
Consultation on proposed F9/AS1 and F9/AS2 Acceptable Solutions for residential pool barriers

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Introduction

Purpose of this consultation document

The Ministry of Business, Innovation and Employment (MBIE) seeks your views and your feedback on:

- Building Code clause F9 Means of Restricting Access to Residential Pools¹ : issuing new Acceptable Solutions F9/AS1 and F9/AS2
- Revoking the Acceptable Solution created by section 450A of the Building Act²
- Building Code clause F4 Safety from Falling: amending F4/AS1 to delete paragraph 1.2.7

¹ The Building (Pools) Amendment Act inserts a new clause F9. The Act commences on 1 January 2017.

² Section 450A is inserted by the Building (Pools) Amendment Act.

How to provide your feedback

You can provide your feedback on this consultation document to us by downloading the submission form at <http://www.mbie.govt.nz/info-services/building-construction/consultations/> and then sending your submission by:

- emailing your feedback to buildingfeedback@mbie.govt.nz, with “Consultation – proposed Acceptable Solutions for residential pool barriers 2016” in the subject line
- posting or couriating your feedback to:

Consultation – proposed Acceptable Solutions for residential pool barriers 2016
Compliance Solutions Team
Ministry of Business, Innovation and Employment
Level 5, 15 Stout Street
P O Box 1473
Wellington 6140

Timeframe for providing feedback

Submissions on this consultation document close at 5pm on 16 December 2016.

What happens to your feedback

Your feedback will contribute to issuing the Acceptable Solutions.

Release of information

Submissions are also subject to the Official Information Act 1982. Please set out clearly in the cover letter or e-mail accompanying your submission if you have any objection to the release of any information in the submission, and in particular, which parts you consider should be withheld, together with the reasons for withholding the information. MBIE will take such objections into account and will consult with submitters when responding to requests under the Official Information Act 1982.

If your submission contains any confidential information, please indicate this on the front of the submission. Any confidential information should be clearly marked within the text. If you wish to provide a submission containing confidential information, please provide a separate version excluding the relevant information for publication on our website.

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Background

The Building Act 2004 governs building work in New Zealand. One purpose of the Act is to make sure that people who use buildings can do so safely and without endangering their health. This purpose is reflected in the Building Code. The Building Code sets performance criteria that buildings must meet.

Under the Building Code, swimming pools must have barriers that restrict access by young children. These requirements are currently set out in clause F4 of the Code, in particular clauses F4.3.3, F4.3.4(f), and F4.3.5. Acceptable Solutions provide one way of complying with Building Code requirements. The Schedule to the Fencing of Swimming Pools Act 1987 (the FOSPA) is currently an Acceptable Solution for the existing clause F4 of the Code.

The Building (Pools) Amendment Act (the Amendment Act) repeals the FOSPA. It also deletes sub clauses from clause F4 relating to the fencing of swimming pools and inserts a new clause F9 relating to residential pools. Clause F9 requires similar performance to the current clause F4. The main differences are that a safety cover will be an acceptable barrier for small heated pools (such as spa pools and hot tubs) and doors that restrict unsupervised access will be able to have an alarm as an alternative to automatically closing. The new clause will take effect on 1 January 2017, which is the commencement date of the Amendment Act. The Amendment Act provides that the Schedule to the FOSPA will be an Acceptable Solution for residential pools.

The need for new Acceptable Solutions

Additional Acceptable Solutions are needed to specify acceptable safety covers for small heated pools and acceptable alarms for doors that restrict unsupervised access. MBIE proposes to revoke the current Acceptable Solution and issue new Acceptable Solutions AS1 (*Barriers for residential pools*) and AS2 (*Covers for small heated pools*). The proposed Acceptable Solutions incorporate much of the Schedule to the FOSPA and NZS 8500 *Safety Barriers and Fences Around Swimming Pools, Spa and Hot Tubs* as well as introducing new specifications for covers for small heated pools and door alarms.

Specifications for safety covers for small heated pools

AS2 sets out specific construction details for safety covers for small heated pools. Most safety covers currently in use should be able to comply with AS2. The specifications in draft AS2 align with those in NZS 8500, but are more specific than NZS 8500.

Specifications for door alarms

A door can be part of a pool barrier. Under the new Building Code clause F9, doors must always restrict unsupervised access by young children. Door closers and door alarms help to make sure that doors are kept closed.

AS1 sets out specific construction details for door alarms. The specifications are based on the US Consumer Product Safety Commission Safety Barrier Guidelines for Residential Pools. The alarms make sure that adults and older children close the door after they pass through.

If people need the door open longer than a few seconds, they can temporarily deactivate the alarm. The alarm will automatically reset. The alarm cannot have an on-off switch that would enable people to leave the door open.

Specifications for doors that open towards a pool area

The Building Code allows doors that form part of a barrier to open in either direction. However, doors that open towards a pool area are not part of the current Acceptable Solution. They have been approved as alternative solutions in past cases where the door closer is strong enough to restrict access. AS1 would make doors that open towards a pool area acceptable where the door closer is strong enough to restrict access by a child. The strong self-closer would provide a safeguard if the door fails to automatically latch.

Specifications for boundary fences

AS1 provides methods of constructing boundary fences by citing the relevant parts of Australian Standard 1926-1:2012 (*Swimming pool safety*). These specifications provide that, for fences of a certain height and construction, there is no requirement on the pool owner to ensure there are no climbable objects on the other side of the fence, as is currently required by the Acceptable Solution.

Proposal

Effective date

New clause F9 will take effect on 1 January 2017, which is the commencement date of the Amendment Act. AS1 and AS2 are intended to take effect after the commencement date.

Transitional arrangements

As the substance of the Schedule to the FOSPA is to be part of the new AS1, there is no need for transitional arrangements.

Existing pools

The Amendment Act will require residential pools to comply with the pool barrier requirements on an ongoing basis. The proposed Acceptable Solutions would provide one way for existing pool barriers to comply. The Amendment Act also provides other ways for existing pools to comply, including by continuing to comply with the Schedule to the FOSPA.

Referenced materials

- NZS 8500 is available for inspection free of charge at the Ministry of Business, Innovation and Employment, 15 Stout Street, Wellington. It may also be purchased from Standards New Zealand, 15 Stout Street, Wellington or online at www.standards.govt.nz.
- AS 1926.1 is available for inspection free of charge at the Ministry of Business, Innovation and Employment, 15 Stout Street, Wellington. It may also be purchased at www.saiglobal.com.
- The Fencing of Swimming Pools Act 1987 can be accessed free of charge at www.legislation.govt.nz.

F9 Means of Restricting Access To Residential Pools

Proposed updates

MBIE proposes new Acceptable Solutions F9/AS1 and F9/AS2 to:

- specify acceptable safety covers for small heated pools
- specify acceptable alarms for doors that are part of a pool barrier
- provide new acceptable solutions for boundary fences and garden walls.

Consequentially, MBIE also proposes to revoke the Acceptable Solution created by new section 450A of the Building Act.

F9 options

Option one: no new Acceptable Solutions

One option is to not introduce new Acceptable Solutions for clause F9. This would mean there are no Acceptable Solutions for safety covers for small heated pools or door alarms. There would consequently be no recognised acceptable method of constructing spa pool covers and door alarms.

Option two: new Acceptable Solutions

The preferred option is to revoke the Acceptable Solution in the Building (Pools) Amendment Act and introduce new Acceptable Solutions for clause F9. This would make sure that there are acceptable solutions for safety covers for small heated pools and door alarms. It also offers the opportunity to provide new acceptable solutions for boundary fences and garden walls.

Question F9 – 1

What are your comments on the options?

Proposed Acceptable Solutions F9/AS1 and F9/AS2

Building Code Clause F9 'Means of restricting access to residential pools'

Acceptable Solutions

Status of Verification Methods and Acceptable Solutions

Verification Methods and Acceptable Solutions are prepared by the Ministry of Business, Innovation and Employment in accordance with section 22 of the Building Act 2004.

Verification Methods and Acceptable Solutions are for use in establishing compliance with the New Zealand Building Code. A person who complies with a Verification Method or Acceptable Solution will be treated as having complied with the provisions of the Building Code to which the Verification Method or Acceptable Solution relates.

However, using a Verification Method or Acceptable Solution is only one method of complying with the Building Code. There may be alternative ways to comply. Users should make themselves familiar with the preface to the New Zealand Building Code Handbook, which describes the status of Verification Methods and Acceptable Solutions and explains alternative methods of achieving compliance.

Defined words (italicised in the text) and classified uses are explained in Clauses A1 and A2 of the Building Code and in the Definitions at the start of this document.

Definitions

Abode or place of abode

- (a) means any place used predominately as a place of residence or abode, including any appurtenances belonging to or enjoyed in the place; and
- (b) includes –
 - (i) a hotel, motel, inn, hostel, or boarding house;
 - (ii) a convalescent home, nursing home, or hospice;
 - (iii) a rest home or retirement village;
 - (iv) a camping ground;
 - (v) or any similar place

Immediate pool area means the land in or on which the pool is situated and so much of the surrounding area as is used for activities carried out in relation to or involving the pool

Pool

- (a) means
 - (i) any excavation or structure of a kind normally used for swimming, paddling, or bathing; or
 - (ii) any product (other than an ordinary home bath) that is designed or modified to be used for swimming, wading, paddling, or bathing; but
- (b) does not include an artificial lake

Residential pool means a pool that is—

- (a) in a place of abode; or

- (b) in or on land that also contains an abode; or
- (c) in or on land that is adjacent to other land that contains an abode if the pool is used in conjunction with that other land or abode

Small heated pool means a heated pool (such as a spa pool or hot tub) that —

- (a) has a water surface area of 5 m² or less; and
- (b) is designed for therapeutic or recreational use

Referenced Standards

NZS 8500: 2006. Safety barriers and Fences Around Swimming Pools, Spas and Hot Tubs.

AS 1926.1– 2012. Swimming pool safety: Part 1: Safety barriers for swimming pools

F9/AS1 Barriers for residential pools

Scope

This Acceptable Solution provides a means for restricting the unsupervised access of small children to *residential pools*. Its main provision is an appropriate barrier or fence surrounding the pool having doors or gates able to be managed by those responsible for supervising any small children who may be present.

1.1 Barriers surrounding the *immediate pool area*

- 1.1.1 A barrier complying with clauses 1 to 7 of the Schedule to the Fencing of Swimming Pools Act 1987 is an acceptable method of constructing a barrier surrounding the *immediate pool area* of a *residential pool*:

Schedule

Height

1(1) The fence shall extend—

- (a) at least 1.2 metres above the ground on the outside of the fence; and
- (b) at least 1.2 metres above any permanent projection from or object permanently placed on the ground outside and within 1.2 metres of the fence.

1(2) Notwithstanding subclause (1), where the fence is constructed of perforated material, netting, or mesh and any opening in the material, netting, or mesh has a dimension (other than the circumference or perimeter) greater than 10 mm, the fence shall extend at least 1.8 metres above the ground or the projection or object.

Ground clearance

2 Any clearance between the bottom of the fence and ground level shall not exceed 100 mm.

Materials

3 All materials and components shall be of a durable nature and shall be erected so as to inhibit any child under the age of 6 years from climbing over or crawling under the fence from the outside.

4 Except where the fence is horizontally close-boarded or is made of perforated material, netting, or mesh, the spacing between adjacent vertical pales, panels, or other posts shall not exceed 100 mm at any point.

5 All fencing supports, rails, rods, and wires, that are not vertical, and all bracing that is not vertical, shall be inaccessible for use for climbing from the outside.

5A Notwithstanding clause 5, a fence may have horizontal supports, rails, rods, or wires, that are accessible for use for climbing from the outside, and horizontal bracing that is accessible for such use, if—

- (a) the distance between any 2 of them at any point is at least 900 mm; and
- (b) there is no other support, rail, rod, wire, or bracing (other than a vertical rail) between the same 2 at any point.

6 Where any perforated material, netting, or mesh is used, no opening in that material, netting, or mesh shall have any dimension (other than the circumference or perimeter) greater than 50 mm.

7 All perforated material, netting, or mesh material shall be firmly attached at both top and bottom to a rail, pipe, or similar firm structure, or otherwise be of such a nature that the fence cannot readily be crossed by children under the age of 6 years.

- 1.1.2** The following sections of NZS 8500 are acceptable methods of constructing a barrier surrounding the immediate pool area of a residential pool:

Section 3.3 and the accompanying Figures 3.1, 3.2, 3.3, 3.4 & 3.5 except that in using Figure 3.1, the angled dimension lines 900mm, 1000mm and 1200mm shall be taken as being vertical and in Figure 3.3 openings may be 13 mm diameter in 1200 mm high fences.

Comment: The barriers in these diagrams correspond to the fence dimensions given in the Schedule.

- 1.1.3** AS 1926.1 paragraph 2.2.3 is also an acceptable method of constructing a barrier that is not less than 1800 mm in height provided there are no openings that a 100 mm diameter sphere could pass through and there is an NCZ #1 on the outside.

Comment: An NCZ #1 has a zone 900 mm high with no handholds or footholds.

- 1.1.4** Barriers of the types referred to in this paragraph and in paragraph 1.1.1 shall not be more than 15° from the vertical and may only slope away from the pool.

- 1.1.5** NZS 8500 in section 3.5 and the accompanying Figure 3.7 are also acceptable methods of providing a barrier to an immediate pool area.

- 1.1.6** AS 1926.1 paragraph 2.2.4 is an acceptable method of constructing a pool barrier that is also a boundary fence for the property.

Comment: This paragraph provides that for boundary fences of a certain height and construction there is no requirement for the pool owner to ensure there are no climbable objects on the other side of the fence.

- 1.1.7** Where a balcony projects into the immediate pool area, barriers on the balcony shall be dimensioned in accordance with NZS 8500 section 3.8 and Figure 3.9.

- 1.1.8** Any gates in barriers surrounding an immediate pool area shall comply with section 3.4 and Figure 3.6 of NZS 8500 except that self closing devices shall operate such that they return the gate or door to the closed and latched position when the gate or door is stationary and 150 mm or more from the closed position.

- 1.1.9** Where a building forms part of the barrier the doors shall comply with 1.4.2 to 1.4.5, as applicable.

1.2 Pool wall forming the barrier

- 1.2.1** NZS 8500 Figure 3.10 is an acceptable means of constructing swimming pools where the pool wall itself acts to provide the barrier.

Comment 1: NZS 8500 Figure 3.4 shows the maximum sizes of projections and indentations such that a wall will inhibit climbing by young children.

Comment 2: When the top of a pool side wall is more than 1 m from the surrounding ground Clause F4 'Safety from Falling' of the Building Code may apply if there is a potential hazard from falling over or off the top of the wall. Determinations Nos. 2010/085 and 2010/097 are applicable to this situation. See:

<http://www.building.govt.nz/determinations-view-past-determinations>

1.3 Strength of barriers

1.3.1 Barriers shall meet the strength requirements of NZS 8500 Appendices C, D, E & F.

Comment: Barriers also need to be able to withstand the foreseeable wind force at the location. Refer B1/VM1 for design wind forces.

1.4 Buildings forming part of a barrier surrounding an *immediate pool area*

1.4.1 Where a window forms part of the barrier an acceptable method of construction is paragraph 3.6 and Figure 3.8 of NZS 8500 except that there must be a vertical distance of 1000 mm with no projections greater than 10 mm beneath the opening panel for (a) and (b) to not apply.

Comment: This situation can be compared with the barriers of Figure 3.5 where a foothold can be obtained by a child at a height of 200mm thus giving an effective height of 1000 mm to the top of the barrier.

1.4.2 NZS 8500 section 3.7 is an acceptable means of constructing doors in the barrier, except that where an audible warning alarm is provided instead of a self closer, doors need not comply with 3.7.1(b) and (e). The requirements for sliding doors are the same as for hinged doors.

Comment: The purpose of a door alarm is to remind, if necessary, someone using the door to close it after they have passed through. (See paragraph 1.4.3.)

1.4.3 A sign shall be fixed adjacent to the inside door handle at a height between 1200 mm and 1500 mm having letters of minimum height 4 mm (black on yellow background) stating:

‘This is a swimming pool safety door. Keep closed’

1.4.4 Where a door opens towards the pool and has a self closer, the closer force when the door is open 100 mm shall be not less than 5 kg, measured at the latch level.

Comment: This self closer strength is necessary to ensure that if the door is not latched or is slightly ajar for some reason, the self closer alone will prevent a child readily pushing open the door.

1.4.5 An acceptable audible warning alarm located adjacent to the door shall:

- (a) Sound and continue to sound when the door is open for longer than 7 seconds, and
- (b) Have an intensity of not less than 85dBA measured at a distance of 5 m, and
- (c) Be powered from the building’s mains electricity supply, and
- (d) Have a different tone from other audible or warning devices in the house.

Alarms may be provided with a deactivation switch placed not less than 1.5 m above floor level that provides deactivation for not more than 15 seconds.

Comment: The specification of paragraph 1.3.3 follows that recommended by the US Consumer Product Safety Commission for doors opening to pool areas.

F9/AS2 Covers for *small heated pools*

Scope

This Acceptable Solution applies to the type of *small heated pool* commonly used in association with places of residence having a removable cover constructed primarily from polystyrene or a similar lightweight material.

Comment: The covers on most existing small heated pools are expected to comply with F9/AS1.

1.1 Construction of small heated pools

Note that the provision in Clause F9.3.2(b) for *small heated pools* to have covers rather than a surrounding barrier applies only to those pools whose top edge is at all points not less than 760 mm above the adjacent floor or ground, whose walls inhibit climbing and whose water surface area is not greater than 5 m².

1.2 Strength of covers

1.2.1 Acceptable fastenings are hold down straps fitted with lockable plastic snap buckles having a minimum width 33 mm.

1.2.2 Fastenings using metal padlocks are acceptable for hot tubs if 1.2.1 is not followed.

Comment: Security can also be an issue with hot tubs in some locations so that padlocks can be a more practicable means of fastening a cover.

1.2.3 Fastenings shall be capable of maintaining the cover in place so that there is no opening that 100 mm sphere could pass through when a 10 kg force is applied to the cover in any direction and at any location.

Comment 1: Building Code Clause B2 'Durability' applies to covers and fastenings and signs. In particular, the connection of the fastening strap to the cover needs to allow for some degradation of the stitching and of the materials.

Comment 2: Four fastenings may be acceptable on a small square pool but larger rectangular pools are likely to need more.

1.3 Signage

1.3.1 Signs in accordance with the format of Figure G2.2 of Appendix G of NZS 8500 and containing the text below shall be fixed on or adjacent to each lifting handle.

'WARNING: Cover must be fixed in place when pool not in use to restrict access by young children'

Question F9 – 2.1 Do you have any comments in relation to the proposal for door alarms? *(see AS1 paras 1.4.2, 1.4.5)*

Question F9 – 2.2 Do you have any comments in relation to the proposal for doors that open toward a pool area? *(see AS1 para 1.4.4)*

Question F9 – 2.3 Do you have any comments in relation to the proposal for barriers that are also boundary fences? *(see AS1 para 1.1.6)*

Question F9 – 2.4 Do you have any other comments on proposed AS1 *Barriers for residential pools?* *(see AS1)*

Question F9 – 2.5 Do you have any comments in relation to proposed AS2 *Covers for small heated pools?* *(see AS2)*

F4 Safety from Falling

Proposed updates

MBIE proposes amending Acceptable Solution F4/AS1 to delete paragraph 1.2.7, which relates to deleted clauses regarding swimming pool barriers.

F4 options

Deleting paragraph 1.2.7 of F4/AS1 is the only practicable option as clause F4 has been amended by the Amendment Act, so that the clause no longer relates to swimming pool child safety barriers.

Question F4 – 1 What are your comments on this option?

Proposed amendment to Acceptable Solution F4/AS1

Delete paragraph 1.2.7³

³ Paragraph 1.2.7 reads: “The Schedule to the Fencing of Swimming Pools Act 1987 is a means of establishing compliance with NZBC Clause F4.”

Appendix: new clause F9 of the Building Code

The Building (Pools) Amendment Act creates new Building Code clause F9. The Act commences on 1 January 2017. Clause F9, as enacted by Parliament, is included below for your reference. It can also be accessed online at:

<http://www.legislation.govt.nz/act/public/2016/0071/latest/DLM6581371.html>

Building Regulations 1992 (SR 1992/150)

In Schedule 1, delete clauses F4.3.3, F4.3.4(f), and F4.3.5.

In Schedule 1, after clause F8, insert:

Clause F9—Means of restricting access to residential pools

| Provisions | Limits on application |
|-------------------------------|---|
| Objective | |
| F9.1 | The objective of this provision is to prevent injury or death to young children involving <i>residential pools</i> . |
| Functional requirement | |
| F9.2 | <i>Residential pools</i> with a maximum depth of water of 400 mm or more that are filled or partly filled with water must have means of restricting access that prevents unsupervised access by a child under 5 years of age. |

Building Regulations 1992 (SR 1992/150)—continued

| Provisions | Limits on application |
|--|--|
| Performance | |
| F9.3.1 Residential pools must have or be provided with physical barriers that restrict access to the <i>pool</i> or the <i>immediate pool area</i> by unsupervised young children (ie, under 5 years of age). | In the case of a <i>small heated pool</i> , the means of restricting access referred to in Performance F9.3.1 need only restrict access to the <i>pool</i> when the <i>pool</i> is not in use. |
| F9.3.2 Barriers must either— (a) surround the <i>pool</i> (and may enclose the whole or part of the <i>immediate pool area</i>); or (b) in the case of a <i>small heated pool</i> , cover the <i>pool</i> itself. | Performance F9.3.2(b) applies only to those <i>small heated pools</i> where the top surface of every wall of the <i>pool</i> is at all points not less than 760 mm above the adjacent floor or ground and the walls of the <i>pool</i> inhibit climbing. |
| F9.3.3 A barrier surrounding a <i>pool</i> must have no permanent objects or projections on the outside that could assist children in negotiating the barrier. Any gates must— (a) open away from the <i>pool</i> ; and (b) not be able to be readily opened by children; and (c) automatically return to the closed position after use. | |
| F9.3.4 Where a <i>building</i> forms all or part of an <i>immediate pool area</i> barrier,— (a) doors between the <i>building</i> and the <i>immediate pool area</i> must not be able to be readily opened by children, and must either— (i) emit an audible warning when the door is open; or (ii) close automatically after use; (b) windows opening from a <i>building</i> into the <i>immediate pool area</i> must be constructed or positioned to restrict the passage of children. | |
| F9.3.5 Where a cover is provided as a barrier to a <i>small heated pool</i> , it must— (a) restrict the entry of children when closed; and | |

Building Regulations 1992 (SR 1992/150)—*continued*

| Provisions | Limits on application |
|--|------------------------------|
| (b) be able to withstand a reasonably foreseeable load; and | |
| (c) be able to be readily returned to the closed position; and | |
| (d) have signage indicating its child safety features. | |

Legislative history

| | |
|-------------------|--|
| 9 September 2015 | Introduction (Bill 63–1) |
| 16 September 2015 | First reading and referral to Local Government and Environment Committee |
| 14 April 2016 | Reported from Local Government and Environment Committee (Bill 63–2) |
| 13 September 2016 | Second reading |
| 11 October 2016 | Committee of the whole House (Bill 63–3) |
| 20 October 2016 | Third reading |
| 28 October 2016 | Royal assent |

This Act is administered by the Ministry of Business, Innovation, and Employment.

Wellington, New Zealand: