



## Determination 2018/006

# Regarding the code-compliance of sliding doors that form part of a barrier to a pool at 148 Glenbrook Road, Pukekohe

### Summary

This determination considers the compliance of a barrier to a swimming pool that includes the exterior wall of the house with five sliding doors in it. The determination assesses the barrier against the performance requirements of Clause F9 of the Building Code (Means of restricting access to residential pools), and considers whether the area encompassed by the proposed barrier is the immediate pool area.

### 1. The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004<sup>1</sup> (“the Act”) made under due authorisation by me, Katie Gordon, Manager Determinations, Ministry of Business, Innovation and Employment (“the Ministry”), for and on behalf of the Chief Executive of the Ministry.
- 1.2 The parties to the determination are:
  - the owner of the house, Karaka Trust, who applied for this determination (“the applicant”)
  - Auckland Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.3 The matter arises from an application for an amendment to a building consent that proposed to remove the approved pool barrier and instead rely on the external wall of the house as the barrier to the immediate pool area. The authority is of the view that the existing sliding doors from the house that lead into the immediate pool area would not be compliant with Clause F9 of the Building Code.
- 1.4 The matter to be determined<sup>2</sup> is whether the proposed barrier that incorporates the external wall of the house to restrict access to the pool by unsupervised children under 5 years of age will comply with Clause F9 of the Building Code<sup>3</sup>.
- 1.5 In making my decision, I have considered the submissions of the parties and the other evidence in this matter. Refer Appendix A for the relevant clauses of the Building Code, the Acceptable Solution, and the New Zealand Standard referred to in this determination.

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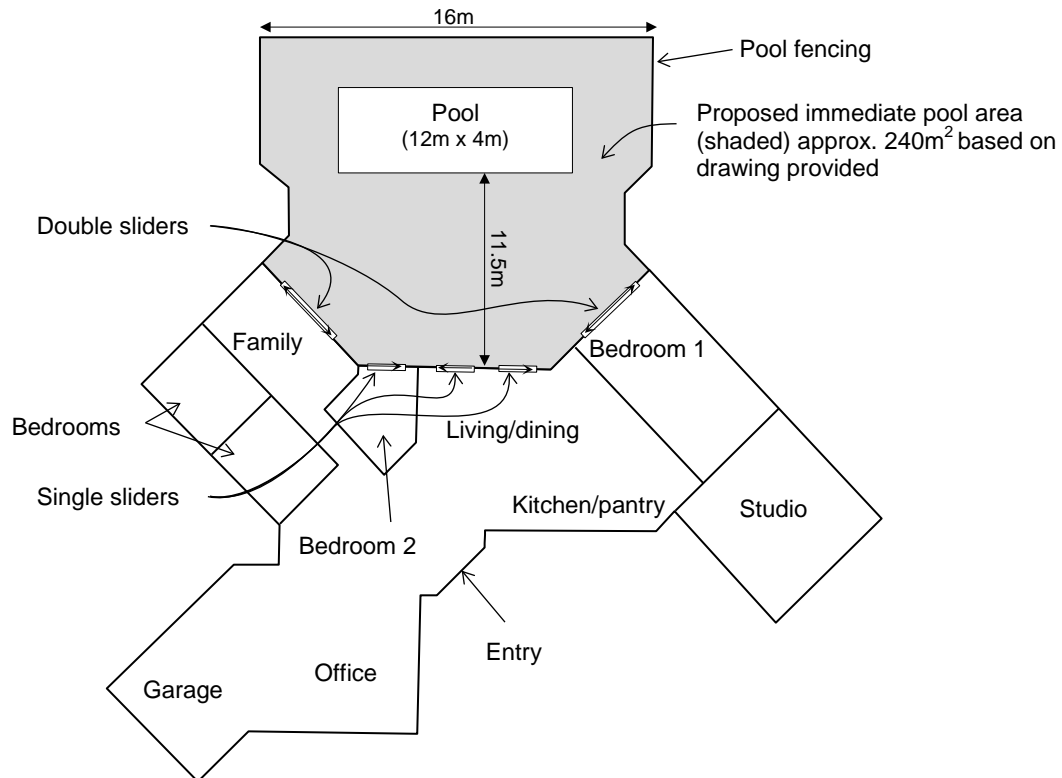
<sup>1</sup> The Building Act, Building Code, compliance documents, past determinations and guidance documents issued by the Ministry are all available at [www.building.govt.nz](http://www.building.govt.nz) or by contacting the Ministry on 0800 242 243.

<sup>2</sup> Under section 177(1)(a) of the Act.

<sup>3</sup> In this determination, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

## 2. The building work

- 2.1 The building work that is the subject of this determination is the proposed use of an exterior wall of the single-storey house to form part of the barrier to the swimming pool. The wall contains five sliding doors which open into the immediate pool area, as shown below.



**Figure 1: Site plan (not to scale)**

- 2.2 The doors are not self-closing or self-latching. The width of the sliding doors and maximum width of the opening leaves, as advised by the applicant, are as follows:

	<b>Door size</b>	<b>Maximum opening</b>
<u>Single leaf doors</u>		
Living:	1343 mm	1170 mm
Dining:	964 mm	870 mm
Bedroom 2:	1031 mm	810 mm
<u>Double leaf doors</u>		
Family:	1029 mm (each leaf)	1760 mm
Bedroom 1:	771 mm & 770 mm	1260 mm

- 2.3 All the sliding leaves are fitted at the top of the door with keyed bolt locks that operate from the inside. The doors have (or are proposed to have) audible alarms that comply with UL 2017<sup>4</sup>, and the applicant proposes to install (or has already installed) an automatic pool cover on the swimming pool that complies with ASTM F1346:91<sup>5</sup>.

<sup>4</sup> UL 2017 Standard for General-Purpose Signalling Devices and Systems. (UL is approved to perform safety testing by the U.S. federal agency Occupational Safety and Health Administration)

<sup>5</sup> ASTM F1346:91(2001) Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs (ASTM International is an international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services.)

### 3. Background

3.1 The applicant lodged an application for an amendment to building consent no. BCO10174473-B. The effect of the amendment was to remove the approved barrier between the house and the swimming pool and to use the external wall of the house, with the sliding doors as described in paragraph 2, as part of the barrier to the pool. The annotations on the drawings state the alarms on the doors will comply with Clause F9.3.4(i) and ‘NZS 8500:2006<sup>[6]</sup> section 2.3.2(f) to apply in support of F9.3.4’.

3.2 On 22 November 2017 the authority requested further information from the applicant:

1. You are proposing to have five doors opening into the pool area, 2 of which are opening off bedrooms. Sleeping is not an activity related to swimming, bathing and wading and doors are not permitted off bedrooms.
2. Also 2 of the doors are double sliders which are not allowed, as the doors must only open no more than 1m as per [Acceptable Solution F9/AS1] 4.2.1. You would have to permanently fix shut one of the doors and have the other opening no more than 1m. ...
3. ...
4. NZS8500-2006. This is not a compliance document and is no longer relevant under the Building Code F9. [Acceptable Solutions F9/AS1 and F9/AS2] are the only acceptable solutions at this stage, as we are not accepting any alternative solutions.

3.3 The applicant responded by email on the same day, disputing the authority’s views and noting (in summary):

- The Building Code does not restrict doors opening from bedrooms into the pool area.
- There are no references to door opening sizes in any other document than F9/AS1 (paragraph 4.2.1).
- The Acceptable Solution states it is ‘only one method of complying with the Building Code. There may be alternative ways to comply.’ Using an Acceptable Solution is not the only method of achieving compliance.

3.4 The parties continued to correspond about the disputed matters (in summary):

#### The authority

- In regard to the door opening size, the authority will only accept proposals compliant with the Acceptable Solution F9/AS1 and will not accept alternative solutions – it is up to the Ministry to decide if there is an acceptable alternative, not the authority.
- Limiting the opening to 1m makes it harder for doors to be left open and children to gain access to the pool, which meets the performance clause F9.3.4 “doors must not be able to be readily opened by children”. The wider the door opens the longer it takes to close it and there is only seven seconds before the alarm goes off.
- In regard to doors opening from bedrooms, the authority has relied on *Waitakere City Council v Hickman*<sup>7</sup>. With bedrooms, people go through the

<sup>6</sup> New Zealand Standard NZS 8500:2006 Safety Barriers and Fences Around Swimming Pools, Spas and Hot Tubs

<sup>7</sup> *Waitakere City Council v Hickman* 1/10/2004, Randerson J, HC Auckland CIV 2003-404-7266

pool area to the bedroom and vice versa ‘and this also relates to the number of doors’. The more doors you have opening into the pool area the more likely it is that the pool area becomes a thoroughfare.

- The authority accepts the specified alarm will meet the Acceptable Solution F9/AS1 (paragraph 4.2.4).
- The authority will not grant the amendment to the consent based on the current proposal.

#### The applicant

- Limitation of the opening size of doors is in the Acceptable Solution, but is not a “requirement” of the Building Code.
- The applicant would not have an issue with limiting the double sliding door opening to a maximum of 1m.
- The applicant disagrees with the authority’s interpretation taken from *Waitakere City Council v Hickman*. The bedrooms are separated from the pool area by a barrier (the external wall of the house) – they are not part of the immediate pool area.

3.5 The Ministry received an application for determination on 13 December 2017 and requested further information about the doors, which was provided on 9 January 2018.

## **4. The submissions**

### **4.1 The applicant**

4.1.1 The applicant provided a covering letter with the application for determination, setting out the background to the dispute and their view on the matter, and provided copies of:

- drawings showing the proposed amendment
- specifications for the pool cover and for the door alarms
- correspondence between the parties.

4.1.2 The applicant submitted (in summary):

- The bedrooms are not part of the immediate pool area and there is no restriction on having doors opening into an immediate pool area from a bedroom.
- The doors will have locks above 1500mm from floor level and alarms in accordance with NZS 8500.
- There is no requirement to restrict the opening of the doors to a maximum of 1m.

4.1.3 The applicant stated that in practice only one of the sliding doors from the living room is used as the main access to the pool, and as the house is air conditioned the doors typically remain closed throughout summer. The applicant is of the view that having the pool visible from every facing room was an advantage, and having an automatic pool cover added another level of security.

4.1.4 On 9 January 2018, in response to the Ministry's request for further information, the applicant stated:

.. for the 2 sets of double sliders to be limited to a max opening of one metre will require the fitting of a stop block screwed into the tracks on either side of both doors prevent the doors from sliding any more than the 1 metre if fully opened.

4.1.5 On 30 January 2018, in response to the Ministry's request for further information, the applicant provided a copy of the door specifications, photographs of the doors open to show the opening width, a photograph of the lock bolts as installed, and a site plan with dimensions for the immediate pool area.

4.1.6 On 31 January 2018 the applicant provided a further submission:

- Clause F9.3.4(a) requires doors to have only an audible warning or self-closing door, and it is only in the Acceptable Solution that other features are required.
- The bolt locks are for general security as well.
- Having "self-locking" bolts on the doors would prevent people in the immediate pool area from accessing the house.
- NZS 8500 is accepted as a 'supporting reference' in Acceptable Solution F9/AS1, but was not accepted by the authority in supporting the application for amendment to the consent: this was inconsistent.

## 4.2 The authority

4.2.1 On 10 January 2018 the authority provided a submission in response to the application for determination. The authority noted the original building consent application was for a fenced pool but the applicant now wished to remove the fence from the plans and use the exterior wall of the house as the pool barrier.

4.2.2 The authority submitted that:

- the five doors all open more than 1m
- the authority had requested confirmation that the doors would be restricted to opening no more than 1m, but the applicant did not confirm that prior to making the application for determination
- if the opening width issue is resolved, the authority's main concern is the number of doors creating a pedestrian access way through the immediate pool area from bedrooms to the living room/kitchen.

4.2.3 In further submissions received on 30 and 31 January 2018, the authority submitted:

- the keyed bolt locks are not acceptable under F9/AS1 because they are not self-latching and are able to be unlocked and opened manually; top bolts cannot self-close once they are opened – meaning a child can easily open the door even though an alarm is fitted
- self-latching devices usually operate from both sides of the door, so once in the pool area a person may open the door from the pool side to leave the immediate pool area; they are fitted at a height of 1.5m or more so that young children cannot reach them
- NZS 8500: 2006 is quoted on the plans, which is a Standard and not a compliance document.

### 4.3 Responses to the draft determination

- 4.3.1 A draft of this determination was issued to the parties on 14 February 2018.
- 4.3.2 The authority and the applicant accepted the draft of the determination without any further comment in responses received on 21 and 27 February 2018 respectively.

## 5. Discussion

### 5.1 The regulations and means of compliance

- 5.1.1 The objective of Clause F9 is to prevent injury or death to young children involving residential pools. The functional requirement for Clause F9 is:

*Residential pools* 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.

- 5.1.2 Where a building forms part of a barrier to the immediate pool area, the performance criteria that must be met in order to satisfy the functional requirement are set out in Clause F9.3.4: subclause F9.3.4(a) is specific to doors and requires:

Where a building forms all or part of an immediate pool area barrier,—

(a) doors between the building and the immediate pool area **must not be able to be readily opened by children** [my emphasis], and must either—

- (i) emit an audible warning when the door is open; or
- (ii) close automatically after use:

- 5.1.3 There are various means of compliance listed in section 19 of the Act that the authority must accept, including Acceptable Solutions such as F9/AS1. However, these are not the only means of achieving compliance, and the building consent applicant is not restricted to only these methods of establishing compliance.
- 5.1.4 The Building Code is performance-based and it is open to a building consent applicant to use different methods than those detailed in the Acceptable Solutions and Verification Methods to demonstrate compliance.
- 5.1.5 Under section 49(1) of the Act the authority must grant a building consent “if it is satisfied on reasonable grounds that the provisions of the building code would be met if the building work were properly completed in accordance with the plans and specifications that accompanied the application”. Authorities cannot refuse to consider the compliance of a proposal simply on the basis the means of compliance is an alternative solution (refer paragraph 3.2).
- 5.1.6 Consideration of an alternative solution requires an assessment against the performance requirements of the Building Code and the likely performance within the context of the particular building. Authorities must make this assessment when considering a building consent application that proposes an alternative solution to achieve compliance. The authority was incorrect to state that it is for the Ministry to decide whether the proposal is a compliant alternative rather than the authority (refer paragraph 3.4).

### 5.2 Compliance of the barrier as proposed

- 5.2.1 Swimming pools and spa pools present a risk to unsupervised young children, and so the Building Code requires barriers to pools that will restrict their access into the immediate pool area. One common solution to achieve compliance is to install a fence surrounding the immediate pool area.

- 5.2.2 Whatever form of barrier is elected, in order to access the immediate pool area to use the pool the barrier must be breached. To prevent the breach of the barrier continuing longer than is required for simply accessing the pool, gates in pool fences must be self-closing (F9.3.3(c)) and doors in external walls opening into the immediate pool area must be either self-closing or alarmed (F9.3.4(a)). In this case the applicant proposes to alarm the doors.
- 5.2.3 The other requirement for barriers to pools is they are not able to be readily breached by children. This is evident in the requirements in: Clause F9.3.3 relating to objects or projections that would assist children in negotiating the barrier; and F9.3.3(b) that requires gates in a barrier must not be able to be readily opened by children; and F9.3.4(a) that doors between the building and the immediate pool area must not be able to be readily opened by children.
- 5.2.4 Typically these performance requirements are achieved through appropriate “self-latching” mechanisms that prevent young children opening the gate or door on their own to gain access to the immediate pool area unsupervised. The latching mechanisms are installed at a height that is not easily accessible to young children and use a manual operation to release that is not easily manipulated by young children.
- 5.2.5 The Acceptable Solution F9/AS1 sets out various criteria for latches, doors, and gate construction that together achieve compliance with those clauses. For example: gates in a pool barrier shall open away from the pool (Clause F9.3.3(a) and paragraph 3.1.1(f) of F9/AS1), latches on gates and doors shall automatically operate on the closing of the gate/door and must be released manually (paragraphs 3.1.2(a) and 4.2.2(b) of F9/AS1), and latches shall be positioned so that they cannot be reached by a child from outside the pool area (paragraphs 3.1.2(b) and 4.2.2(c)). It is the combination of those features that prevents young children from being able to readily operate and open the door unaided.
- 5.2.6 In this case the doors depart from F9/AS1: they are not self-latching and have opening leaves greater than 1000mm. As noted in paragraph 5.1.3, Acceptable Solution F9/AS1 is one way, but not the only way, of achieving compliance with the performance requirements of the Building Code. The barrier is not in accordance with the Acceptable Solution and must therefore be considered as an alternative solution.
- 5.2.7 In evaluating the alternative solution, it is useful to make some comparisons with the relevant Acceptable Solutions, however in making this comparison the following general observations are valid:
- Some Acceptable Solutions cover the worst case, so they may be modified in less extreme cases and the resulting alternative solution will still comply with the Building Code.
  - Usually, when there is non-compliance with one provision of an Acceptable Solution, it will be necessary to add some other provision to compensate for that in order to comply with the Building Code.
- 5.2.8 The applicant has suggested the keyed bolt locks, installation of blocks to restrict door openings to less than 1000mm, and the addition of a pool cover that complies with ASTM F1346:91 are sufficient to achieve compliance with Clause F9. The applicant has noted this would meet the standard in NZS 8500, and the Standard is referenced in parts of F9/AS1.

- 5.2.9 While parts of the standard are referenced in the Acceptable Solution, NZS 8500 is not currently cited as an Acceptable Solution for Clause F9 and cannot be relied on as such. It can, however, be put forward as an alternative solution to be assessed against the performance requirements of the Building Code.
- 5.2.10 In this proposal, the keyed bolts are located at a height that is not readily able to be reached by children, meaning they are effective when they have been slid into place. However they do not “self-latch” when the door is closed, rather they require action from someone using the door. A self-latching door requires manual operation every time the door is opened. I do not consider the keyed bolts sufficiently mitigate the lack of a self-latching mechanism, such as is described in F9/AS1, particularly given the number of doors opening into the immediate pool area coupled with the potential for a keyed lock to be left unlocked. There is no other feature of the doors themselves that suggests they would not be readily opened by children if left unlocked.
- 5.2.11 I do not consider the proposal to rely on the keyed bolt locks is adequate to achieve compliance with Clause F9.3.4(a). Accordingly I conclude that the barrier as proposed does not comply with Clause F9.

### 5.3 The immediate pool area

- 5.3.1 The authority also raised concerns regarding the area encompassed by the barrier (the immediate pool area), in relation to bedrooms opening into the immediate pool area and pedestrian access ways. Section 7 of the Act defines the term “immediate pool area” as ‘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’.
- 5.3.2 The authority has relied on *Waitakere City Council v Hickman* in forming the view that having doors from a bedroom opening into the immediate pool area would not comply with Clause F9. The authority’s reasoning is the activities carried out in the bedroom are not activities that would be carried out in conjunction with the use of the pool. Also, a thoroughfare through the immediate pool area would be created by having a door to the bedroom or multiple doors to the immediate pool area.
- 5.3.3 In its letter of 22 November 2017, the authority noted that two doors would be opening off bedrooms and ‘Sleeping is not an activity related to swimming, bathing and wading and doors are not permitted off bedrooms.’ This appears to be a reference to the conclusions on the term “immediate pool area” in *Waitakere City Council v Hickman*:

[29] Considered in conjunction with s 8(1), I reach the following conclusions as to the scope of the immediate pool area: ...

c) Although the term "use of the pool" is not defined, it is evident from the definition of "pool" in s 2 that the use of the pool contemplated in the definition of immediate pool area is for swimming, wading, paddling, or bathing.

d) It follows that the activities or purposes carried on "in conjunction with the use of the pool" are activities or purposes carried on in conjunction with swimming, wading, paddling, or bathing or similar. ...

- 5.3.4 The immediate pool area is formed within the barrier to the pool. In this case the applicant proposes the external wall of the house, including the sliding doors that are subject of this determination, will form the barrier between the internal spaces in the house and the immediate pool area. The two bedrooms referred to by the authority are not within the immediate pool area, and accordingly the activities carried out in the bedrooms are irrelevant to the consideration of whether the barrier complies with Clause F9.



- 5.3.5 The authority has also expressed the view a thoroughfare through the immediate pool area would be created by the doors opening into the immediate pool area.
- 5.3.6 Pedestrian access ways were included as an example in paragraph 29 in *Waitakere City Council v Hickman*. That paragraph discussed activities and the relationship with the use of the pool:
- (f) ... Examples of activities which would not usually be regarded as being carried on in conjunction with the use of the pool include clothes lines, vegetable gardens, vehicle or pedestrian access ways, and planting for landscape purposes.
- 5.3.7 When people are present in the immediate pool area they may well come and go between the pool area and those rooms where the doors have been unlocked to provide access to the pool, and each movement between the immediate pool area and the internal space(s) in the house is a breach of the pool barrier. The door to the bedroom, for example, would make it convenient for people using the pool to use the bathroom or to change. Likewise the doors to the living room would provide access to the living room and kitchen.
- 5.3.8 In my opinion, the activity of coming and going between the pool and adjoining room(s) does not necessarily equate to the creation of a “pedestrian access way”. There are other routes available to move from one part of the house to another and I consider it unlikely when the pool is not in use, which is when the doors to the immediate pool area should be locked, people will use the immediate pool area as the most direct route between the bedrooms and the family room or living area. In that respect I do not consider the addition of the doors to the bedrooms has created a pedestrian access way.
- 5.3.9 The area enclosed by the proposed barrier encompasses the whole of the outdoor living area, is approximately 240m<sup>2</sup>, is adjacent to the living areas and has a number of doors that provide for indoor/outdoor flow. From the site plans provided it appears there are no other alternative outdoor living spaces, such as another courtyard or patio. I am of the view there is a high likelihood of the outdoor area functioning as an extension to the living area of the house.
- 5.3.10 Taking into account: the number, size and location of the doors; the location and size of the immediate pool area proposed; and the relationship of the proposed immediate pool area with the living and bedroom areas of the house – I do not accept the area encompassed by the external wall of the house in this case can properly be considered the “immediate pool area”.
- 5.3.11 Having come to the view that the proposed barrier does not enclose the immediate pool area, I conclude that the proposed barrier does not comply with Clause F9.3.2(a) of the Building Code.

## **6. The decision**

- 6.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the proposed barrier that incorporates the external wall of the house does not comply with Clause F9 of the Building Code.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 21 March 2018.

Katie Gordon  
**Manager Determinations**

## Appendix A: The legislation

A.1 The relevant clauses of the Building Code discussed in this determination:

### Clause F9—Means of restricting access to residential pools

Objective

F9.1 The objective of this provision is to prevent injury or death to young children involving *residential pools*.

Functional requirement

F9.2 *Residential pools* 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.

Performance

F9.3.1 *Residential pools* must have or be provided with physical barriers that restrict access to the *pool* or the *immediate pool area* by unsupervised young children (ie, under 5 years of age).

F9.3.2 Barriers must either—

(a) surround the pool (and may enclose the whole or part of the immediate pool area); ...

F9.3.3 A barrier surrounding a *pool* 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 pool; 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 *building* forms all or part of an *immediate pool area* barrier,—

(a) doors between the *building* and the *immediate pool area* 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) ...

A.2 The relevant paragraphs of the Acceptable Solutions discussed in this determination:

### F9/AS1

#### 4.2 Doors in the building wall

4.2.1 Doors in a building wall that provide access into the immediate pool area shall be single leaf doors that are not more than 1000 mm in width. These doors shall be side hinged or sliding.

4.2.2 Doors in a building wall providing access into the immediate pool area shall have:

a) Either a self-closing device or an audible alarm, and

b) A self-latching device that automatically operates on the closing of the door and that must be released manually, and

c) The release for the latching device located not less than 1500 mm above the inside floor, and

d) A sign which shall be:

- i) fixed adjacent to the inside door handle at a height between 1200 mm and 1500 mm stating:

‘SWIMMING POOL. CLOSE THE DOOR.’, and

- ii) composed of black letters of minimum height 5 mm complying with Paragraphs 2.2 and 3.2.2 of F8/AS1.

*Comment:*

*a) Doors will usually require two-handed operation, one to release the high level latch and the other to operate the door handle lock set.*

*b) Doors described in Paragraphs 4.2.1 and 4.2.2 enable the barrier to the pool to remain effective except when the doors are briefly used for access.*

*c) Signs on pool doors are a requirement under Clause F8 ‘Signs’, which does not apply to detached dwellings or to household units in multi-unit dwellings (such as apartment units). However, homeowners may choose to fit signs to their pool access doors as a reminder for visitors.*

4.2.3 For hinged doors that open towards the pool, a self-closing device shall return the door to the closed and latched position from any position when the door is stationary. For all other doors, a self-closing device shall return the door to the closed and latched position when the door is stationary and 150 mm or further from the closed and latched position.

4.2.4 A door alarm shall:

- a) Produce an alarm tone of 75dBAL10 when measured at a distance of 3000 mm that commences 7 seconds after the door’s self-latching device is released, and
- b) Automatically return to a state of readiness when the door is closed and latched, and
- c) Have a low battery charge warning that may be visual or audible.

4.2.5 Door alarms may be provided with a deactivation switch placed not less than 1500 mm above floor level that silences the alarm for not more than 15 seconds.

*Comment:*

*A deactivation switch can be useful when maintenance materials or pool furniture needs to be moved through a door.*

A.3 The relevant paragraphs of NZS 8500:2006 discussed in this determination:

## **2.3 Requirements for new and existing pools**

### **2.3.1 General**

NZS 8500 has been developed on the basis that TAs will gradually seek an upgrade to existing pools over a transitional period. It is expected that this transitional phase would be completed within 5 years of the publication of this Standard.

### **2.3.2 Specific requirements for pools**

For new and existing pools at least one of the follow requirements shall be met:

...

- (f) The pool shall be enclosed by an isolation barrier where a wall of a house contains doors opening from the house to the immediate pool area (regardless of direction of door swing). Should the doors not be self-closing and self-latching, then a lockable door latch 1500 mm above finished floor level shall be provided on every opening door-set. In addition there shall also be:
  - (i) An automatic pool cover that complies with ASTM F1346-91, and
  - (ii) An alarm complying with UL 2017 capable of detecting unauthorised access from the house into the immediate pool area, and that when activated emits a sound of 85 decibels or more to be heard from the house.