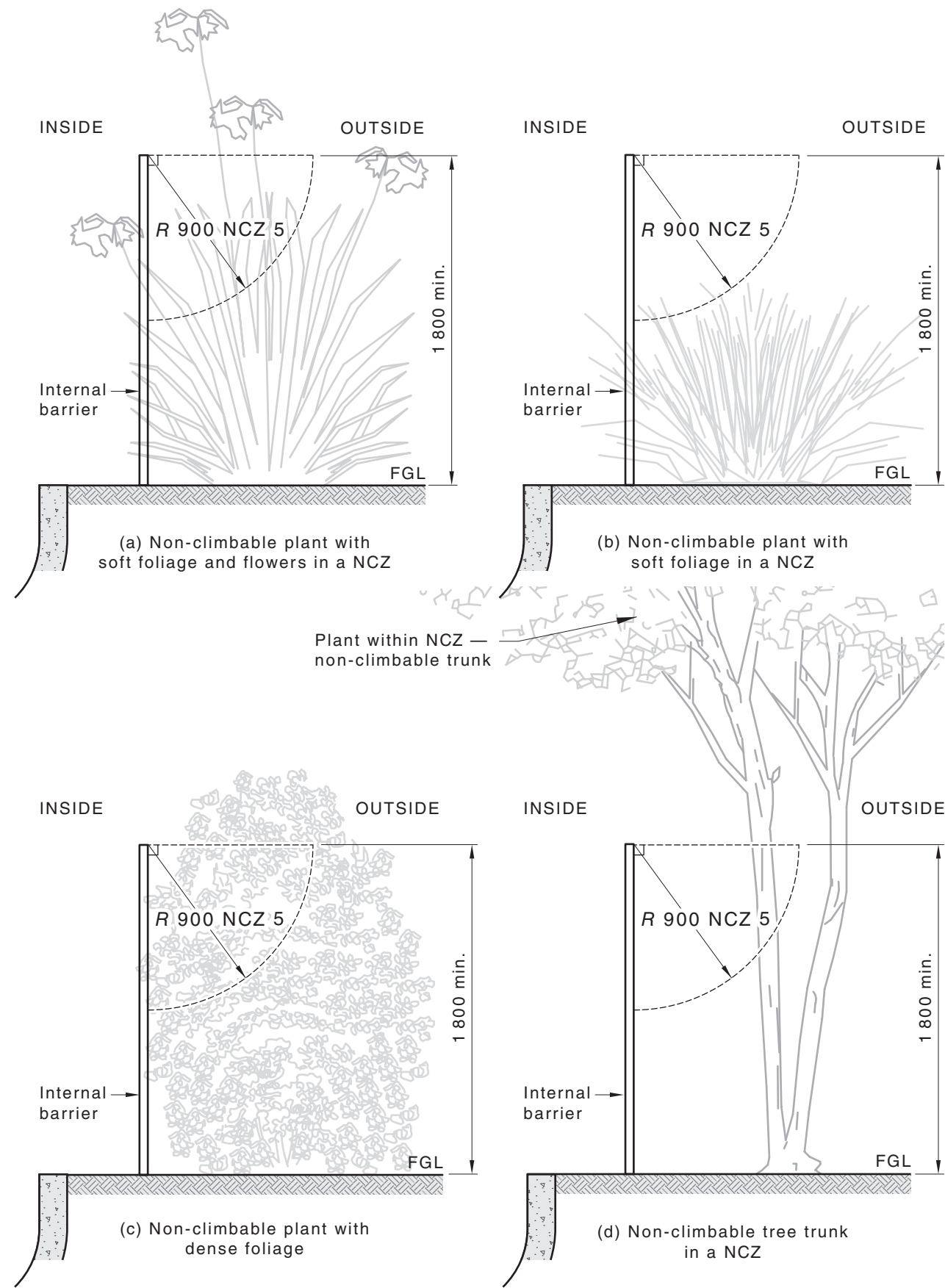


Figure 2.6 — Example of non-climbable plants within NCZs — Boundary barrier