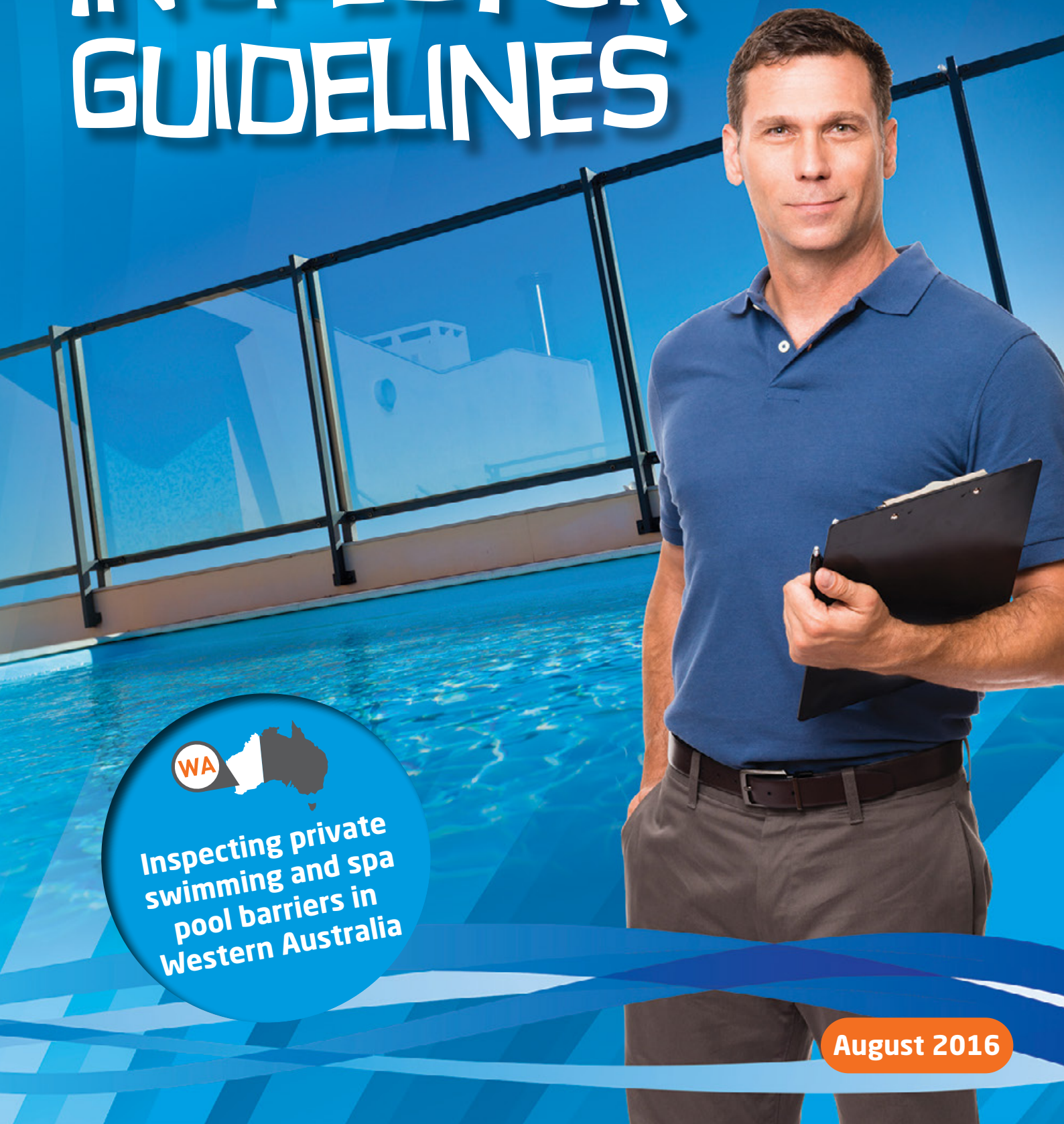
Government of **Western Australia**
Department of **Commerce**
Building Commission

Building Commission

Private swimming and spa pool INSPECTOR GUIDELINES



WA

Inspecting private swimming and spa pool barriers in Western Australia

August 2016

The Building Commission wishes to thank the following organisations for their contribution to the development of the revised guidelines.

Australian Institute of Building Surveyors

City of Canning

City of Joondalup

City of Mandurah

City of Stirling

Department of Health

KidSafe WA

Royal Life Saving Society (WA)

Swimming Pool and Spa Association (WA)

Western Australian Local Government Association

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Disclaimer

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Contents

Scope

This document is provided as guidance for all local governments and their authorised persons who are required to provide inspections of private swimming and spa pool barriers in Western Australia. It provides general information in regards to the legislative and technical provisions required for inspections. This document is intended to be read in conjunction with the applicable Act, Regulations, Codes, and Standards.

It is recommended you check the Building Commission website periodically to ensure you are using the latest version.

If you require further information on the currency of these guidelines, or you want to provide feedback please contact:

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Introduction

Forty toddlers drowned in Western Australia in the decade between 2003 and 2013. In Western Australia, approximately 40 per cent of toddler drowning deaths occur in swimming pools (Royal Life Saving WA, n.d.)

For every drowning death 10 children will be admitted to hospital. A number of these children will be left with some long-term impairment as a consequence of drowning (Royal Life Saving WA, n.d.)

In Western Australia the *Building Act 2011* (the Act) and Building Regulations 2012 (the Regulations) prescribe pool safety barrier requirements, including inspections.

Private swimming and spa pools with water that is more than 300 mm deep must have a compliant barrier installed (Building Regulations 2012 regulation 50(1)). This is intended to help in the prevention of drowning deaths and injury of young children under the age of five years.

Private swimming pools are excavations or structures containing water and principally used, or designed, manufactured or adapted to be principally used for swimming, wading, paddling, or the like, that have the capacity to contain water that is more than 300 mm deep, and that are associated with or incidental to:

- a Class 1a building;
- less than 30 sole-occupancy units in a Class 2 building; or
- a Class 4 part of a building.

Any reference to 'pool' in this document has the meaning as described above.

A private swimming pool includes:

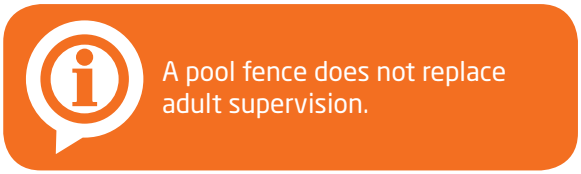
- in-ground and above-ground pools (including inflatable and portable pools);
- in-ground and above-ground spas (but not spa baths that are normally emptied after each use); and
- bathing or wading pools.

Swimming pools that do not fit into the above category are controlled under the Health (Aquatic Facilities) Regulations 2007. More information can be found in the Code of Practice for the Design, Operation, Management and Maintenance of Aquatic Facilities.

The Regulations also require the owner or occupier to ensure that installed barriers are maintained in compliance with the legislation at all times (Building Regulations 2012 regulation 50(1)). The Act contains enforcement provisions, which a permit authority may use to compel swimming pool owners to comply with the Regulations (*Building Act 2011* Part 8).

Australian Standard 1926.1 (AS 1926.1) details the technical requirements for swimming pool barriers and was developed through a consultative process with state governments, industry, interested organisations and the public.

The provisions of AS 1926.1 are intended to create barriers that are child-resistant but not childproof. The effectiveness of the barrier is significantly reliant on its location, installation and maintenance, and the supervision of young children in its proximity.



Terms and abbreviations

The following is a list of some of the terms and abbreviations used throughout this document. Some of the terms referenced have differing definitions depending on the publication. When using the Act, Regulations, or Standards, please refer to the definitions as listed in that particular publication.

Terms and abbreviations used in this document, when in relation to a particular Australian Standard, have the same meaning as in that Standard. As this document is intended to be read in conjunction with the applicable Standard, please refer to that Standard for definitions.

General

AS 1926.1-1993 means Australian Standard AS 1926.1-1993 incorporating Amendment No. 1 only.

AS 1926.1-2012 means Australian Standard AS 1926.1-2012.

AS 1926.2-2007 means Australian Standard AS 1926.2-2007 incorporating Amendment Nos. 1 and 2 only.

AS 1288-2006 means Australian Standard AS 1288-2006 incorporating Amendment Nos. 1 and 2 only.

BCA means the Building Code of Australia which is volumes 1 and 2, as amended from time to time, of the National Construction Code series published by, or on behalf of, the Australian Building Codes Board.

Permit authority means the relevant local government, but can be the State of Western Australia for certain buildings and structures.

Pre-May 2016 means, when in reference to applicable building standards for a swimming pool, a swimming pool:

- installed before 1 May 2016; or
- installed on or after 1 May 2016 in accordance with plans, drawings and specifications submitted to the permit authority for approval before that day.

Pre-Nov 2001 means, when in reference to applicable building standards for a swimming pool, a swimming pool:

- installed before 5 November 2001; or
- installed on or after 5 November 2001 in accordance with plans, drawings and specifications submitted to the permit authority for approval before that day.

Post-May 2016 means, when in reference to applicable building standards for a swimming pool, a swimming pool:

- installed on or after 1 May 2016 other than a pre-May 2016 pool.

The Act means *Building Act 2011*.

The Regulations means Building Regulations 2012.

Building Act 2011

Adult means a person who has reached 18 years of age, and in the absence of positive evidence as to age, means a person who is apparently 18 or more years of age.

Applicable building standard, in a provision, means a building standard that is prescribed as an applicable building standard for the purposes of the provision in respect of a kind of building, incidental structure, building or demolition work or application to which the provision relates.

Authorised person means a person designated under section 96 of the Act as an authorised person and includes, for the purposes of section 93(2)(d) of the Act –

a) a person who is prescribed as an authorised person for the purposes of section 93(2)(d) of the Act; and

b) a person who is authorised by a local government in the manner prescribed for the purposes of section 93(2)(d) of the Act.

Building order means an order made under section 110(1) of the Act.

Building permit means a permit granted under section 20 of the Act.

Building standard means a prescribed requirement in relation to the technical aspects of the construction or demolition of a building or an incidental structure.

Building surveyor means a building service practitioner, as defined in the *Building Services (Registration) Act 2011* section 3, who is registered in a class of building service practitioner that is prescribed for the purposes of this definition.

Building work means –

a) the construction, erection, assembly or placement of a building or an incidental structure;

b) the renovation, alteration, extension, improvement or repair of a building or an incidental structure;

c) the assembly, reassembly or securing of a relocated building or a relocated incidental structure;

d) the changing of ground levels of land for the purposes of work of a kind mentioned in paragraph (a), (b) or (c) to an extent that could adversely affect land beyond its boundaries;

e) site work on any land for the purposes of, or required because of, work of a kind mentioned in –

   i) paragraph (a), (b), (c) or (d); or

   ii) paragraph (a) or (b) of the definition of demolition work; or

f) other prescribed work, but does not include work of a kind prescribed for the purposes of this definition as not being building work.

Incidental structure means a structure attached to or incidental to a building and includes –

a) a chimney, mast, swimming pool, fence, free-standing wall, retaining wall or permanent protection structure; and

b) a part of a structure.

Prescribed means prescribed by regulation.

Building Regulations 2012

Approved alternative requirement means a requirement that has been approved in accordance with regulation 51(2) by the permit authority for the private swimming pool.

Approved door means a door that has been approved in accordance with regulation 51(3) by the permit authority for the private swimming pool.

AS followed by a designation refers to the Australian Standard having that designation that is published by Standards Australia.

Private swimming pool means a swimming pool:

a) that is associated with:

   i) a Class 1a building;

   ii) less than 30 sole-occupancy units in a Class 2 building;

   iii) a Class 4 part of a building; and

b) which has the capacity to contain water that is more than 300 mm deep.

Young child means a child under the age of five years.

Building Code of Australia

Certificate of Accreditation means a certificate issued by a State or Territory accreditation authority stating that the properties and performance of a building material or method of construction or design fulfil specific requirements of the Housing Provisions.

Certificate of Conformity means a certificate issued under the ABCB scheme for products and systems certification stating that the properties and performance of a building material or method of construction or design fulfil specific requirements of the Housing Provisions.

Professional engineer means a person who is –

a) if legislation is applicable – a registered **professional engineer** in the relevant discipline who has appropriate experience and competence in the relevant field; or

b) if legislation is not applicable –

   i) a Corporate Member of the Institution of Engineers, Australia; or

   ii) eligible to become a Corporate Member of the Institution of Engineers, Australia, and has appropriate experience and competence in the relevant field.

Registered Testing Authority means –

- an organisation registered by the National Association of Testing Authorities (NATA) to test in the relevant field;
- an organisation outside Australia registered by an authority recognised by NATA through a mutual recognition agreement; or
- an organisation recognised as being a **Registered Testing Authority** under legislation at the time the test was undertaken.

Swimming pool means any excavation or structure containing water and principally used, or designed, manufactured or adapted to be principally used for swimming, wading, paddling, or the like, including a bathing or wading pool, or spa.

Building Act 2011 and Building Regulations 2012

Building permit and notice of completion

The Act and Regulations came into effect in April 2012.

Swimming pools and pool safety barriers require a building permit to be issued by the permit authority prior to construction (*Building Act 2011* section 9), unless otherwise exempt.

A building permit is required for a portable swimming and spa pool that will remain erected for a period of more than one month (*Building Act 2011* section 69).

Changes and modifications to swimming pool barriers, that affect the way in which the barrier complies with building standards, may require a building permit. Queries should be directed to the relevant permit authority.

As part of the process for obtaining a building permit, a registered building surveyor assesses the plans and specifications and certifies that the pool and its safety barriers will comply with the applicable building standards prior to issuing a certificate of design compliance (Building Commission form BA3) (*Building Act 2011* section 19(3)).

The building permit must include the requirement for the required inspection under regulation 28 (*Building Act 2011* section 25(3)(h)(ii)).

At the completion of the work, the person named as builder on the building permit must provide the permit authority with a notice of completion (Building Commission form BA7) (*Building Act 2011* section 33). If the building permit listed the required inspection under regulation 28, this notice must be accompanied by an inspection certificate that confirms whether the safety barriers comply with the Regulations (*Building Act 2011* section 33(2)(c), Building Regulations 2012 regulations 28 and 29).

This inspection certificate is separate to the four yearly pool inspection carried out by the relevant local government. It is the responsibility of the builder, as named on the building permit, to organise the inspection certificate.

Inspections

The Regulations requires each local government to cause all private swimming pools in non-exempt areas (Building Regulations 2012 regulation 49) to be inspected at intervals not exceeding four years (Building Regulations 2012 regulation 53(1)). The purpose of this inspection is to monitor whether legislation, codes, and standards, are being complied with in regards to the pool safety barriers.

Swimming pools that are not located in a local government district specified in Building Regulations 2012 – column 1 of the Table in Schedule 5, in the area specified for that district in column 2 of that Table, do not require a four yearly inspection, but must still have a compliant pool barrier installed prior to filling with more than 300 mm in depth of water (Building Regulations 2012 regulation 49).

A common query is that a particular local government is not on the list. Please note the last entry in Schedule 5 which states:

Column 1 Local government district	**Column 2 Areas of State where Part 8 Division 2 applies**
All other districts	All townsites

Pool inspectors need to be mindful of the date that the building permit application for the swimming pool was submitted to the permit authority and/or the installation date of the swimming pool they are attending, to ensure that the correct set of requirements are being applied to the safety barriers.

A pool inspector is required to be an authorised person. An authorised person includes a person who is authorised by a local government as having the appropriate experience or qualifications (*Building Act 2011* sections 3, 93(2)(d) and 96, Building Regulations 2012 regulations 5A and 53(1)).

A pool inspector who was an authorised person under the repealed section 245A of the *Local Government (Miscellaneous Provisions) Act 1960* immediately before repeal day is taken

to be an authorised person in relation to the inspection of a barrier to a private swimming pool until 2 April 2017 (Building Regulations 2012 regulation 54).

The pool inspector should have an identity card which identifies the person as an authorised person and which contains a recent photograph of the person. The identity card must be carried at all times when attending inspections (*Building Act 2011* sections 97(2) and 97(5)).

Generally the pool inspector must produce the identity card or have the identity card displayed so it is clearly visible to the other person prior to conducting the inspection. (*Building Act 2011* section 98).

There may be limitations on the powers of an authorised person and pool inspectors should familiarise themselves with any limitations that may apply to themselves (*Building Act 2011* section 99).

The Act permits the pool inspector to take photographs of the pool barriers (*Building Act 2011* section 101(1)(c)).

The Act requires the pool inspector to obtain consent from an adult occupier prior to entering a part of a place used as a residence (*Building Act 2011* section 100(2)(a)). A common practice is for the local government to post a letter to the occupier requesting permission to inspect the pool barriers at an agreed time and date.

Where consent from the adult occupier cannot otherwise be obtained, an entry warrant is required (*Building Act 2011* section 100(2)(b)).

The pool inspector should be aware of other entry requirements including *Local Government Act 1995* section 3.31.

The pool inspector, subject to limitations as detailed above, may use assistance and force that is reasonably necessary but cannot use force against a person. If the reasonable force is likely to cause significant damage to the property it must be under direction of a police officer (*Building Act 2011* section 103).

At the completion of an inspection, typically the pool inspector will provide an inspection report to the owner / occupier that details whether the pool barriers were found compliant, and if not, list the non-compliances identified. The legislation is silent on the manner and form of inspection reports for the purpose of the four year inspection.

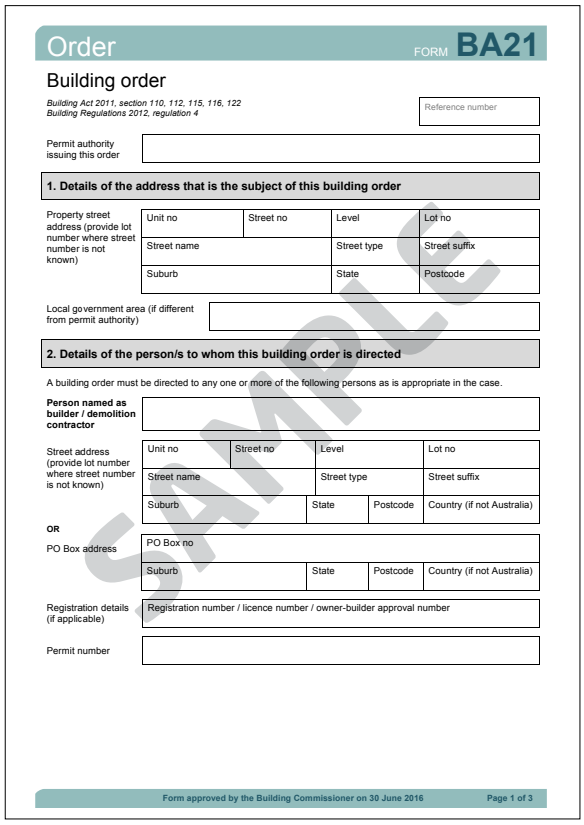
It is commonplace for the pool inspector to reinspect a non-compliant safety barrier to ensure compliance has been achieved.

Local governments are permitted, for a financial year, to fix the charge to be imposed on each owner or occupier of land on which there is a swimming or spa pool, to meet the estimated costs for that financial year of carrying out inspections. The fee charged must not exceed the estimated average cost to the local government of carrying out inspections in that year. The maximum fee that can be charged is $57.45 (Building Regulations 2012 regulation 53(2)).

Building orders

The Act sets out specific requirements regarding the making of building orders.

The BA21 Building order form can be obtained from the Building Commission extranet, available to all permit authorities.



Order FORM BA21

Building order

Building Act 2011, section 110, 112, 115, 116, 122
Building Regulations 2012, regulation 4

Reference number

Permit authority issuing this order

1. Details of the address that is the subject of this building order

Property street address (provide lot number where street number is not known)

Unit no	Street no	Level	Lot no
Street name		Street type	Street suffix
Suburb		State	Postcode

Local government area (if different from permit authority)

2. Details of the person/s to whom this building order is directed

A building order must be directed to any one or more of the following persons as is appropriate in the case.

Person named as builder / demolition contractor

Street address (provide lot number where street number is not known)

Unit no	Street no	Level	Lot no
Street name		Street type	Street suffix
Suburb	State	Postcode	Country (if not Australia)

OR

PO Box address

PO Box no			
Suburb	State	Postcode	Country (if not Australia)

Registration details (if applicable) — Registration number / licence number / owner-builder approval number

Permit number

SAMPLE

Form approved by the Building Commissioner on 30 June 2016 Page 1 of 3

Section 110(1) of the Act allows orders to be made in respect of building or demolition work (ie work that is currently under way) or in respect of a building or incidental structure, whether completed or not, and whether completed before or after commencement day.

Section 110(2) of the Act requires building orders to be in a consistent form and to be given to the person best able to respond to the order. Where building or demolition work is under way and a building or demolition permit is in place, the most appropriate person will be the builder or demolition contractor named on the permit. Where no permit is in place, or where the builder or demolition contractor is not available, the most appropriate person is the owner, or is in some cases, the occupier.

Section 111(1) of the Act requires an authorised person to give 14 days' notice of a proposed building order and why it is proposed to be issued. A person given notice can respond and the response must be considered before the building order has effect.

In any case, permit authorities may seek legal advice in regards to the use of building orders to ensure compliance with the legislation.

Infringement notices

The local government is responsible for enforcing swimming pool safety barrier compliance and the Regulations set out specific requirements and penalties to carry out this role.

Part 10 of the Regulations sets out:

- prescribed offences and modified penalties;
- requirements for the appointment of authorised officers and approved officers, including certificates (note that this is different from an authorised person); and
- the specific forms to be used when issuing or withdrawing an infringement notice (Schedule 7).

Schedule 6 sets out the offences for which an infringement notice may be issued and the corresponding modified penalty.

Generally for swimming pool barrier non-compliance the applicable offence is Building Regulations 2012 regulation 50(1):

- Each owner and occupier of premises on which there is a private swimming pool containing water that is more than 300 mm deep must ensure that there is installed or provided around the pool a barrier that restricts access by young children to the pool and its immediate surrounds.

Building Regulations 2012 Schedule 6

Offences		Modified penalty ($)
r. 50(1)	Barrier to a private swimming pool	750

In any case, permit authorities may seek legal advice in regards to the use of infringement notices.

Prosecutions

Permit authorities are encouraged to seek legal advice in regards to prosecutions.

Post-May 2016 pools

Technical requirements

The Regulations have two sets of safety barrier requirements depending on when the swimming pool was installed or when plans for the installation of the pool were submitted to the permit authority for approval:

- Post 1 May 2016
- Pre 1 May 2016

Owners, builders, and demolition contractors have different responsibilities under the Regulations:

Regulation	Who is responsible
r. 28 Required inspection: barrier to a private swimming pool	Builder
r. 29 Inspection certificates	Builder
r. 31C Applicable building standards for swimming pools	Builder
r. 50 Barrier to private swimming pool	Owner and occupier
r. 54A Temporary pool barriers	Builder, demolition contractor, and owner

An empty pool/spa does not require a compliant pool safety barrier until it has at least 300 mm (depth) of water in it (Building Regulations 2012 regulations 3 and 50(1)).

A pool that is required to be filled with water during construction (eg a fibreglass pool) must have a compliant safety barrier, either temporary or permanent, installed before the pool can be filled with more than 300 mm (depth) of water. A temporary barrier must not be removed until a permanent complying barrier is installed. Some permit authorities may have specific requirements for temporary barriers.

If a fence, wall, gate or component is removed for any period, the builder or owner must ensure an alternative barrier that complies with the relevant pool barrier requirements is installed or provided for the extent of that period (Building Regulations regulation 54(A)).

Fish ponds

Generally fish ponds are not required to comply with the pool safety barrier requirements, as they do not fit the definition of 'swimming pool' or 'private swimming pool' in the Regulations. Where an existing swimming pool is converted into a fish pond, the local government needs to carefully consider whether the structure continues to meet the definition of 'swimming pool' and whether the pool safety barrier requirements continue to apply.

General

For a post-May 2016 pool, the Regulations nominate the current edition of the BCA as the applicable building standard for the pool barriers (Building Regulations 2011 regulation 31C).

The deemed-to-satisfy provisions of the BCA references:

- AS 1926.1-2012 for the design, construction and performance of the safety barriers; and
- AS 1926.2-2007 for the location of the safety barriers.

These standards do not allow the use of a door as part of the barrier to an outdoor pool.

Albeit that many clauses in Part 4 of the Regulations permit the use of the BCA in effect 12 months before the time the application is made, this does not apply to pool safety barriers.

Alternative requirements

The permit authority may approve an alternative solution in regards to a swimming pool barrier if it is satisfied that, at the time of granting approval, the alternative solution will meet the performance requirements set out in the BCA applicable to swimming pool safety barriers (Building Regulations 2012 regulation 51(5)).

Pool inspectors should be aware of approved alternative requirements that may be applicable to the pool barriers they are to inspect.

AS 1926.1-2012 commentary

The following commentary is intended to be read in conjunction with the Standard. For your convenience, the clause numbers are consistent with the Standard.

1.3 Definitions

Please refer to AS 1926.1-2012 for definitions.

2.1 General

Effective pool safety barriers must be provided to restrict young children from gaining access into the swimming pool area.

Pool barriers must be permanent in nature, unable to be removed or dismantled without the use of tools. Removable pool barriers are not permitted.

The pool barrier must be free of sharp edges or projections so as to not to cause injury.

Pool inspectors should check for significant corrosion, particularly in coastal areas. Pool inspectors may lightly shake and apply force to a barrier to ensure stability. Rattling may indicate loose fixings. Refer to section 3 of AS 1926.1-2012 for loading requirements.

A pool barrier located within the property must not be less than 1200 mm in height, as measured on the outside of the barrier. Where a barrier has a horizontal surface at the top of the barrier the effective height is measured perpendicular to the finished ground level. It is however, more problematic to identify where the top of the effective height is located on a rounded top surface.

Clause 2.3.6 requires that the maximum gap between vertical members must not exceed 100 mm at any point. The rounding at the top of the fence may create gaps greater than 100 mm. The measurement should therefore not be taken at the top of the rounding, but to the upper point in the fence where the 100 mm gap is exceeded (see Figure 1).

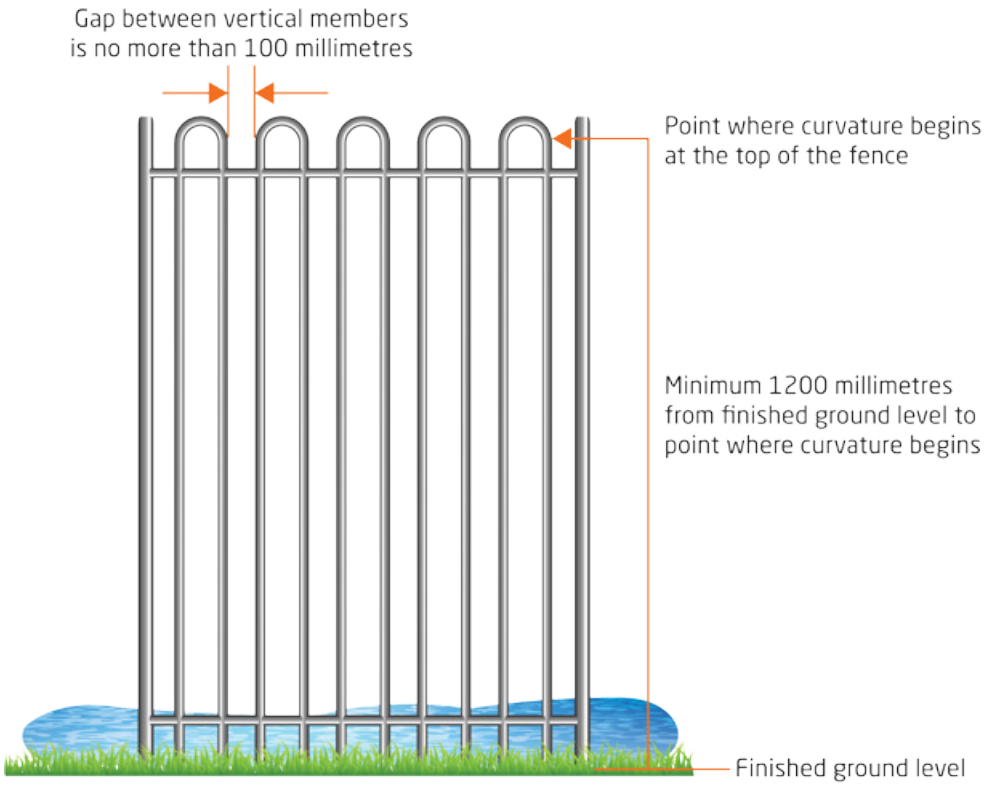


Figure 1

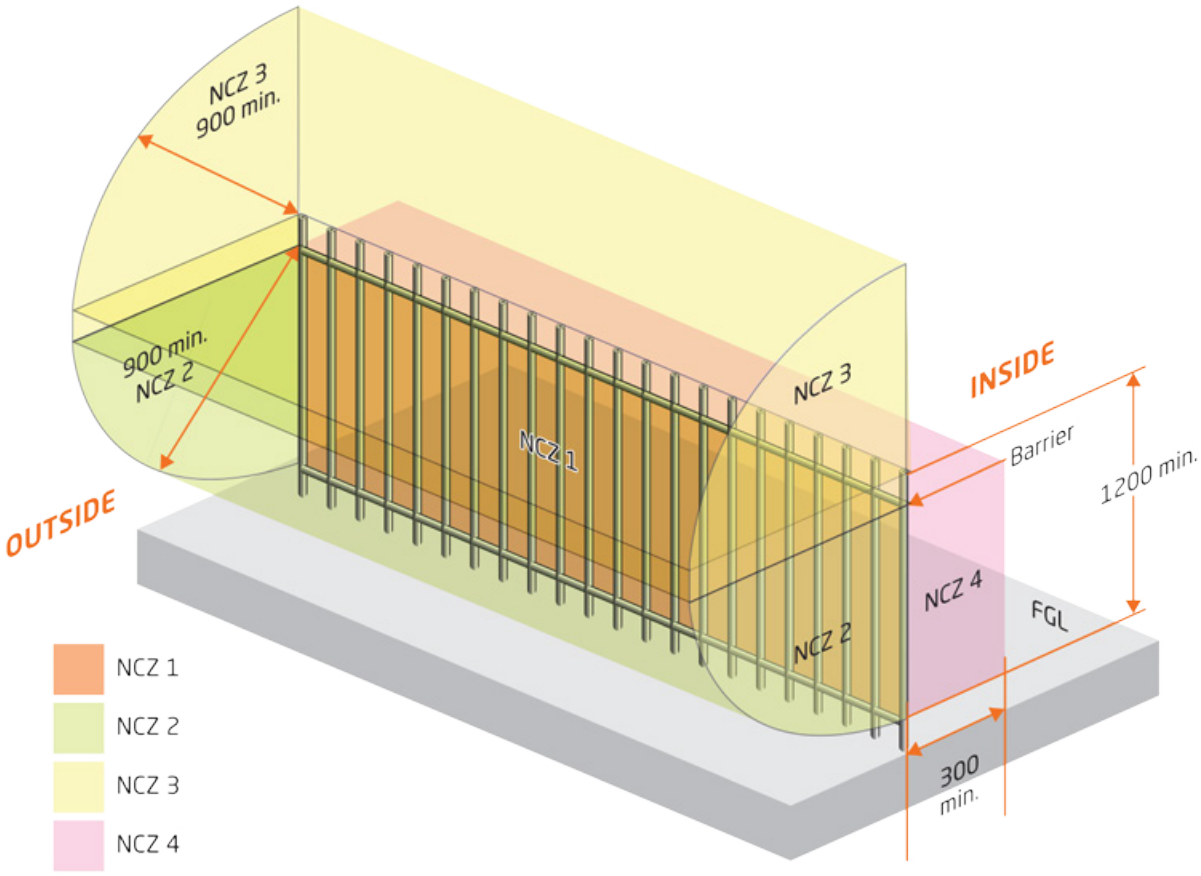


Figure 2

2.2 Non-climbable zone (NCZ)

2.2.1 General

There must be no climbable objects, handholds, or footholds within any non-climbable zone (NCZ) and all NCZs, except NCZ 4, are to have a radius of 900 mm.

NCZs must extend the entire length of a barrier including a gate.

2.2.2 Barriers less than 1800 mm in height

NCZs have specific requirements. NCZs are only applicable to barriers that are less than 1800 mm in height when measured on the outside of the barrier (non-pool side).

- NCZ 1 = 900 mm vertical measurement between horizontal components or hand-holds and footholds, located anywhere within the barrier (see Figure 3).
- NCZ 2 = 900 mm quadrant (3 o'clock to 6 o'clock), aligned with NCZ 1 (see Figure 4a and b).
- NCZ 3 = 900 mm quadrant (12 o'clock to 3 o'clock) at the top of the barrier. Additionally the NCZ extends down to the top of NCZ 1 and 2 (see Figure 5).
- NCZ 4 = 300 mm on the inside of the barrier, aligned with NCZ 1, where openings in the barrier exceed 10 mm (see Figure 6).

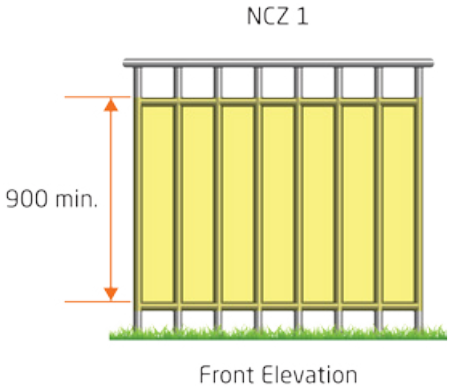


Figure 3

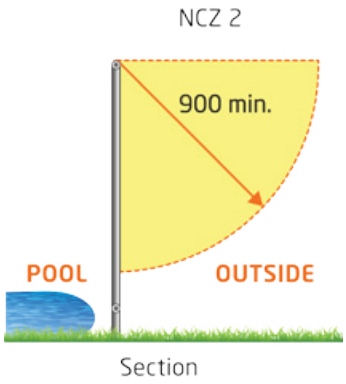


Figure 4a

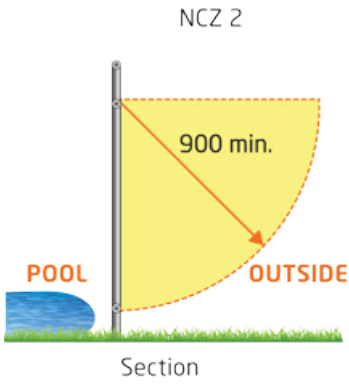


Figure 4b

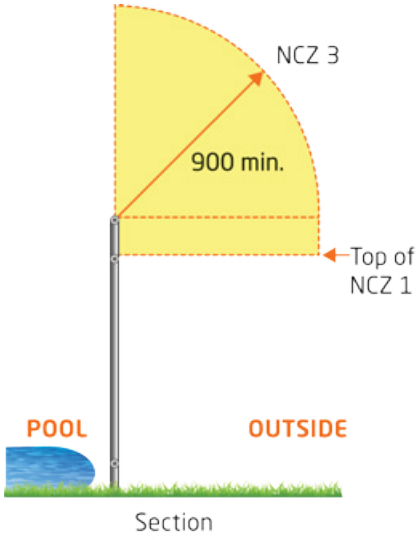


Figure 5

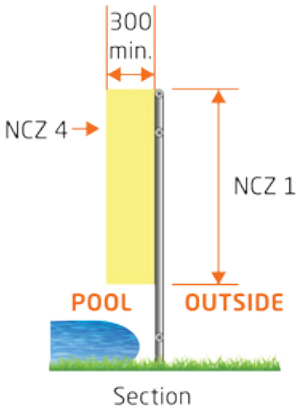


Figure 6

Climbable objects include BBQs, garden furniture, water features/ornaments, climbable trees/ shrubs, garden light fixtures, retaining walls, taps, plumbing and raised pool sides.

Where a climbable object is located within NCZ 4 (the inside of the barrier) an alternative to removing the object is the installation of a shield (eg toughened glass, perspex, plywood, tin, aluminium sheets or reinforced fly mesh), that complies with the strength and rigidity tests in section 3 of AS 1926.1-2012, at the point where the climbable object is inside the fence. The shield must be positioned to cover the position of NCZ 1 and extend at least 300 mm either side of the climbable object.

Trees, shrubs, or other objects may be placed within a NCZ if they are unclimbable. A tree or shrub with thorns or which is incapable of supporting a young child's weight is also permissible.

Where these objects are climbable and are located on the outside of the barrier within a NCZ, an additional barrier may need to be provided to segregate them. Alternatively, the primary barrier could be constructed around them (see Figure 8).

Post-May 2016

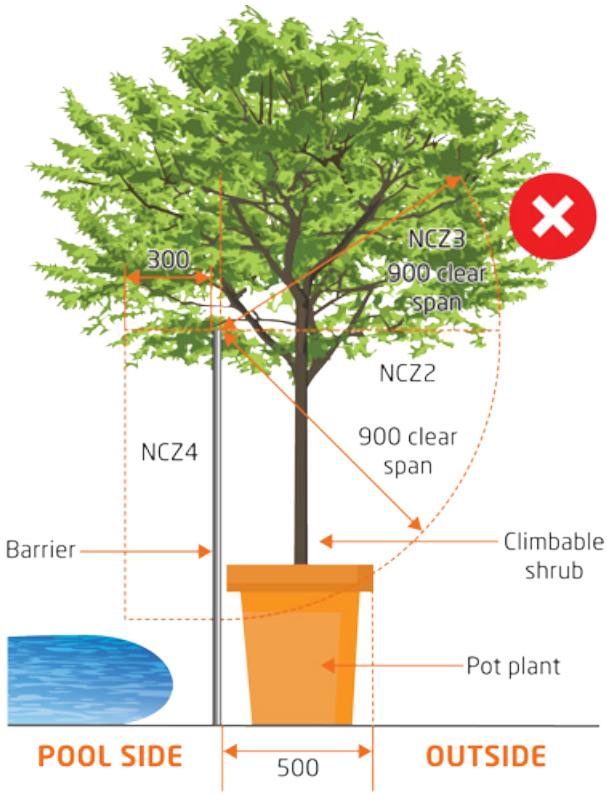


Figure 7a

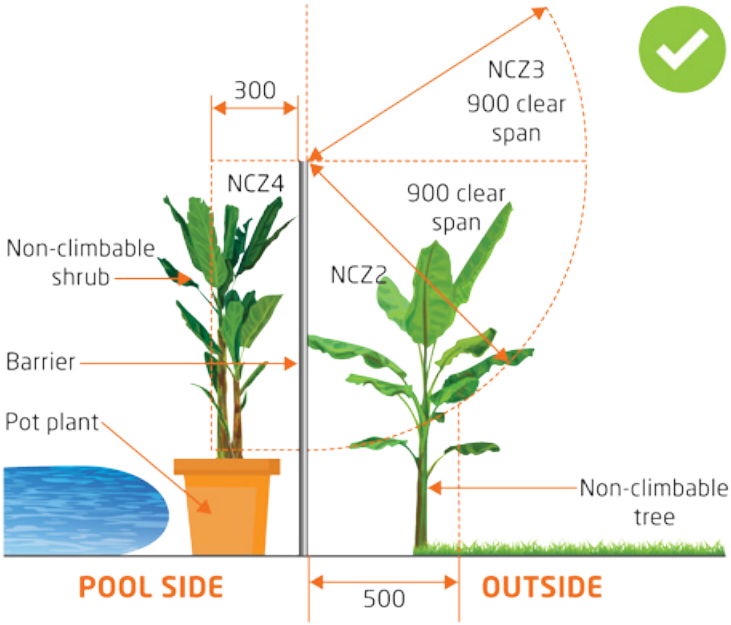


Figure 7b

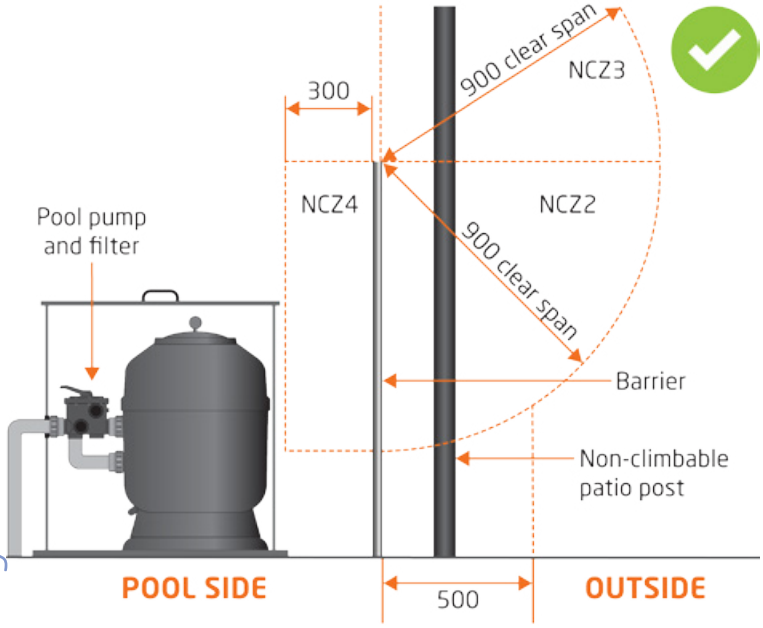


Figure 7c

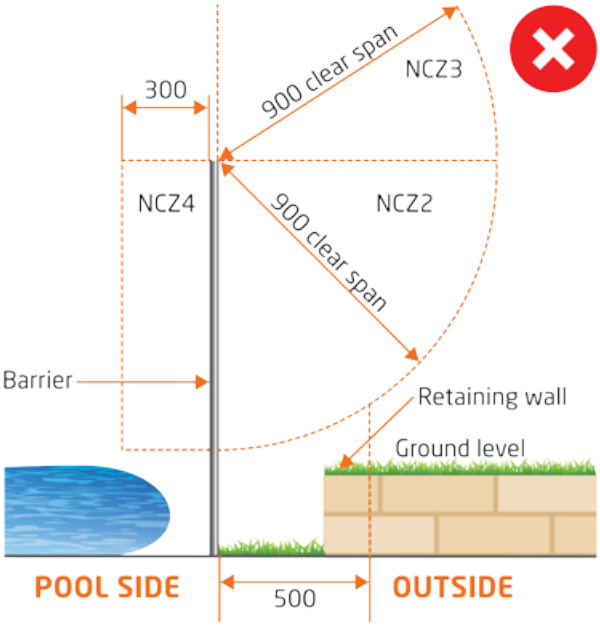


Figure 7d

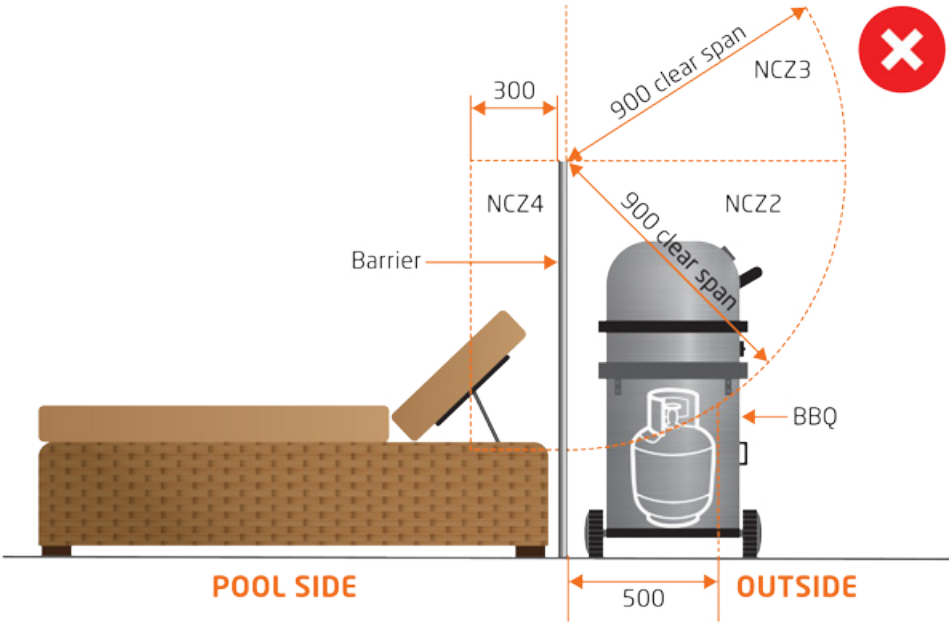


Figure 7e

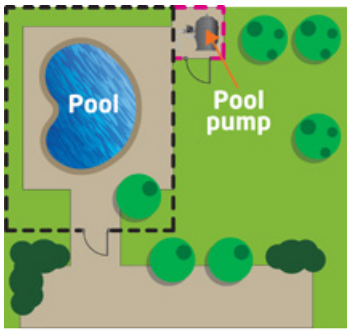


Figure 8

2.2.3 Barriers not less than 1800 mm in height

This clause details the specific requirements of barriers at least 1800 mm in height when measured on the outside of the barrier (non-pool side).

- NCZs do not apply.
- The barrier is permitted to be climbable on both sides.

Barriers in this category may include fences made of chain-link mesh, lattice, etc.

2.2.4 Boundary barriers

A boundary barrier is a dividing barrier between two adjoining properties. This includes, but is not limited to, a barrier between the pool area and:

- an adjoining green-title property;
- the verge;
- road;
- lane or right of way;
- crown land;
- public park; and
- adjoining strata property.

A boundary fence that forms part of the pool barrier:

- must be at least 1800 mm high when measured from the finished ground surface on the pool area side;
- may be climbable on the outside (neighbour's side);
- may be climbable below NCZ 5 on the inside (pool side);
- must have no climbable objects or components within NCZ 5 (pool side). This is a 900 mm quadrant located between 3 o'clock to 6 o'clock and includes the face of the barrier (See Figure 9);

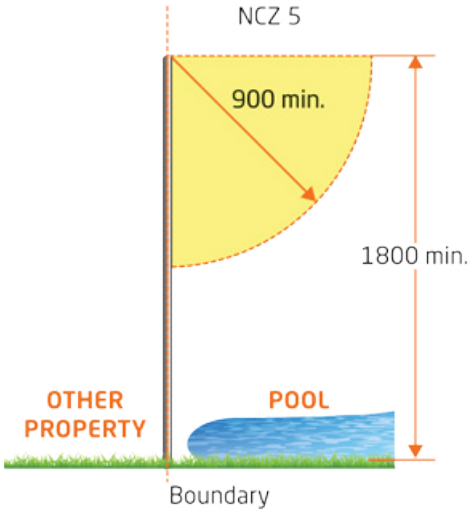


Figure 9

- may have an intersection with a compliant internal barrier at an angle of 45 to 135 degrees where the internal barrier has a top rail or surface that does not exceed 50 mm in width, albeit within NCZ 5; and
- may have an intersection with a compliant internal barrier where the internal barrier has a top rail or surface that exceeds 50 mm in width within NCZ 5 and the internal barrier is at least 1800 mm high within NCZ 5. The 1800 mm high portion must extend for a distance of at least 900 mm from the boundary barrier.

Where an existing boundary fence is less than 1800 mm high, and the fence height is extended to meet the 1800 mm height requirement, NCZ 5 applies from the top of the fence extension. Depending on the fence material, this can pose a problem as the extension may create gaps, spaces, or joints inside the NCZ 5 that render the fence non-compliant.

Where a lattice or similar extension has been used at the top of a boundary barrier, this may render the barrier non-compliant, as NCZ 5 is measured from the top of the barrier. This may be resolved by covering the lattice extension, on the pool side, with a compliant product, such as wire mesh with apertures of 13 mm or less.

Where post-May 2016 swimming pools occur on both sides of a boundary barrier, both sides are required to be at least 1800 mm high with NCZ 5 applicable on both sides.

Please note that AS 1926.1-2012 is silent on the use of 60 degree chamfers on a boundary barrier. The Standard only details their use on barriers less than 1800 mm high. However, the intent of their use is to make a climbable surface non-climbable, as such their use on boundary barriers is considered acceptable.

It should be noted that in many local governments, local fencing laws control boundary fence heights. In certain circumstances a planning approval and/or building permit may be required for a boundary fence that exceeds 1800 mm in height. Pool inspectors should be careful not to provide advice that may lead to a breach of other requirements.

For a boundary barrier, the effectiveness is the fear of the fall. For most other barriers the effectiveness is the inability to climb the outer face of the barrier.

2.2.5 Intersecting barriers

The intersection of a barrier less than 1800 mm in height with a climbable barrier is permitted where:

- the barrier less than 1800 mm in height has compliant NCZs; and
- the climbable barrier has NCZ 1 and NCZ 2 continued from the lower barrier for at least 900 mm across (see Figure 12).

This also applies in instances as demonstrated in Figure 10. NCZ 1 and 2 transfer from the 1200 mm high section of the barrier to the 1800 mm high section.

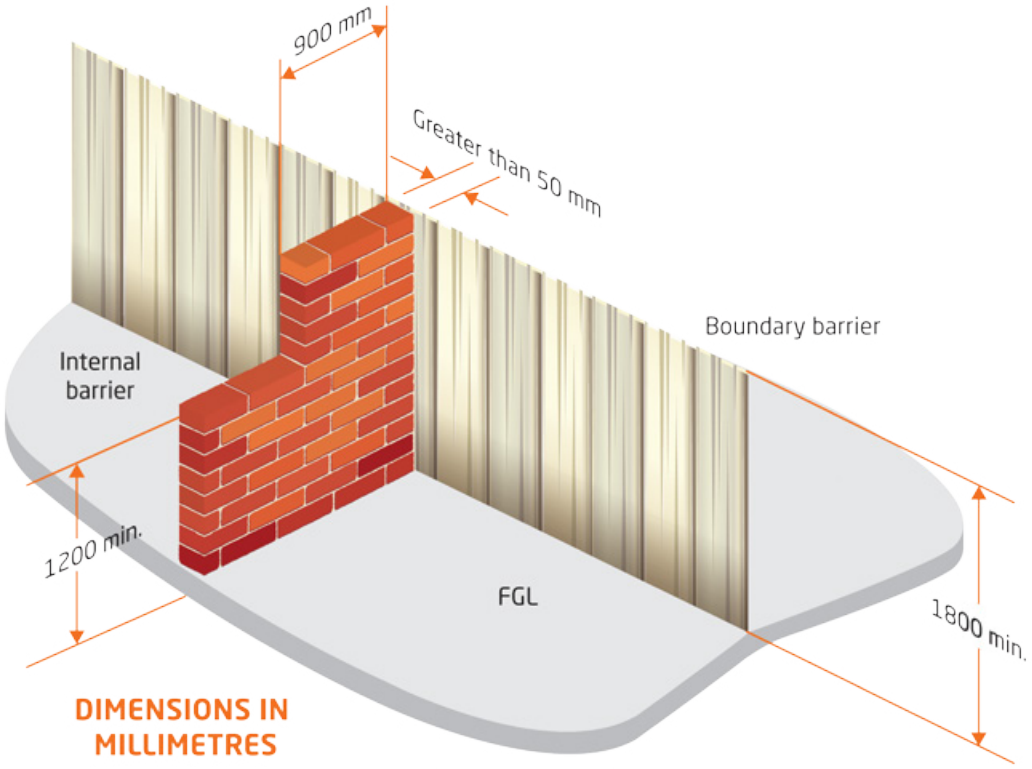


Figure 10

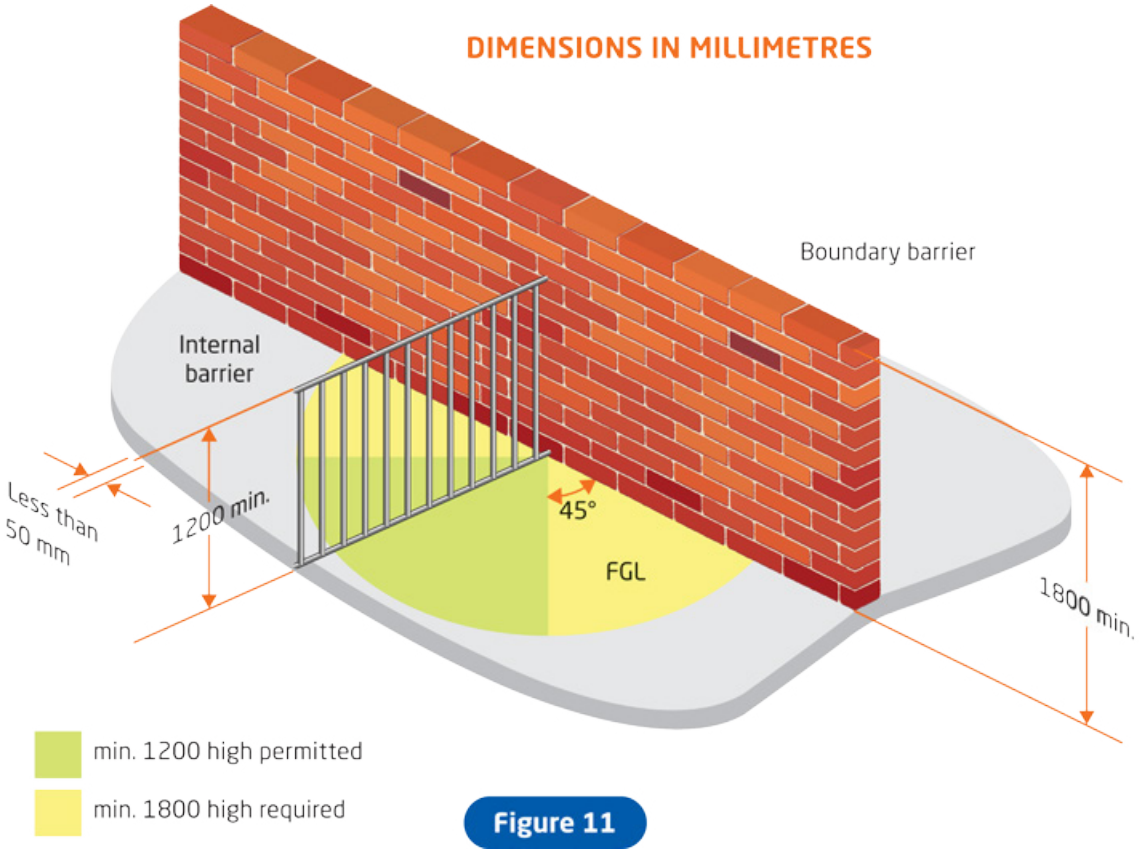


Figure 11

Post-May 2016

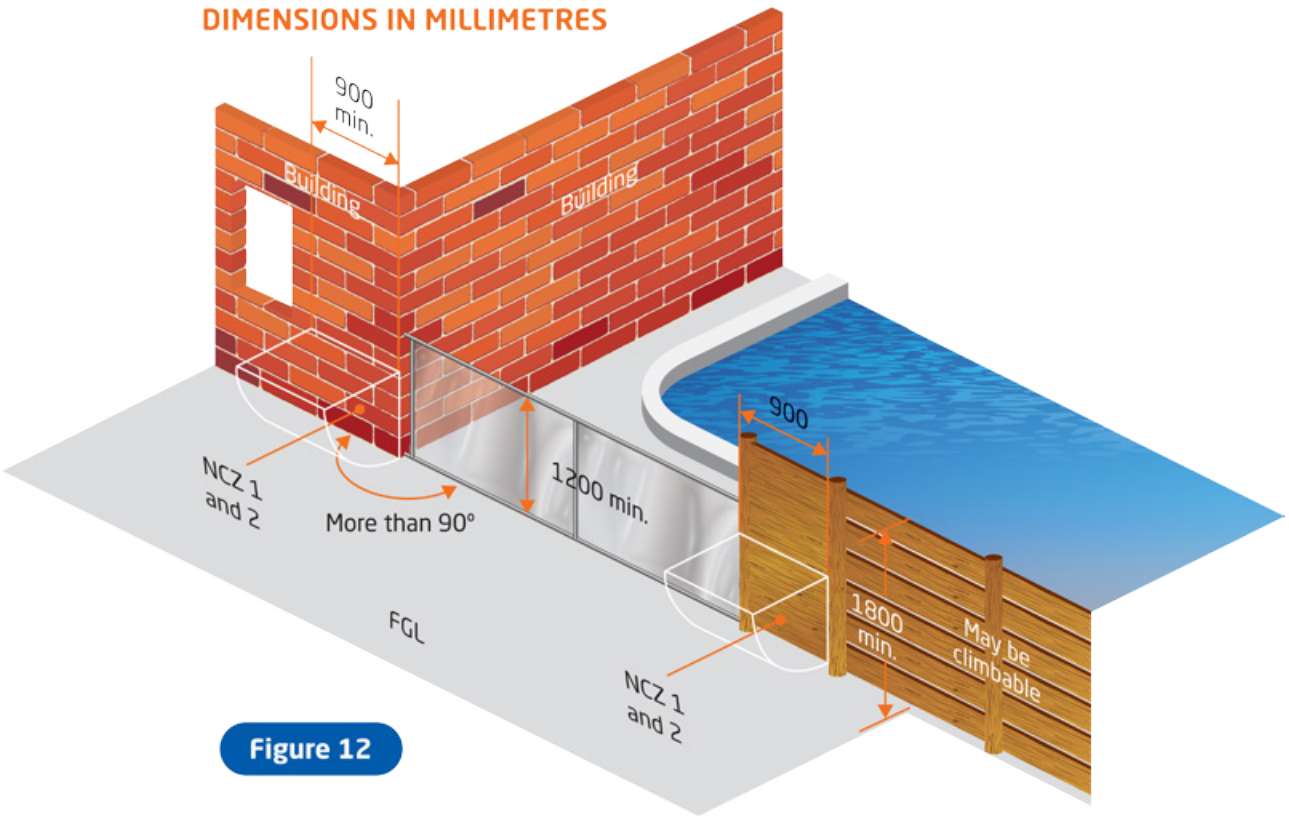


Figure 12

2.3 Barriers

2.3.1 Features and objects near a barrier

In addition to various NCZs, there must be no climbable objects, steps, retaining walls or ground level changes within 500 mm of the barrier, that reduce the effective height of the barrier. This is typically aimed at preventing retaining walls and other low level objects from reducing the effective height of the barrier. Examples of this are demonstrated in Figure 13.

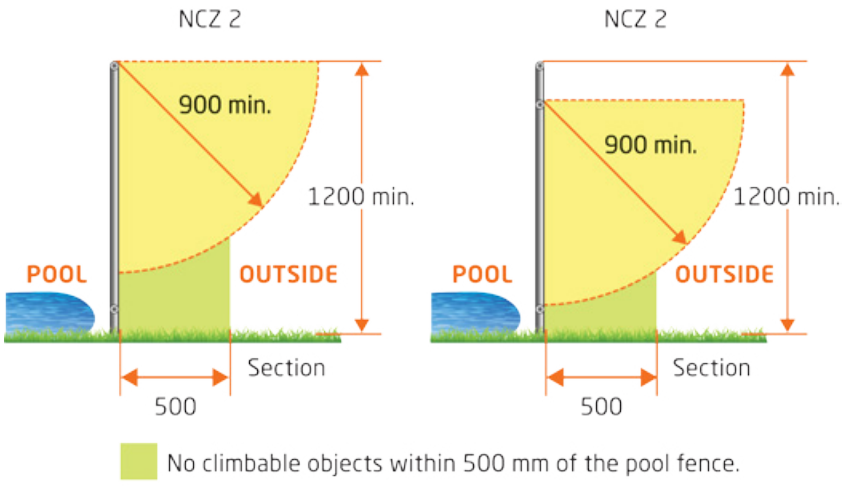


Figure 13

2.3.2 Perforated material or mesh

Perforated materials used for a pool barrier are permitted subject to the following:

- If the gaps, measured horizontally, do not exceed 13 mm the barrier must be at least 1200 mm in height. These types of materials can be used within a NCZ.
- If the gaps, measured horizontally, exceed 13 mm the barrier is deemed climbable and the barrier must be at least 1800 mm in height.
- The maximum gap permitted, measured horizontally, is 100 mm.
- Barriers must not be subject to undue distortion by applied force:
  - 250N (approx. 25kg) from above - not to reduce the barrier height to less than 1.2m.
  - 100N (approx. 10kg) from below - not to create a gap under the barrier of more than 100 mm.

Examples of materials that have perforations greater than 13 mm include chain-link/cyclone fence, lattice, aviary wire, and chicken wire.

Figure 14

2.3.3 Glass barriers

AS 1288-2006 Glass in buildings – Selection and installation is referenced in AS 1926.1-2012 for glass safety barriers. Glass barriers are required to be compliant with AS 1288-2006. AS 1288-2006 clause 7.4 requires that glass pool fencing be type A safety glass.

Glass panels may or may not have a permanent marking or label. AS 1288 details that a marking may be by either:

- a label of a type that cannot be removed and re-used; or
- a permanent mark on the glass surface.

Pool inspectors may require the supplier or manufacturer to provide evidence that the glass pool barrier complies with AS 1288.

As glass pool barriers are required to be type A safety glass, AS 1288 also requires compliance with AS/NZS 2208-1996 which has additional requirements and tests.

Pool inspectors should be diligent at the first inspection of a new pool barrier to ensure barriers comply. Requesting test certificates from property owners eight or twelve years later would be problematic for all parties involved. Test certificates may have been provided in the building permit for the pool barrier and/or with the BA7 notice of completion.

Hinges for glass barriers must comply with AS 1926.1-2012 clause 2.4.3.

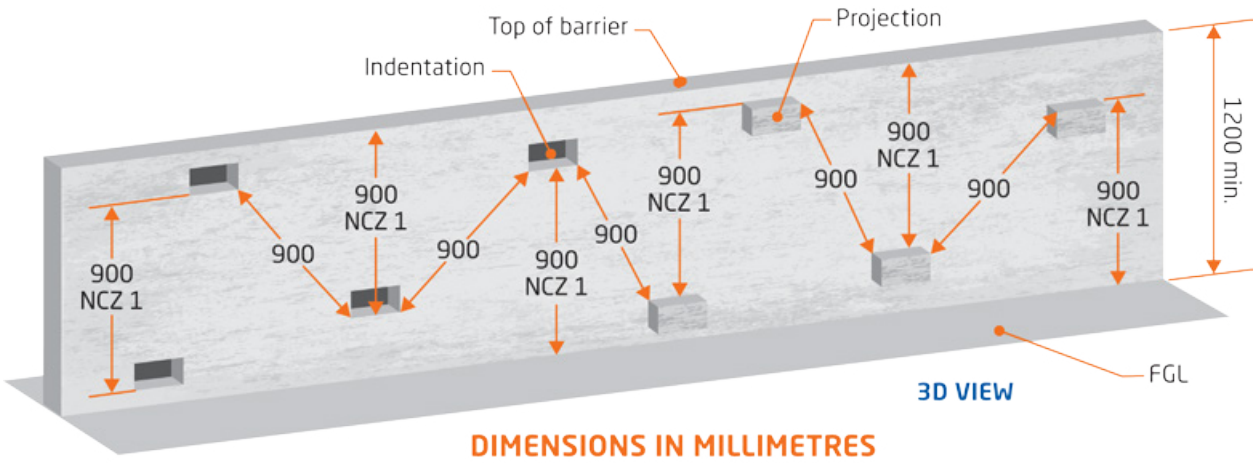


Figure 15

2.3.4 Surface projections and indentations

Projections and indentations that exceed 10 mm are considered footholds and/or handholds and should not be located within a NCZ. Barriers, such as masonry walls, that have random indentations and projections must have them spaced at least 900 mm apart so as to not facilitate climbing (see Figure 15).

Pool inspectors should check mortar joints that form part of the barrier. The application of the 60 degree chamfer may assist in rectifying non-compliances (see Figure 16).

2.3.5 Horizontal components

The following apply to barriers less than 1800 mm in height:

- Horizontal surfaces, that would otherwise form a handhold or foothold, that are within NCZ 1 and/or NCZ 2, and that have an upper surface of at least 60 degrees to the horizontal are permitted where the gap between vertical members, if applicable, does not exceed 10 mm. This is similar to the 1993 edition (see Figure 16).*
- For sloping barriers, all NCZs must be measured parallel to the top of the barrier (see Figure 19a).
- For barriers constructed on sloping / stepped land, the 1200 mm height measurement and NCZ measurements must be taken at any angle to ensure the height and NCZs are achieved (see diagram below). Barriers should maintain a minimum height of 1200 mm and maintain the 900 mm NCZ (see Figures 17, 18, 19a, 19b).

The maximum gap between vertical members is 100 mm. Where gaps are 10 mm or less between vertical members NCZ 4 does not apply.

*Chamfers work by sitting on the horizontal member and being flush with the surface behind, creating a sloping surface that is difficult for a child to rest a foot on. Where a gap is located in the surface behind, it may be possible for a child to place their foot into the gap, resting on the top of the chamfer, creating a foothold. AS 1926.1-2012 permits this circumstance with gaps between vertical members up to 100 mm. However the Building Regulations 2012 regulation 15B modifies this clause, permitting a maximum 10 mm between vertical members, when using a 60 degree chamfer on a horizontal member. This is consistent with the 1993 edition on the Standard.

Modifying substantial horizontal surfaces/members

DIMENSIONS IN MILLIMETRES

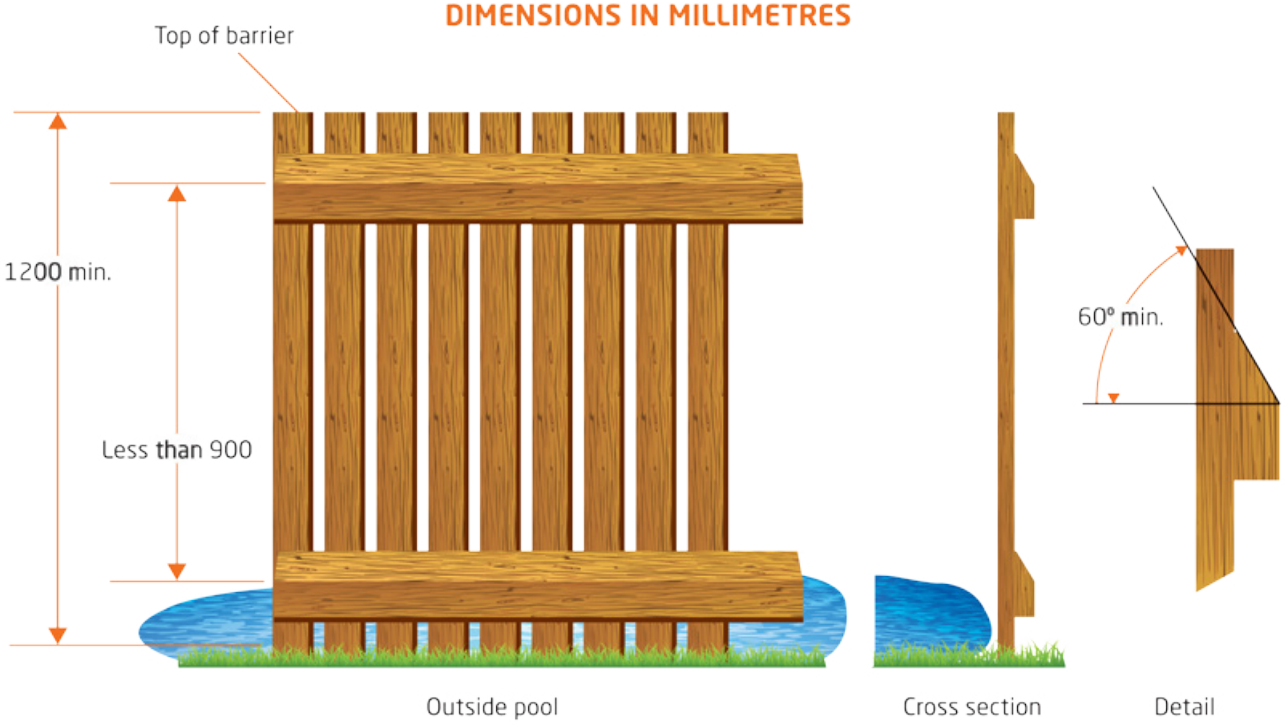


Figure 16

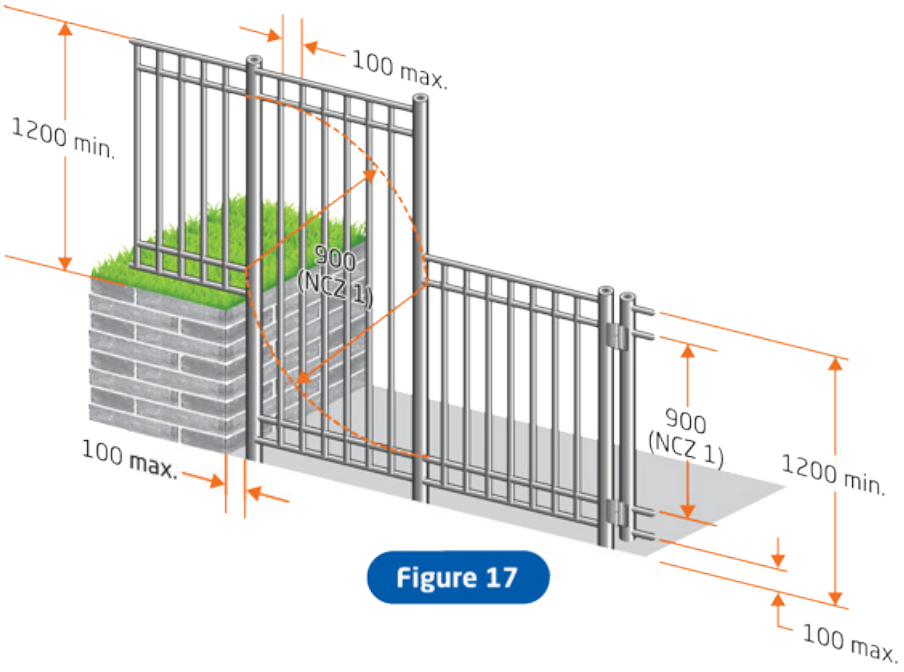


Figure 17

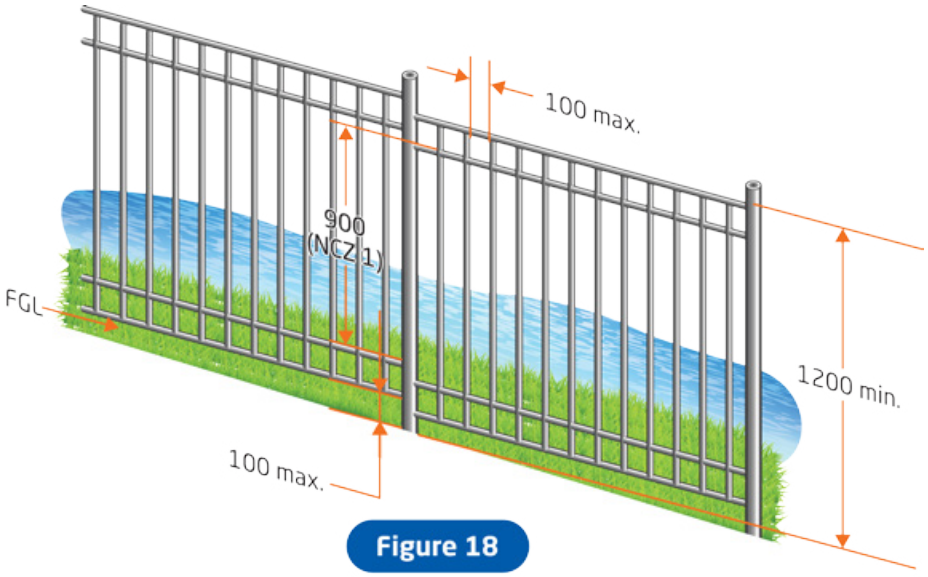


Figure 18

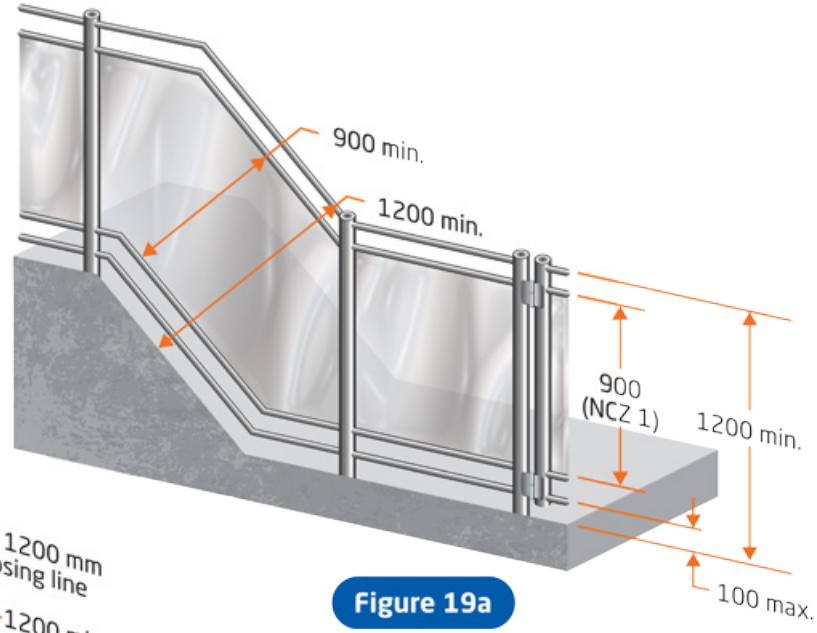


Figure 19a

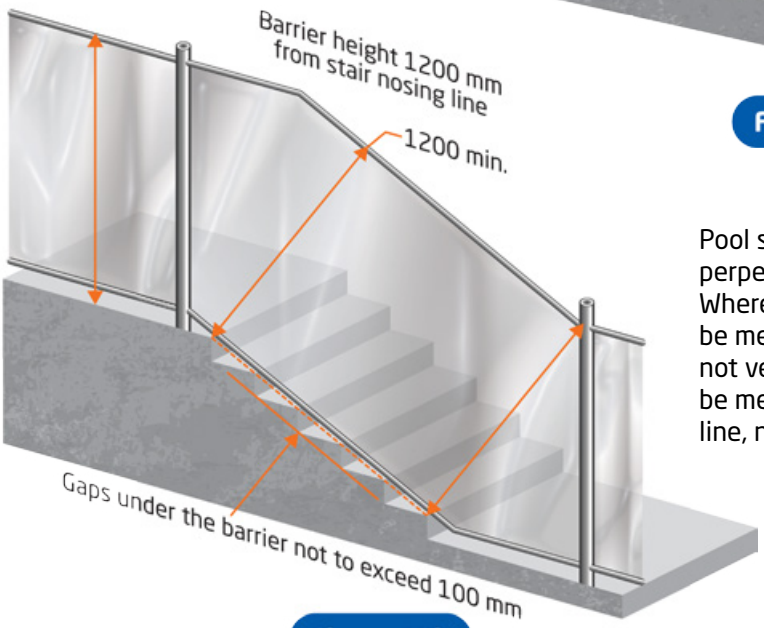


Figure 19b

Pool safety barriers should be measured perpendicularly to the finished ground level. Where the ground slopes, the barrier should be measured perpendicularly to the slope, not vertically. For stairs, the barrier should be measured perpendicularly to the nosing line, not vertically from each step.

Post-May 2016

2.3.6 Vertical components

The maximum distance between vertical members is 100 mm.

Pool inspectors should also ensure vertical members meet the strength and rigidity requirements of the Standard (see Appendices to AS 1926.1-2012 for details on strength and rigidity testing).

Pool inspectors should be aware that there have been anecdotal reports of black aluminium fences in summer having increased flexibility in the vertical members due to the warming of the fence.

2.3.7 Ground clearance

The maximum space between the bottom of the barrier and the finished ground surface beneath is 100 mm. The finished ground surface must be permanent and durable. Examples below:

- Compliant surface:
  - Paving.
  - Finished grass landscaping.
  - Artificial grass/lawn.
- Non-compliant surface:
  - Loose sand or stones, easily excavated or eroded.

2.4 Gates, gate units and latch fittings

2.4.1 Gates

Gates are the highest risk area when it comes to preventing drowning of young children.

Gates are not permitted to slide sideways or open inwards towards the pool area. They must open outwards, away from the swimming pool area.

The arc of operation of the gate must be clear of any obstructions including a doorway. A gate located directly in front of a door, where the gate swings **into the doorway** when the door is opened is not permitted (commonly termed a 'chameleon gate') (see Figure 20).

Gates must self-close when released from any open position, including resting on the latch.

Wind must not prevent the gate from self-closing effectively. Typically solid type lightweight gates can be a problem. Heavier, open style gates can be more effective in windy areas.

Gates, as with all barriers, are not permitted to have a gap underneath exceeding 100 mm.

When under an applied force of 250N (approx. 25 kg) in the downwards or upwards direction, the gate must not open, release the latch, unhinge the gate, or form an opening under the gate that exceeds 100 mm. This simulates a child standing on the gate and/or jumping.

It is preferable to have a solid surface under the gate such as paving. Grass may become overgrown and interfere with the operation of the gate, potentially creating a hazard.

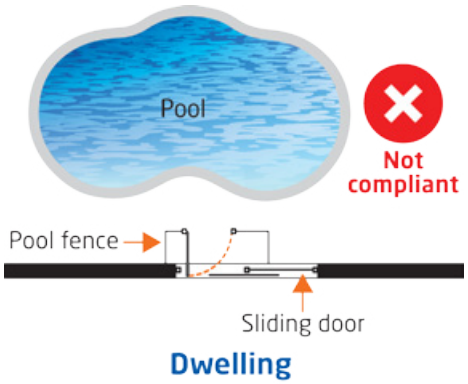


Figure 20a

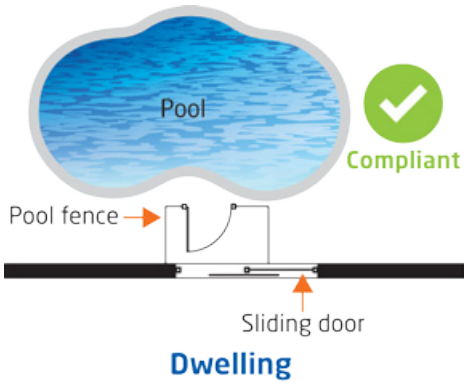


Figure 20b

2.4.2 Latch

Gate latches must be self-latching upon closure.

Where a gate latch release is located 1500 mm or higher above the finished ground level, there are no additional location requirements. There is no requirement in this Standard for the latch to be 1400 mm above the highest lower horizontal member, including the highest lower horizontal member within adjoining panels (see Figure 21).

Gate latches lower than 1500 mm must be:

- located on the inside of the barrier;
- in a position so that it will be necessary to reach over or through the fencing at a height at least 1200 mm above the finished ground level or at least 1000 mm above the highest lower horizontal member to release the latch from the outside;
- at least 150 mm below the top of the barrier if there is no hand-hole, or at least 150 mm below the edge of the hand-hole if provided; and
- shielded so that no opening greater than 10 mm occurs within an area bounded by:
  - an effective radius of 450 mm from the latch device; and
  - the top of the barrier, if this intersects the area described above.

A latching device must not be able to be released by the insertion of any implement into the 10 mm opening between the barrier and the gate.

Shields can be used to negate climbable members and objects within and inside the barrier, and to protect lower latch assemblies from the reach of a young child. A range of materials can be used including toughened glass, perspex, infill sheeting (plywood, tin, aluminium sheets etc.) and reinforced fly mesh. A shield is not required for a latch or release located more than 1500 mm above finished ground level.

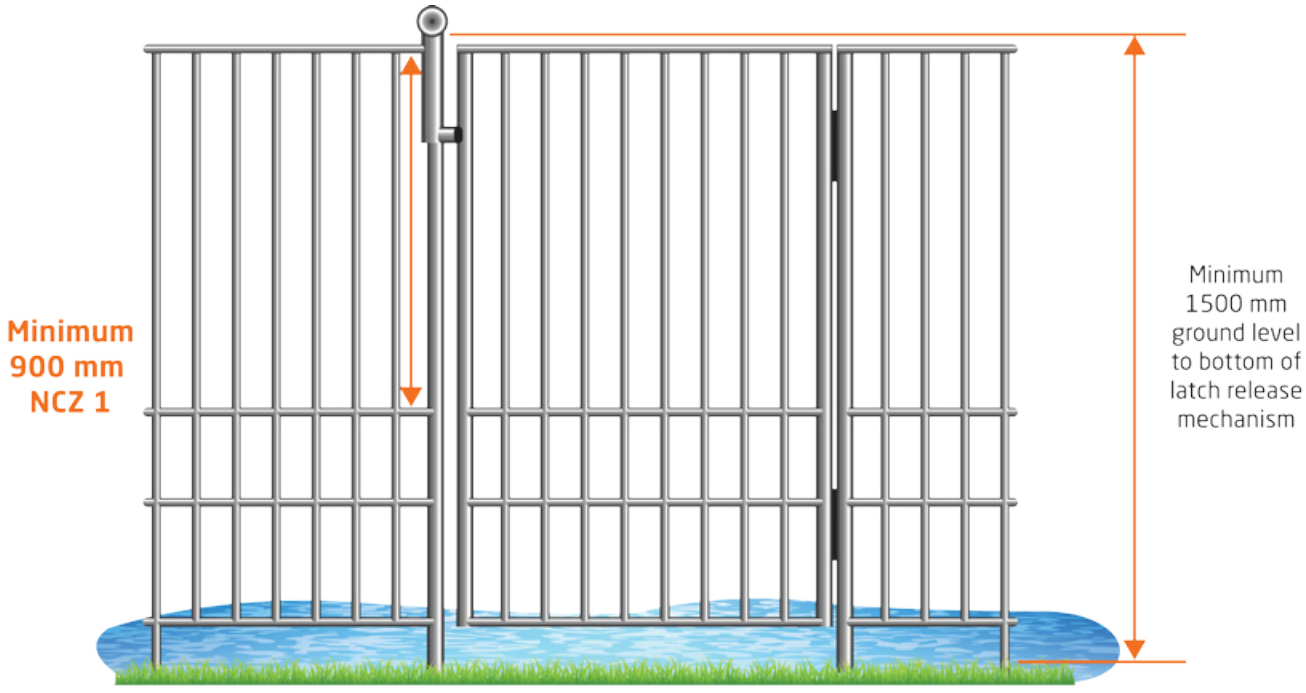


Figure 21

Post-May 2016

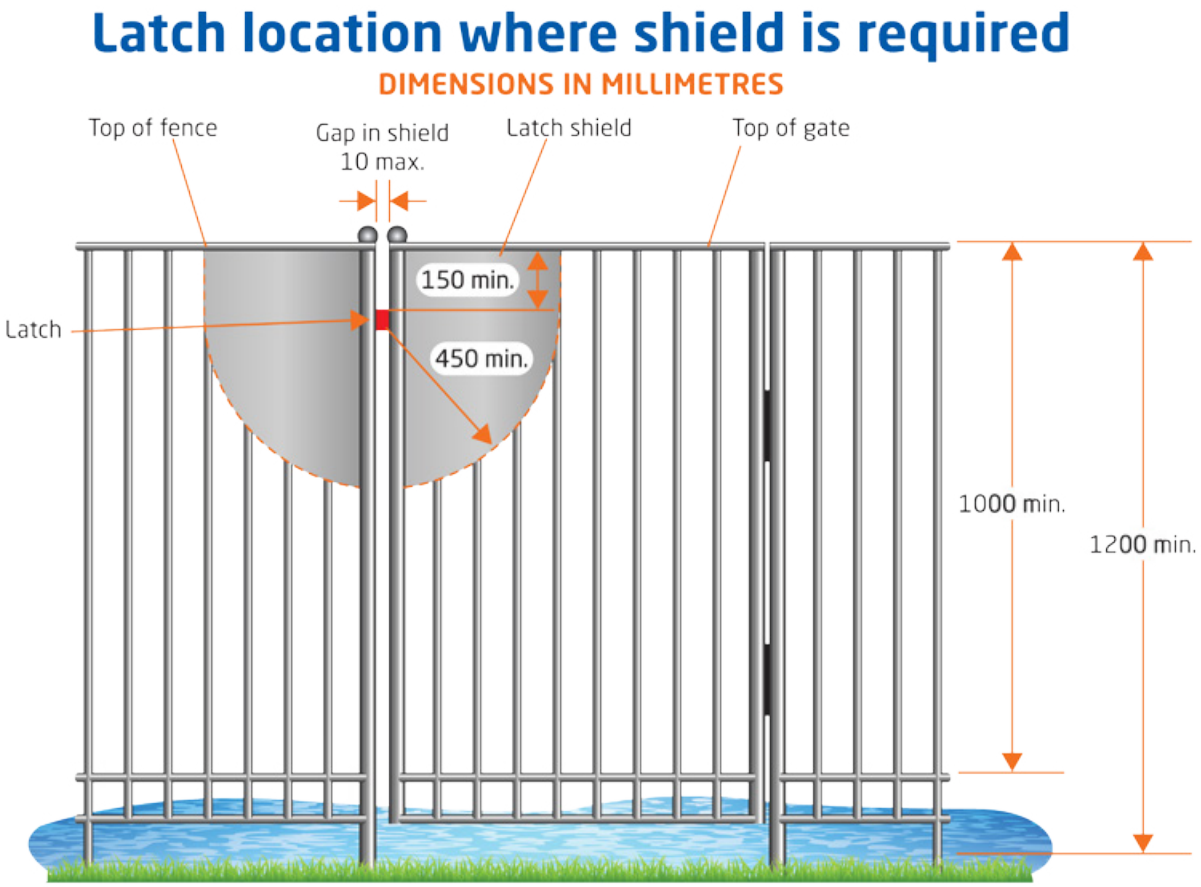


Figure 22

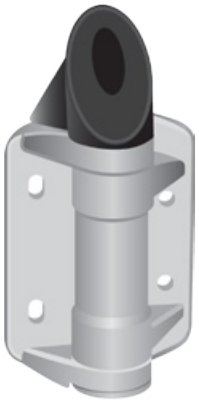


Figure 23

2.4.3 Gate hinges

Gate hinges must not form a surface with a dimension exceeding 10 mm within the NCZ 1 and NCZ 2, including those that create an opening between the gate post and gate stile. Should the top surface be at an angle of 60 degrees to the horizontal it is permitted within NCZ 1 and NCZ 2 (see Figure 23).

2.5 Other barriers

A retaining wall forming part of the barrier that is below the pool level must be:

- 1200 mm high with compliant NCZs; or
- 1800 mm high; and

must not slope by more than 15 degrees to the vertical.

A retaining wall forming part of the barrier that is above the pool level must be:

- 1800 mm high and must not slope by more than 15 degrees to the vertical.

Where retaining walls do not comply, an alternative barrier should be provided.

Where a barrier intersects a lower retaining wall, the barrier must extend to the edge of the retaining wall and either:

- overhang the retaining wall by 900 mm; or
- return 900 mm along the retaining wall in either direction. Return barriers should be affixed as close as possible to the outside face of the retaining wall (see Figure 24c).

There is no requirement for the returning or overhanging panels to be solid to prevent shimmying.

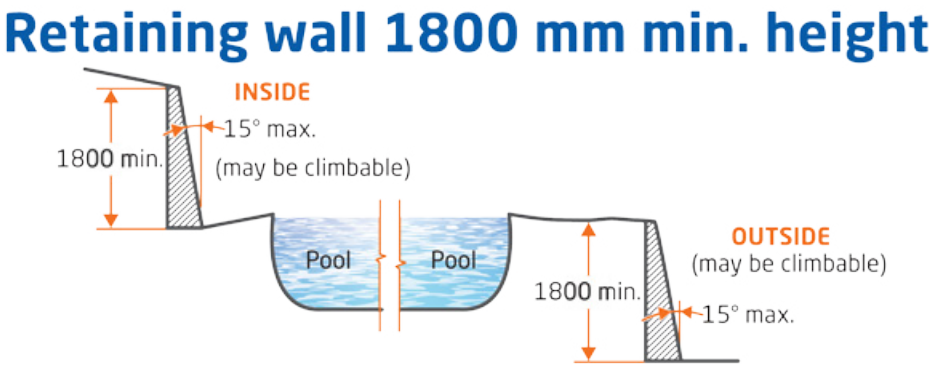


Figure 24a

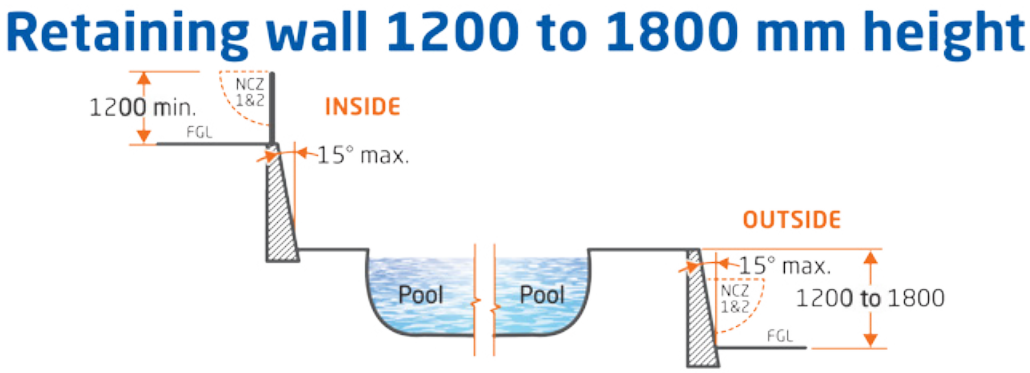


Figure 24b

Post-May 2016

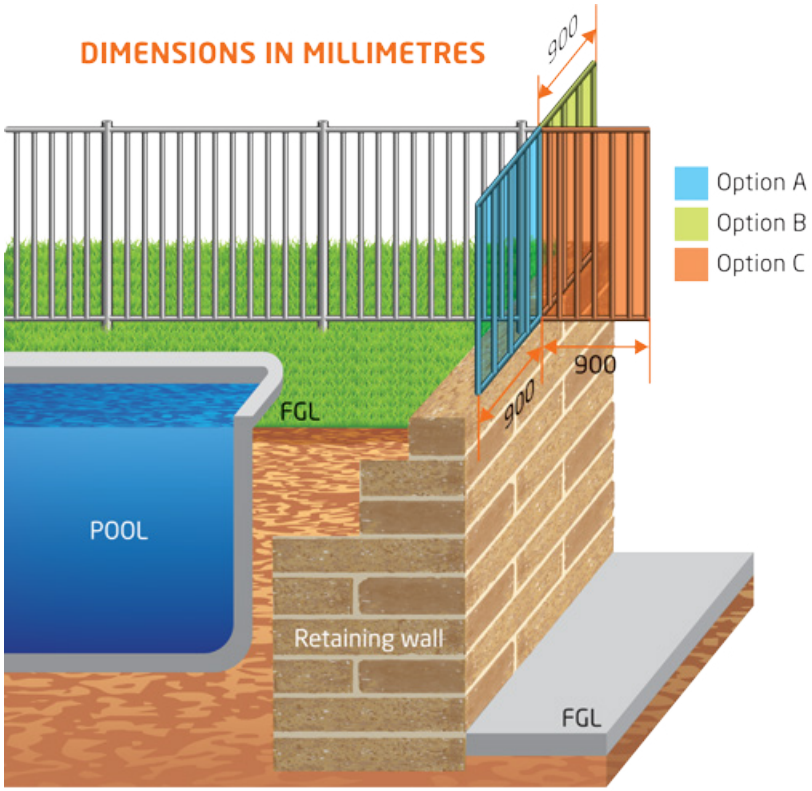


Figure 24c

2.5.3 Out-of-ground pool walls

Where an in-ground swimming pool has a wall that projects out of the ground, that wall may form part of the effective barrier if it complies with the requirements of the Standard such as height and non-climbable zones.

2.5.4 Permanent bodies of water

A permanent body of water may be considered to be an effective barrier if it is at least 1800 mm wide and at least 300 mm deep at the edge of the pool area.

Evidence may need to be provided that demonstrates the water body is compliant with this clause. Liaison with the Department of Water and the local government should occur to ensure the body of water is suitable.

An example of application of this clause is where a property borders a canal where no boundary fence exists, and the canal then forms part of the pool barrier.

Where a barrier abuts a water body, the barrier will need to return along it to prevent shimmying, as detailed for a retaining wall intersection.

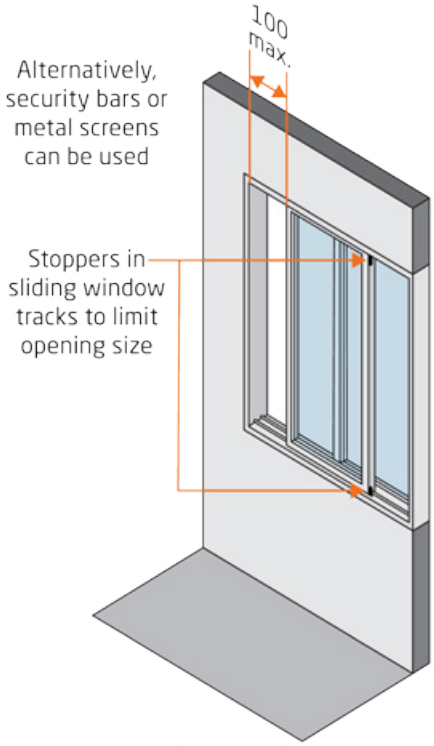
2.6 Child-resistant openable portion of window

All windows that form part of the pool barrier, with an external sill height of less than 1800 mm, are required to be permanently restricted by either:

- bars or a metal security screen that is secured to the building with fixings that cannot be removed without the use of a tool; or
- a device that permanently restricts the window from having an opening more than 100 mm that cannot be removed without the use of a tool.

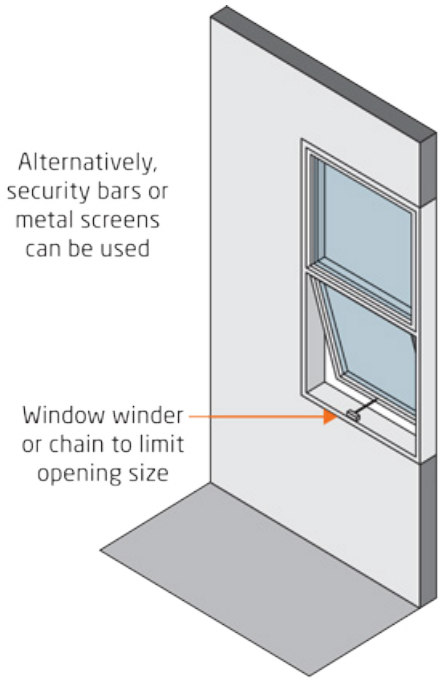
A tool is defined at clause 1.3.23 as 'screwdriver, spanner, wrench, shovel, cutting implement or the like'. The use of a key is not permitted. A screw in the top and bottom window track that prevents the window from opening more than 100 mm is generally acceptable.

Windows, where the height from the sill of the lowest opening panel of the window to the finished ground level is 1800 mm or greater, have no pool barrier requirements.



Sliding window

Figure 25a



Awning window

Figure 25b

Figure 26 – Compliant window restriction device

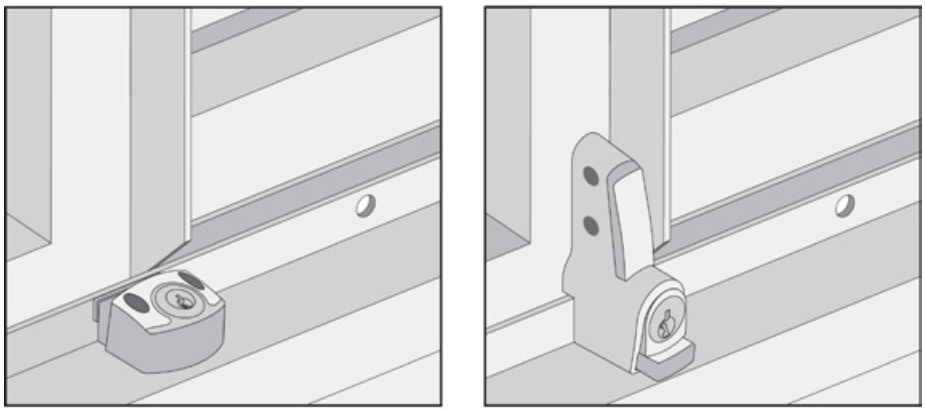


Figure 27 – Non compliant window restriction devices

2.7 Child-resistant doorsets

Where child-resistant doorsets are permitted they must:

- be self-closing from any open position, including resting on the latch;
- have a self-latching device at least 1500 mm above floor level;
- be non-climbable for a 900 mm vertical span within the bottom 1200 mm of the door (NCZ 1), on the opposite side to the pool area (see Figure 28);
- not open towards the pool area. Only sliding doors, or doors that open away from the pool area are suitable; and
- comply with clause 2.3.2 if constructed of perforated material or mesh.

Doors are generally not permitted to lead into an outdoor pool area. They are only permitted for indoor pool areas, and the indoor pool part of an indoor/outdoor pool.

The Standard considers an indoor pool to be a pool that is fully enclosed by walls on all sides and roofed, with access to the pool from within the building.

Note that changes to the Standard from the 1993 edition, include the direction of swing of the doors. Doors, where permitted, must either slide or open away from the pool area. Doors are not permitted to open towards the pool area.

Pet doors must not be placed in a child-resistant doorset. There is no exception made for pet doors in either the Building Regulations 2012 or AS 1926.1-2012.

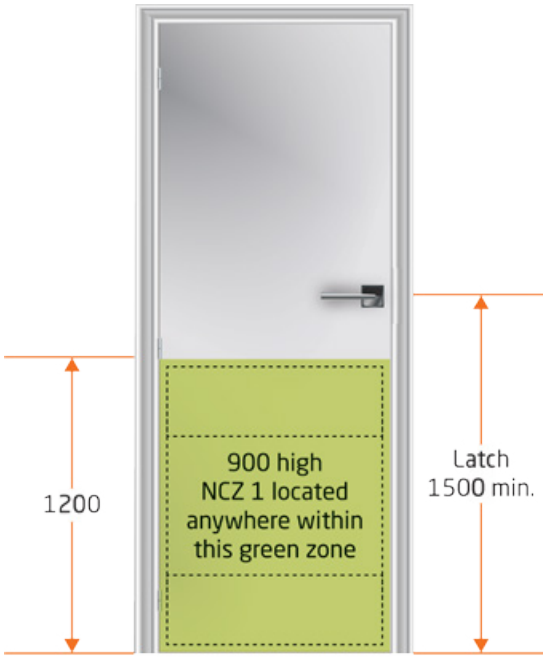
A pet door, located within a pool barrier, with a sliding bolt latch on the pool side, so that when a child is present in the dwelling the owner can latch the pet door closed, is not compliant.

Doors that would allow access to a pool area via a garage or shed must not be used as part of the barrier. A separate barrier must be installed around the garage or shed.

The use of automatic or manual roller doors, in garages or other Class 10a buildings forming part of a pool barrier, does not comply with the requirements of AS 1926.1-2012.

The Standard requires that the barrier be a permanent structure. Permanent structure is defined in the Standard as 'a barrier, or part of a barrier which cannot be removed without the use of tools'. Therefore, unless the door is permitted and compliant with AS 1926.1-2012, any door within a pool barrier needs to be permanently fixed in the closed position with fasteners that can only be removed with tools such as a screwdriver, spanner or drill.

A permit authority may approve the use of a garage door or driveway access gate under regulation 51 of the Building Regulations 2012 if it can satisfy those requirements (performance requirements of the BCA). The permit authority may have due regard to whether the garage door or driveway access gate is suitable based upon if it is capable of being self-closing and self-latching, even in the absence of mains power.



DIMENSIONS IN MILLIMETRES

Figure 28

2.8 Balcony balustrades

A balcony balustrade that forms part of the pool barrier or where the balcony projects into a non-climbable zone must comply with the Standard.

AS 1926.1-2012 is silent on the circumstance of a balcony that projects into a pool area where the house wall below forms part of the pool barrier. As such where the floor level of the balcony is less than 1800 mm from the ground level of the pool area the balustrade should be AS 1926.1-2012 compliant. This is in keeping with clause 2.5.1 retaining wall above the pool level (see Figures 29 and 30).

Should a balcony have a stair that leads down to a pool area, a compliant barrier incorporating a gate, restricting access from the dwelling to the pool area, will need to be installed.

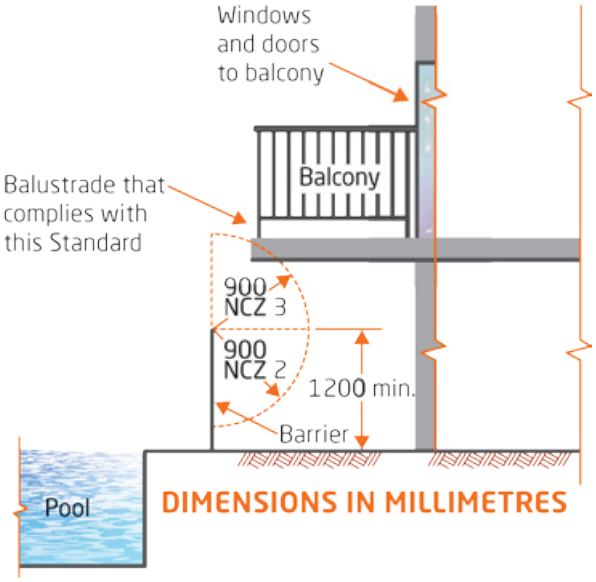


Figure 29

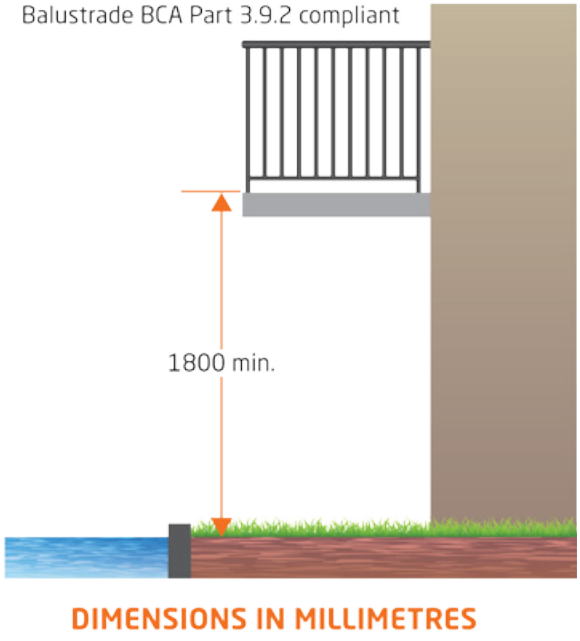


Figure 30

2.9 Above-ground pools

Above-ground pools that have walls that comply with the requirements of a barrier (min 1200 mm high with compliant NCZs 1, 2, 3) are deemed to be an effective barrier, however a compliant barrier and gate needs to be provided around permanent ladders and around designated access points where portable ladders are used.

The swimming pool barrier in Figure 31 does not comply. Although the swimming pool ladder is fenced, there is a climbable object (the diagonal pool support) inside the barrier which could provide a foothold or handhold.

Where bracing is required to support the swimming or spa pool and the bracing extends out from the pool wall to the finished ground surface, the top surface of the supports must be greater than 60° from the horizontal.

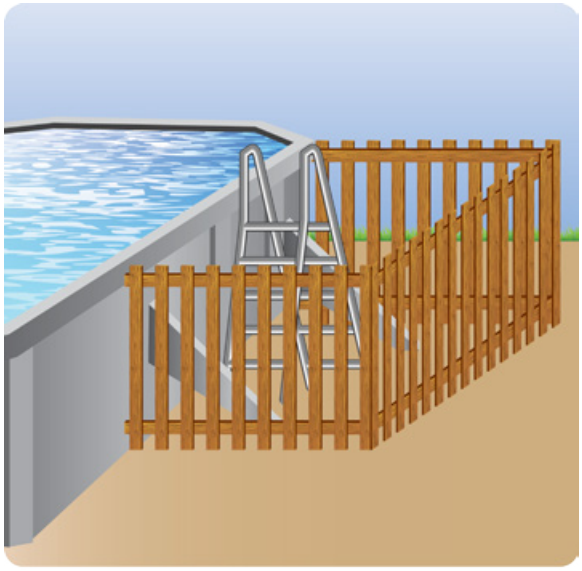


Figure 31

Post-May 2016

3.0 Loading requirements

Appendices A – F of AS 1926.1-2012 detail a range of strength tests that a barrier must satisfy, which includes:

- **Appendix A Test for strength and rigidity of barrier openings**

  This test outlines a method for determining that fencing is sufficiently strong and rigid to prevent an opening to be forced to a size that would allow a young child to gain entry.

  - The cone test object detailed is **not** to be used for in-field testing, but by manufacturers to gain certification for their barrier. As such, if a barrier is suspected to be non-compliant, the pool inspector should ask for a copy of the test report. The test report should meet BCA Part 1.2.2/A2.2 Evidence of suitability which requires:
    - a report issued by a Registered Testing Authority;
    - a current Certificate of Conformity or a current Certificate of Accreditation;
    - a certificate from a professional engineer or other appropriately qualified person;
    - a current certificate issued by a product certification body that has been accredited by the Joint Accreditation Scheme of Australia and New Zealand (JAS-ANZ); or
    - any other form of documentary evidence.

Note: Pool inspectors should be diligent at the first inspection of a new pool barrier to ensure barriers comply. Requesting test certificates from property owners eight or twelve years later would be problematic for all parties involved. Test certificates may have been provided in the building permit for the pool barrier and/or with the BA7 notice of completion.

- **Appendix B Strength test for posts and footings**

  This test outlines a method for testing whether fencing posts have adequate strength and have been correctly installed.

- **Appendix C Strength test for rigid barrier components**

  This test outlines a method for testing whether fencing components have adequate strength.

- **Appendix D Strength test for flexible materials and components**

  This test outlines a method for testing whether flexible materials and components have adequate strength.

- **Appendix E Strength test for rigid components of gate units**

  This test is for manufacturers of gate units only and outlines a method for testing whether the strength of structural components of gate units have adequate strength throughout the life of the barrier.

- **Appendix F Test of durability of gate units**

  This test outlines a method of assessing whether a gate and its hinges will withstand repeated closing.

Location requirements

General

The deemed-to-satisfy provisions of the BCA references AS 1926.2-2007 for the location requirements of pool safety barriers.

Restricted access is required to all swimming pools from the dwelling, adjoining allotments, and the verge by safety barriers compliant with AS 1926.1-2012.

Outdoor swimming pools are required to provide a fence type barrier between any door of the dwelling and the swimming pool. Doors are generally not permitted.

Indoor swimming pools that are fully enclosed within a residential building or a separate building are permitted to have child-resistant doorsets compliant to AS 1926.1-2012.

Indoor/outdoor swimming pools are required to provide a fence type barrier between any door of the dwelling and the pool from the outdoor area. From the indoor area a child-resistant doorset compliant to AS 1926.1-2012 is acceptable.

Alternative requirements

The permit authority may approve an alternative solution in regards to a swimming pool barrier if it is satisfied that, at the time of granting approval, the alternative solution will meet the performance requirements set out in the BCA applicable to swimming pool safety barriers (Building Regulations 2012 regulation 51(5)).

Pool inspectors should be aware of approved alternative requirements that may be applicable to the pool barriers they are to inspect.

AS 1926.2-2007 commentary

The following commentary is intended to be read in conjunction with as 1926.1-2012. The clause numbers in this section are consistent with as 1926.2-2007.

The edition of AS 1926.2-2007 referenced by the BCA, and to be used by pool inspectors and building surveyors under the Regulations is:

- AS 1926.2-2007-Swimming pool safety-Part 2: Location of safety barriers for swimming pools (Incorporating Amendments No. 1 and 2).

In general, the location of barriers must comply with clauses 4.2 or 4.4 as applicable of AS 1926.2-2007.

All swimming pools must have access restricted from the dwelling, habitable building, adjoining properties and public land, including the verge.

4.2 Outdoor pools

A pool that is not fully or partly enclosed by a building is considered to be an outdoor pool. Barriers are required to comply with AS 1926.1-2012 and may consist of:

- boundary fences;
- pool fences;
- walls of the house;
- child-resistant windows;
- retaining walls;
- lattice;
- mesh type fences; and
- permanent bodies of water;

but must not include:

- doors.

Doors, even if a child-resistant doorset compliant with AS 1926.1-2012, are not permitted to form part of the barrier for an outdoor pool.

4.4.1 Indoor pools

Where a pool is fully enclosed within a residential or another separate building, it is considered an indoor pool. Access must be restricted to the pool area from all other habitable parts of the building and otherwise unrestricted outdoor areas. Access must be restricted by components complying with AS 1926.1-2012, including child-resistant doorsets.

Child-resistant doorsets are permitted subject to compliance with AS 1926.1-2012 clause 2.7.

4.4.2 Indoor/outdoor pools

Where a pool is partly enclosed by a building and partly an outdoor pool it is considered to be an indoor/outdoor pool.

The outdoor portion is to have restricted access in accordance with clause 4.2 of this Standard (refer above).

The indoor portion is to have restricted access in accordance with clause 4.41 of this Standard (refer above).

Doors and windows wholly encompassed within the pool barriers, but not forming part of the pool barriers, are not required to comply with AS 1926.1-2012.

The indoor part of a pool area must be separated by construction from the outdoor part of the pool such that a person is unable to walk around the pool without passing through the construction.

Doors, even if compliant with AS 1926.1-2012, are not permitted to form part of the barrier for the outdoor portion of the pool.

Appendix B Factors to be considered in barrier location

Appendix B is 'informative' and is to be used for information and guidance. There is no requirement for it to be applied.

Example layouts

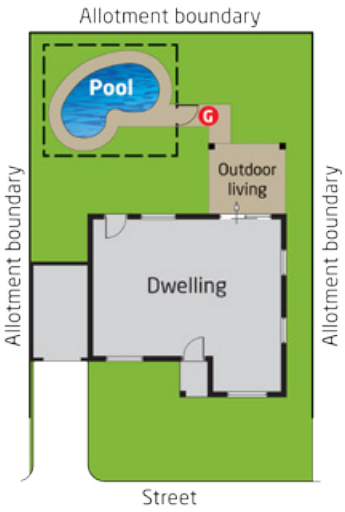
Post-May 2016 pools

The following diagrams are compliant pool barrier layouts for post-May 2016 private swimming pools:

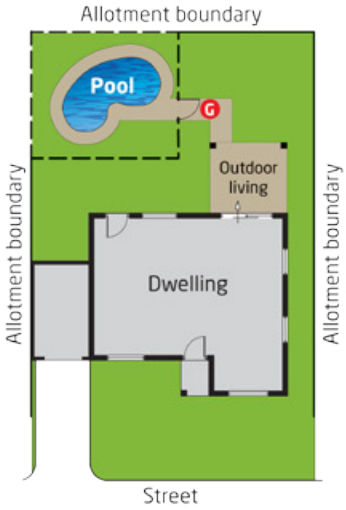
Legend

- G — Gate complying with AS 1926.1
- D — Child-resistant doorset complying with AS 1926.1
- W — Child-resistant openable window complying with AS 1926.1
- Openable window NOT complying with AS 1926.1
- Sliding door NOT complying with AS 1926.1
- Fence, retaining wall or other such barrier complying with AS 1926.1
- Wall of dwelling with no openings

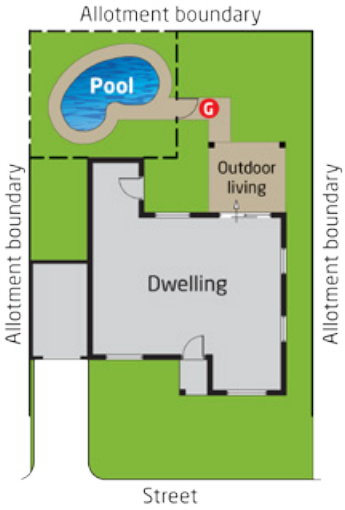
Example 1



Example 2

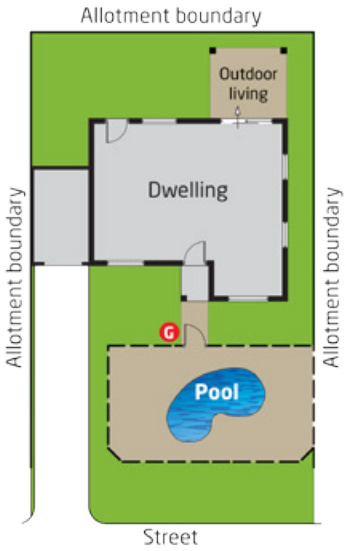


Example 3

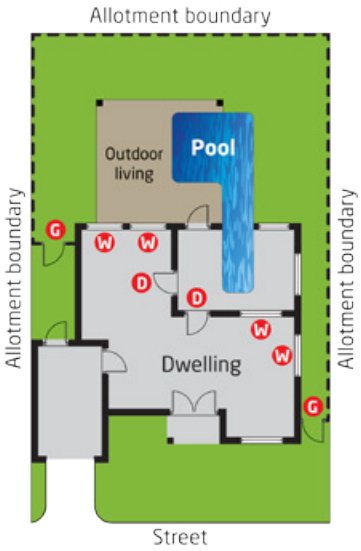


Example 4

Example 5



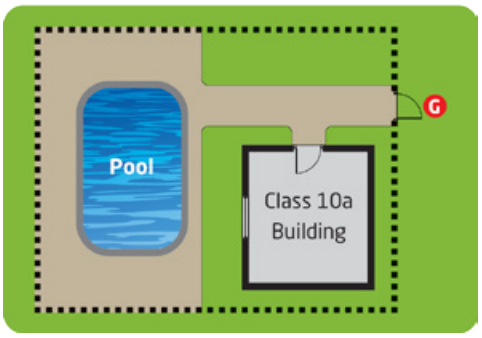
Example 6



Example 7

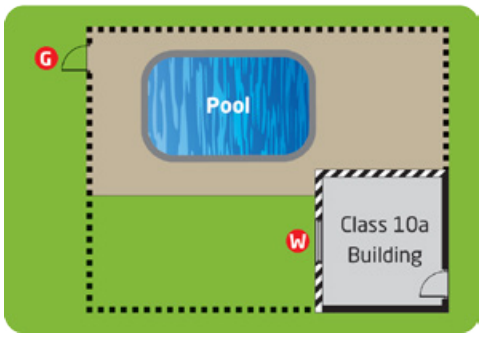
Buildings within the pool area

Example A



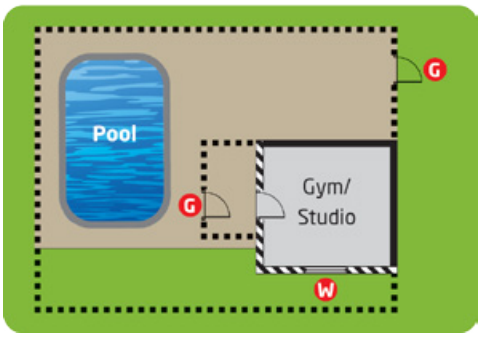
The Class 10a building is wholly within the pool area and does not provide access to the pool through the barrier. As the building is not habitable, access between it and the pool does not need to be restricted to comply with AS 1926.1.

Example B



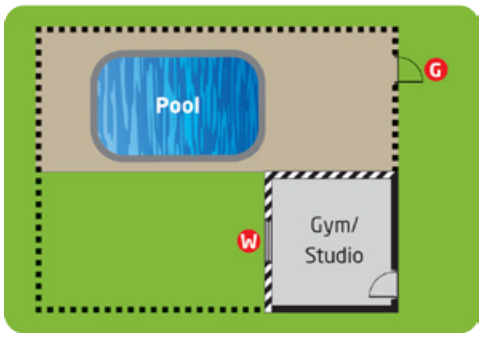
The Class 10a building provides access into the pool area through the barrier which consists of part of the building's wall. For this reason the window of the building must comply with AS 1926.1 or a barrier between the Class 10a building and the pool must be installed. The door is not part of the effective barrier and as such does not need to be restricted.

Example C



Doors are not permitted to lead directly into a pool area. A fence and gate complying with AS 1926.1 is to be provided between the door and the pool area.

Example D



Access is restricted from the gym/studio by walls and a compliant child-resistant window.

The gym/studio is an example of a Class 1 building located in the pool area. Access to the pool from the habitable building is to be restricted as if it was a dwelling.

Legend

- G — Gate complying with AS 1926.1
- D — Child-resistant doorset complying with AS 1926.1
- W — Child-resistant openable window complying with AS 1926.1
- Wall forming part of enclosure
- Openable window NOT complying with AS 1926.1
- Wall of dwelling with no openings
- Fence, retaining wall or other such barrier complying with AS 1926.1

Post-May 2016

Pre-May 2016 pools

Technical requirements

The Regulations have two sets of safety barrier requirements depending on when the swimming pool was installed or when plans for the installation of the pool were submitted to the permit authority for approval:

- Post 1 May 2016
- Pre 1 May 2016

Owners, builders, and demolition contractors have different responsibilities under the Regulations:

Regulation	Who is responsible
r. 28 Required inspection: barrier to a private swimming pool	Builder
r. 29 Inspection certificates	Builder
r. 31C Applicable building standards for swimming pools	Builder
r. 50 Barrier to private swimming pool	Owner and occupier
r. 54A Temporary pool barriers	Builder, demolition contractor, and owner

An empty pool/spa does not require a compliant pool safety barrier until it has at least 300 mm (depth) of water in it (Building Regulations 2012 regulations 3 and 50(1)).

A pool that is required to be filled with water during construction (eg a fibreglass pool) must have a compliant safety barrier, either temporary or permanent, installed before the pool can be filled with more than 300 mm (depth) of water. A temporary barrier must not be removed until a permanent complying barrier is installed. Some permit authorities may have specific requirements for temporary barriers.

If a fence, wall, gate or component is removed for any period, the builder or owner must ensure an alternative barrier that complies with the relevant pool barrier requirements is installed or provided for the extent of that period (Building Regulations regulation 54(A)).

Fish ponds

Generally fish ponds are not required to comply with the pool safety barrier requirements, as they do not fit the definition of 'swimming pool' or 'private swimming pool' in the Regulations. Where an existing swimming pool is converted into a fish pond, the local government needs to carefully consider whether the structure continues to meet the definition of 'swimming pool' and whether the pool safety barrier requirements continue to apply.

General

For pre-May 2016 pools, the Regulations nominate the following as the applicable building standard for pool barriers, in regards to new building work:

- The requirements mentioned in regulation 31A(2)(a) except that –
  a) the requirements for a barrier to a private swimming pool set out in regulation 50 may be substituted for the BCA pool barrier requirement; and
  b) an alternative solution cannot be used to comply with a Building Code pool barrier requirement unless the alternative solution is an approved barrier solution (Building Regulations 2012 regulation 31C).

Where a building permit application was submitted to the permit authority before 5 November 2001, or where the pool was installed before 5 November 2001, a concession applies, permitting the use of child-resistant doorsets compliant with AS 1926.1-1993 (Building Regulations 2012 regulation 52).

The ongoing compliance requirements for existing pools and pool safety barriers are outlined in Regulation 50, and are the responsibility of the owner and occupier.

The Regulations references AS 1926.1-1993 for the construction and installation of the safety barriers (Building Regulations 2012 regulations 48 and 50).

Additionally, the Regulations permit the use of the post-May 2016 requirements in lieu of the pre-May 2016 requirements. The mixing of

compliance with post-May 2016 and pre-May 2016 requirements to achieve compliance for individual components is permitted (Building Regulations 2012 regulation 50(1A)(b)).

When using both sets of requirements, it is important to ensure that the particular component complies with one set of requirements or the other. The particular component cannot comply with aspects of both. As an example:

- a boundary fence at 1200 mm high must be non-climbable on at least one side and on that side there must be no climbable objects within 1200 mm of the top of the fence (pre-May 2016 requirements); or
- a boundary fence at 1800 mm high must have no climbable objects within 900 mm of the top of the fence (NCZ 5) on the pool side (Post-May 2016 requirements).

It is not permissible to use the 900 mm NCZ 5 on a 1200 mm high boundary fence.

Where a boundary or dividing fence forms part of the enclosure, only one side of the boundary fence needs to comply with clauses 2.3 (Fencing Height), 2.6 (Outside Surface), and 2.7 (Horizontal Climbable Members) of AS 1926.1-1993 (Building Regulations 2012 regulation 50(5)). This regulation specifies that where a swimming pool barrier does not meet the requirements of AS 1926.1-1993 due to the actions/activity on the adjoining property, the barrier will comply if either side meets the requirements. This is because when a dividing fence is used as part of the barrier, the neighbouring property is considered the outside of the enclosure.

The owner or occupier of land which contains the pool has little influence over what occurs on the neighbouring property, and is therefore unable to influence compliance with the requirements. This does not apply when using post-May 2016 requirements for a boundary barrier.

Guidance Note 1: Regulation 50(5) only applies to the part of the enclosure consisting of a dividing fence or boundary fence using the pre-May requirements. Regulation 50(5) cannot be used for post-May requirements. Additionally, this provision does not apply to parts of the barrier fence that are not dividing or boundary fences.

Alternative requirements

The permit authority may approve an alternative solution in regards to a swimming pool barrier for a pre-May 2016 pool if it is satisfied that, at the time of granting approval, that the alternative requirements will restrict access by young children to a pool as effectively as if there were compliance with AS 1926.1-1993 (Building Regulations 2012 regulation 51(2)).

Further, the permit authority may approve a door as part of the pool barrier if the door is in accordance with the requirements of AS 1926.1-1993 and:

- in the opinion of the permit authority, a fence or barrier satisfying regulation 50 between the building and the pre-May 2016 pool would cause:
  - a significant problem of a structural nature;
  - a significant problem of any other nature, the cause of which is not within the control of the owner or occupier;
- the pre-May 2016 pool is totally enclosed by a building; or
- in the opinion of the permit authority, a fence or barrier satisfying regulation 50 between the building and the pre-May 2016 pool would create a significant problem for a person with a disability who is resident at the premises and wishes to have access to the pre-May 2016 pool.

In deciding whether to give approval in this manner, the permit authority must have regard as to whether or not a young child resides at the premises (Building Regulations 2012 regulation 51(4)).

Pool inspectors should be aware of approved alternative requirements that may be applicable to the pool barriers they are to inspect.

Pre-May 2016 pools also have the option of complying with the post-May 2016 route for alternative solutions.

AS 1926.1-1993 commentary

The following commentary is intended to be read in conjunction with the Standard. For your convenience, the clause numbers are consistent with the Standard.

Barrier design and construction standards/guidelines

A barrier must be designed and constructed in such a way that it provides an effective barrier to young children, restricting their access into the swimming pool area.

Any material may be used in the construction of a swimming pool enclosure provided it complies with the requirements of AS 1926.1-1993 and is durable (see clause 2.2).

Figure 32 details some of the various design and construction requirements of AS 1926.1-1993 in relation to swimming pool fences. These include:

- Minimum fencing height = 1200 mm
- Maximum distance between vertical members = 100 mm
- Minimum distance between horizontal members (measured from the top of the members) = 900 mm
- Minimum distance between highest lower horizontal member and top of fence = 1100 mm
- Maximum distance between finished ground and bottom of fence = 100 mm

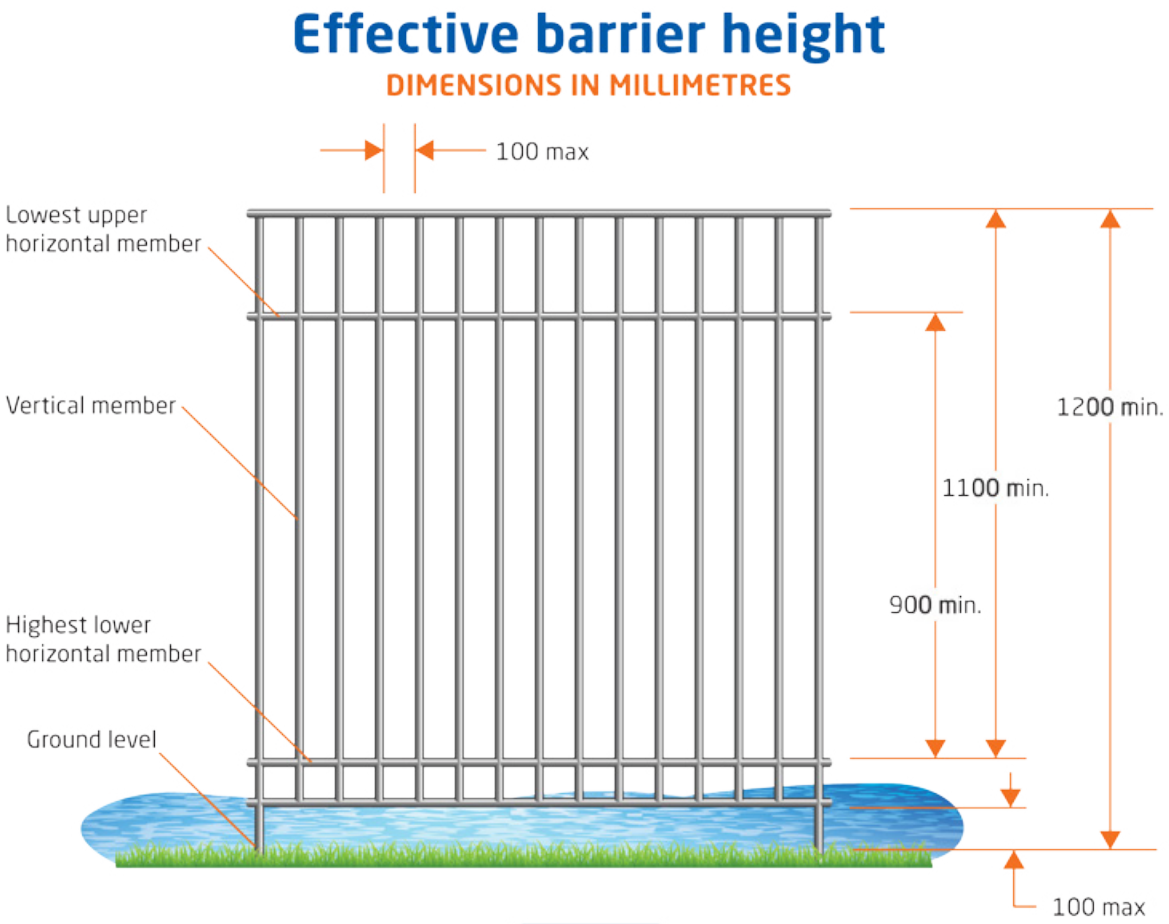


Figure 32

2.3 Fencing height

Fences must have an effective height of at least 1200 mm to the top of the finished fence from the ground surface on the outside of swimming pool enclosure (see clause 2.3.1). Where the fence is constructed from material made of mesh with holes, cracks, gaps or other apertures that exceed 13 mm, the fence must be at least 2400 mm high from the finished ground surface, or alternatively where the fence has a 450 mm cranked top, the fence must have a vertical height of 1800 mm up to the beginning of the crank (see clause 2.3.2). In addition, if mesh or cyclone type material is used, a strainer wire or rail at the top and bottom of the vertical section of the fence must be used (see clause 2.3.2).

Guidance Note 2: Examples of materials that have perforations greater than 13 mm include lattice, aviary wire, chicken wire and cyclone fencing.

Guidance Note 3: A range of materials can be used to shield perforations in a fence rendering it non-climbable, and therefore ensuring it complies with the requirements. These include toughened glass, perspex, infill sheeting (plywood, tin, aluminium sheets etc.) and reinforced fly mesh. The shielding needs to cover 900 mm between the highest lower foothold and the highest lower handhold, and 1100 mm between the highest lower foothold and the top of the barrier.

2.4 Retaining walls

A retaining wall can be used as a swimming pool barrier provided that:

- if it is on the high side of the pool, it must be at least 2400 mm in height from the finished ground surface on the inside of the pool enclosure, and it must not slope away from the pool by more than 15° to the vertical; or
- if it is on the low side of the pool:
  - it must be at least 1200 mm in height from the finished ground surface and must not slope towards the pool by more than 15° to the vertical. In addition, it must meet the requirements contained in clause 2.3.1 (climbable objects) and clause 2.6 (outside surface) of AS 1926.1-1993; or
  - it must be at least 2400 mm in height from the finished ground surface.

Guidance Note 4: AS 1926.1-1993 recommends that a barrier should be installed to prevent falls from retaining walls (see clause 2.4). Such a barrier does not need to comply with the requirements of AS 1926.1-1993. Part 3.9.2.2 of the BCA Volume 2 may require additional barriers on top of retaining walls. Please refer to the building surveyor at the relevant local government (permit authority) or a private building surveying contractor registered under the *Building Services (Registration) Act 2011*.

2.5 Ground clearance

The bottom of the fence must be no more than 100 mm from finished ground level.

Guidance Note 5: The surface underneath the pool barrier should be stable and not susceptible to erosion due to weather or children or animals digging or playing in the area.

Barrier with projections and indentations

DIMENSIONS IN MILLIMETRES

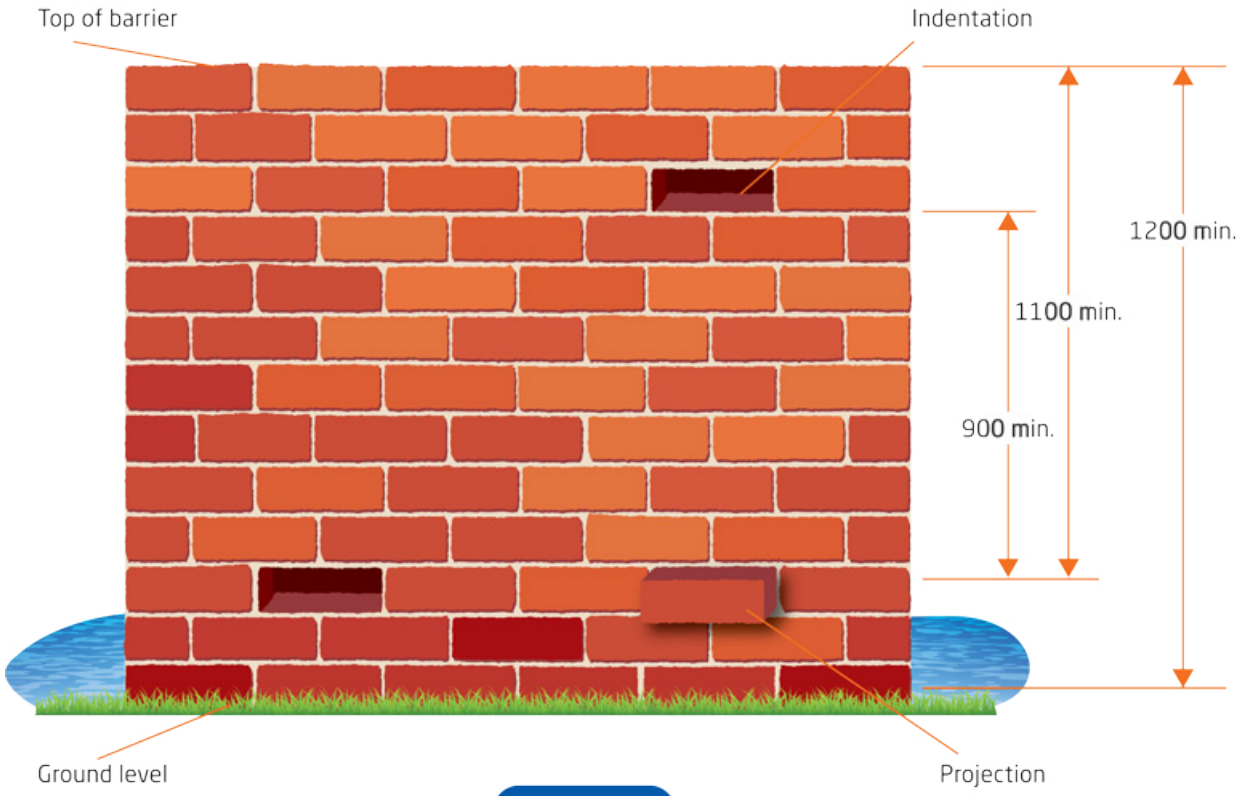


Figure 33

2.6 Outside surface

Projections from or indentations into the outside surface of a barrier must not form a substantially horizontal surface that is greater than 10 mm in depth unless they are placed more than 900 mm apart (either horizontally, or diagonally) and the highest of the lower horizontal surface is a minimum of 1100 mm below the top of the barrier (see Figure 33). This 1100 mm distance is consistent with provisions relating to horizontal members.

Guidance Note 6: Where the barrier is comprised of brick, the pool inspector should be satisfied that there is no indentation or projection which is greater than 10 mm deep, other than that which is shown in Figure 33.

2.7 Horizontal members

If the fencing has horizontal members on the outside surface (ie rails, rods, wires) or vertical members that have openings greater than 10 mm with horizontal members on the inside of the barrier:

- the horizontal members must be at least 900 mm apart (measurements are to be taken from the top surface of the highest of the lower members to the top surface of the lowest of the high members); and
- the top surface of the highest of the low members must be at least 1100 mm from the top of the barrier (see Figure 34).

Guidance Note 7: For fences constructed on sloping land, the measurements should be taken at right angles from the finished ground surface (see Figure 35).

Horizontal members spacing

DIMENSIONS IN MILLIMETRES

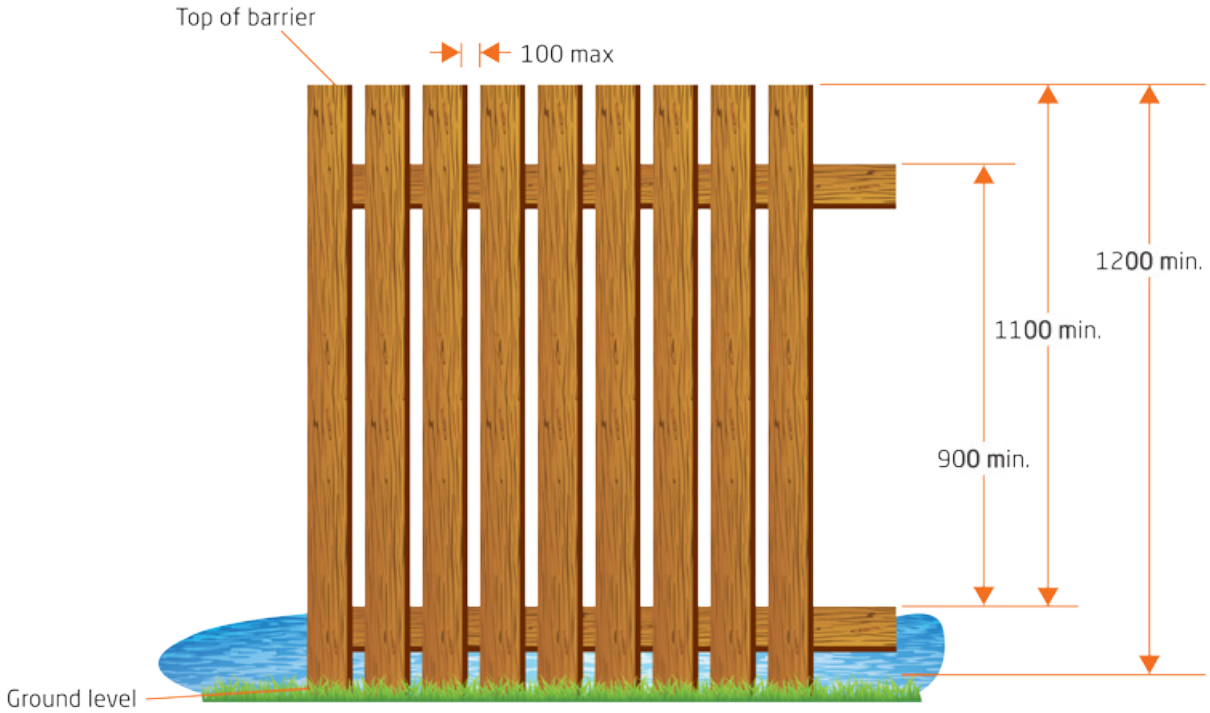


Figure 34

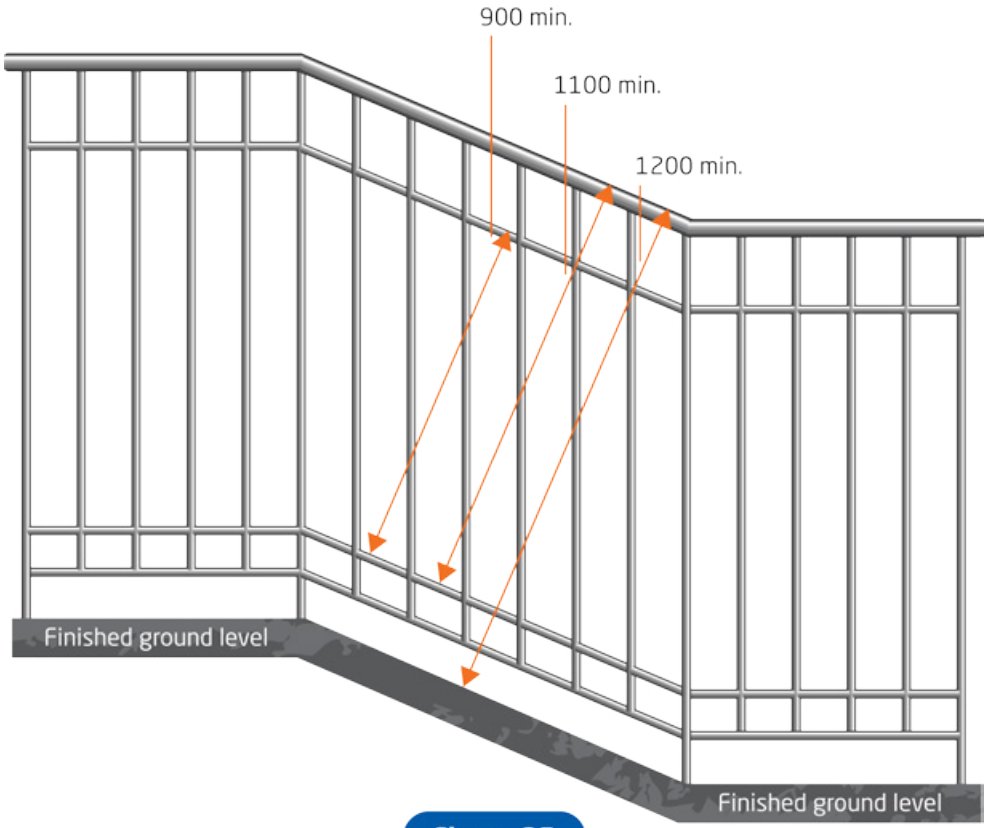


Figure 35

2.8 Horizontal non-climbable members

As an alternative to the requirements of clause 2.7, horizontal members may be located on the outside of the fencing where they are sloped to provide a surface greater than 60° from horizontal, where the gaps between vertical members do not exceed 10 mm (see Figure 36).

Guidance Note 8: This modification can be used to make fencing comply where the fencing would otherwise fail to comply with clause 2.7 of AS 1926.1-1993. Situations where fencing would fail to comply with clause 2.7 include:

- horizontal members on the outside of the fence being within 900 mm of each other; or
- the highest lower horizontal member on the outside of the fence being within 1100 mm of the top of the fence.

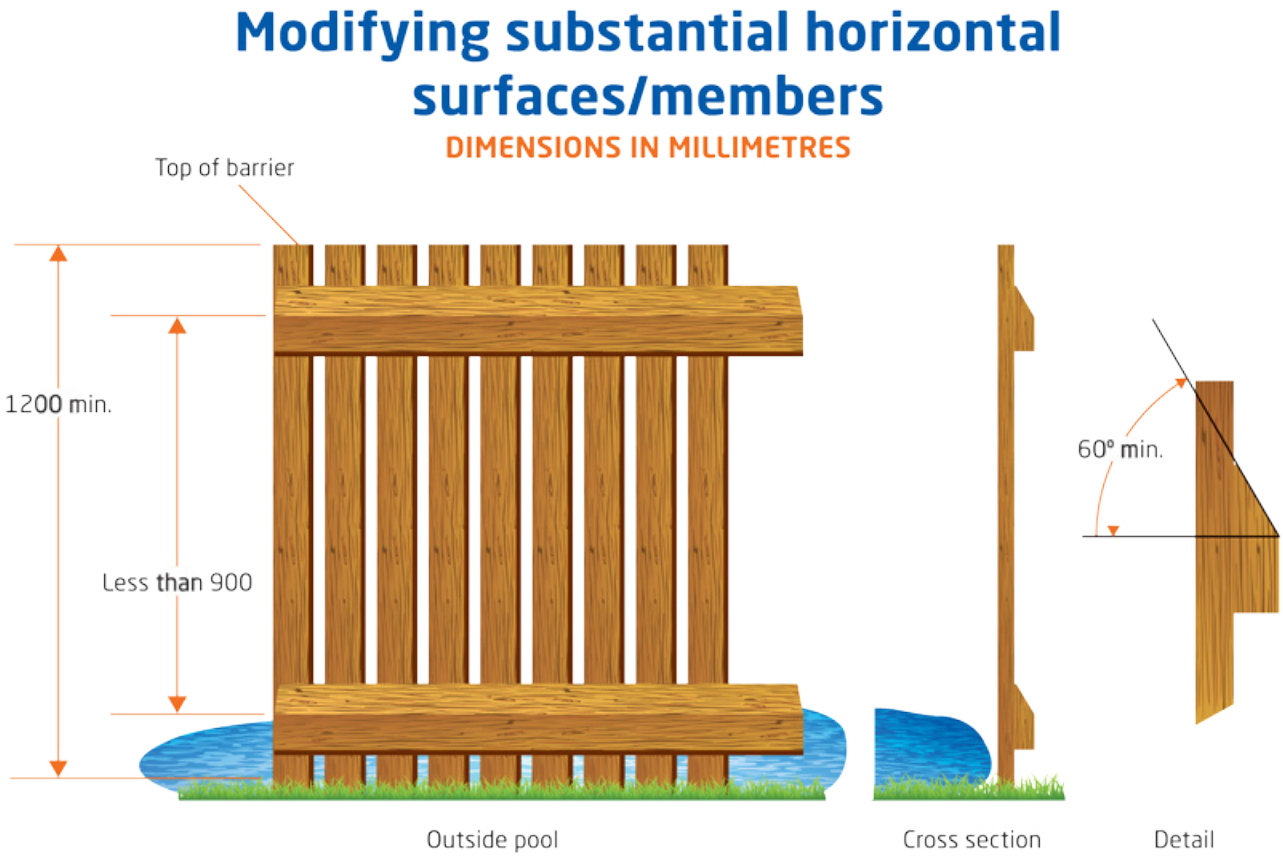


Figure 36

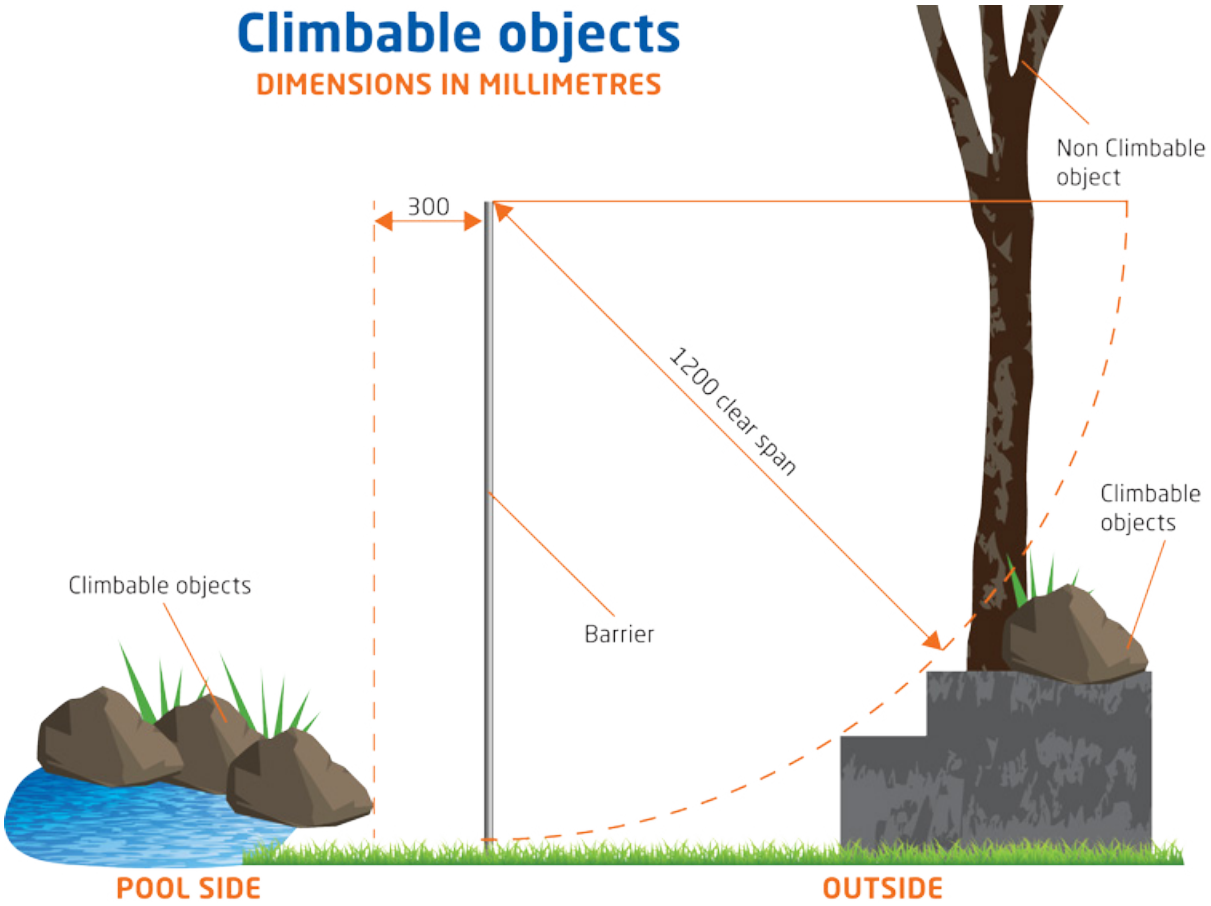


Figure 37

2.9 and 2.3.1 Climbable objects

The following clearance distances must be maintained on the outside and inside of the barrier:

- Climbable objects outside the fence (clause 2.3.1).

  In order to ensure an effective barrier height, no climbable objects may be within 1200 mm of the top of the barrier, outside the pool area. This measurement is taken from the top of the barrier in a downward arc toward the finished ground surface (see Figure 37, and Figure 2.1 in AS 1926.1-1993).

Guidance Note 9: Climbable objects include BBQs, garden furniture, water features / ornaments, trees / shrubs, garden light fixtures, retaining walls, plumbing and raised pool sides, however this list is not exhaustive.

Guidance Note 10: Where part of the swimming pool barrier is a dividing or boundary fence, the effective height of 1200 mm can be maintained on either side of the barrier, however the outside of the barrier is preferable.

Guidance Note 11: A non-climbable tree or shrub may be placed within 1200 mm of the outside of the swimming pool fence. A tree or shrub with thorns or which is incapable of supporting a young child's weight is also permissible.

- Climbable objects inside the fence (clause 2.9).

  Where the fence has vertical openings greater than 10 mm wide, objects with substantial horizontal surfaces must be placed greater than 300 mm from the inside surface (see Figure 37).

Guidance Note 12: The intent of this provision is to prevent young children from using objects placed inside the fence from being used to climb the fence.

Guidance Note 13: Examples of objects that must be placed more than 300 mm away from the inside of the fence, where vertical openings are greater than 10 mm, include climbable objects as per Guidance Note 9.

Guidance Note 14: An alternative to removing the object from inside the fencing is the installation of a shield that complies with the strength and rigidity tests in Appendices A-D of AS 1926.1-1993 (eg toughened glass, perspex, plywood, tin, aluminium sheets or reinforced fly mesh) on the outside of the fencing at the point where the climbable object is inside the fence. The shielding must be positioned at least 900 mm from the finished ground surface or highest of the lower horizontal members and extend at least 300 mm either side of the climbable object.

2.10 Vertical members

Any barrier that is designed with vertical uprights must not have a space between them that is greater than 100 mm.

Guidance Note 15: Pool inspectors should also ensure vertical members meet the strength and rigidity requirements of the Standard (see Appendices to AS 1926.1-1993 for details on strength and rigidity test).

2.11.1 Gates and fittings: direction of opening

Gates must be hung so that they open outwards, ie away from the pool area.

Guidance Note 16: Swimming pools installed in accordance with plans submitted for approval prior to 28 July 1989 were exempt from this requirement only until the transitional period expired in December 2006.

Guidance Note 17: AS 1926.1-1993 does not permit gates to slide open. Gates must be hung so they open outwards.

2.11.2 Gates and fittings: self-closing device

All gates must be fitted with a device that will return the gate to the closed position and will operate from any position from a stationary start without the use of manual force.

Guidance Note 18: The gate must be capable of latching from any position from a stationary start even when resting against the latch.

Guidance Note 19: Where hinges are used as a self-closing device, they must comply with the requirements of clause 2.6 ('Outside Surface') and clause 2.12 ('Finish') of AS 1926.1-1993. Therefore, hinges should not project greater than 10 mm (unless they are spaced more than 900 mm apart) and should be free from sharp edges and other hazards.

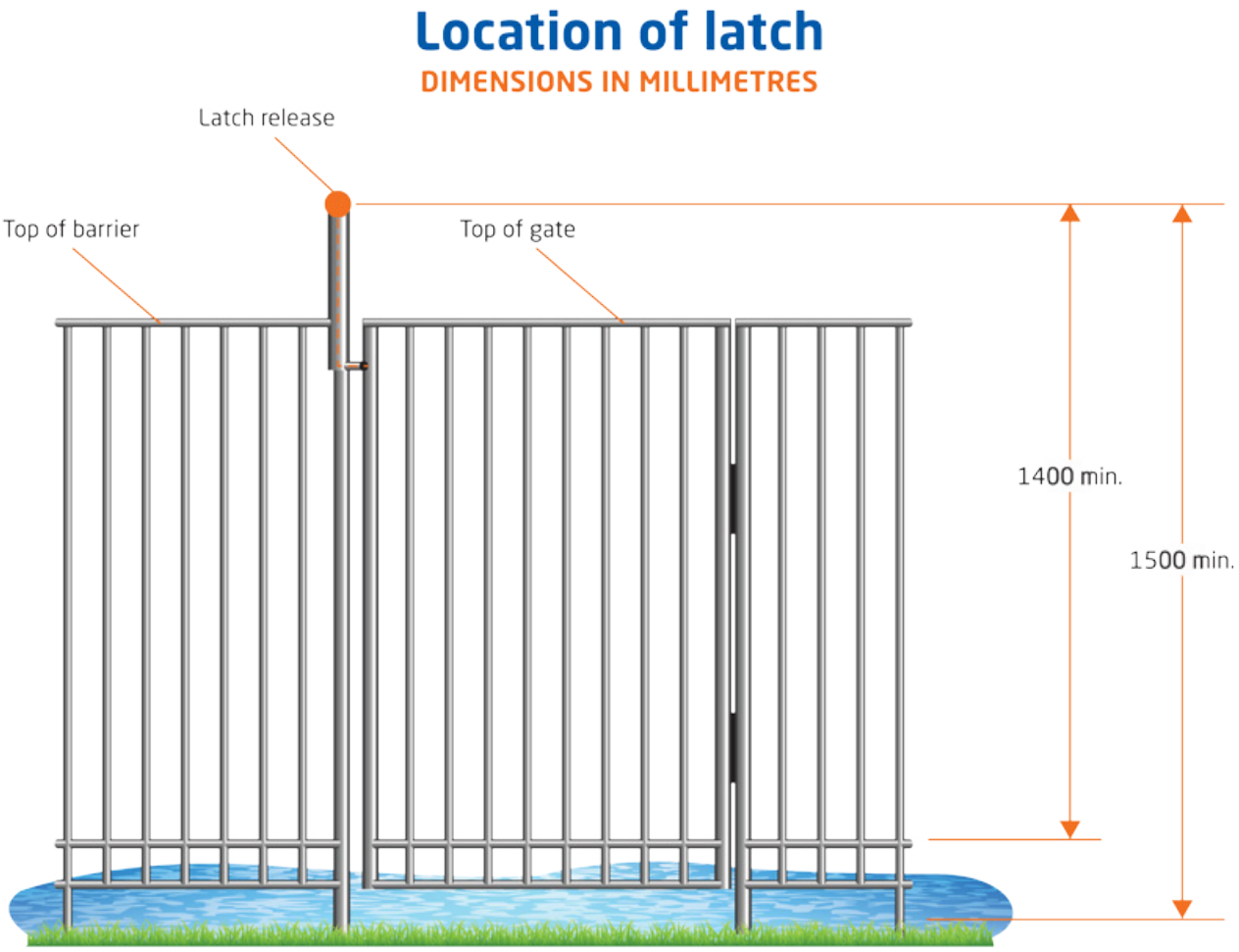
2.11.3.1 Gates and fittings: latching device

Gates must be fitted with a latching device that will automatically operate and secure the gate in the closed position without manual assistance after closing and will prevent the gate rebounding open. The latching device must not allow the gate to open without operating the latch release mechanism. Latching devices must not be capable of release as the result of the insertion of any implement into the latch or between the gate and the fence, or from the application of downward pressure on the gate.

2.11.3.2 Location of latching device

Where the release to the latching device or the latch itself is located at a height less than 1500 mm above the finished ground level, or 1400 mm above the highest lower horizontal member, the location of the release must be:

- inside of the fencing in a position so that it will be necessary to reach over or through the fencing at a height at least 1200 mm above the finished ground level or at least 1100 mm above the highest lower horizontal member to release the latching device from outside; and
- at least 150 mm below the top of the gate if a hand-hole is not provided, or at least 150 mm away from the edge of any hand-hole opening if a hand-hole is provided (see Figures 38 and 39).



Figue 38

Latch location where shield is required

DIMENSIONS IN MILLIMETRES

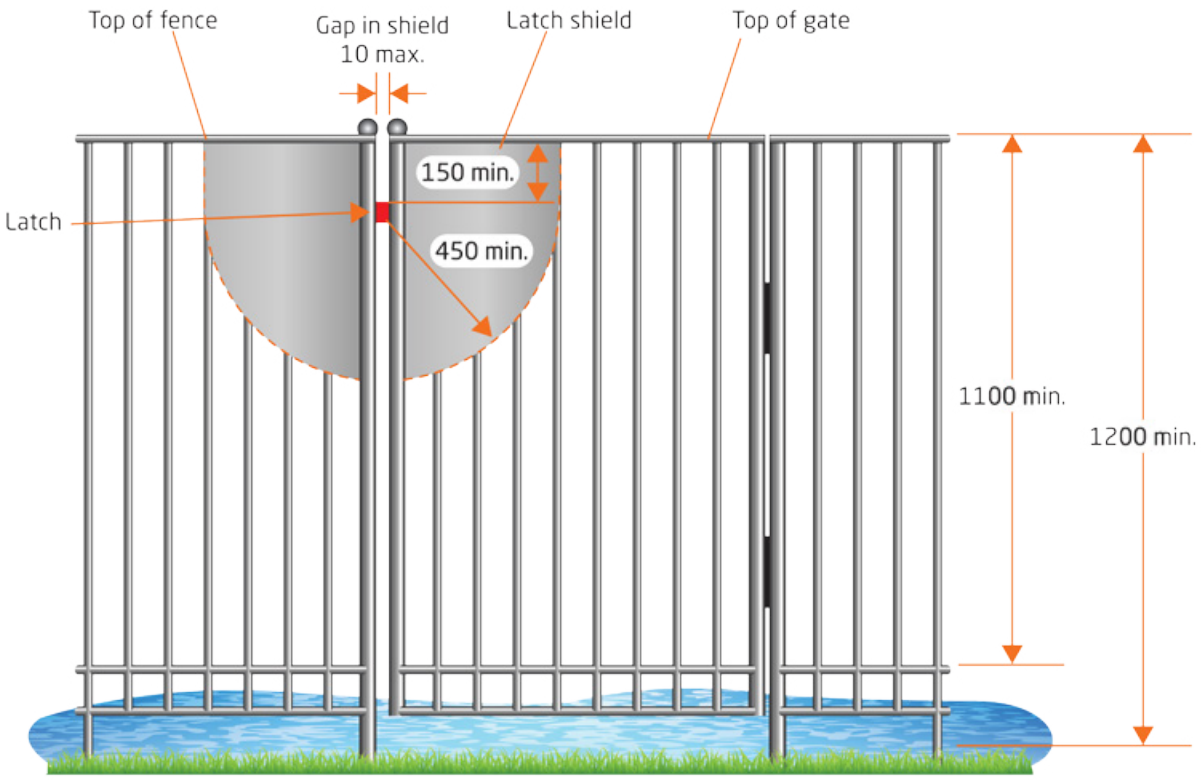


Figure 39

2.11.3.3 Shielding of latching devices

Latching releases must be inaccessible to young children. Shields must have an effective radius of 450 mm, installed to restrict access to the latch release by a young child. Gaps larger than 10 mm must not occur within the shielded area, and the shield must be free from sharp edges.

See Figure 39 for an example of the acceptable shielding of a latching device.

2.13 Child-resistant openable portion of window

Where the height from the finished floor level of the swimming pool area to the bottom of the lowest openable portion of a window in a barrier is less than 2400 mm, the window must comply with the following:

- Where the bottom of the openable portion of the window is less than 900 mm from the inside floor of the building, it must be covered by bars or a mesh screen which complies with clause 3.1 and clause 3.3 of AS 1926.1-1993.

  Alternatively, the window may be permanently modified so that it is not capable of opening more than 100 mm (key locking devices are not acceptable).

- Where the bottom of the openable portion of the window is between 900 mm and 1200 mm from the inside floor of the building, it must comply with either the above requirements or be fitted with a securely fixed flyscreen.
- Where the bottom of the openable portion of the window is greater than 1200 mm from the inside floor of the building, no treatment is necessary.

Guidance Note 20: Doors and windows of Class 10a buildings wholly contained inside the pool enclosure do not need to satisfy the requirements of AS 1926.1-1993.

Guidance Note 21: Where a window is used as part of the barrier, in order to ensure an effective barrier height, it is suggested that the pool inspector advise the occupants that no climbable objects should be fixed within 1200 mm of the window. However, this is not a requirement of the Standard.

2.14 Opening doors

Although AS 1926.1-1993 details doors can be used as part of a swimming pool barrier, the Regulations only permit doors to be used in enclosures where the swimming pool was installed in accordance with plans submitted for approval prior to 5 November 2001, unless specifically approved by the permit authority (Building Regulations 2012 regulation 51(3)).

If a door leads directly into a pool area and the pool was approved after 5 November 2001, the door is not permitted unless it is permanently fixed closed; or approved by the permit authority in accordance with regulation 51(3).

Note that doors are not permitted in pools totally enclosed by a building without specific approval from the permit authority.

Any door contained in a wall that is an approved part of the barrier must be self-closing and self-latching, with the latch release located at least 1500 mm above the internal floor. It must also be free from footholds greater than 10 mm and have horizontal and vertical members complying with AS 1926.1-1993.

Guidance Note 22: Doors can open in any direction.

Guidance Note 23: Sliding doors may be used, however it may be difficult to ensure that these are self-closing and self-latching.

Guidance Note 24: Doorsets must comply with the requirements outlined in clause 2.14 and section 3 of AS 1926.1-1993.

Guidance Note 25: Security doors can be used where constructed of reinforced mesh or materials that comply with the requirements in Appendix D of AS 1926.1-1993. Typically, these materials include stainless steel or plastic coated aluminium that is securely fixed to the screen doorframe with fasteners that can only be removed with the use of a tool. Standard flywire is unlikely to meet the strength test requirements in Appendix D of AS 1926.1-1993.

Guidance Note 26: There is no exception made for pet doors in either the Building Regulations 2012 or AS 1926.1-1993. Where pool inspectors encounter a pet door, they should note the requirement that apertures in fencing and barriers do not exceed 100 mm. Pool inspectors should also ensure compliance with clause 2.14 of AS 1926.1-1993, which relates to footholds in child-resistant doorsets.

Pet doors that are permanently fixed shut, unable to be opened without the use of tools, are permitted.

The practice of pet doors, located within a pool barrier, with a sliding bolt latch on the pool side, so that when a child is present in the dwelling the owner can latch the pet door closed, is not acceptable.

Garage doors

Automated garage doors and driveway access gates are unlikely to comply with the requirements of AS 1926.1-1993. A permit authority may approve the use of a garage door or driveway access gate under regulation 51 of the Building Regulations 2012 if it can satisfy those requirements. The permit authority may have due regard to whether the garage door or driveway access gate is suitable based upon if it is capable of being self-closing and self-latching, even in the absence of mains power.

Pools enclosed by a building

Swimming pools may be totally enclosed within a building. Subject to permit authority approval, doors leading into the pool area must be child-resistant and comply with clause 2.14 of AS 1926.1-1993 (Building Regulations 2012 regulation 51(5)).

Guidance Note 27: If a Class 10a building forms part of the barrier, the doors (where permitted) and windows that provide access into the enclosure must comply with the requirements of AS 1926.1-1993. However, if the Class 10a building is wholly located within the enclosed area then the associated windows and doors do not need to comply with the requirements of AS 1926.1-1993.

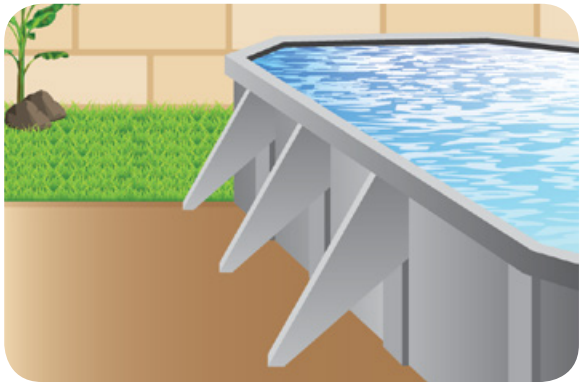
2.15 Above-ground swimming and spa pools

Above-ground swimming or spa pools that have side walls with a height of at least 1200 mm satisfy the requirements of AS 1926.1-1993 provided they comply with clauses 2.6 ('Outside Surfaces'); 2.7 ('Horizontal Climbable Members') and 2.8 ('Horizontal Non-Climbable Members'). Swimming and spa pools that have sides that are less than 1200 mm high or that fail to comply with clauses 2.6, 2.7 or 2.8 of the AS 1926.1-1993 require a separate compliant barrier to be installed.

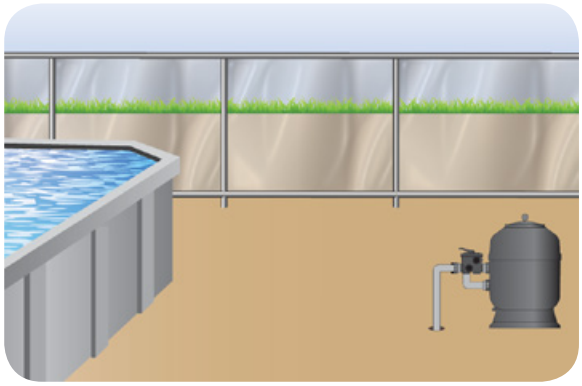
If the swimming pool has bracing supports, these may be considered non-climbable if they have a top surface that is at least 60 degrees to the horizontal.

Ladder areas and access points into the swimming pool should be fenced to meet AS 1926.1-1993.

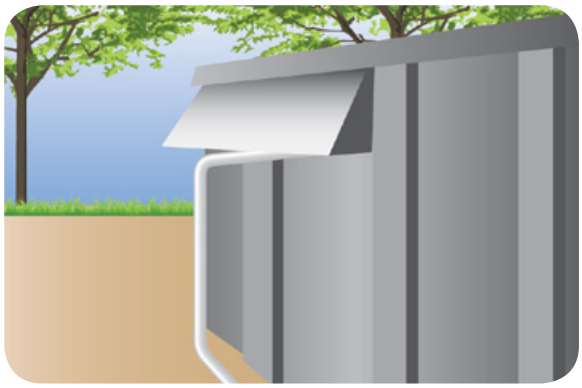
Guidance Note 28: Consideration needs to be given to the location of pool pumps, ladders and similar climbable objects adjacent to the swimming pool. Where these objects are climbable and permanently placed within 1200 mm of the pool, they may require fencing.



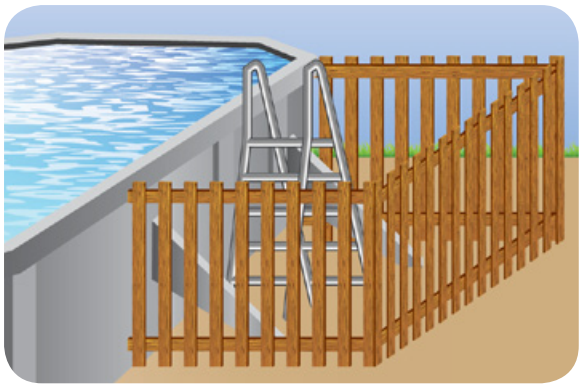
An example of non-climbable swimming pool supports.



An example where the pool pump and filter are at a distance greater than 1200 mm from the pool complying with clause 2.3.1 of AS 1926.1-1993.



An example where the pool pipes that could provide a fingerhold are being shielded.



This swimming pool fence does not comply. Although the swimming pool ladder is fenced, there is still a climbable object (the diagonal brace) inside the barrier which could provide a foothold or handhold.

2.16 Balcony

Where a balcony projects into a pool area and the distance from the floor of the balcony to the ground surface level of the pool area is less than 2400 mm, the doors (if permitted) and windows to the balcony must comply with clauses 2.13 ('Child-Resistant Openable Portion of Window') and 2.14 ('Child-Resistant Doorsets'). Alternatively the balcony must have a balustrade that complies with the fencing requirements of AS 1926.1-1993.

3.0 Performance

Appendices A – D of AS 1926.1-1993 detail a range of strength tests that a fence must satisfy, which include:

- **Appendix A Test for strength and rigidity of openings**

  This test outlines a method for determining that fencing is sufficiently strong and rigid to prevent an opening to be forced to a size that would allow a young child to gain entry.

- **Appendix B Strength test for posts and footings**

  This test outlines a method for testing whether fencing posts have adequate strength and have been correctly installed.

- **Appendix C Strength test for rigid barrier components**

  This test outlines a method for testing whether fencing components have adequate strength.

- **Appendix D Strength test for flexible materials and components**

  This test outlines a method for testing whether flexible materials have adequate strength and are adequately fixed to prevent them being penetrated or deformed under dynamic loading.

Guidance Note 29: Please refer to AS 1926.1-1993 Appendices A-D for full details of test objects, methods of testing, and reports to be prepared detailing the results.

Examples of pool fences

Appendix E of AS 1926.1-1993 is an informative appendix only. It provides a broad guide to the design and performance requirements of materials typically used in swimming pool barriers. It sets out the criteria common types of fencing would need to satisfy in order to comply with AS 1926.1-1993. Examples of fencing materials outlined include:

- post and rail construction;
- perforated materials, wire mesh or fabric barriers;
- fabricated metal barriers;
- infill panel barriers (eg colorbond steel, glass, perspex);
- brickwork or masonry barriers;
- brushwood barriers; and
- retaining walls.

Location requirements

General

Restricted access is required to all swimming pools from the dwelling, adjoining allotments, and the verge by safety barriers compliant with the Regulations and AS 1926.1-1993.

Outdoor swimming pools are required to have a barrier between any door of the dwelling and the swimming pool. Generally, child-resistant doorsets are only permitted in outdoor pools where the building permit application was submitted to the permit authority before 5 November 2001, or where the pool was installed before 5 November 2001 (Building Regulations 2012 regulation 52).

Swimming pools that are totally enclosed by a building are permitted to have child-resistant doorsets compliant to AS 1926.1-1993, subject to permit authority approval (Building Regulations 2012 regulation 51(3)(b)).

A Class 10a building that is wholly within the pool area may only be accessed from inside the enclosure. Where entry into the Class 10a building can be made from outside the enclosure and the building also opens into the enclosed pool area, doors (where permitted) and windows providing this access must comply with AS 1926.1-1993, or a suitable barrier must be erected between the building and the pool.

Alternative requirements

The permit authority may approve an alternative solution in regards to a swimming pool barrier for a pre-May 2016 pool if it is satisfied that, at the time of granting approval, that the alternative requirements will restrict access by young children to a pool as effectively as if there were compliance with AS 1926.1-1993 (Building Regulations 2012 regulation 51(2)).

Further, the permit authority may approve a door as part of the pool barrier if the door is in accordance with the requirements of AS 1926.1-1993 and:

- in the opinion of the permit authority, a fence or barrier satisfying regulation 50 between the building and the pre-May 2016 pool would cause:
  - a significant problem of a structural nature;
  - a significant problem of any other nature, the cause of which is not within the control of the owner or occupier;
- the pre-May 2016 pool is totally enclosed by a building; or
- in the opinion of the permit authority, a fence or barrier satisfying regulation 50 between the building and the pre-May 2016 pool would create a significant problem for a person with a disability who is resident at the premises and wishes to have access to the pre-May 2016 pool.

In deciding whether to give approval in this manner, the permit authority must have regard as to whether or not a young child resides at the premises (Building Regulations 2012 regulation 51(4)).

Pool inspectors should be aware of approved alternative requirements that may be applicable to the pool barriers they are to inspect.

Pre-May 2016 pools also have the option of complying with the Post-May 2016 route for alternative solutions.

Guidance Note 30: An example of where the installation of a fence or barrier involves a sufficient problem of a structural nature or a sufficient problem of any other nature beyond the control of the owner or occupier is where the pool is too close to the building or door for the installation of a fence or gate.

Guidance Note 31: In the case of a pool that is wholly contained within the building, the pool must not share common living areas with other parts of the premises unless there are suitable barriers installed between the common living areas and the pool.

Example layouts

Pre-May 2016 pools

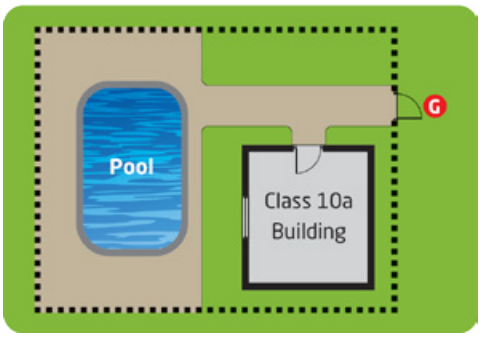
The following diagrams are compliant pool barrier layouts for pre-May 2016 private swimming pools:

Legend

- G — Gate complying with AS 1926.1
- D — Child-resistant doorset complying with AS 1926.1
- W — Child-resistant openable window complying with AS 1926.1
- Openable window NOT complying with AS 1926.1
- Sliding door NOT complying with AS 1926.1
- Fence, retaining wall or other such barrier complying with AS 1926.1
- Wall of dwelling with no openings

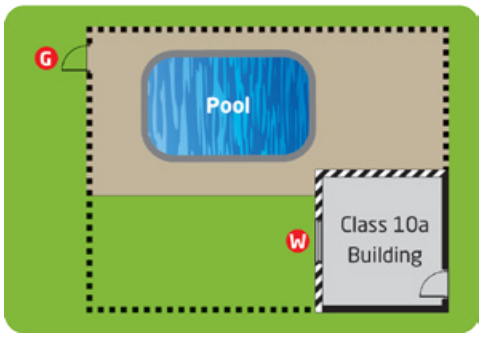
Buildings within the pool area

Example A



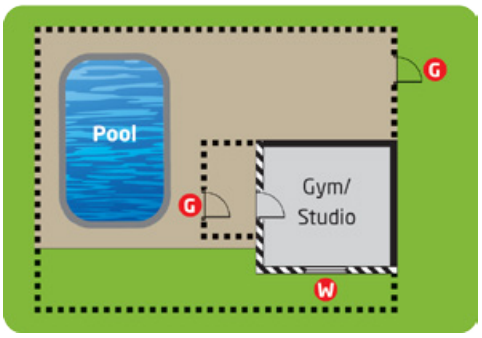
The Class 10a building is wholly within the pool area and does not provide access to the pool through the barrier. As the building is not habitable, access between it and the pool does not need to be restricted to comply with AS 1926.1.

Example B



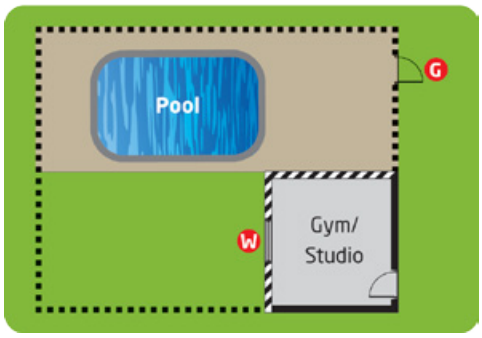
The Class 10a building provides access into the pool area through the barrier which consists of part of the building's wall. For this reason the window of the building must comply with AS 1926.1 or a barrier between the Class 10a building and the pool must be installed. The door is not part of the effective barrier and as such does not need to be restricted.

Example C



Doors are not permitted to lead directly into a pool area. A fence and gate complying with AS 1926.1 is to be provided between the door and the pool area.

Example D



Access is restricted from the gym/studio by walls and a compliant child-resistant window.

The gym/studio is an example of a Class 1 building located in the pool area. Access to the pool from the habitable building is to be restricted as if it was a dwelling.

Legend

- G — Gate complying with AS 1926.1
- D — Child-resistant doorset complying with AS 1926.1
- W — Child-resistant openable window complying with AS 1926.1
- Wall forming part of enclosure
- Openable window NOT complying with AS 1926.1
- Wall of dwelling with no openings
- Fence, retaining wall or other such barrier complying with AS 1926.1

Pre-May 2016

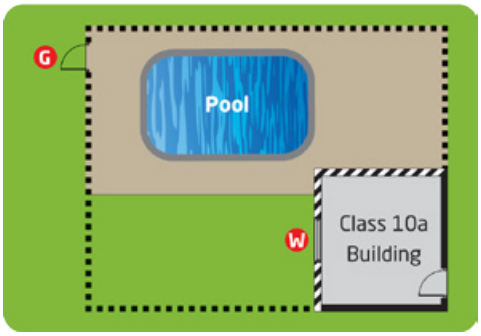
Pre May 2016 pools using the pre-Nov 2001 concession:

The following diagrams are compliant pool barrier layouts for pre-May 2016 private swimming pools, using the pre-November 2001 concession:

Example 1

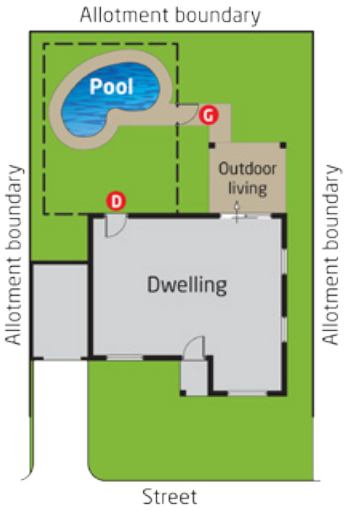
Example 3

Example 5



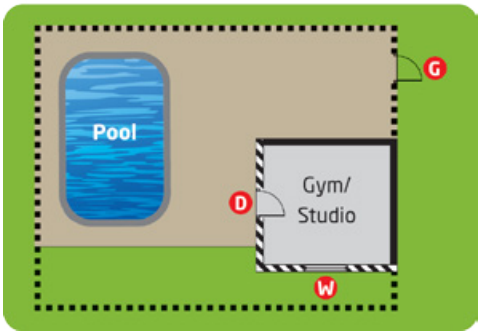
The Class 10a building provides access into the pool area through the barrier which consists of part of the building's wall. For this reason the window of the building must comply with AS 1926.1 or a barrier between the Class 10a building and the pool must be installed. The door is not part of the effective barrier and as such does not need to be restricted.

Example 2



Example 4

Example 6



Doors that lead directly into a pool area are permitted for pools using the pre-November 2001 concession providing they comply as a child-resistant doorset under AS 1926.1.

Legend

- G — Gate complying with AS 1926.1
- D — Child-resistant doorset complying with AS 1926.1
- W — Child-resistant openable window complying with AS 1926.1
- Wall forming part of enclosure
- Openable window NOT complying with AS 1926.1
- Sliding door NOT complying with AS 1926.1
- Fence, retaining wall or other such barrier complying with AS 1926.1
- Wall of dwelling with no openings

Scenarios

Scenario 1

Dividing fences: adjoining pools

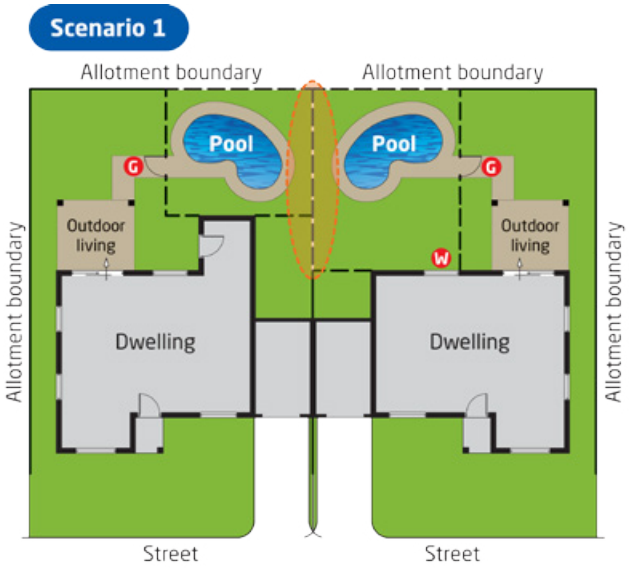
In this scenario the dwelling on the left has a pre-May 2016 pool and the dwelling on the right has a post-May 2016 pool, where the dividing fence is utilised by both owners. Both swimming pools must comply with the requirements that applied at the time the pool was approved/ installed.

The pre-May 2016 pool:

- Boundary fence to be min. 1200 mm high with at least one side non-climbable with no climbable objects within 1200 mm of the top of the fence; or
- Boundary fence to be min. 1800 mm high with 900 mm NCZ 5 at the top of the fence internally.

The post-May 2016 pool:

- Boundary fence to be min. 1800 mm high with 900 mm NCZ 5 at the top of the fence internally.



Scenario 2

Post-May 2016 spa pool in a pre-May 2016 pool enclosure

In this scenario the property owner has decided to install a spa pool beside an older swimming pool.

The pre-May 2016 pool must meet either the pre-May 2016 safety barrier requirements or the post-May 2016 safety barrier requirements. The post-May 2016 spa barrier is only permitted to comply with the post-May 2016 requirements. As such, the barriers are required to comply with the post-May 2016 requirements.

If the pre-May 2016 pool area has barriers upgraded, or otherwise complies, to meet the post-May 2016 requirements then no barrier is required between the spa and pool.

Scenario 3

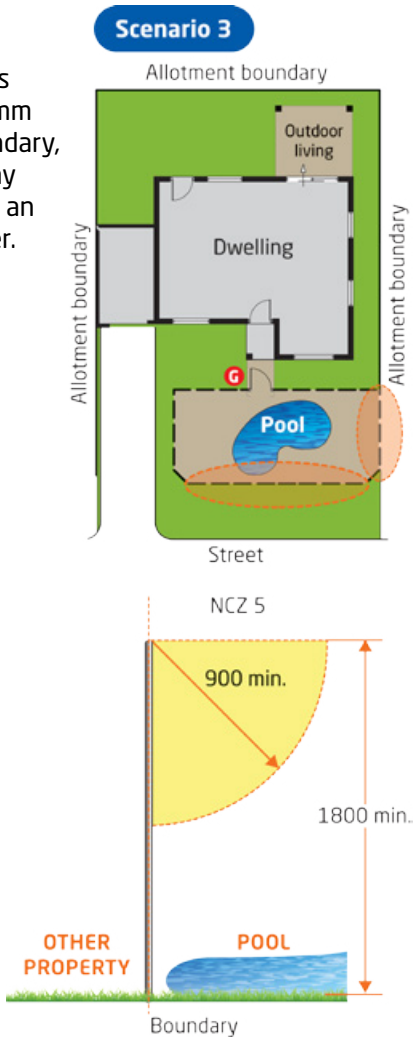
Post-May 2016 pool boundary barrier – front fence, boundary fence adjoining parkland

In this scenario the pool is located in the front yard. The pool area is partially bound by the adjoining public open space and the verge.

A boundary barrier is defined by AS 1926.1-2012 as a dividing barrier between two adjoining properties. As the public open space and verge are not part of the allotment, and the barriers abut the boundary, the barriers are required to comply as boundary barriers.

Boundary barriers are required to comply with clause 2.2.4 of AS 1926.1-2012. It must have a height at least 1800 mm high on the inside, and NCZ 5 applies from the top of the barrier on the inside. The external face is permitted to be climbable.

Alternatively, if the barrier is setback 900 mm from the boundary, the barrier may be considered an internal barrier.



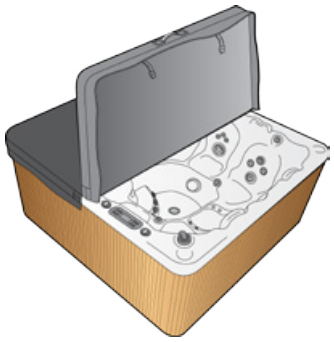
Scenario 4

Hard covers on spa pools.

Child-resistant hard covers cannot be used as safety barriers in place of a fence for above-ground spa pools because:

- there are no current regulatory standards for spa pool covers;
- when the cover is off the spa pool there is no barrier; and
- they do not comply with AS 1926.1-2012.

A safety barrier complying with the Regulations is required.



Scenario 5

A property has existing boundary fences at 1700 mm high. They are going to install a post-May 2016 swimming pool. In order to meet the 1800 mm minimum boundary fence height, for the portion of the boundary fence that forms part of the pool barrier, they will add a 200 mm high extension.

The boundary fence pool barrier must be at least 1800 mm high. The owner needs to check with the permit authority to establish whether additional approvals under local laws, planning policy and/or scheme requirements, or building regulations may be required. The owner should liaise with the adjoining property owner regarding the modification to the boundary fence (*Dividing Fences Act 1961*).

As NCZ 5 applies from the top of the barrier, the extension needs to be flush with the face of the existing boundary fence facing the pool, and the extension must not have handholds or footholds, indentations, projections, or gaps exceeding 10 mm. A securely fixed wire mesh with gaps not exceeding 13 mm is an example of a material that may be used to cover the extension to render it unclimbable.

Bibliography

Australian Building Codes Board (ABCB), 2015. National Construction Code Series *2015 Volume One - Building Code Of Australia - Class 2 To Class 9 Buildings*. Canberra, ACT: Australian Building Codes Board (ABCB).

Australian Building Codes Board (ABCB), 2015. National Construction Code Series *2015 Volume Two - Building Code Of Australia - Class 1 And Class 10 Buildings*. Canberra, ACT: Australian Building Codes Board (ABCB).

Department of the Premier and Cabinet, 02 Nov 2015. *Criminal Procedure Act 2004, Version 02-e0-01*. s.l.:State Law Publisher.

Department of the Premier and Cabinet, 02 Nov 2015. *Local Government Act 1995, Version 06-h0-01*. s.l.:State Law Publisher.

Department of the Premier and Cabinet, 07 Jun 2013. *Building Act 2011*, Version 01-a0-05. s.l.:State Law Publisher.

Department of the Premier and Cabinet, 08 Dec 2015. *Building Regulations 2012, Version 02-e0-00*. s.l.:State Law Publisher.

Department of the Premier and Cabinet, 9 Dec 2009. *Health (Aquatic Facilities) Regulations 2007, Version 00-b0-04*. s.l.: State Law Publisher.

Queensland Department of Housing and Public Works - Building Industry and Policy, 2015. *Pool Safety Inspector Guideline*. QLD: Queensland Department of Housing and Public Works - Building Industry and Policy.

Royal Life Saving WA, n.d. *About Toddler Drowning - Royal Life Saving wa*. [Online]

Available at: http://lifesavingwa.com.au/programs/keep-watch/about-toddler-drowning [Accessed 18 02 2016].

Standards Australia International Ltd, 1993. *Australian Standard - AS 1926.1-1993 (Incorporating Amendment No.1) - Swimming Pool Safety - Part 1: Fencing For Swimming Pools*. Strathfield, NSW: Standards Australia International Ltd.

Standards Australia International Ltd, 2006. *Australian Standard - AS 1288-2006 (Incorporating Amendment Nos 1 and 2) - Glass In Buildings - Selection And Installation*. Sydney, NSW: SAI Global Limited.

Standards Australia International Ltd, 2007. *Australian Standard - AS 1926.2-2007 (Incorporating Amendment Nos 1 and 2) - Swimming Pool Safety - Part 2: Location Of Safety Barriers For Swimming Pools*. Sydney, NSW: SAI Global Limited.

Standards Australia International Ltd, 2012. *Australian Standard - AS 1926.1-2012 - Swimming Pool Safety - Part 1: Safety Barriers For Swimming Pools*. Sydney, NSW: SAI Global Limited.

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