LICENCE

for

DR AS 1926.1:2019, Swimming pool safety, Part 1: Safety barriers for swimming pools

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Draft

Australian Standard

Public Comment is invited for:

DR AS 1926.1:2019, *Swimming pool safety*, Part 1: *Safety barriers for swimming pools*

Revision of AS 1926.1:2012

Public Comment period:

Start date: 02 September 2019

Close date: 31 December 2019

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Please provide supporting reasons and suggested wording for each comment. Where you consider that specific content is too simplistic, too complex or too detailed please provide an alternative.

If the proposed Standard is acceptable for Australia without change, an acknowledgement to this effect would be appreciated.

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Preface

This Standard was prepared by the Standards Australia Committee CS-034, Swimming and Spa Pools, to supersede AS 1926.1—2012, *Swimming pool safety, Part 1: Safety barriers for swimming pools.*

The objective of this Standard is to assist pool owners and pool users to avoid pool-related drowning by providing the design, construction and performance specifications of various barrier options, which are intended to restrict entry to the swimming pool area by young children.

This draft is the first in a series of public consultations. The CS-034 technical committee is seeking feedback on all aspects of this document and intends to review the content accordingly. An updated document will then be circulated for further consultation.

This Standard is part of a series dealing with barrier characteristics, barrier location, and water recirculation and filtration systems for swimming pools, as follows:

(a) AS 1926.1, *Swimming pool safety, Part 1: Safety barriers for swimming pools (this Standard)*

(b) AS 1926.2, *Swimming pool safety, Part 2: Location of safety barriers for swimming pools*

(c) AS 1926.3, *Swimming pool safety, Part 3: Water recirculation systems*

This revision features a more logical order of presentation and clarifies a number of inconsistencies and ambiguities. Some technical specifications have also been revisited to better illustrate particular safety issues and their associated solutions.

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 Standard are directed at achieving barriers that will restrict a young child's access to a pool area, whether that be under, over, down, or through the barrier.

NOTE It should be noted that the provisions of this Standard relate to barriers that are intended to be child resistant but not necessarily childproof. The ultimate effectiveness of any barrier is very much dependent on regular checking of the barrier, as well as the barrier's location, installation and maintenance.

The requirements are established with the intention of leaving a high degree of discretion to the consumer in the choice of barrier materials, aesthetics and cost. Requirements for the effective location of barriers in protecting children from pool hazards are given in AS 1926.2, *Swimming pool safety, Part 2: Location of safety barriers for swimming pools*.

The terms "normative" and "informative" have been used in this Standard to define the application of the appendices to which they apply. A "normative" appendix is an integral part of the Standard, whereas an "informative" appendix is for information and guidance only.

In this Standard, notes are for information and guidance only. Statements expressed in mandatory terms in notes to tables or figures are deemed to be requirements of this Standard.

Contents

NOTES

Australian Standard®

Swimming pool safety

Part 1: Safety barriers for swimming pools

Section 1 Scope and general

1.1 Scope

This Standard specifies requirements for the design, construction and performance of barriers that restrict the access of young children to swimming pools.

NOTE Public swimming pools typically have different requirements, such as special access for people with disabilities, increased gate usage, crowd behaviour and supervision, and therefore the use of this Standard for such pools may not always be appropriate.

1.2 Normative references

The following are the normative documents referred to in this Standard:

NOTE Documents referenced for informative purposes are listed in the Bibliography.

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

1.3 Terms and definitions

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

1.3.1
above-ground pool
a free-standing, fabricated pool designed for assembly and/or installation on site, including inflatable pools

1.3.2
angled extension (crank)
a supplementary barrier component added at the top of a barrier, inclined at an angle towards or away from the pool

1.3.3
barrier
an 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 and doorsets, constructed or natural walls (retaining or otherwise), as well as building walls, windows, and balustrades on a balcony where they form part of the intended barrier.

1.3.4
barrier height
the height of the barrier measured vertically from the FGL

1.3.5
child-resistant doorset
a door unit, comprising a door, door frame, self-closing device and latch, which forms part of a barrier

1.3.6
child-resistant window
the opening part of a window that is protected in accordance with Clause 3.4.4

1.3.7
dividing fence
a fence dividing properties, as defined by the laws of the jurisdiction in which it is located

1.3.8
external barrier
a barrier that is a dividing fence or part of a dividing fence

1.3.9
finished ground level
FGL
ground level or other stable surface

1.3.10
flexible materials
those parts of a barrier made of chain link wire mesh, perforated materials, fabric, brushwood or the like

1.3.11
foothold
a component of a barrier, feature, object, or surface that can be used by a young child's foot or toes to facilitate climbing

1.3.12
handhold
a component of a barrier, feature, object, or surface that can be used by a young child's hand or fingers to facilitate climbing

1.3.13
indoor pool
a pool that is fully enclosed within a building

1.3.14
indoor/outdoor pool
a pool that is partly enclosed by a building and partly an outdoor pool

1.3.15
inside of the barrier
that side of a barrier facing towards the pool area

1.3.16
latch
a self-engaging mechanism that prevents the opening of a gate or door that has closed, without direct activation of the latch release

1.3.17
latch release (release)
that part of a mechanism on a gate or door, the activation of which disengages the latch

1.3.18
may
indicates the existence of an option

1.3.19
non-climbable
a distinguishing characteristic of a structure, feature, object, or surface where there are no handholds, footholds or other aids that could facilitate a young child in climbing

1.3.20
outside of the barrier
that side of a barrier facing away from the pool area

Note 1 to entry: This definition also applies to a child-resistant doorset.

1.3.21
permanent structure
a barrier, or part of a barrier, which cannot be removed without the use of tools

1.3.22
pool area
the area that contains the pool and is enclosed by one or more barriers

1.3.23
rigid components
parts of a barrier made of steel, aluminium, wood, glass, acrylic, concrete, masonry

1.3.24
shall
indicates that a statement is mandatory

1.3.25
should
indicates a recommendation

1.3.26
swimming pool (referred to as "pool" in this Standard)
any structure containing water to a depth greater than 300 mm and used principally for swimming, paddling, or the like, including a bathing, wading, or spa pool

Note 1 to entry: For the purposes of compliance with the National Construction Code (NCC), the definition within the NCC applies

1.3.27
tool (tools)
implements such as screwdrivers, spanners, wrenches, shovels, cutting implements

1.3.28
young child
a child under the age of five years

Section 2 Non-climbable zone (NCZ)

2.1 General

2.1.1 Introduction

Within a NCZ there shall be no handholds or footholds that may be used by a young child to gain access to the pool area.

NCZs shall apply to the entire length of a barrier and where applicable extend 900 mm onto or beyond an intersecting barrier. NCZs shall be continuous with other adjoining NCZs. (See Clause 3.1.12.)

2.1.2 NCZ 1

NCZ 1 is a 900 mm vertical plane on the outside face of a barrier.

NCZ 1 may be located anywhere on the vertical face of a barrier and may move up or down along the length of the barrier. NCZ 1 may be anywhere between horizontal components or handholds and footholds on a barrier where these are present. [See Figure 2.1(A) and (B).]

For slopes and level changes the NCZ 1 height is measured as a radius to maintain a 900 mm separation. [See Figures 3.1.5 and 3.1.6(B).]

NOTE NCZ 1 may also move up and down to clear items in the pool area.

2.1.3 NCZ 2

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 Figure 2.1(A) and (B).]

NOTE NCZ 2 is always immediately adjacent to NCZ 1 on all barriers.

2.1.4 NCZ 3

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 then NCZ 3 shall extend vertically down to the top of NCZs 1 and 2. [See Figure 2.1(A) and (B).]

NCZ 3 is applicable only to the space created by the quadrant, and it does not apply to any item or component attached to or comprising part of the barrier.

NOTE The intent of NCZ 3 is to restrict objects and structures, such as a cantilevered pergola or vegetation branches, that may facilitate a child climbing over the barrier.

2.1.5 NCZ 4

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. [See Figure 2.1(A) and (B).] It shall align with NCZ 1.

Dimensions in millimetres

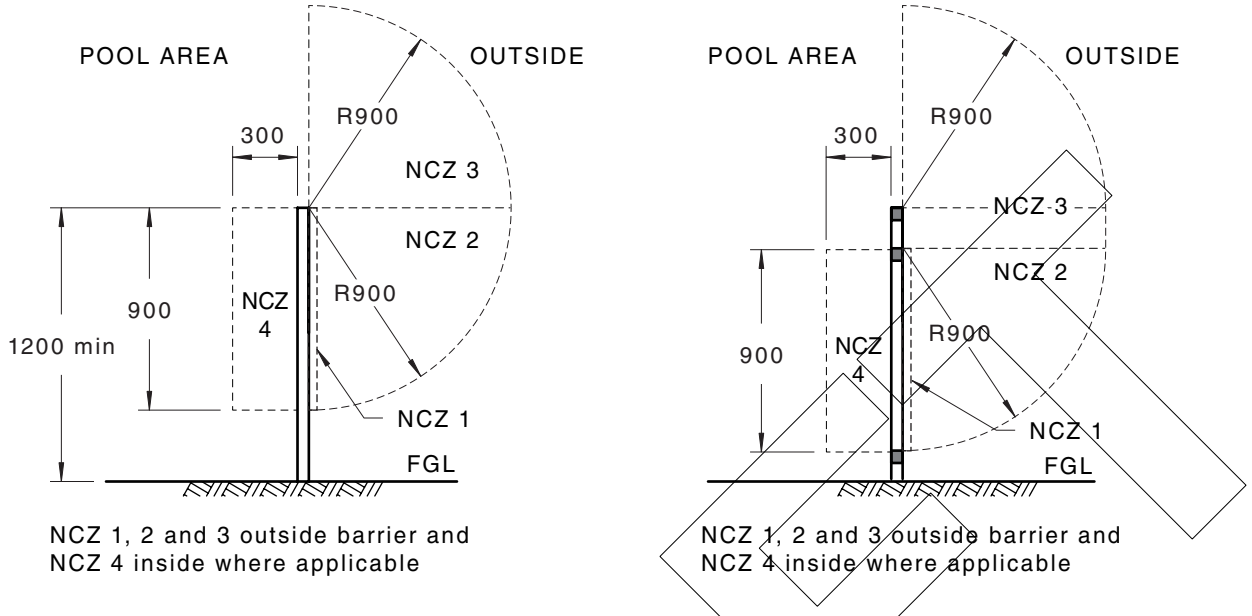
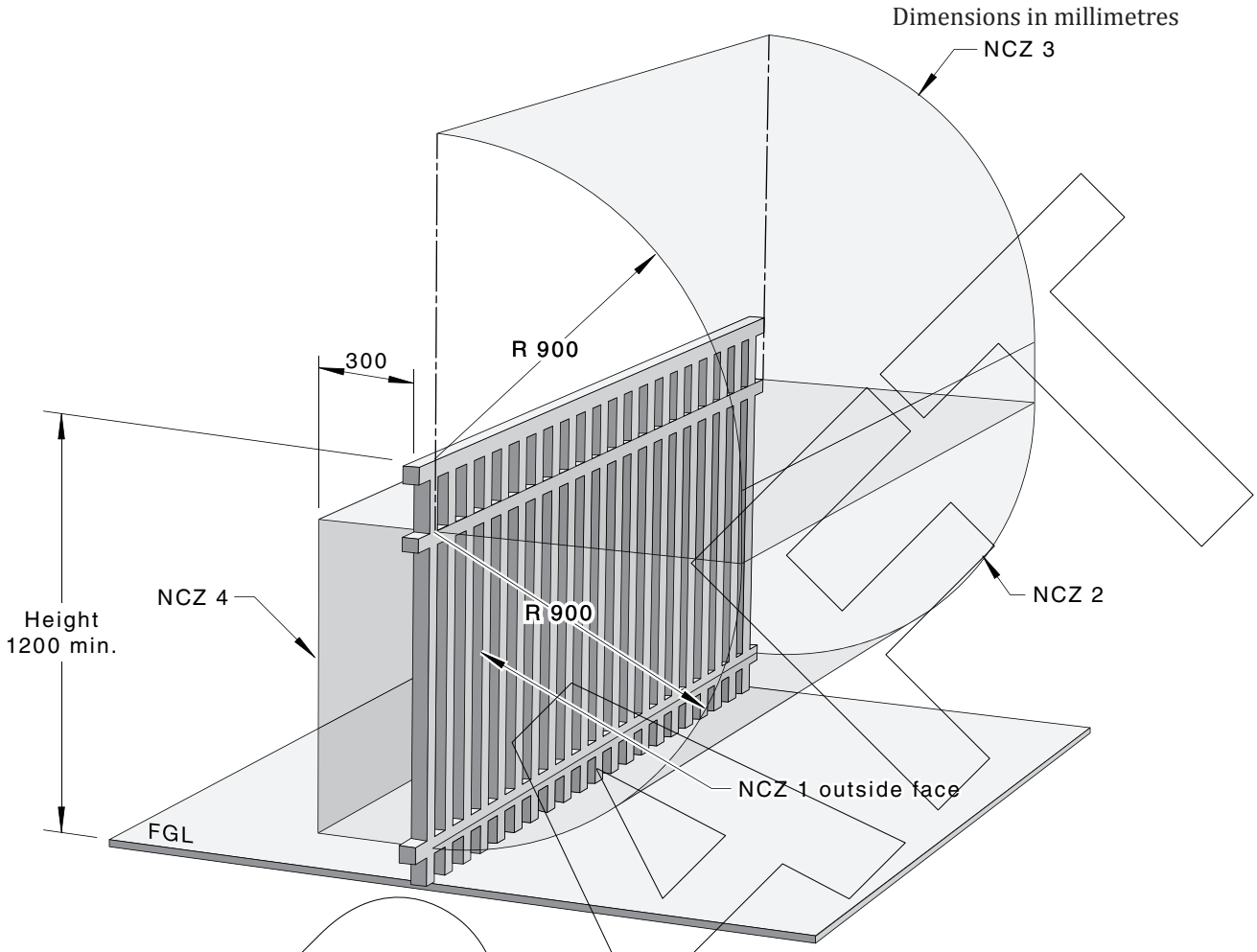


Figure 2.1(A) — NCZ 1, 2, 3 and 4



NOTE NCZ 1 may move up or down along the length of the barrier and the drawings illustrate the two situations where NCZ 1 is located at the top of the barrier [see Figure 2.1(A)(a)], and NCZ 1 is not located at the top of the barrier [see Figure 2.1(A)(b)]. NCZ 2 and NCZ 4 are locked to NCZ 1 and move up or down along the length of the barrier with NCZ 1. NCZ 3 is from the top of the barrier and where NCZ 1 is below the top of the barrier NCZ 3 extends vertically down to the top of NCZ 1 and NCZ 2.

Figure 2.1(B) — 3D view of NCZ 1, 2, 3 and 4

2.1.6 NCZ 5

NCZ 5 is formed as a quadrant of 900 mm radius down from the top of the inside of the barrier. (See Figure 2.1.6.)

Dimensions in millimetres

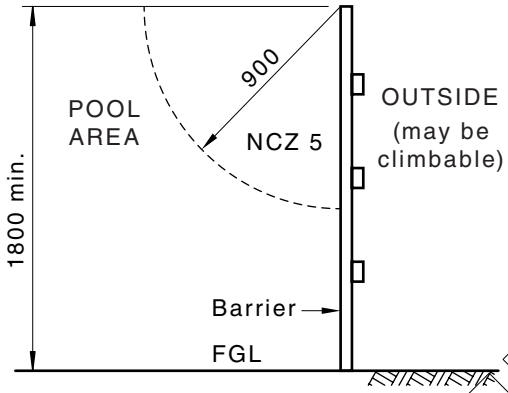


Figure 2.1.6 — NCZ 5

2.2 Objects within a NCZ

The following objects located within a NCZ shall be of a height not less than the height of the barrier associated with the NCZ (see Figure 2.2):

(a) Objects that do not facilitate access to the pool area.

(b) Objects that do not facilitate climbing.

The requirements of Item (a) do not apply to plants. (See Clause 3.1.2.)

NOTE Such objects can include sheds covering pool filtration equipment and the like. See Clause 3.1.2 for additional provisions relating to setbacks from barriers.

Dimensions in millimetres

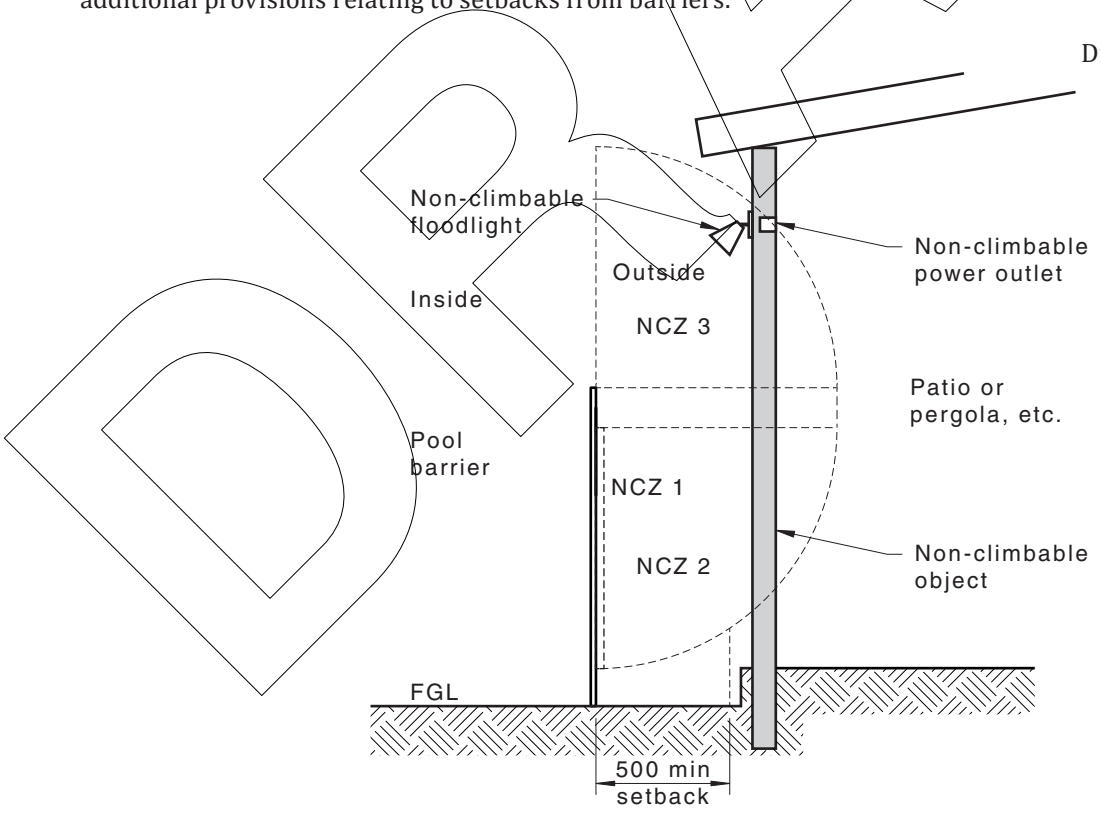


Figure 2.2 — Example of non-climbable objects within a NCZ

2.3 Plants within a NCZ

Plants located within a NCZ shall not facilitate access to the pool area or contain any handholds or footholds that facilitate climbing. (See Figure 2.3.)

NOTE 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) Plants that are fragile and unable to support a young child.

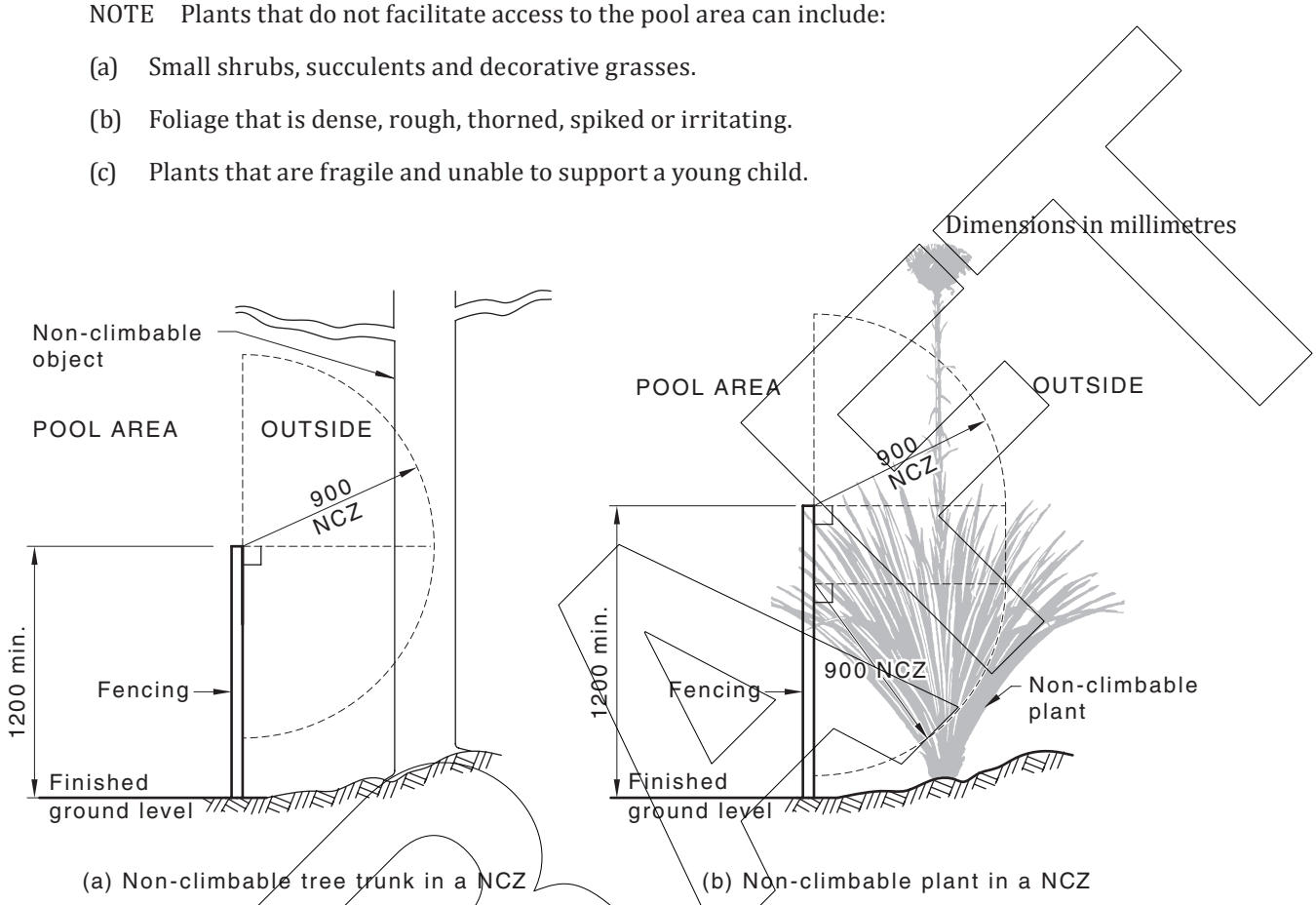


Figure 2.3 — Example of non-climbable plants within a NCZ

Section 3 Barriers

3.1 All barriers

3.1.1 General

The provisions of this section shall apply to all barriers, unless specifically stated otherwise.

A barrier shall be designed and constructed so that it will restrict access to the pool by a young child.

Barriers shall be permanent structures.

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

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 hazards, including sharp edges, sharp projections, and entrapments.

3.1.2 Setback from a barrier

In addition to the provisions of Clauses 2.2 and 2.3, steps, retaining walls, objects or level changes that would otherwise reduce the required height of a barrier shall not be located within 500 mm of the barrier. [See Figures 3.1.2(A) and (B).] This does not apply to the outside of an external barrier.

NOTE Pool owners have no control over what happens outside their property.

For a barrier required to be at least 1800 mm high, exceptions to this provision include objects that do not facilitate access to the pool area and that are not practical to climb or slide down provided that —

(a) all handholds and footholds are at least 1800 mm above FGL; or

(b) the barrier includes an added angled extension at an angle between 90° and 135° from the vertical covering the object, that extends on both sides, a minimum of 450 mm beyond the outer edge of the object. [See Figure 3.1.2(C).]

Dimensions in millimetres

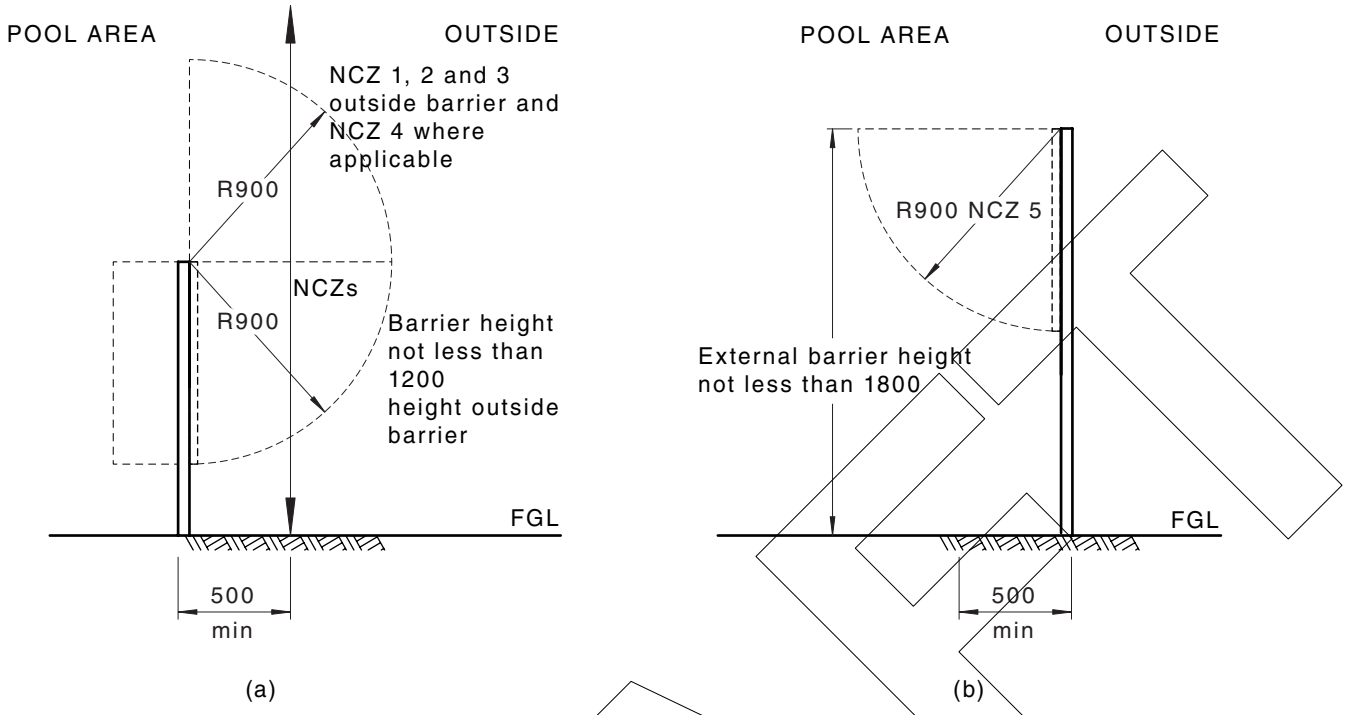


Figure 3.1.2(A) — Example of a setback for maintaining integrity of barrier height — Exclusion zones for all barriers

Dimensions in millimetres

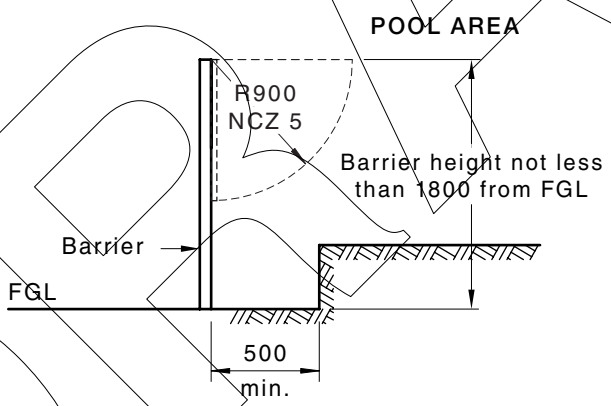


Figure 3.1.2(B) — Examples of a setback for maintaining integrity of barrier height — Example of a step reducing the height of a barrier

Dimensions in millimetres

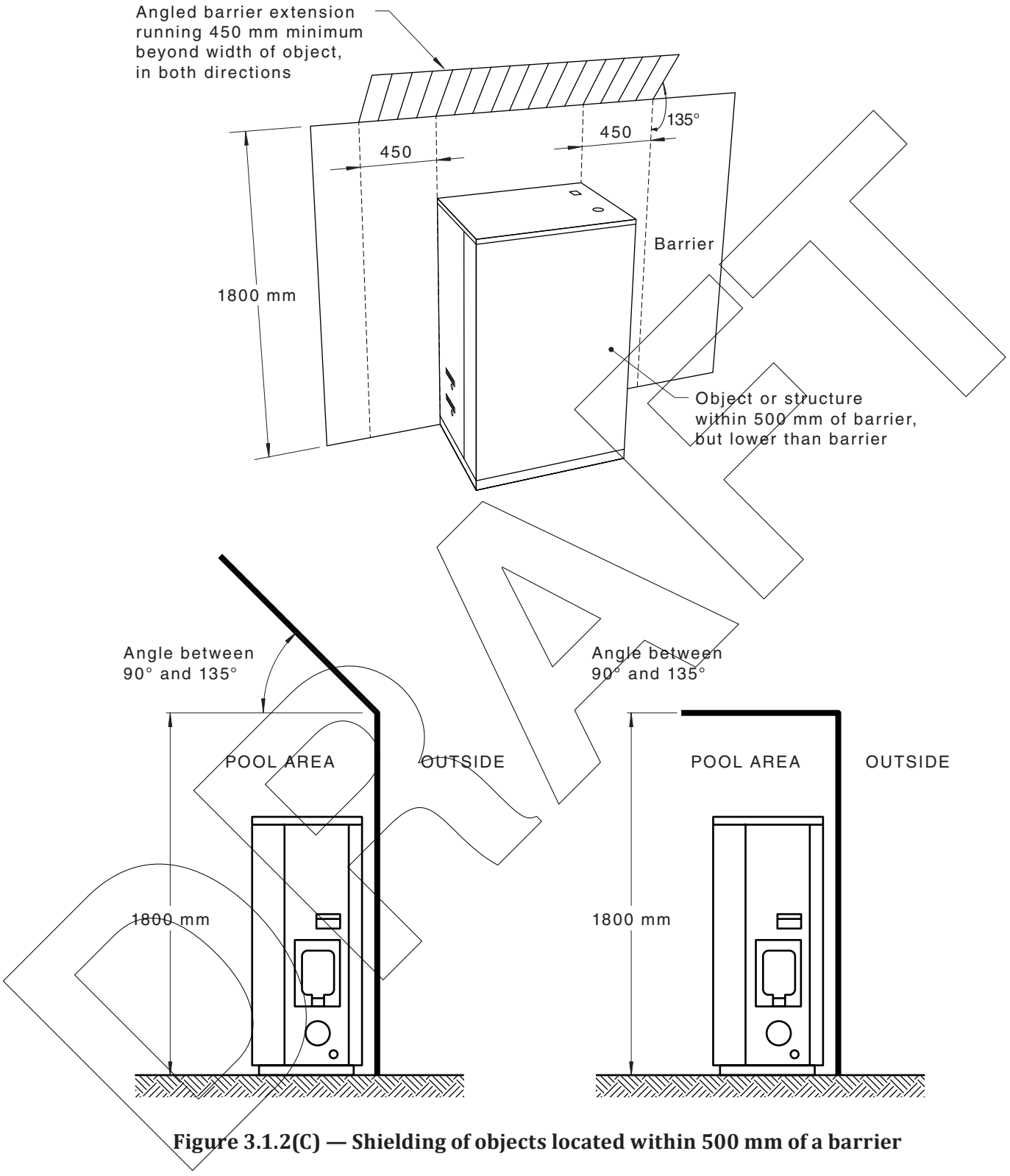


Figure 3.1.2(C) — Shielding of objects located within 500 mm of a barrier

3.1.3 Flexible materials

Material with apertures greater than 100 mm shall not be used.

Apertures shall be measured horizontally across their widest part.

Perforated materials or mesh shall be durable and shall conform with the requirements of Clause 5.3.3.

3.1.4 Glass barriers

Glass used shall conform with AS 1288.

Glass gates using conventional hinges or top and bottom pivot style hinges shall conform with the relevant dimensions of Figures 3.1.4(A) and 3.1.4(B) or Figure 3.1.4(C), respectively.

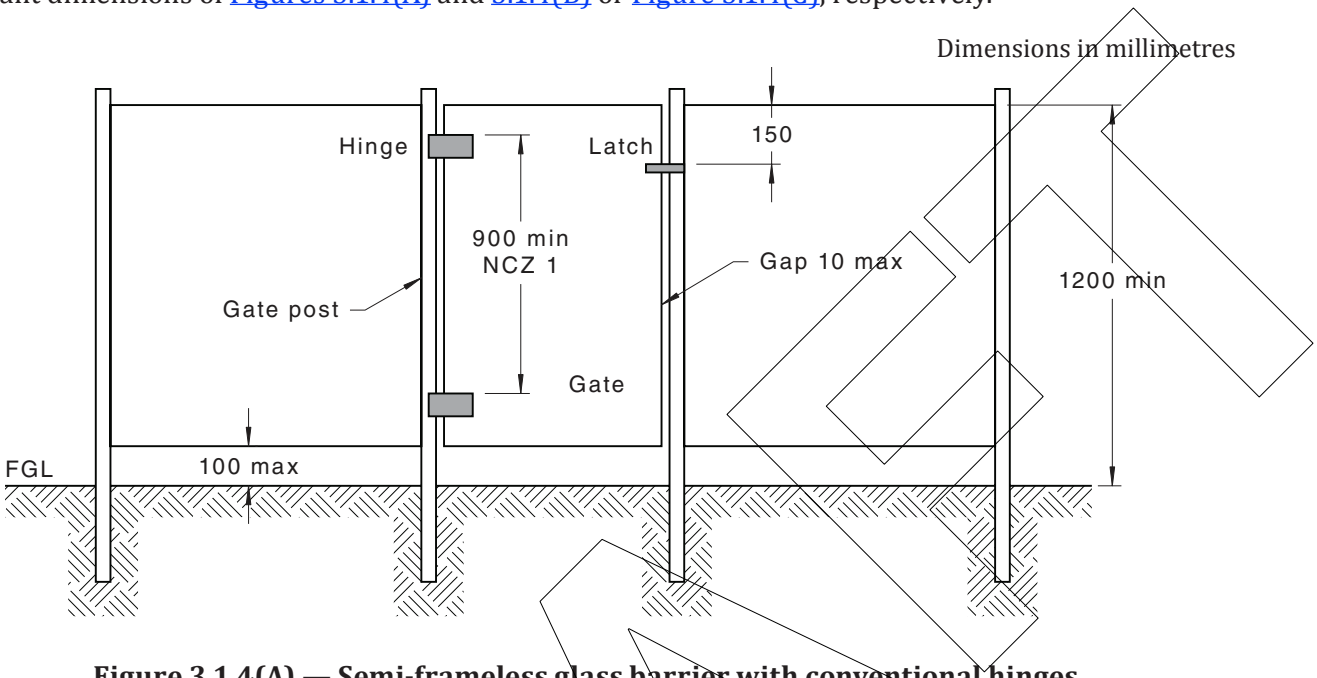


Figure 3.1.4(A) — Semi-frameless glass barrier with conventional hinges

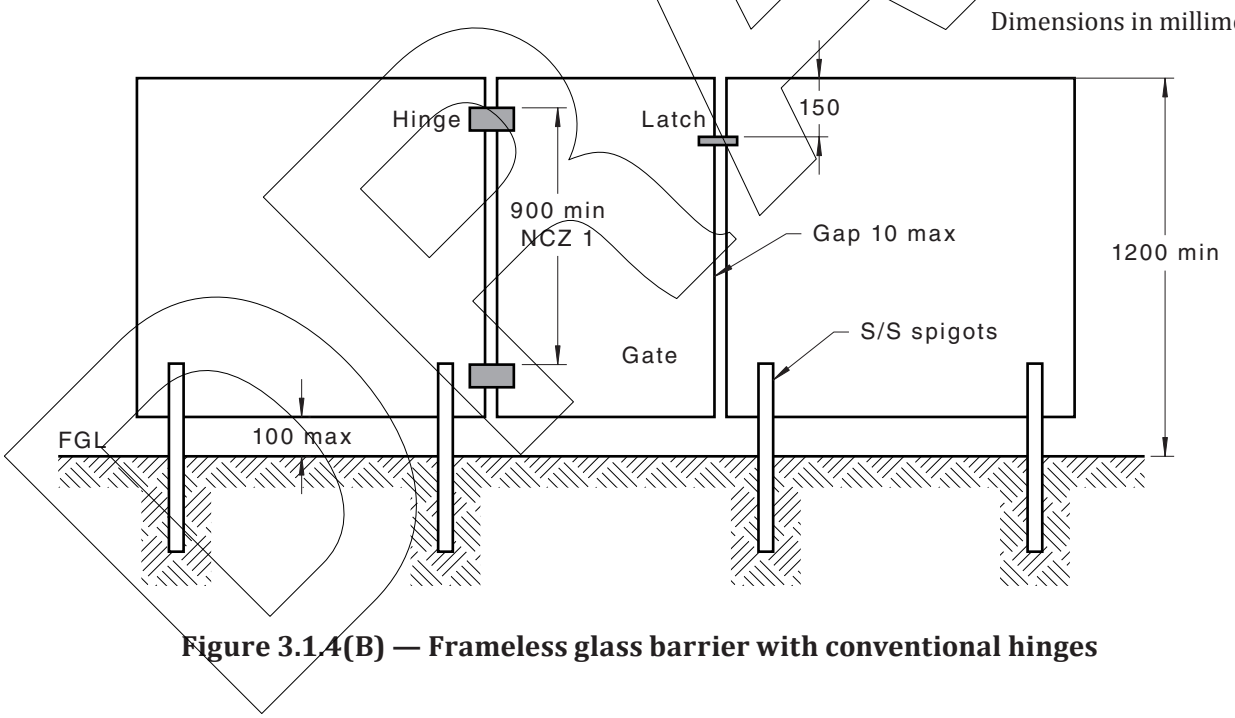


Figure 3.1.4(B) — Frameless glass barrier with conventional hinges

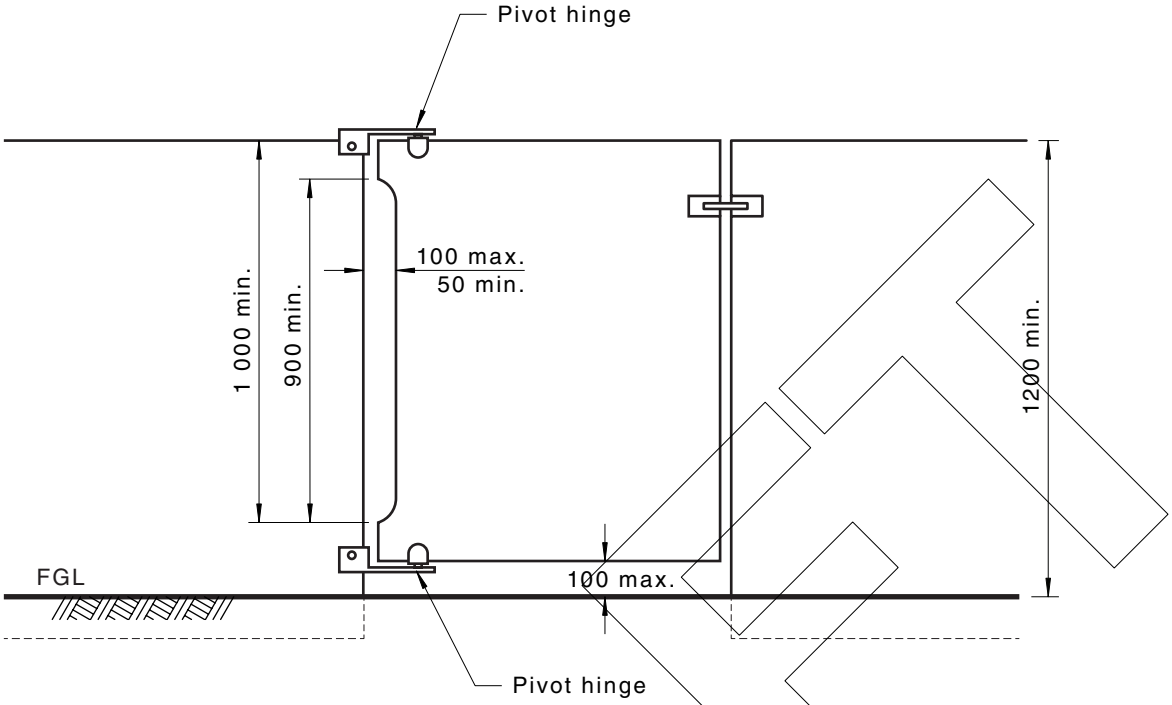


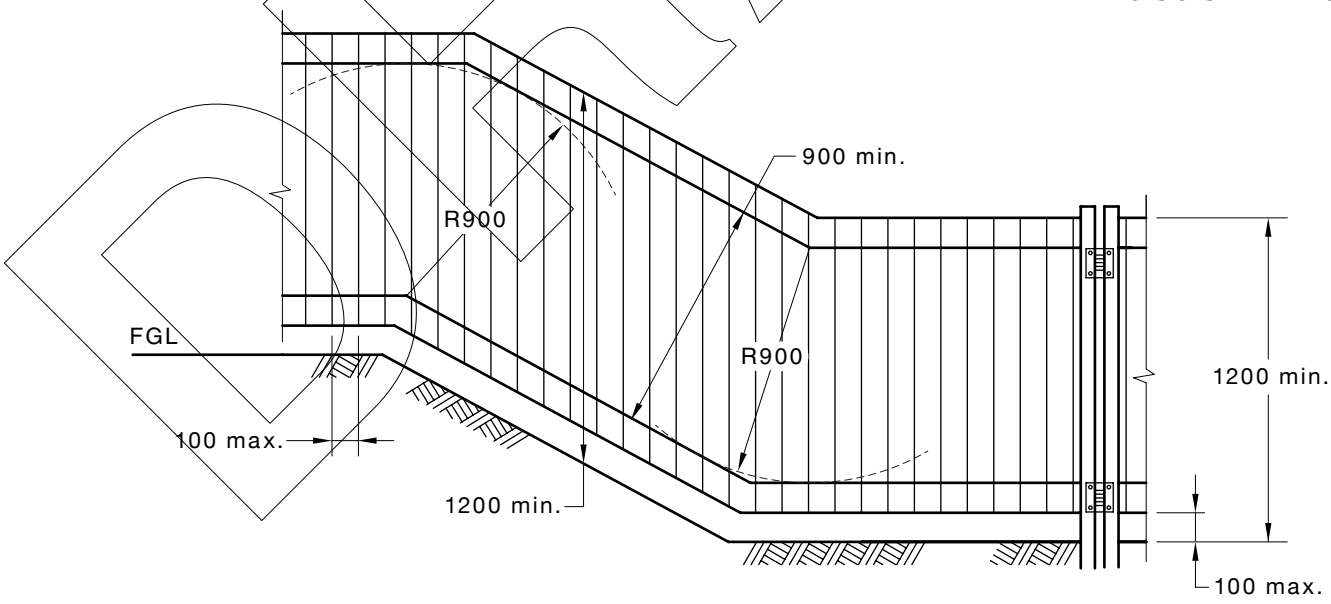
Figure 3.1.4(C) — Glass gate with pivot hinges

3.1.5 Barriers over sloping ground

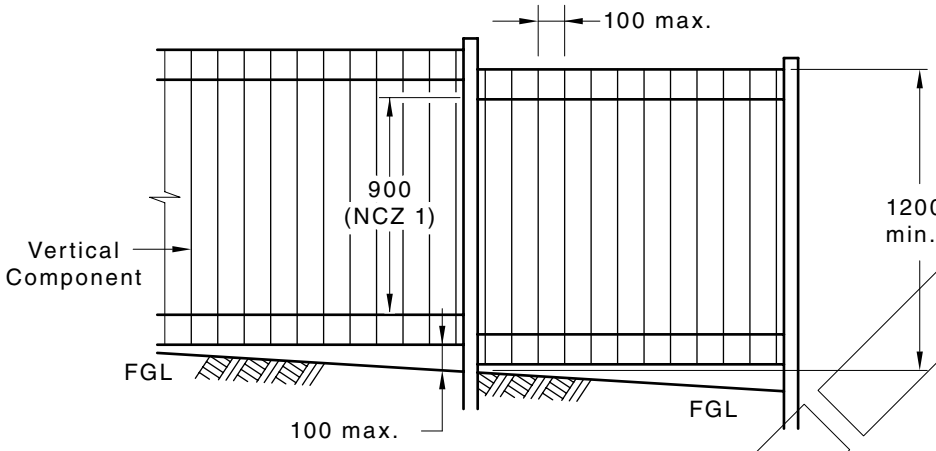
Where a barrier is placed over sloping ground, NCZs shall be parallel to the top of the barrier. [See Figure 3.1.5(a).] The integrity of all applicable NCZs shall be maintained.

Where the slope permits, stepped panels may be used provided the integrity of the NCZs is maintained. [See Figure 3.1.5(b).]

Dimensions in millimetres



(a) Example of a 900 mm radius maintaining NCZ 1 along the length of a barrier on a slope



(b) Example of a stepped panel sloping site maintaining NCZ 1 at panel steps

Figure 3.1.5 — Example of a stepped barrier on sloping ground

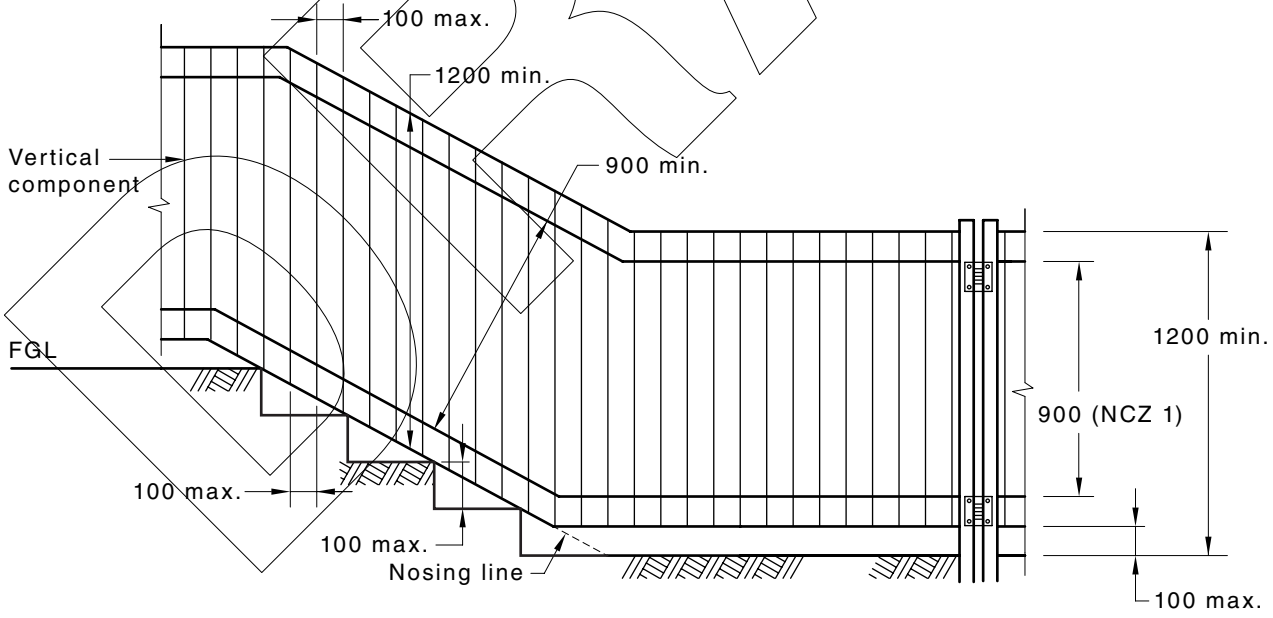
3.1.6 Barriers over steps

Where a barrier is stepped at a ground level change or installed with steps on a slope, the integrity of all applicable NCZs shall be maintained. [See Figures 3.1.6(A) and 3.1.6(B).] The height of the barrier shall be measured from the step nosing line. [See Figure 3.1.6(A).]

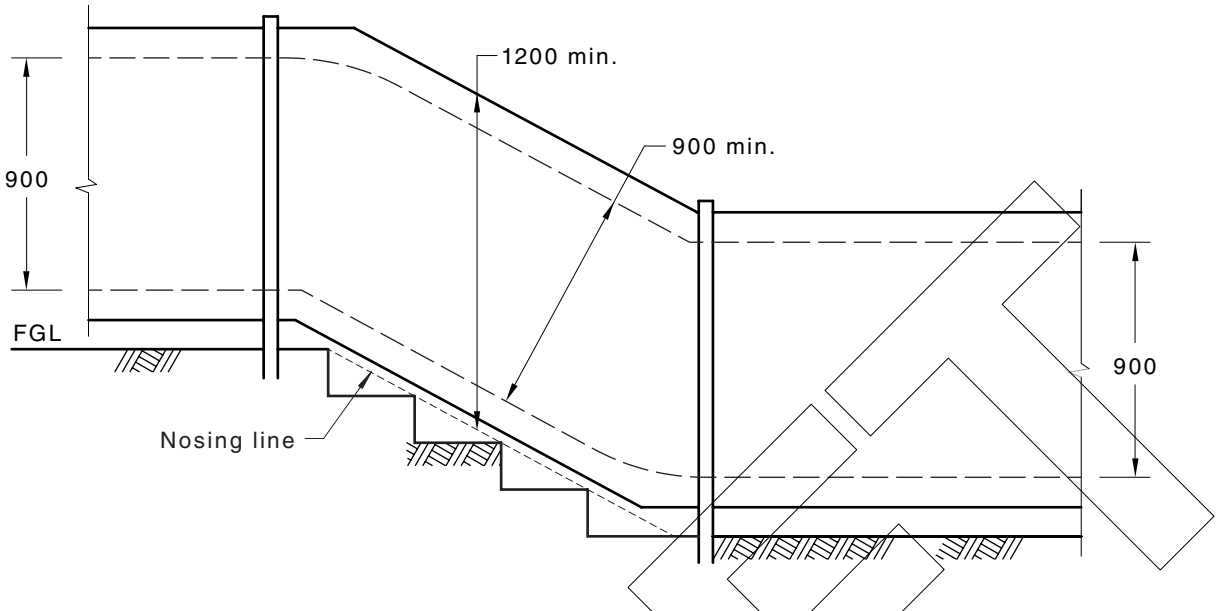
For a barrier that crosses a retained ground level change (that is, the barrier is stepped at ground level) the barrier may be squared off [see Figure 3.1.6(B)(a) and (c)] or may be raked on the top section [see Figure 3.1.6(B)(b) and (d)].

NOTE The raked barrier is most commonly used in glass panelled barriers.

Dimensions in millimetres



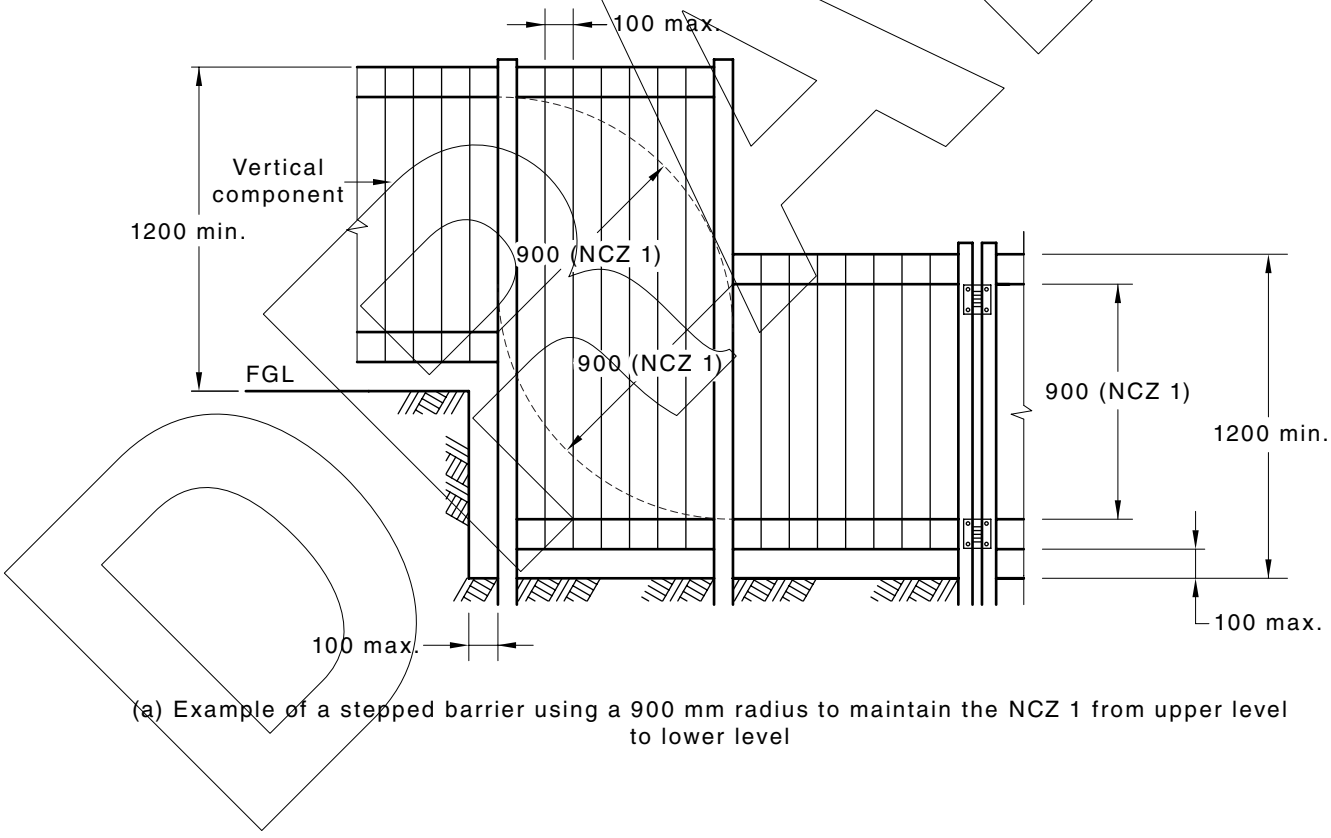
(a) Example of a barrier over steps



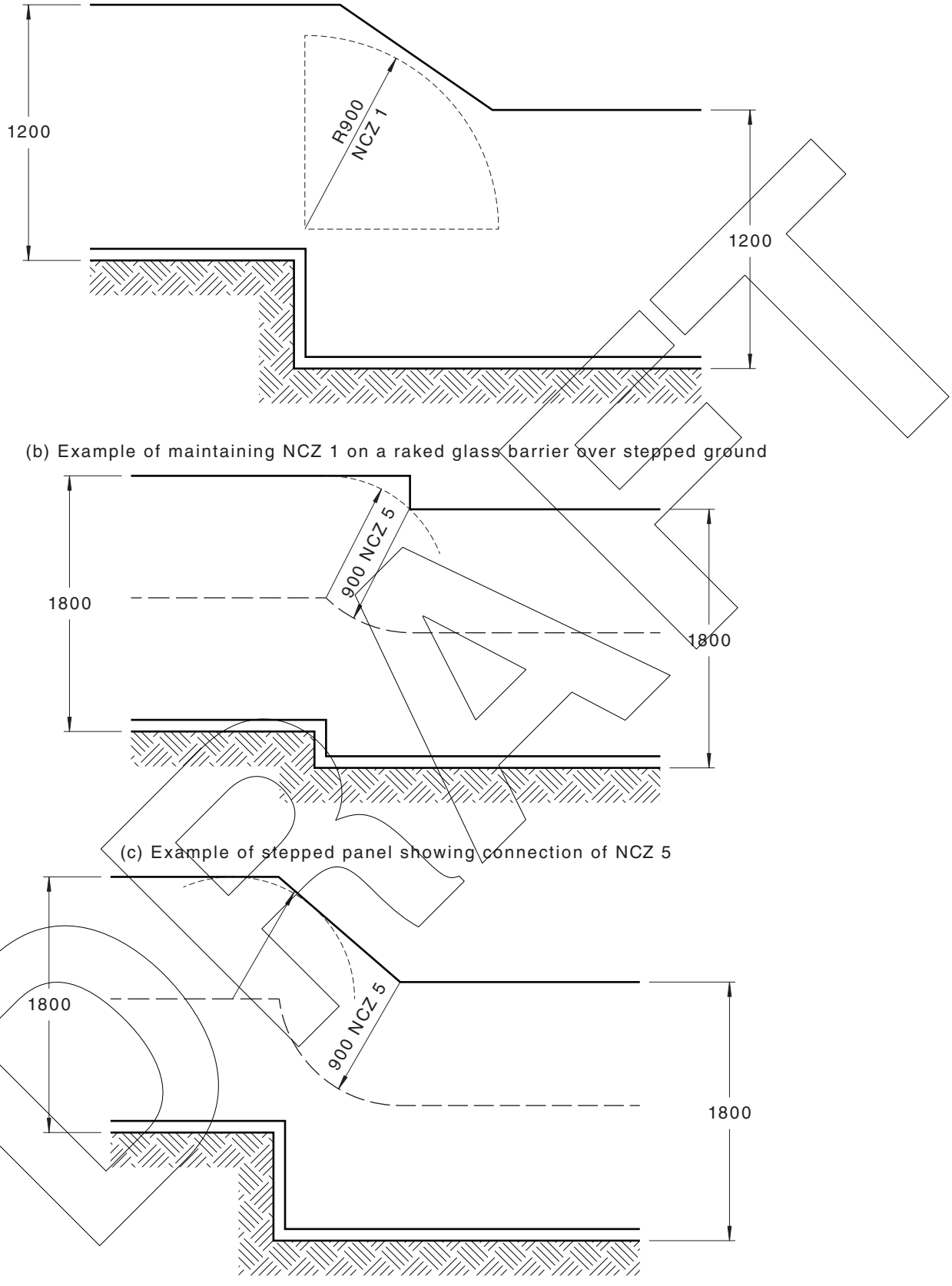
(b) Example of glass barrier over steps with a 900 mm radius maintaining NCZ 1 on the barrier

Figure 3.1.6(A) — Example of a glass barrier over steps

Dimensions in millimetres



(a) Example of a stepped barrier using a 900 mm radius to maintain the NCZ 1 from upper level to lower level



(b) Example of maintaining NCZ 1 on a raked glass barrier over stepped ground

(c) Example of stepped panel showing connection of NCZ 5

(d) Example of continuation of NCZ 5 along a splayed barrier

Figure 3.1.6(B) — Examples of barriers over stepped ground

3.1.7 Surface projections and indentations

Projections and indentations, or any combination thereof, within NCZ 1 and NCZ 5, shall not form a horizontal surface with a depth greater than 10 mm. (See Figure 3.1.7.)

For a barrier having random projections and/or indentations with horizontal surfaces of a depth greater than 10 mm the following requirements apply:

(a) All such lower surfaces shall be a minimum of 900 mm from the top of the barrier.

(b) All such higher surfaces shall be a minimum of 900 mm above FGL.

(c) High and low surfaces shall be a minimum of 900 mm apart.

The relevant surface for projections shall be the top horizontal surface and for indentations shall be the bottom horizontal surface.

A projection or indentation is not considered to be a horizontal surface for the purpose of this clause when the top surface of the projection or indentation is slopped at 60° or more to the horizontal plane.

NOTE On such barriers the location of NCZ 1 may vary along the length of a barrier. (See Figure 3.1.7.)

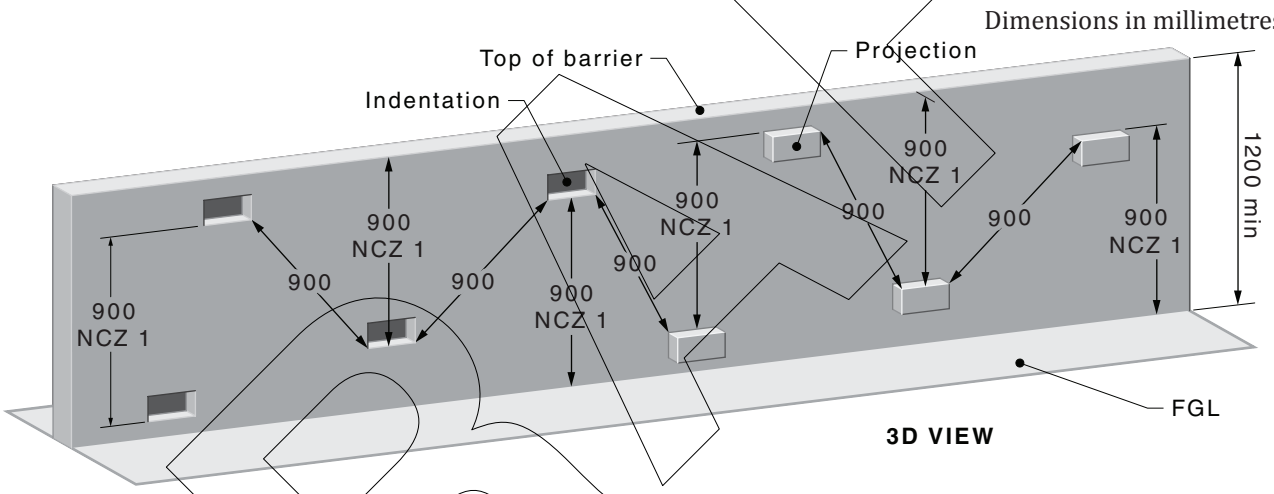


Figure 3.1.7 — Barrier with projections and indentations greater than 10 mm

3.1.8 Horizontal components in a NCZ

3.1.8.1 Horizontal components on the same side as the NCZ

Horizontal components located on the NCZ side of a barrier are not a handhold or foothold where —

(a) the opening between the vertical components is not greater than 10mm; and

(b) the horizontal component is rigidly fixed to the vertical components where:

(i) the surface depth is a maximum of 10 mm; or

(ii) for a surface depth greater than 10 mm the top surface is sloped at 60° or more to the horizontal plane.

NOTE See Figure 3.1.8(A) for examples.

3.1.8.2 Horizontal components located on the opposite side of the NCZ

Horizontal components located on the opposite side of the NCZ are not a handhold or foothold where the opening between the vertical components is not greater than 10 mm.

NOTE See Figure 3.1.8(B) for an example.

3.1.8.3 Horizontal slat designs

For horizontal slat designs (e.g. privacy screens) within the NCZ the opening between rigid horizontal components shall be a maximum of 10 mm and there shall be no projections from the vertical face.

NOTE See Figure 3.1.8(C) for an example.

Dimensions in millimetres

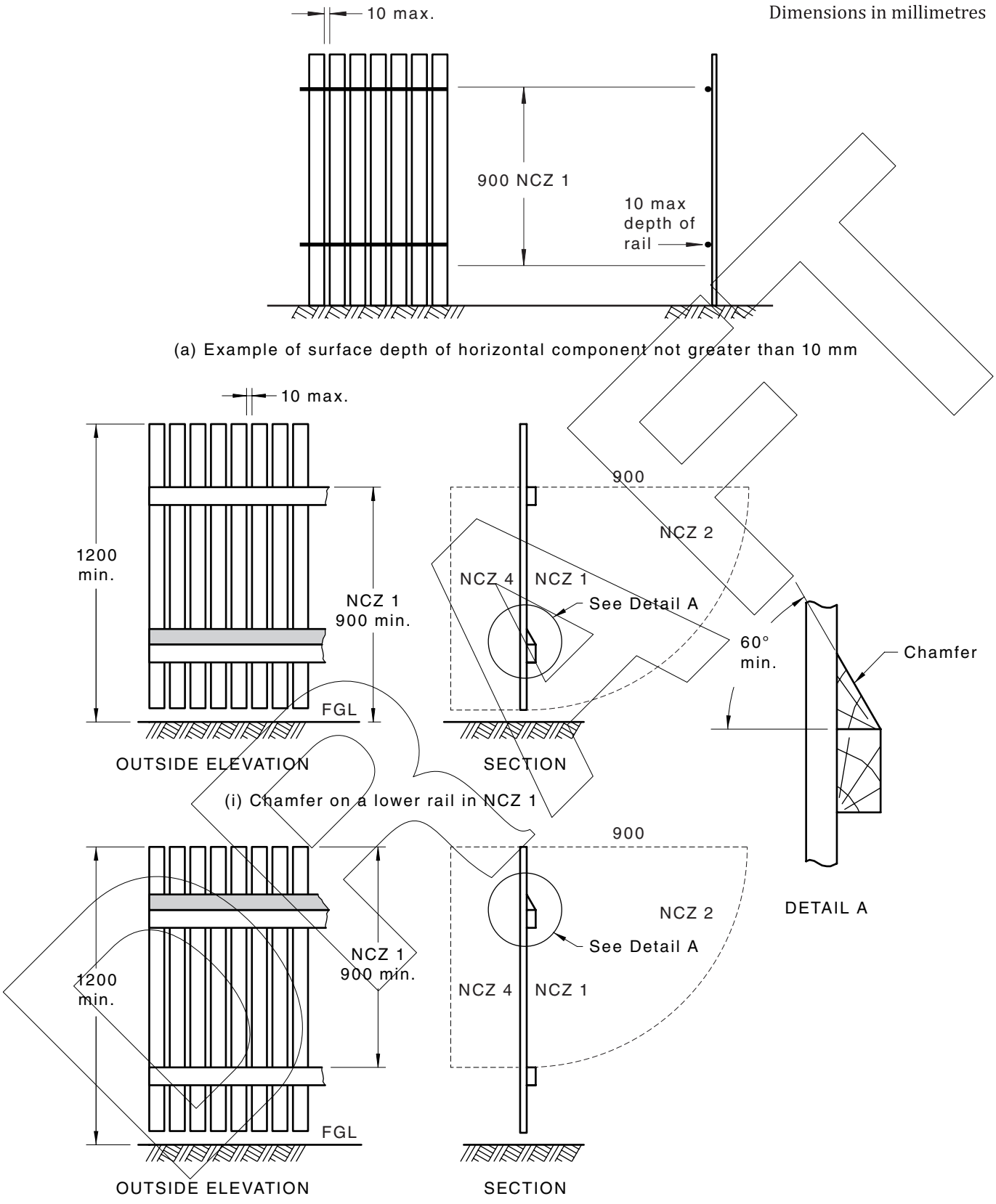


Figure 3.1.8(A) — Horizontal component within NCZ area located on NCZ side of barrier

Dimensions in millimetres

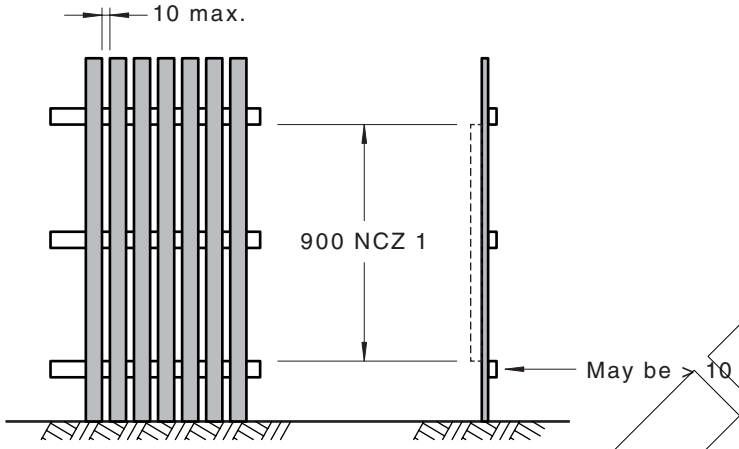


Figure 3.1.8(B) — Example of horizontal component on the opposite side of NCZ area

Dimensions in millimetres

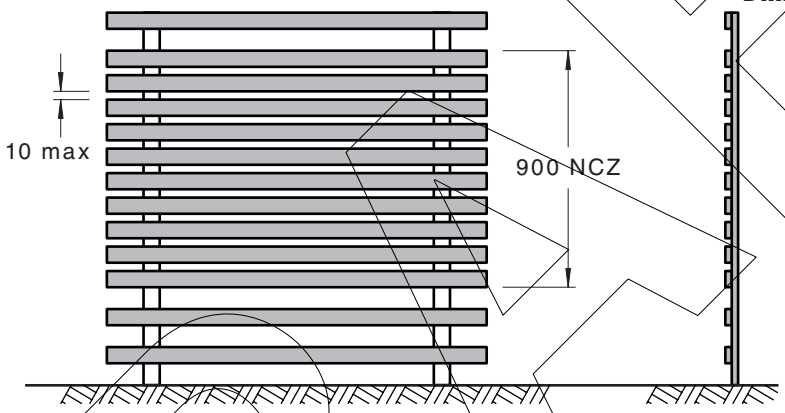


Figure 3.1.8(C) — Example of horizontal slat construction (privacy screen)

3.1.9 Barrier openings

Openings in barriers shall be constructed so that they do not permit a 100 mm sphere to pass through them.

NOTE 1 This is a dimensional check not a force test.

NOTE 2 See Figure 3.1.9 for examples.

Dimensions in millimetres

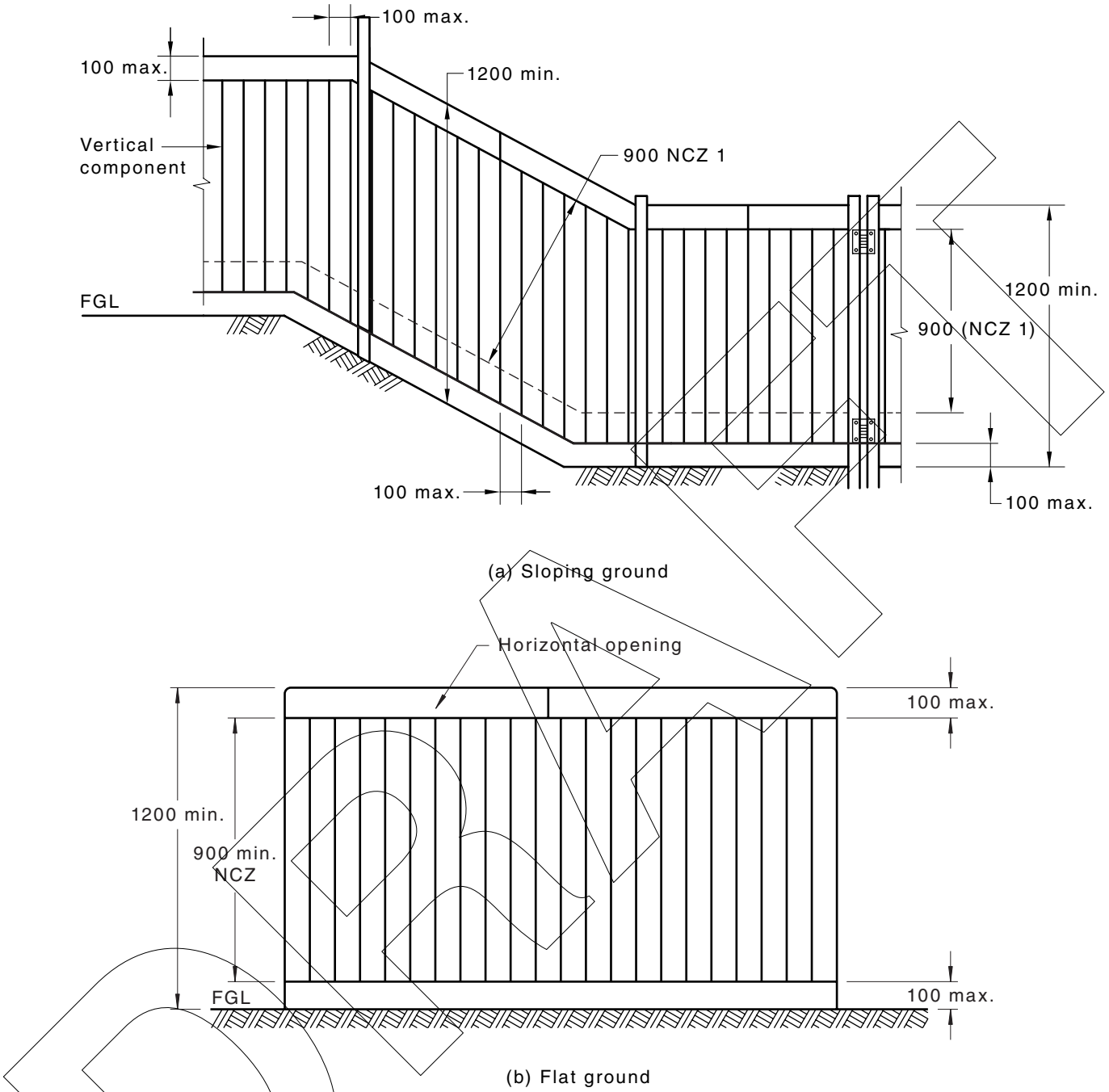


Figure 3.1.9 — Examples of horizontal openings in a barrier

3.1.10 Ground clearance

The height between the bottom of the barrier and the FGL shall not exceed 100 mm. The surface beneath the barrier shall not be easily removed or eroded by a young child, animals or the weather.

3.1.11 Retaining wall or similar feature

A retaining wall that conforms with the requirements of this Standard for a barrier shall be deemed a conforming barrier.

The barrier height may comprise a combination of a fence and a retaining wall, provided —

(a) relevant NCZs are not compromised;

(b) any ledge at the connection of the fence and retaining wall does not exceed 50 mm in depth; and

(c) the retaining wall does not slope by more than 15°. (See Figure 3.1.11.)

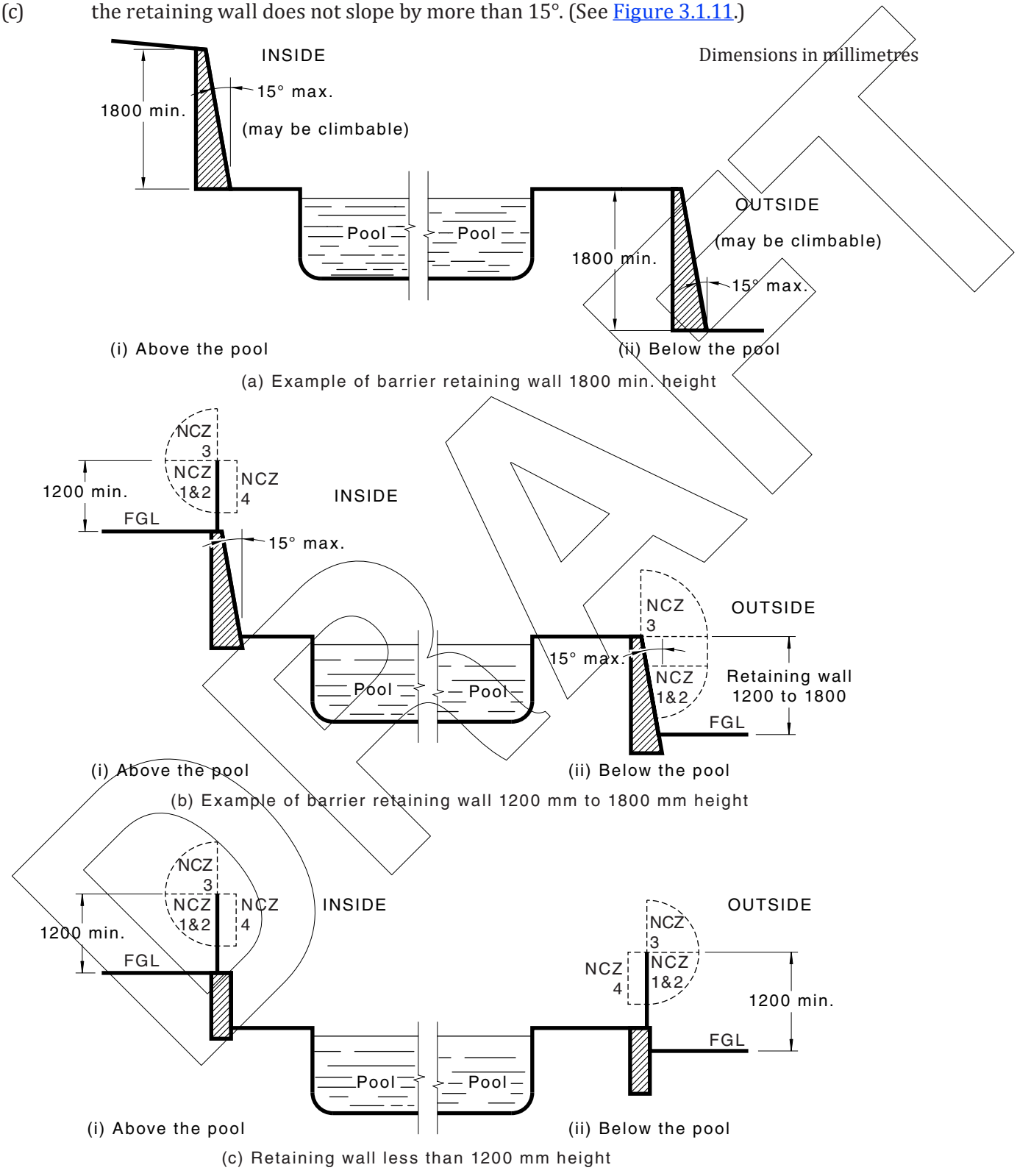


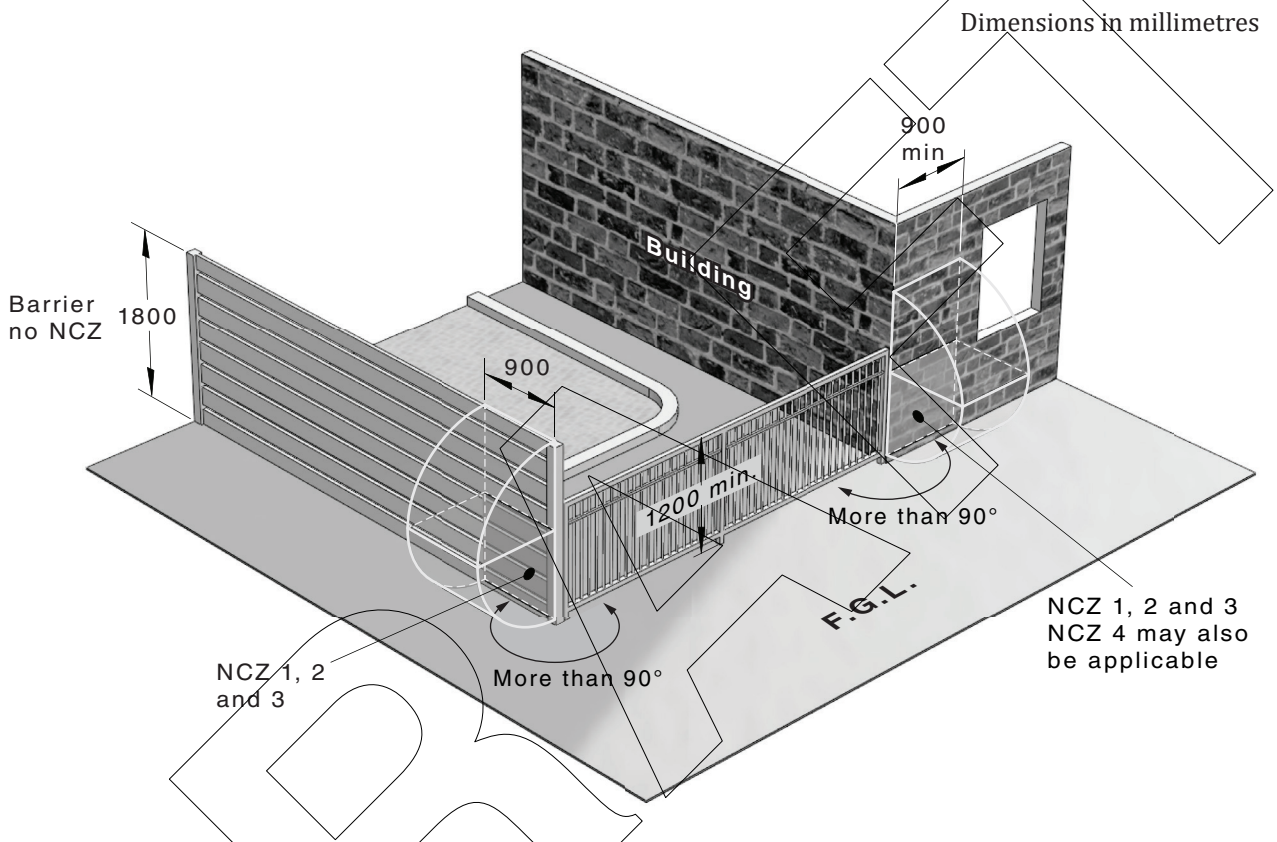
Figure 3.1.11 — Retaining wall or similar barrier

3.1.12 Intersecting barriers

3.1.12.1 Extension of NCZs

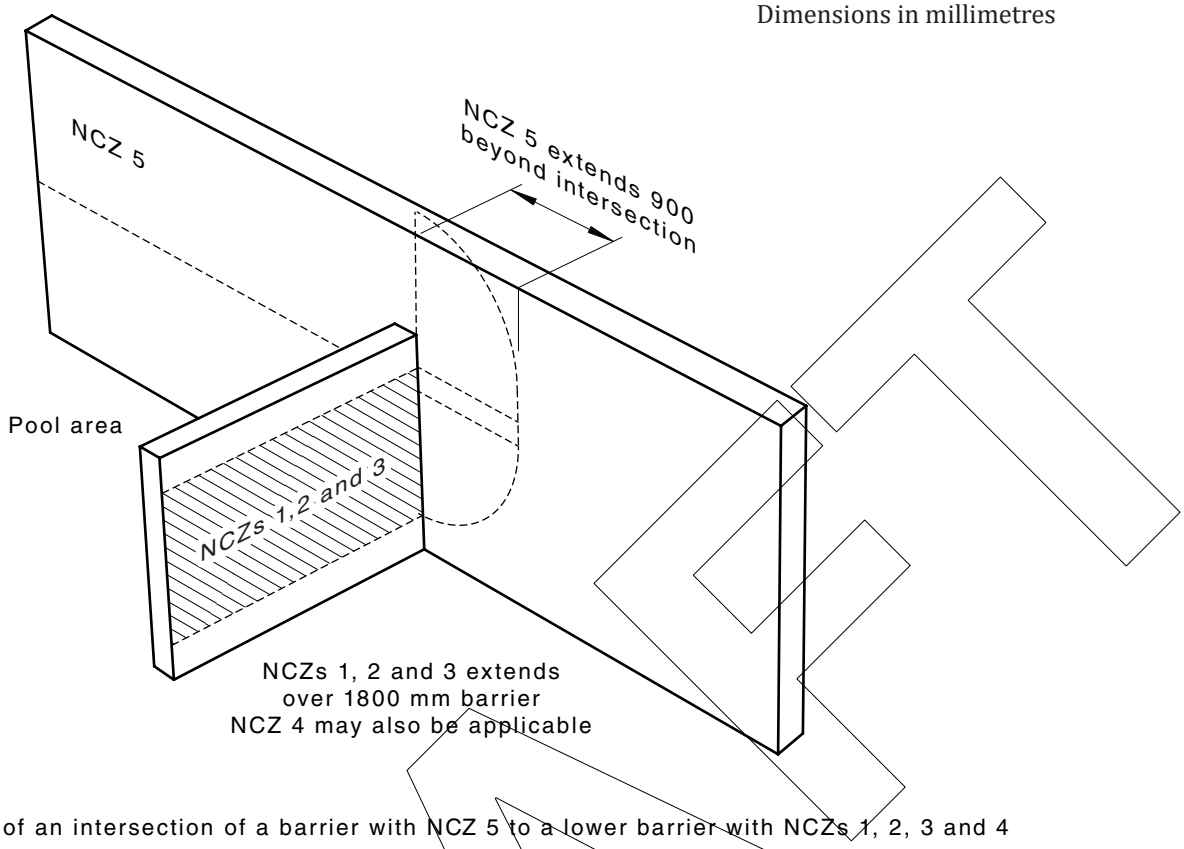
At a barrier intersection with another barrier, or adjoining structure, the NCZs shall be applied to the adjoining barrier or structure for a minimum distance of 900 mm beyond the intersection.

NOTE At the intersection of different types of barriers or with other structures the connection junction can be a point of access. To restrict access at this point the NCZs are extended over the connecting barrier or structure to provide a continuous line of restricting access into the pool area. (See Figure 3.1.12.1.)



(a) Example of intersections to a building and to a different type of internal barrier

Dimensions in millimetres



(b) Example of an intersection of a barrier with NCZ 5 to a lower barrier with NCZs 1, 2, 3 and 4

NOTE Provided the lower intersecting barrier top is not greater than 50 mm, NCZ 5 is not invalidated by the intersecting barrier. (See Clause 3.1.12.3.)

Figure 3.1.12.1 — Examples of intersecting barriers showing extension of NCZs

3.1.12.2 Extension of barrier on retaining walls

As an alternative to Clause 3.1.12.1, the barrier can be extended 900 mm beyond the intersection of the adjoining barrier or structure. (See Figure 3.1.12.2 for an example.)

Barrier extensions on a retaining wall below pool level shall be affixed as close as practicable to the outside face of the retaining wall with a ledge not exceeding 50 mm. (See Clause 3.1.14.)

Dimensions in millimetres

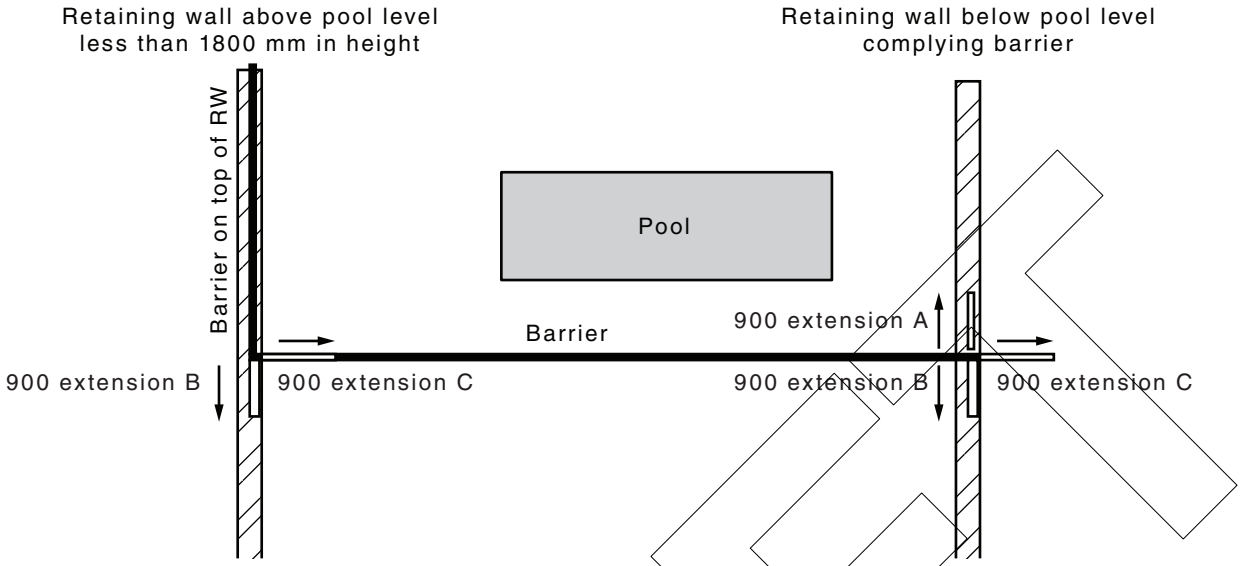


Figure 3.1.12.2 — Example of 900 mm barrier extension as it applies to retaining walls

3.1.12.3 Intersection point

A barrier shall intersect another barrier, or a structure, at an angle of between 45° and 135°.

NOTE 1 Narrow angles of intersection can be used by a young child to access the pool area.

For the intersection of barriers of differing heights (e.g. an internal barrier, minimum 1200 mm height, with an external barrier, minimum 1800 mm), the following shall apply:

(a) Any NCZ applicable to the higher barrier is not invalidated by the intersection of a lower barrier provided the width of the horizontal top surface of the lower barrier is not greater than 50 mm. [See Figure 3.1.12.3(A).]

(b) Where the horizontal top surface of the lower barrier is greater than 50 mm the height of the lower barrier shall not be less than the height of the higher barrier or 1800 mm, whichever is the lesser, for a distance not less than 900 mm from the intersection. [See Figure 3.1.12.3(B).]

Dimensions in millimetres

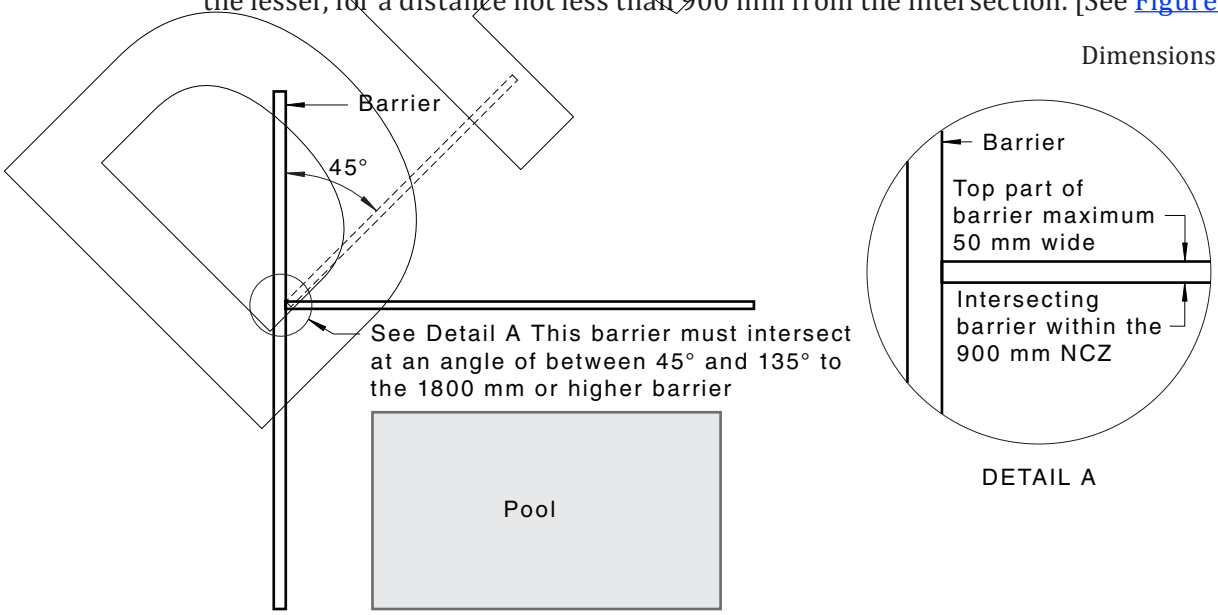


Figure 3.1.12.3(A) — Intersecting barrier with top less than 50 mm in width

Dimensions in millimetres

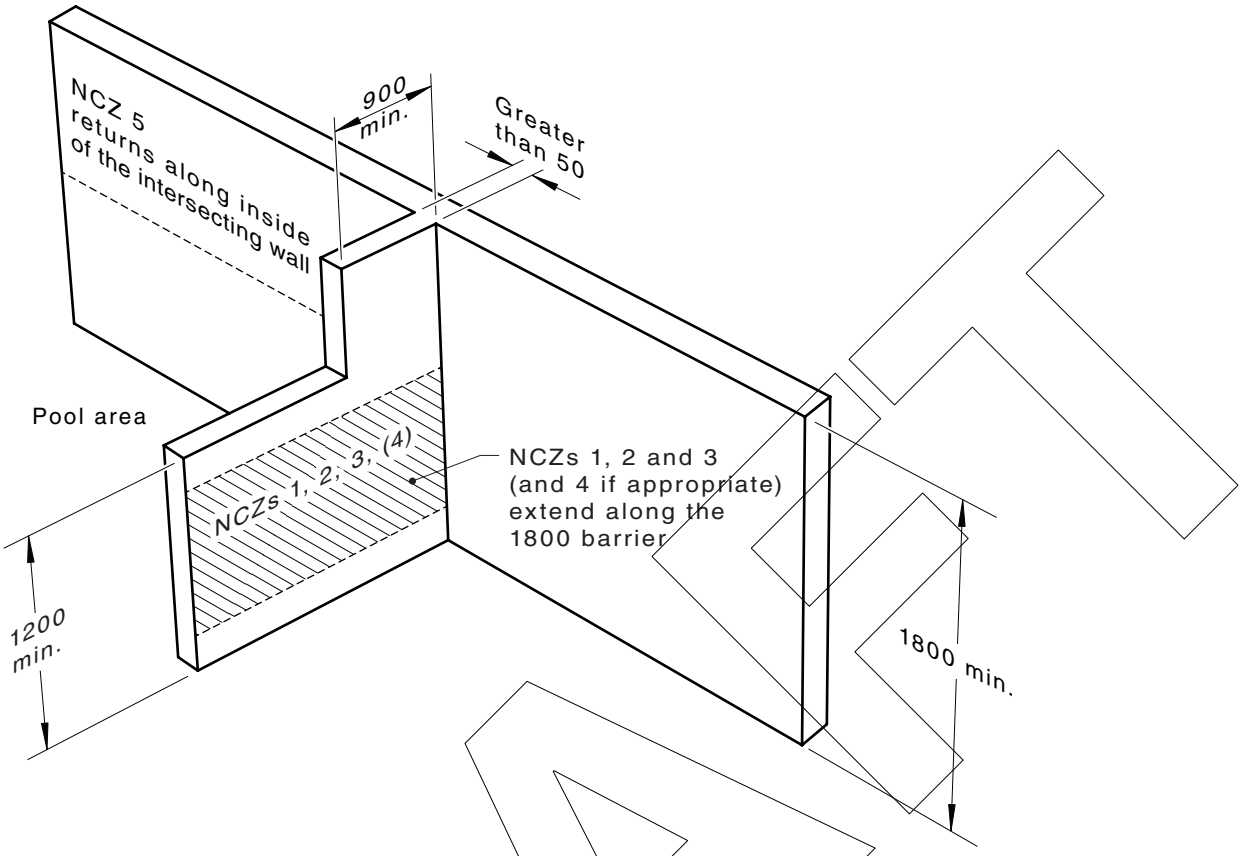


Figure 3.1.12.3(B) — Intersecting barrier with top greater than 50 mm in width

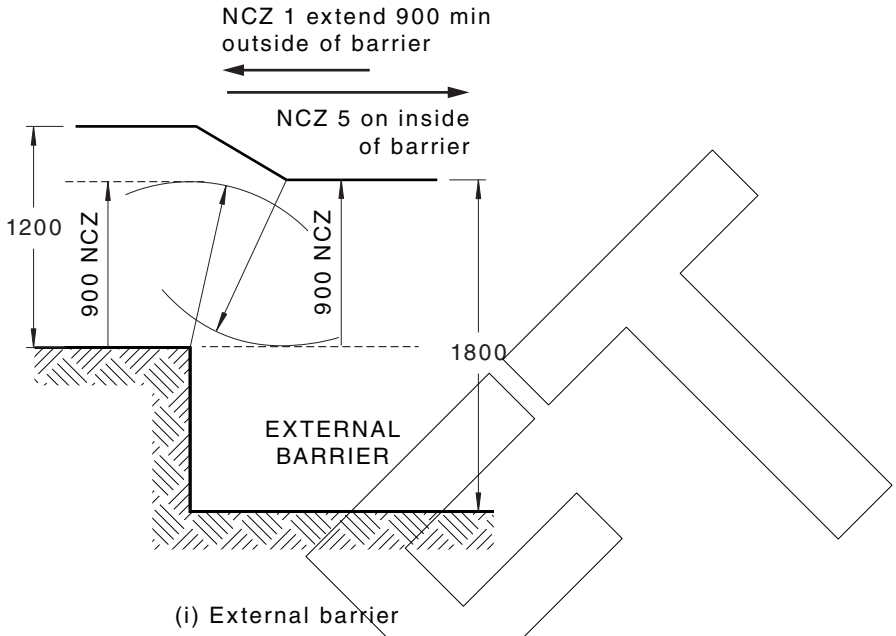
NOTE 2 NCZ4 is not applicable for solid barriers.

3.1.13 Connecting barriers on stepped ground

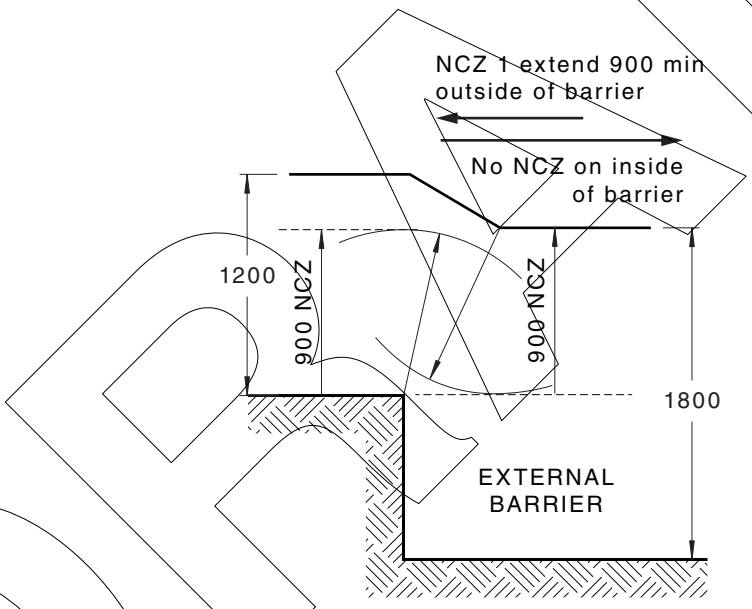
Connecting barriers of different heights or with different NCZs shall have their NCZs overlap for a minimum distance of 900 mm on either side of the intersection junction.

NOTE This overlapping is to maintain the integrity of the NCZs. (See Figure 3.1.13.)

Dimensions in millimetres



(i) External barrier



(ii) Internal barrier

NOTE A barrier not less than 1800 mm can either have no NCZ for an internal barrier or NCZ 5 (inside) for an external barrier. (See Clause 3.2.3 for an internal barrier and Clause 3.3.1 for an external barrier.)

Diagram (i) illustrates the situation where the 1200 mm internal barrier NCZ 1 extends 900 mm along the outside of the 1800 mm external barrier section, and the NCZ 5 on the inside of the 1800 mm barrier extends along 900 mm opposite the NCZ 1.

Diagram (ii) illustrates the situation where the 1200 mm internal barrier NCZ 1 extends 900 mm along the outside of the 1800 mm internal barrier section. The remainder of the 1800 mm barrier has no NCZ requirements.

Figure 3.1.13 — Examples of connecting barriers

3.1.14 Combined structures forming a barrier

A barrier may consist of a number of structures provided the overall barrier —

(a) conforms with the requirements of this Standard; and

(b) the structure presents a single barrier with the connection as close as practical to the outside face of the composite wall and with a ledge not exceeding 50 mm. (See Figure 3.1.14.)

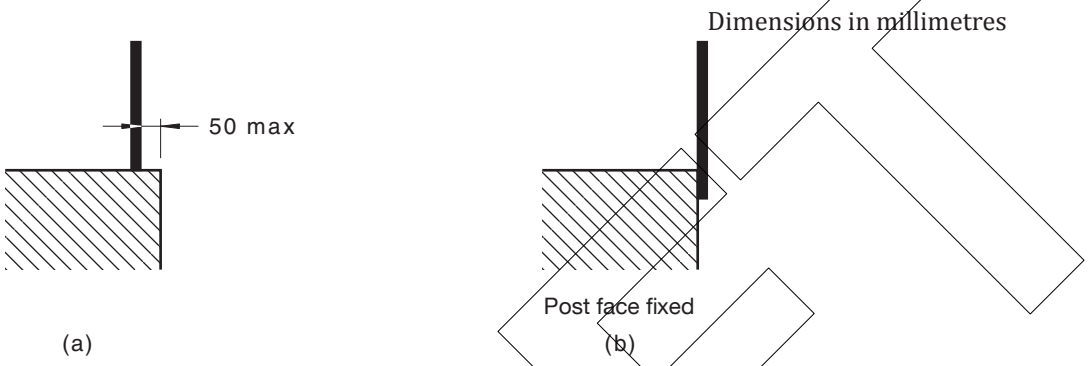


Figure 3.1.14 — Fixing for a composite barrier

3.2 Internal barriers

3.2.1 General

See Clause 3.1.11 for retaining walls serving as internal barriers.

The internal barrier height shall not be less than 1200 mm measured vertically on the outside of the barrier.

3.2.2 Internal barrier height less than 1800 mm

Internal barriers with a height less than 1800 mm shall have NCZs 1, 2, and 3. Where relevant, NCZ 4 shall also be present. [See Figure 3.1.2(A)(a).]

3.2.3 Internal barrier 1800 mm or more in height

Internal barriers with a minimum 1800 mm height, measured on either side of the barrier, shall not require a NCZ and may be climbable on either or both sides. (See Figure 3.2.3.)

Dimensions in millimetres

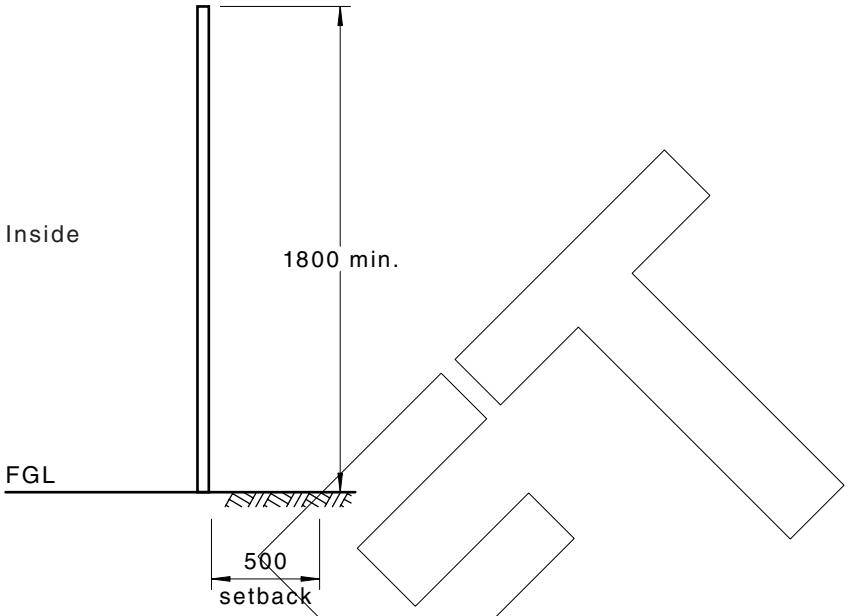


Figure 3.2.3 — Internal barrier not requiring an NCZ

3.3 External barriers

3.3.1 General

Except as specified in Clauses 3.3.2 and 3.3.3, where an external fence acts as a barrier to a pool, it shall have a minimum height of 1800 mm on the inside and NCZ 5 formed as a quadrant of 900 mm radius down from the top of the inside of the barrier. (See Figure 2.1.6.)

3.3.2 Alternative external barrier height adjacent to public open space

Where an external barrier abuts public open space, it may have a height between 1200 mm to 1800 mm, in which case it shall have NCZs 1, 2 and 3. Where relevant, NCZ 4 shall also be present.

3.3.3 Alternative external barrier for adjacent pool areas

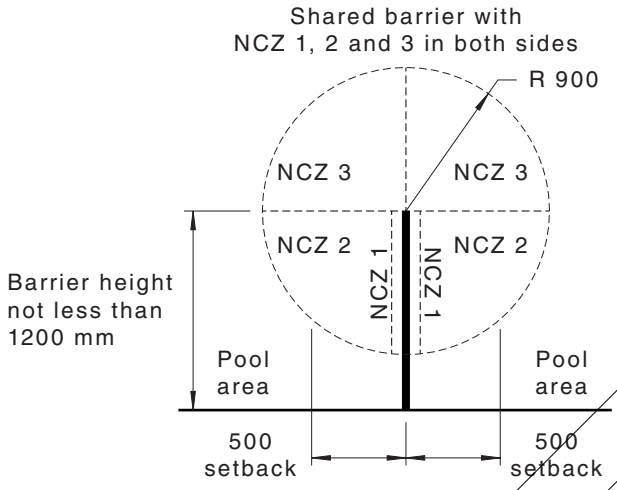
Where pools share a barrier, the following is an alternative to providing a barrier 1800 mm high or higher. (See Figure 3.3.3.)

The shared boundary barrier shall —

(a) be less than 1800 mm but not less than 1200 mm in height measured on both sides of the barrier; and

(b) each side of the barrier shall have conforming NCZs 1, 2 and 3.

Dimensions in millimetres



NOTE Where relevant, NCZ 4 is also to be present.

Figure 3.3.3 — Summary of requirements for an external barrier between adjacent pool areas

3.4 Other barriers

3.4.1 Permanent bodies of water

Permanent bodies of water of a width greater than 1800 mm shall be considered as an effective barrier where a pool owner is able to provide evidence showing that the body of water is permanent and the water at the edge of the pool area is not less than 300 mm deep at any time.

NOTE Refer to relevant authorities for the minimum water depths of a waterway.

3.4.2 Above-ground pools

The walls of an above-ground pool that conform with the requirements of this Standard for an internal barrier shall be deemed to be an effective barrier.

A barrier conforming with Clause 3.2 shall be placed around permanently fixed access ladders and around a designated access point to above-ground pools with removable ladders.

NOTE Above-ground pools pose a particular hazard because of the tendency to leave climbable objects against or near the pool. Such objects may be used by a young child to aid access into the pool.

3.4.3 Out-of-ground pool walls

Out-of-ground walls of pools that conform with the requirements of a barrier in this Standard shall be considered an effective barrier.

3.4.4 Child-resistant openable portion of window

A window opening shall be provided with protection if —

(a) the window opens directly into a pool area; and

(b) the height of the bottom of the lowest opening window panel to the FGL in the pool area is less than 1800 mm.

The openable portion of the window shall be protected with —

(i) a device capable of restricting the window opening; or

(ii) a screen with secure fittings.

The device or screen required shall be designed to —

(A) not permit a 100 mm sphere to pass through the window opening or screen; and

(B) resist an outward horizontal action of 250 N against the —

(1) window restrained by a device; or

(2) screen protecting the opening; and

(C) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden.

3.4.5 Balcony balustrades

3.4.5.1 General

A balcony balustrade shall conform with the requirements for a balcony balustrade barrier (Clause 3.4.5.1) where —

(a) the balcony projects into the pool area; and

(b) the balcony finished floor level (FFL) is less than 1800 mm to FGL of the pool area. [See Figure 3.4.5(B).]

A balcony that protrudes into an NCZ shall —

(i) conform with all internal barrier requirements in this Standard; and

(ii) incorporate NCZs 1, 2, 3 and where appropriate NCZ 4. [See Figure 3.4.5(A).]

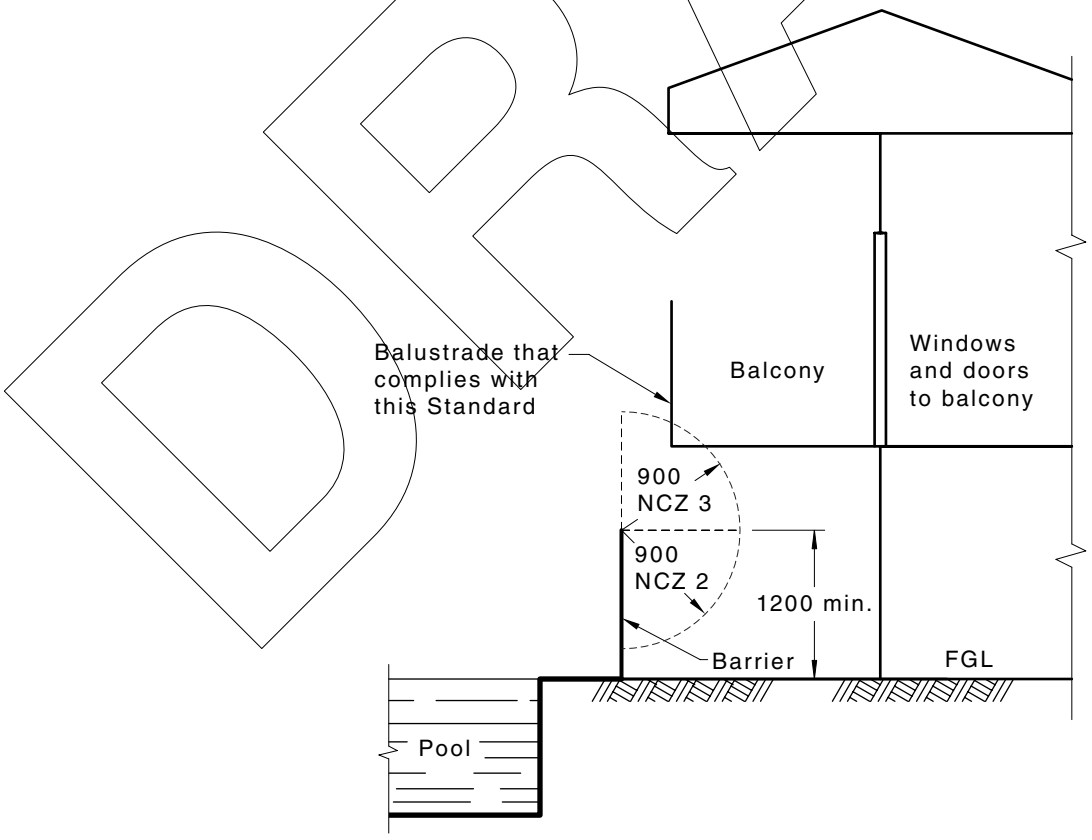


Figure 3.4.5(A) — Balcony intruding into NCZ

Dimensions in millimetres

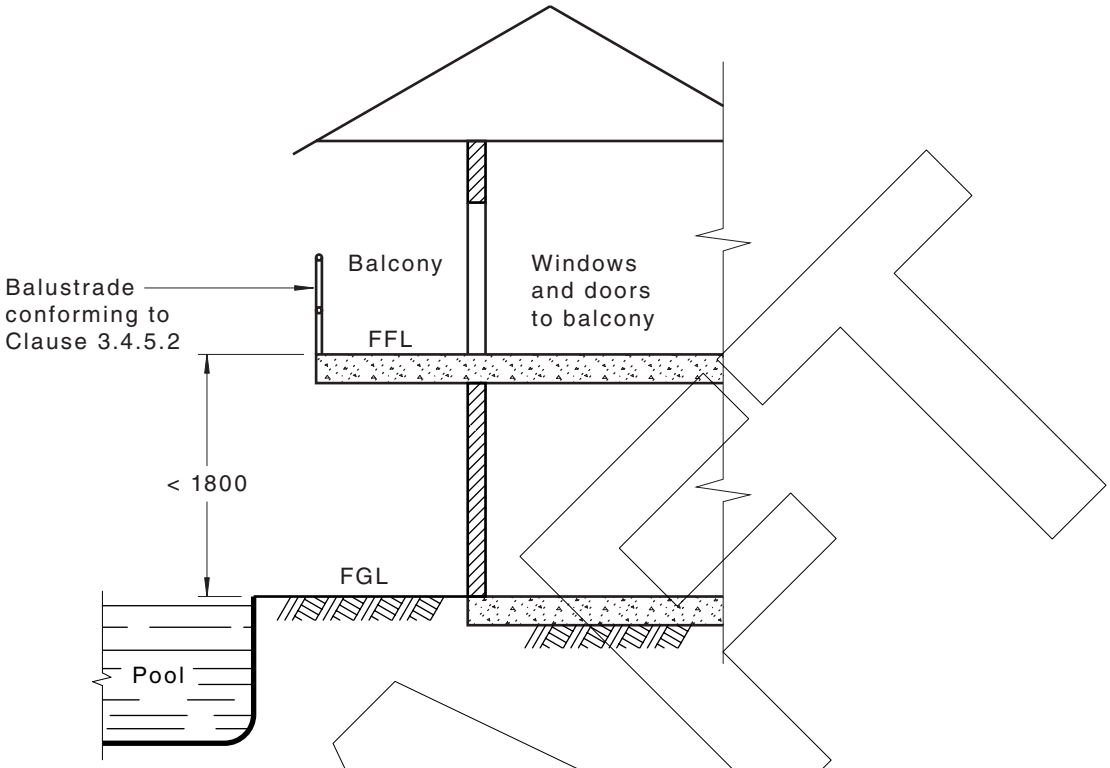


Figure 3.4.5(B) — Balcony intruding into pool area

3.4.5.2 Requirements for balcony balustrades

Where the distance from the top of the balustrade to the FGL is less than 1800 mm, the balustrade shall —

(a) conform with all internal barrier requirements in this Standard; and

(b) incorporate NCZs 1, 2, 3 and where appropriate 4. [See Figure 3.4.5(C).]

Dimensions in millimetres

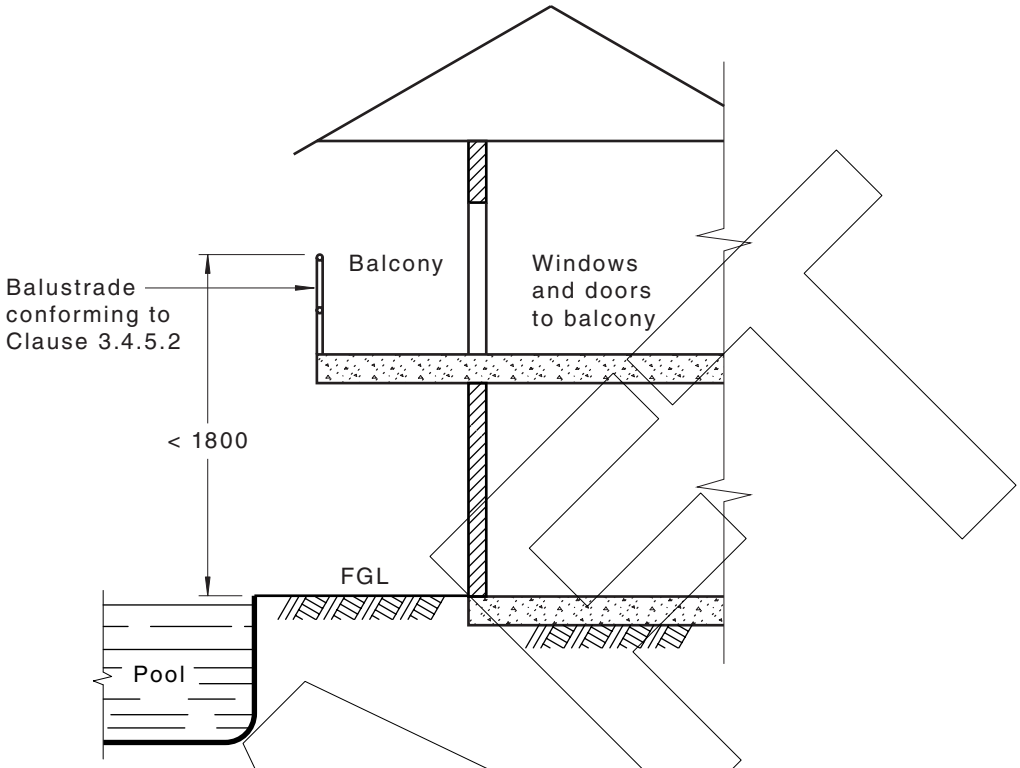


Figure 3.4.5(C) — Top of balustrade less than 1800 mm from FGL

Where the distance from the top of the balustrade to the FGL is 1800 mm or more, the balustrade shall conform with the following:

(i) All requirements in this Standard for internal barriers 1800 mm or more.

(ii) No spherical object greater than 100 mm will pass through the balustrade.

(iii) Any ledge at the connection of the balustrade and the balcony on the pool side of the balustrade shall not exceed 50 mm in depth. [See Figure 3.4.5(D).]

NOTE The National Construction Code (NCC) may have further requirements for balcony barriers.

Dimensions in millimetres

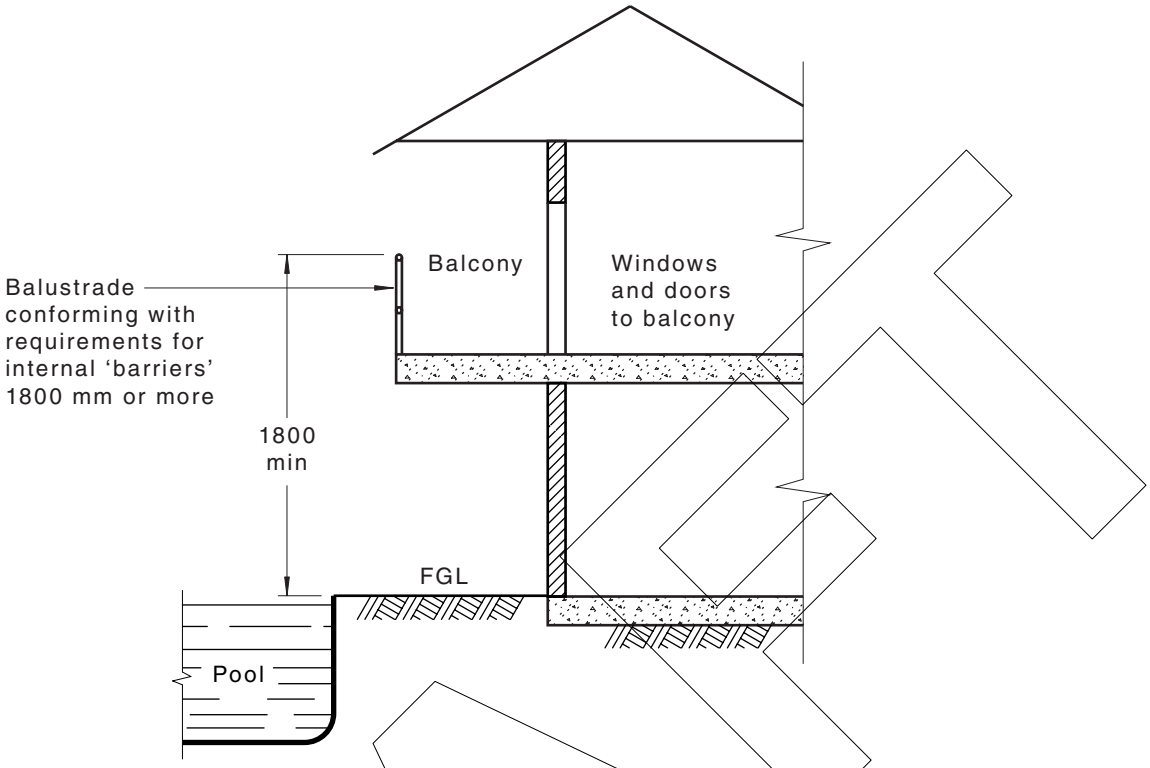


Figure 3.4.5(D) — Top of balustrade not less than 1800 mm from FGL

Section 4 Access

4.1 Gates and latch fittings

4.1.1 Gates

4.1.1.1 General

Gates shall be fitted with a latch that will automatically operate on closing of the gate and prevent the gate from being re-opened without being manually released.

4.1.1.2 Operation of gates

Gates shall —

(a) be hinged so that they only swing away from the pool area;

(b) be self-closing and latching in accordance with the provisions of this clause (4.1);

(c) be located so that the arc of operation is clear of any building or doorway; and

(d) have sufficient clearance to swing freely through the arc of operation.

The opening under a closed gate shall not exceed 100 mm at any point.

NOTE The installer of a gate to a pool area is advised to take into account possible future soil movement.

4.1.1.3 Self-closing mechanism

Gates shall be fitted with a self-closing mechanism that will close and latch the gate from:

(a) any unlatched position;

(b) a stationary start; and

(c) without the application of manual force.

Self-closing mechanisms shall be in accordance with Clauses 5.4 to 5.6.

NOTE 1 The self-closing mechanism may require a cushioned back-checking device to prevent shock when the gate is closing.

NOTE 2 Gates subject to wind loading (which may prevent their closing) may require special consideration.

NOTE 3 Gate component manufacturers should ensure their components are capable of operating in all weather conditions including prolonged periods of rain and/or excessive heat.

4.1.1.4 Gate hinges

Gate hinges that protrude outward from the barrier with a horizontal top surface depth greater than 10 mm, and those that create an opening between the gate post and the gate stile of more than 10 mm, shall not be permitted in NCZ 1.

Hinges with a top surface sloped at 60° or more to the horizontal may be located in NCZ 1. (See Figure 4.1.1.4.)

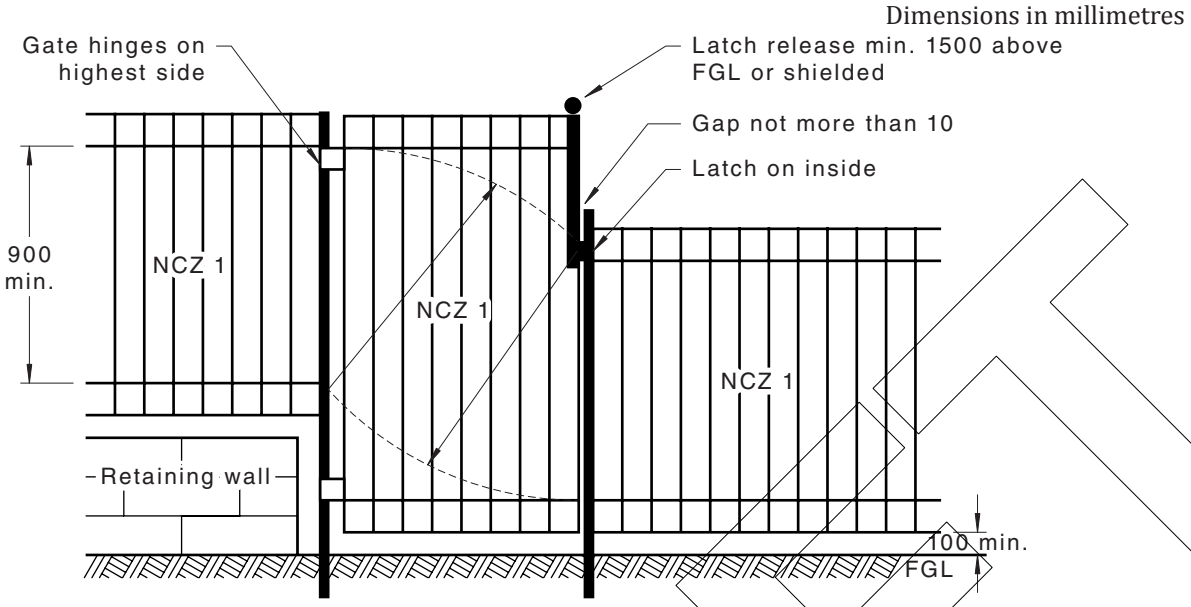


Figure 4.1.1.4 — Gate as part of level change — Hinged on high side

4.1.2 Latch

4.1.2.1 General

The gate latch shall not be able to be —

(a) inadvertently adjusted during operation;

(b) locked in the "open" position; or

(c) adjusted without the use of tools.

A latch shall not be able to be released by the insertion of any implement in the 10 mm opening shown in Figure 4.1.2.2(B).

A latch shall be in accordance with Clauses 5.4 to 5.6.

4.1.2.2 Location of the latch release

4.1.2.2.1 1500 mm or more above FGL

Where the release point of the latch release is located at a minimum height of 1500 mm above the FGL, the location of the latch release shall —

(a) be on the outside or above the barrier;

(b) be at a minimum 1400 mm above any lower foothold; and

(c) the heights required under Items (a) and (b) shall be maintained for a distance of 450 mm on either side of the barrier from the latch release point. [See Figure 4.1.2.2(A).]

4.1.2.2.2 Less than 1500 mm above FGL

Where the release point of the latch release is located at a height less than 1500 mm above the FGL, the location of the latch release shall —

(a) not be on the outside of the barrier;

(b) be in such a position that to release the latch from the outside it will be necessary to reach over or through the barrier at a height of not less than 1200 mm above the FGL and not less than 1000 mm above the lowest foothold; and

(c) be at least 150 mm below the top of the barrier if a hand-hole is not provided, or at least 150 mm below the edge of any hand-hole if provided. [See Figure 4.1.2.2(B).]

4.1.2.3 Shielding of latch release

In a gate with vertical openings greater than 10 mm, where the latch release is located at a height less than 1500 mm above the FGL, the latch release shall be shielded so that no opening greater than 10 mm occurs within an area bounded by —

(a) an effective radius of 450 mm from the latch release; and

(b) the top of the barrier, if this intersects the area described in Item (a).

Where it is necessary to have a hand-hole in a gate, the bottom of the opening shall be not less than 1200 mm above the FGL, and the shielding shall be extended up to a horizontal line through the top of the hand-hole, or 150 mm above the top of the latch release, whichever is the higher.

The shield shall be free of sharp edges, and the edges of the adjacent parts on the gate and the barrier shall be rounded or chamfered to prevent a scissor hazard when the gate closes. [See Figure 4.1.2.2(B).]

Dimensions in millimetres

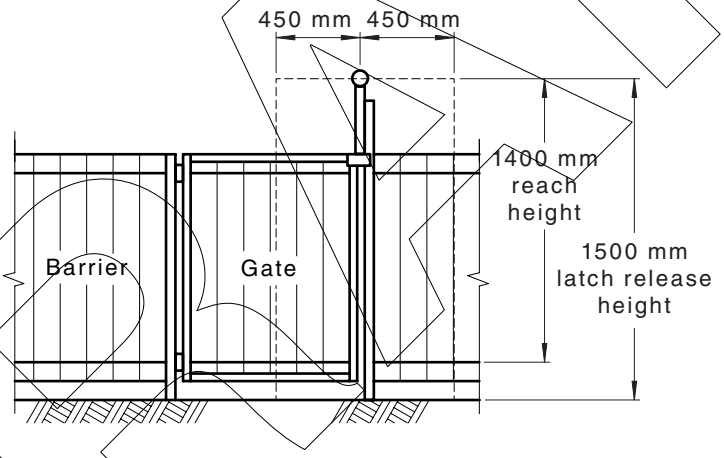


Figure 4.1.2.2(A) — Gate release on outside

Dimensions in millimetres

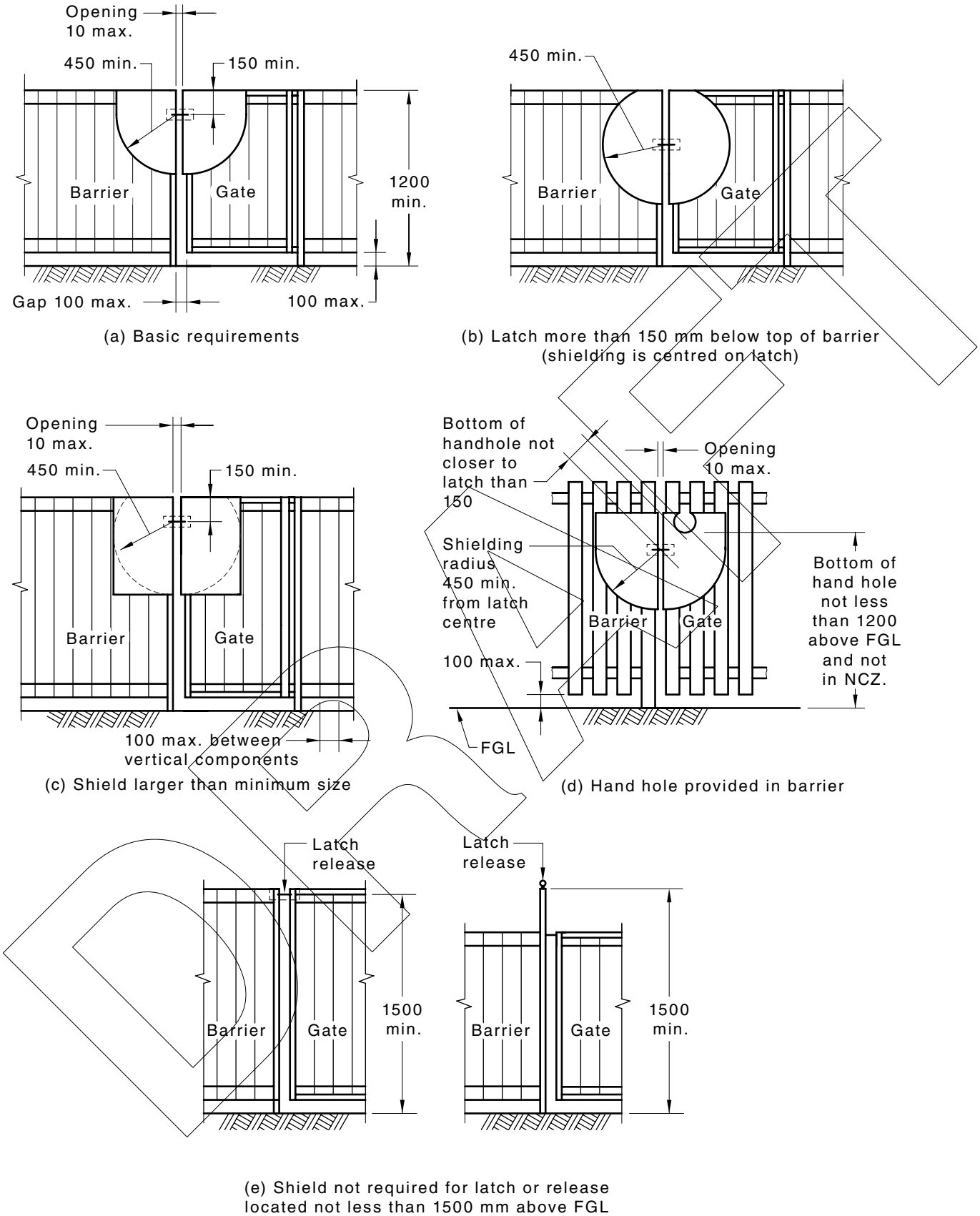


Figure 4.1.2.2(B) — Alternative latch shielding options for gates with vertical openings 10 mm to 100 mm

4.1.3 Marking requirements

All commercial gate fittings shall be legibly marked with the manufacturer's name, brand or trademark. Model number and batch number may also be included.

Markings shall be readily visible during in-service inspections.

4.1.4 Installation, operation and maintenance instructions

The manufacturer's instructions shall give full details of installation procedures for the component and shall be supplied with the product. The instructions should include the following:

(a) Detailed step-by-step instructions for installation and operation.

(b) Details of any special tools or training that may be required to install the product.

(c) Regular maintenance requirements.

(d) Troubleshooting guide.

4.2 Child resistant doorsets

Child-resistant doorsets shall only be installed for access to indoor pools and the indoor part of indoor/outdoor pools, and shall conform with the following:

(a) Doors shall be fitted with a self-closing device that will operate the latch and close the door from any position, with a stationary start, without the application of manual force.

(b) The self-closing device shall be capable of conforming with the requirements of Item (a) with the door starting at any position, from fully open to resting on the latch.

(c) Doors shall be fitted with a latch that conforms with Clause 4.1.2.1 which will automatically operate on the closing of the door, and which will prevent the door from being reopened without being manually released.

(d) The release for the latch shall be located on the outside of the door and be not less than 1500 mm above the floor.

(e) NCZ 1 shall apply to the outside of a door and the top of NCZ 1 shall be 1200 mm or less above the floor. (See Clause 2.1.2.)

(f) Perforated materials or mesh shall conform with the requirements of Clauses 5.3.2 and 5.3.3.

(g) Pet doors shall not be placed in a child-resistant doorset.

(h) Doors shall not open towards the pool.

NOTE Examples of locations for use of doorsets are provided in AS 1926.2.

Section 5 Loading requirements

5.1 Strength of barrier openings

Under laboratory testing a barrier with openings wider than 10 mm shall have components with sufficient strength such that a 105 +0, −0.5 mm diameter metal cone cannot pass through the opening under the application of a force of 150 N.

When tested in accordance with Appendix A the test object shall not pass through the openings.

5.2 Strength of posts and footings

Each post and footing shall withstand a horizontal force of 330 N at 1200 mm above FGL. After loading, there shall be no permanent damage to any post, the footings shall not loosen to impair the effectiveness of the barrier.

NOTE A method that may be used to test posts and footings is provided in Appendix B.

5.3 Strength of barrier components

5.3.1 Rigid components

Structural components, such as panel infills, top and bottom rails, rods, palings and pickets, shall be capable of withstanding a force of 330 N without any component —

(a) breaking;

(b) showing signs of fracture;

(c) loosening so the effectiveness of the panel is impaired; or

(d) becoming permanently deformed by more than a factor of 1/200 over its length.

Testing of barrier panels shall be in accordance with Appendix C.

5.3.2 Flexible materials

Flexible barrier components, and the manner in which they are installed, shall be capable of withstanding the dynamic forces imparted with no permanent deformation when tested in accordance with Appendix D.

5.3.3 Perforated material or mesh strength

Barriers shall be installed in such a manner and with sufficient height so that —

(a) when a vertical downward force of 250 N is applied at any point along the uppermost reach of the barrier, including any angled extension, it shall not reduce the effective height to less than the minimum barrier height required by this Standard (AS 1926.1); and

(b) when a vertical lift force of 100 N is applied at any point along the bottom of the barrier, it shall not result in a gap between the bottom of the barrier and the surface beneath of more than 100 mm.

5.4 Closing and latching of gates

The gate shall close and latch from fully open to resting on the latch, under both of the following conditions:

(a) Under the natural weight of the gate.

(b) With the gate open and after a vertical downward force of 250 N is applied to the top rail or component at a point 100 mm from the outer edge of the locking stile of the gate for 30 seconds and then removed.

NOTE This requirement is intended to indicate whether the automatic closing and latching mechanism is likely to remain effective after the gate has been subject to deflection, either under its own weight or as a result of children swinging on it.

With the gate closed, the latch and posts of the barrier to which the gate is attached shall be capable of retaining the gate in a closed position when the force in Item (b) is placed at the same location and remains on the gate.

Gates shall be hung so that when a gate is closed and latched, and is then lifted upwards or pulled downwards with a force of 250 N, movement of the gate does not —

(i) release the latch; or

(ii) unhinge the gate; or

(iii) increase the opening between the bottom of the gate and the FGL to more than 100 mm.

5.5 Strength and rigidity of gate latches and hinges

When tested in accordance with Appendix E, no gate latch or hinge shall fracture, break or loosen so that the effectiveness of the gate is impaired or permanently deformed by a factor of more than 1/200 over its length. The latch shall not unintentionally release and all gate components shall still conform with Clause 4.1 after completion of the test.

5.6 Durability of gate components

When tested in accordance with Appendix F, all gate components shall —

(a) be capable of conforming with the requirements of Clause 4.1 after 25 000 operations; and

(b) require a force to release the latch of not less than 20 N both before and after the test.

Appendix A
(normative)

Test for strength of barrier openings

A.1 Scope

This appendix sets out a method for determining whether a barrier is sufficiently strong and rigid to prevent an opening from being forced to a size that would allow a young child to gain entry. This test is not designed for in-field testing.

WARNING — THIS TEST SHALL NOT BE USED ON A GLASS BARRIER.

A.2 Principle

A horizontal force is applied to the test object in an attempt to force it through the openings in the barrier panel.

A.3 Apparatus

The following apparatus is required:

(a) A cylindrical solid-faced test object 105 +0, −0.5 mm in diameter with a body length of 300 mm to 400 mm, as shown in Figure A.1.

(b) One end shall be conical and shall be truncated to a nominal diameter of 20 mm to provide a flat base for the attachment of fittings, as shown in Figure A.1.

(c) The test object shall be mild steel and have a smooth machined finish.

(d) A calibrated force-measuring device with an accuracy of 2 % of the test loads and a resolution of 1 N or less.

(e) A stable supporting structure to suspend the conical test object from and to hold the barrier panel in a vertical position, as shown in Figure A.1.

(f) A means of attaching the force-measuring device to the conical test object, as shown in Figure A.1.

(g) A force activating device.

A.4 Procedure

The procedure shall be as follows:

(a) Secure the panel into the supporting structure (jig) in the vertical position.

(b) Hang the test object from the supporting structure. The test object shall be suspended horizontally at two points by using a suspension method that minimizes the effects of friction and allows free movement, as shown in Figure A.1.

(c) Attach the force measuring device to the conical end of the test object, as shown in Figure A.1. Connect the other end of the force measuring device to the force activating device.

(d) Each panel shall be tested in three locations, across the width of the panel at the middle of each third of the panel.

(e) Place the conical end of the test object into the opening being tested and steadily apply a force up to 150 N, in an attempt to force the object through the opening. If the test object oscillates during the test it shall be stabilized.

(f) Record the force at which the test object pulled through the panel or the force at which it failed to pull through the panel.

A.5 Report

The report shall include the information shown in Table A.2 and clearly show the following:

(a) The pull-through force at which the conical test object passed through the panel openings or the force at which it failed to pass through the panel when tested in the three locations specified in Clause A.4(d).

(b) Reference to this test method, i.e. AS 1926.1, Appendix A.

(c) The conclusion of whether the panel has passed or failed the test in accordance with the criteria in Clause 5.1.

(d) Name of test facility.

(e) Date of the test.

(See Table A.2 for an example of a test report.)

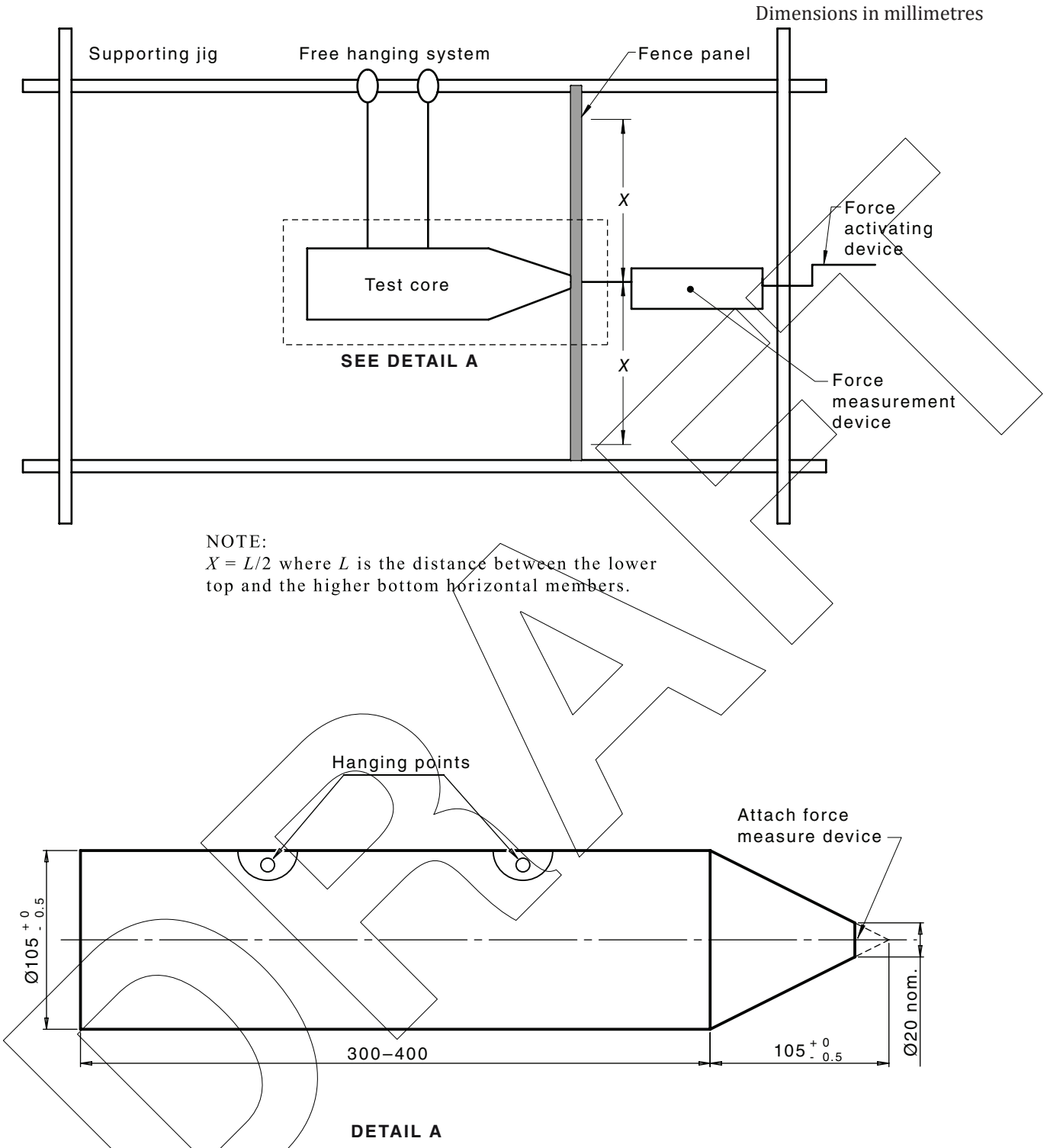


Figure A.1 — Apparatus for testing openings and other components

Table A.2 — Example test report — Barrier panel

Date:	
Test Report No.:	
Product:	Name of product
Material:	Specify product material
Source:	Name of manufacturer/supplier/consumer
Specifications:	AS 1926.1, *Swimming pool safety, Part 1: Safety barriers for swimming pools*, Appendix A, Test for strength of barrier openings

Wire-based panel

Panel dimensions:

Item No.	Product	Wire size mm	Horizontal wire spacing mm	Upright wire openings CC mm	Results — Pull-through force N		
1	Product name						

Wire-based panel

Panel dimensions:

Item No.	Product	Wire size mm	Horizontal wire spacing mm	Upright wire openings CC mm	Results — Pull-through force N		
1	Product name						

Tubular panel

Panel dimensions:

Item No.	Product	Tube size mm	Horizontal wire spacing mm	Upright wire openings CC mm	Results — Pull-through force N		
1	Product name						

Conclusion and comments:

Name of individual conducting the test:	
Individual's title:	
Authorized signatory:	
Name and location of testing facility:	

Appendix B
(informative)

Strength test for posts and footings

B.1 Scope

This appendix sets out a method for testing whether barrier posts have adequate strength and have been correctly installed.

B.2 Principle

A force is applied to the barrier post and it is then inspected for signs of fracture, loosening of footings or any damage or deformation of the post or, if to a gate post, any damage or deformation that would prevent the gate from closing and latching from any position.

B.3 Apparatus

The following apparatus is required:

(a) A circular test object of diameter 105 ± 1 mm, having at least one solid flat-faced end. (See Figure B.1.)

(b) A calibrated force-measuring device with an accuracy of 2 % of the test load and a resolution of 1 N or less.

(c) A means of applying and measuring the applied force.

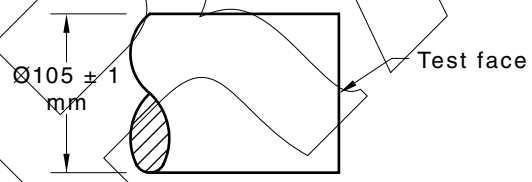


Figure B.1 — Test object

B.4 Procedure

The procedure is as follows:

(a) Place the flat end of the test object against the post under test at a height of 1.2 m above FGL at 90° to the barrier.

(b) Apply a horizontal force of 330 N, without shock, to the test component.

(c) Apply the test force for a minimum of 30 s.

(d) Remove the force and inspect the post for damage or loosening of the footings.

(e) For gate posts, or panels to which gates are directly hinged, the test is to be carried out with the gate held or chocked in a partly open position. After testing check that the gate will close and latch when released from various positions from a 90° opening to resting on the latch.

B.5 Report

The report is to include the following information:

(a) Breakage or sign of fracture of any post.

(b) Loosening of any part of the barrier that will impair its effectiveness.

(c) Any damage to the gate that would prevent it from closing and latching from any position.

(d) Whether the post or gate passed or failed the test.

(e) Reference to this test method, i.e. AS 1926.1, Appendix B.

(f) Name of test facility.

(g) Date of the test

(h) Reference to the manufacturer/supplier and installer.

Appendix C
(normative)

Strength test for rigid barrier components

C.1 Scope

This appendix sets out a method for testing whether barrier components have adequate strength.

This test is not designed for in-field testing.

C.2 Principle

A force is applied to the component or components of the barrier and it is then inspected for signs of fracture, permanent deformation or loosening of components.

Measurements shall be accurate to ± 0.5 mm.

C.3 Apparatus

The following apparatus is required:

(a) A circular test object of diameter 105 ± 1 mm, having at least one solid flat-faced end. (See Figure C.1.)

(b) A calibrated force-measuring device with an accuracy of 2 % of the test load and a resolution of 1 N or less.

(c) A means of applying the force.

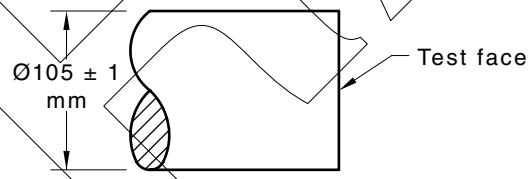


Figure C.1 — Test object

C.4 Procedure

The procedure shall be as follows:

(a) Connect the force measuring device to the test object.

(b) Place the flat end of the test object against the test component at its most flexible point.

(c) Using the force measuring device, apply a pre-load force of 50 N for a minimum of 30 seconds. Remove the force and measure the zero load displacement.

(d) Using the force measuring device, apply a force of 330 N, without shock, for a minimum of 30 seconds.

(e) Remove the test force and measure and record the amount of permanent deformation of the component relative to the zero load displacement.

(f) When testing panels to which gates are directly hinged or latched, the test shall be carried out with the gate chocked partly open.

(g) Inspect the component for —

(i) breakage or sign of fracture of any component; and

(ii) loosening of any component that will impair the effectiveness of the panel.

(h) Inspect the gate to ensure the closing and latching mechanisms operate as required.

C.5 Report

The report shall include the following information:

(a) The amount of permanent deformation recorded in Clause C.4(e).

(b) Whether the barrier panel conforms to the requirements of Clause 5.3.1 after testing.

(c) Any damage to the gate that would prevent it from closing from any open position and latching.

(d) Reference to this test method, i.e. AS 1926.1, Appendix C.

(e) The date of the test.

(f) The source of the barrier panel (i.e. name of manufacturer/supplier/consumer).

(g) Name of test facility.

Appendix D
(normative)

Strength test for flexible materials and components

D.1 Scope

The appendix sets out a method for testing whether flexible components have adequate strength and whether such materials are adequately fixed to ensure they comprise a suitable barrier.

This test is not designed for in-field testing.

D.2 Principle

A dynamic force is applied to the material or component and it is then inspected for signs of penetration, breakage, tearing or signs of fracture or loosening of components.

D.3 Apparatus

The following apparatus is required:

(a) Test object — a 9.1 kg half spherical solid-faced test object 50 ± 1 mm diameter.

(b) A means of swinging the test object through an arc of radius 1400 mm.

D.4 Procedure

The procedure shall be as follows:

(a) Suspend test object A at a distance of 1400 mm below a pivot point to allow a pendulum action and place the test object against the material or component.

(b) Raise the test object to a 40° angle to the vertical (see Figure D.1) and release.

(c) The test shall be carried out from both sides of the component and at the weakest points.

(d) Inspect for the following:

  (i) Breakage, tearing or signs of fracture.

  (ii) Loosening of any component or fixings.

D.5 Report

The report shall include the following:

(a) Whether there was —

  (i) breakage, tearing or signs of fracture of any material and component; or

  (ii) loosening of any components or fixings that impaired the effectiveness of the barrier.

(b) Whether the material and component passed or failed the test.

(c) Reference to this test method, i.e. AS 1926.1, Appendix D.

(d) Name of test facility.

(e) Date of the test.

(f) Reference to the manufacturer or supplier.

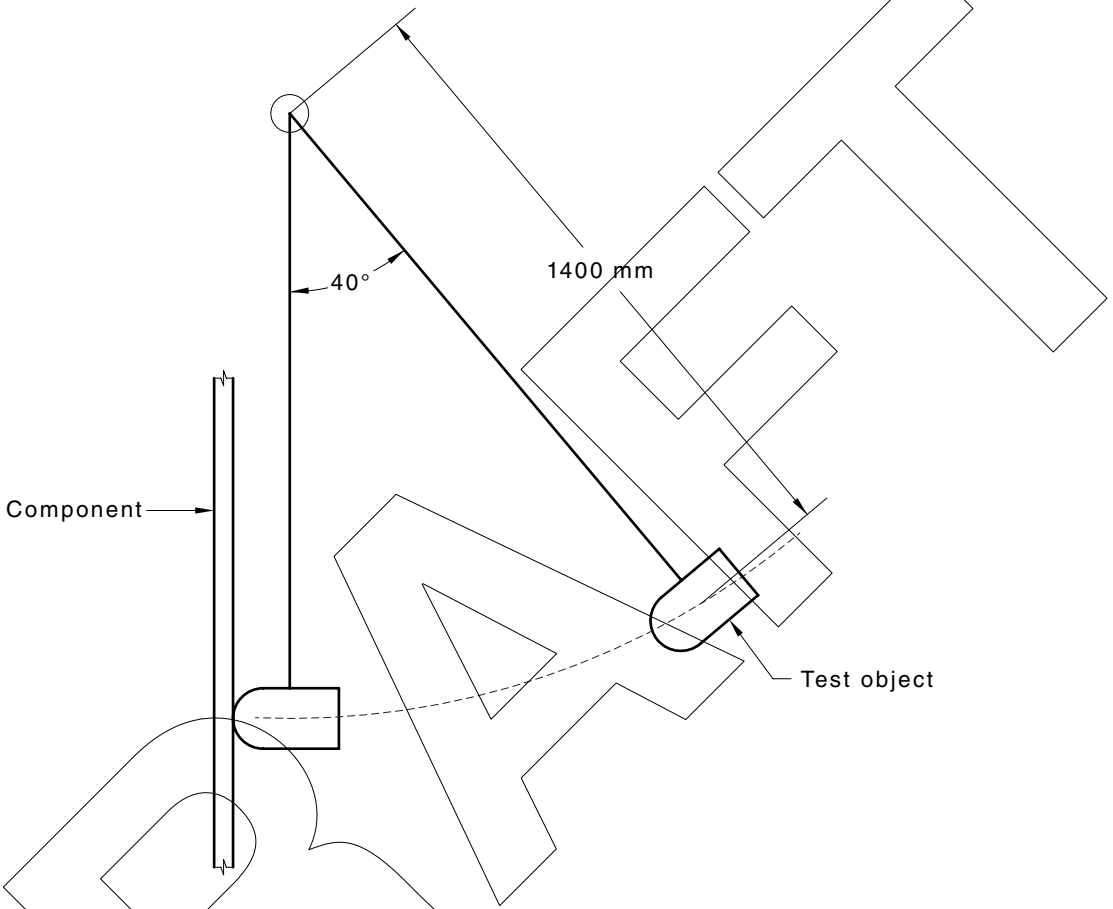


Figure D.1 — Test object

Appendix E
(normative)

Strength test for latches and hinges

E.1 Scope

This appendix sets out a method for testing whether the strength of the gate latches and hinges are sufficiently robust to provide an effective barrier throughout the life of the barrier.

A force is applied at a number of locations on a reference size gate and it is then inspected for signs of fracture, permanent deformation or any faulty operation of the latching device or hinges.

This test is not designed for in-field testing.

E.2 Apparatus

The following apparatus is required:

(a) A circular, solid, flat faced test object of diameter 105 ± 1 mm. The test object is to be rigid and not flex when subjected to specified loads. (See Figure B.1.)

(b) A calibrated force-measuring device with an accuracy of 2 % of the test load and a resolution of 1 N or less.

(c) A means of applying the force.

(d) A reference size gate of H 1150 mm × W 900 mm. A reference gate may have fittings attached for the purpose of applying forces.

E.3 Procedure

The procedure shall be as follows:

(a) All required forces shall be applied and held for 30 seconds.

(b) Close and latch the gate.

(c) Using the test object, apply a force of 330 N in a horizontal direction to the centre of the reference gate .

(d) Using the test object, apply a force of 330 N in a horizontal direction to each of the four corners of the reference gate.

(e) Repeat Steps (c) and (d) on the opposite side of the reference gate.

(f) Inspect the latches and hinges for any breakage, fracture or permanent deformation.

(g) Open the gate and hold it in a position so that it is just ajar with the components of the latch on the gate post and the latching stile disengaged and clear of each other.

(h) Apply a downward force of 250 N in a vertical direction to the top rail of the reference gate at a point 100 mm from the outer edge of the latching stile.

(i) Apply an upward force of 250 N in a vertical direction to the top rail of the reference gate at a point, 100 mm from the outer edge of the latching stile.

(j) Remove the test force and check that the gate automatically closes and the latch operates from an open position of 90 degrees, 45 degrees and just ajar.

(k) Inspect the gate components for any breakage, fracture or permanent deformation.

(l) If permanent deformation is present, adjust latch and/or hinges to determine if the gate continues to meet the relevant requirements of Clause 4.1.

E.4 Report

The report shall include the following information:

(a) Whether there was any breakage or fracture of any part.

(b) Any permanent deformation to components in millimetres.

(c) Whether the latch was unintentionally released during the tests.

(d) Whether the gate components still conformed with Clause 4.1 at the end of the test.

(e) Reference to the manufacturer or supplier of each gate component.

(f) The date of test.

(g) Reference to this test method, i.e. AS 1926.1, Appendix E.

(h) Details of testing facility.

Appendix F
(normative)

Test of durability of gate components

F.1 Scope

This appendix sets out a method of assessing the ability of gate components, including hinges, self-closing device and latch, to withstand repeated opening and closing.

This test is not designed for in-field testing.

F.2 Principle

The hinges, self-closing device and latch when fitted to a reference size gate are subjected to a number of repeated opening and closings, and then inspected for conformance with the design requirements.

F.3 Apparatus

The following apparatus is required:

(a) A test structure that comprises of two securely anchored rigid posts positioned sufficiently apart to install the reference gate, hinges, self-closing device and latch to be tested.

(b) A means of releasing the latch, opening the gate to the 90 degree position, then allowing to self-close unimpeded to the latched position.

(c) A mechanism for recording the number of opening and closing cycles.

(d) A calibrated force-measuring device with an accuracy of 2 % of the test load and a resolution of 1 N or less.

(e) A reference size gate of H 1150 mm × W 900 mm.

F.4 Procedure

The procedure shall be as follows:

(a) Install the reference gate and the gate components to be tested in accordance with the manufacturer's instructions onto the test structure.

(b) Ensure that the gate components conform with Clause 4.1.

(c) Measure and record the force (to the nearest 2 N) required to release the latch.

(d) Release the latch and open the gate to the 90 degree position.

(e) Release the gate and allow it to close under the action of the self-closing device.

(f) Repeat Steps (d) and (e) for a total of 25 000 operations or until the latch, hinges or self-closing device fails to operate. The gate components shall not be lubricated during this test, but may be adjusted for alignment or self-closing tension if required.

(g) Inspect the gate to see whether it still conforms with Clause 4.1.

(h) Measure and record the force (to the nearest 2 N) required to release the latch.

(i) Inspect the gate components, (self-closing device, hinges and latch) for any damage which would affect the ability of the gate to conform with the requirements of Section 2.

NOTE 1 A cushioned back-checking operation may be fitted to prevent shock when the gate is closing.

NOTE 2 For glass and solid panelled gates, a mechanism to simulate a 25 km/h wind speed may be applied as a counteracting means to the closing force of the self-closing device.

NOTE 3 Environmental and external factors can affect the operation of gate components, this may require adjustments to be made to ensure operation of the gate.

F.5 Report

The report shall include the following information:

(a) The number of operations of the gate components that were completed.

(b) Any adjustments to gate components made and at how many cycles.

(c) Whether the gate still conformed with Clause 4.1 at the end of the test.

(d) The force required to release the latch at the start and at the end of the test.

(e) Any damage to the gate, hinges, latching device or gate posts at the end of the test.

(f) Reference to the manufacturer or supplier of each gate component.

(g) The date of test.

(h) The number of this test method, i.e. AS 1926.1, Appendix F.

(i) Details of testing facility.

Bibliography

AS 1926.2, *Swimming pool safety, Part 2: Location of safety barriers for swimming pools*

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