



Determination 2020/028

Regarding the compliance of a pool barrier with Building Code Clause F9 Means of restricting access to residential pools at 23 Cornwall Street, Masterton

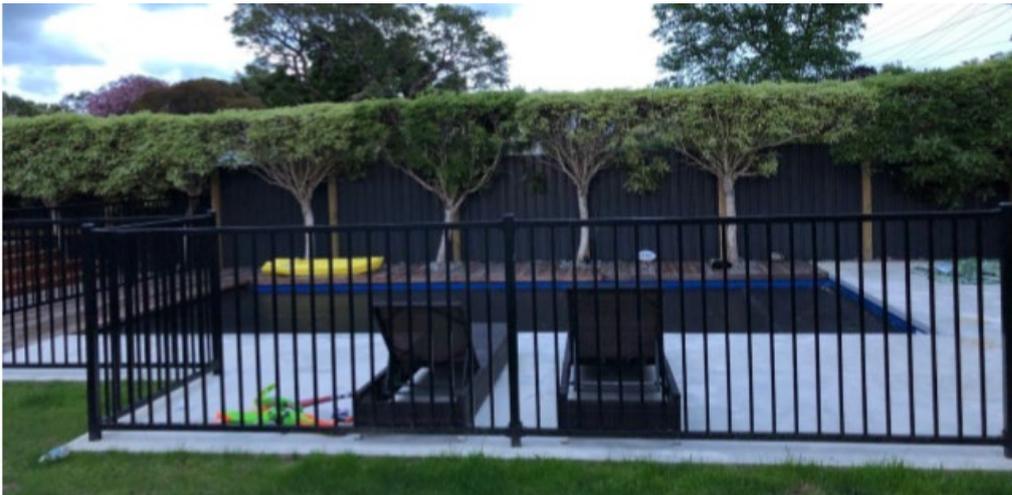


Figure 1: Photograph of pool barrier and trees on the inside of the barrier

Summary

This determination considers the compliance of a new pool barrier with Building Code Clause F9 Means of restricting access to residential pools. The determination discusses the parts of the barrier consisting of boundary fences and junctions with internal sections of the barrier, and trees on the inside of the boundary fences.

1. The matter to be determined

1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004 (“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

1.2 The parties to the determination are:

- Masterton District Council (“the authority”) carrying out its duties as a territorial authority or building consent authority, who applied for the determination
- M and B Bunny, the owners of the property (“the owners”).

¹ The Building Act and Building Code (Schedule 1 of the Building Regulations 1992) are available at www.legislation.govt.nz. Information about the legislation, as well as past determinations, compliance documents and guidance issued by the Ministry, is available at www.building.govt.nz.

- 1.3 The matter to be determined² is whether the pool barrier complies with Building Code Clause F9 Means of restricting access to residential pools³. The dispute between the parties concerns part of the barrier consisting of boundary fences and junctions with internal sections of the barrier, and trees on the inside of the boundary fences.
- 1.4 This determination is limited to the matters outlined at paragraph 1.3. I have not considered any other aspects of the Act or Building Code.
- 1.5 In making my decision I have considered the parties' submissions and the other evidence in this matter.

2. The building work

- 2.1 The pool is an in-ground pre-moulded fibreglass pool located on a residential property. From the approved plans it measures 8m by 4m and has a depth of between 1000mm to 1500mm.
- 2.2 The pool barrier is formed by a combination of the following:
- two new sections of 1800mm high steel sheet fencing on the west and north property boundaries ("the boundary fences"), with capping at the top
 - two new sections of 1200mm high metal fence positioned on the south and east sides of the pool ("the internal fences"), comprised of vertical bars and with two self-closing and self-latching gates. One gate is near the pump shed on the east part of the fence and the other gate is along the south fence.
- 2.3 There is a line of existing trees along the inside of each of the boundary fences. These trees are approximately 2400 to 2500mm in height and are planted approximately 500 to 600mm from the boundary fences (see Figures 1 and 3b). They have small branches and foliage that brush the boundary fences. A public footpath is located on the outside of the boundary fences.

² Under section 177(1)(a) of the Act.

³ In this determination, unless otherwise stated, references to sections are to sections of the Act, and references to clauses are to clauses of the Building Code.

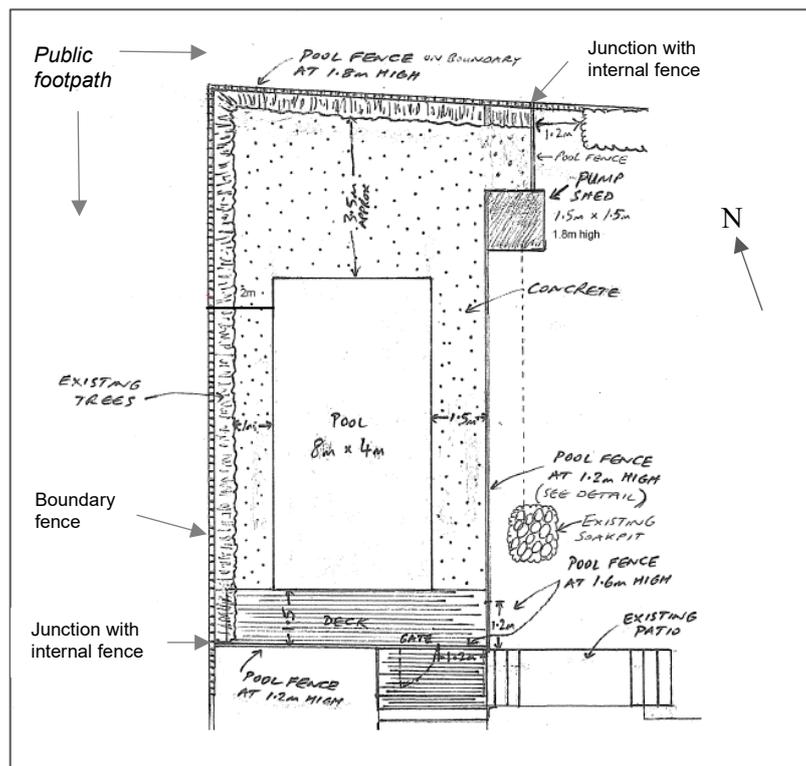


Figure 2: Sketch of pool and barrier (not to scale)

3. Background

- 3.1 On 2 April 2019 the authority granted building consent BC190136 for construction of the pool and associated pool barrier. The plans submitted for building consent note existing trees close to the boundary fences (see Figure 2).
- 3.2 The building consent processing notes refer to Clause F9 as “passed”, and an officer of the authority noted: “there are no trees or vegetation in close proximity of the fence that could be used to help in climbing over the fence”. It is not clear whether the officer was referring to there being no trees on the outside of the barrier or had simply missed the fact that there were trees along the inside of the boundary fences.
- 3.3 The pool and barrier were constructed in mid-2019. On 26 August 2019 the authority carried out an inspection of the building work. The inspection was marked as a “fail”, though none of the items listed in the record as non-compliant concern the matters considered in this determination.
- 3.4 The owners undertook work to remedy the non-compliant items. On 15 October 2019 the authority carried out a second inspection. That inspection passed some previously identified items, but raised a new matter:

As per F9 2.2.1D⁴

The trees in the inside of the pool area are within the 900mm free zone off the top of the boundary fence. As per this section should a child gain access to the top of the

⁴ I take this reference to be to paragraph 2.2.1 d) of the Acceptable Solution F9/AS1 Residential pool barriers. Acceptable Solutions and Verification Methods are produced by the Ministry and, if complied with, must be accepted by a building consent authority as establishing compliance with the Building Code (refer section 19 of the Act).

barrier from the outside this construction should prevent them from climbing down into the pool area.

- 3.5 Figure 3a shows the junction between the north boundary fence and the east internal fence (north/east junction). For completeness, I note the section of boundary fence showing at the left side of the photograph (highlighted in the photo below) has since been clad to cover the horizontal rails. The west boundary fence and south internal fence (south/west junction) are constructed of the same materials and the same height as the north/east junction. Figure 3b shows the location of the trees and their branches relative to the west boundary fence.



Figure 3a: North/east junction

Figure 3b: Trees on pool side (west)



Figure 3c: View of boundary fence and footpath

4. The submissions

The authority's submissions

4.1 The Ministry received the application for determination on 21 November 2019.

4.2 The authority provided a brief submission with its application for determination. The authority also provided copies of:

- the building consent documentation
- inspection notes of 9 April 2019, 26 August 2019 and 15 October 2019
- photographs of the pool area and fences.

4.3 In its submission the authority stated (in summary):

- The dispute has arisen around the presence of the trees located on the inside of the boundary fences that interfere with the '900 mm high zone' described in paragraph 2.2 of F9/AS1 and the comment to that paragraph.
- The junction where the internal fences meet the boundary fences is not in accordance with the Acceptable Solution.
- Should young children gain access to the top of the boundary barrier from the outside, they will be able to climb down into the pool area, assisted by the trees and/or the junction with the internal fencing and gain unsupervised access to the pool.

The owners' submission

4.4 The owners made a submission setting out their views on the matter (in summary):

- The boundary fences are next to public footpaths and have been constructed so they are not climbable from the outside.
- An unsupervised child under the age of five years would need some kind of assistance to climb the boundary fence.
- The pool area is completely secure, with no way for a young child to access the area.
- The design of the pool was based around retaining the trees and any issue with the trees should have been raised prior to granting the consent.
- The kinds of trees that form the hedge do not have and do not grow long, climbable branches.

The draft determination

4.5 A draft of the determination was issued to the parties for comment on 9 July 2020.

4.6 The owners responded on 10 July 2020 and the authority responded on 14 July 2020. Both parties accepted the draft determination without comment.

5. Discussion

The legislation

5.1 Section 17 of the Act provides “that all building work must comply with the Building Code to the extent required by this Act...” The relevant Building Code clause with which the barrier must comply is F9.

5.2 The objective of Clause F9 is “to prevent injury or death to young children involving residential pools”. The relevant performance Clauses are:

F9.3.1 Residential pools must have or be provided with physical barriers that restrict access to the pool or immediate pool area⁵ 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);
- (b) in the case of a small heated pool, cover the pool itself. ...

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.

...

Compliance by way of the Acceptable Solution F9/AS1

5.3 Construction in accordance with an Acceptable Solution is one way, but not the only way, of achieving compliance with the Building Code. I will start by considering whether the pool barrier as constructed is in accordance with the Acceptable Solution F9/AS1.

5.4 The paragraphs of F9/AS1 that I have considered are:

2.1 Pool barriers

2.1.1 A pool barrier can be a fence but may also take other forms of construction, such as a concrete block wall.

2.1.2 Pool barriers not on a property boundary shall have a height of not less than 1200 mm from the finished floor or ground level outside the pool barrier.

2.1.3 Pool barriers shall not be angled more than 15° from vertical and may only slope away from the pool. Any rails, rods or wires forming a part of a pool barrier that are not themselves vertical shall be at least 900 mm apart vertically to restrict climbing. There shall be no openings in the pool barrier that a 100 mm diameter sphere could pass through.

...

2.1.6 There shall be no ground features or objects outside a pool barrier within 1200 mm of the top of the barrier that would assist a child in climbing. Figure 2 gives acceptable methods for evaluating this requirement. [See Appendix A of this determination for a copy of Figure 2]

2.1.7 Any projections or indentions on the outside face of a pool barrier shall not have a horizontal projection from the face of the pool barrier greater than 10 mm unless they are at least 900 mm apart vertically.

...

⁵ An “immediate pool area” is defined in section 7 of the Act 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.

2.2 Pool barrier on a property boundary

2.2.1 If a pool barrier is located on a property boundary, it shall:

a) Be not less than 1800 mm high, measured from the ground level on the pool side, and

...

d) Have a 900 mm high zone on the pool side of the barrier that begins not more than 150 mm from the top and is constructed as specified in Paragraphs 2.1.3 and 2.1.7, to restrict climbing by children.

Comment: Should a child gain access to the top of the barrier from the outside, this construction method will prevent them from climbing down into the pool area.

5.5 My observations on compliance of the pool barrier, both the internal and boundary fences, are summarised in Table 1 and discussed further below.

Table 1: Assessment of relevant features of barrier against Acceptable Solution F9/AS1

Requirements when pool barrier on property boundary		My observations
2.1.1	a pool barrier can be a fence	the pool barrier is made up of fences of two types
Internal fences		
2.1.2	height of not less than 1200mm from the finished floor or ground level outside the pool barrier	the internal fences meet this criteria
2.1.3	not angled more than 15° from vertical and only slope away from the pool	internal fences are vertical
	rails, rods or wires forming a part of a pool barrier that are not themselves vertical at least 900mm apart vertically	top and bottom rails of the internal fences are at least 900mm apart
	no openings in the pool barrier that a 100 mm diameter sphere could pass through	no openings of this size in the barrier
2.1.6	no ground features or objects outside a pool barrier within 1200mm of the top of the barrier	the internal fences meet this criteria
Boundary fences		
2.2.1(a)	minimum 1800mm high measured from ground level on pool side	minimum is met – boundary fences are at least 1800mm high
2.2.1(d)	a 900mm high zone on the pool side of the barrier that begins not more than 150mm from the top and is constructed as specified in paragraphs 2.1.3 and 2.1.7, to restrict climbing by children	not met at the north/east and south/west junctions between the boundary fences and internal fences see comments below in relation to paras 2.1.3 and 2.1.7
	2.1.3 ... rails, rods or wires forming a part of a pool barrier that are not themselves vertical at least 900mm apart vertically ...	the boundary fences do not have any non-vertical rails
	2.1.7 Horizontal projections on outside face of barrier to be 10mm maximum unless 900mm minimum apart vertically	at the north/east and south/west junctions where the top horizontal rail of the internal fences (which project more than 10mm from the face of the boundary fences) is within 600mm of the top of the boundary fences.

- 5.6 As evident in the comment to paragraph 2.2.1 of F9/AS1, the purpose of the criteria in paragraph 2.2.1 is to address the fact that owners of residential pools cannot control what occurs on land beyond their property boundary that may assist a young child to reach the top of a pool barrier on that property boundary, and from there access the immediate pool area. For this reason, F9/AS1 sets criteria that will inhibit a young child's ability to climb down the pool side of the barrier, thus restricting access of the child to the immediate pool area regardless of whether they can access the top of the barrier from the land beyond the property.
- 5.7 The requirements for the 900mm high zone in paragraph 2.2.1(d) are that it begins no more than 150mm from the top of the barrier, extend for 900mm vertically down the face of the barrier, and must be constructed as specified in paragraphs 2.1.3 and 2.1.7 of F9/AS1.
- 5.8 For a barrier that is not on a property boundary, the criterion of paragraph 2.1.7 of F9/AS1 applies to the *non-pool side* of the barrier, and serve to restrict the ability of young children to climb into the immediate pool area from outside that area. However, in the context of a pool barrier on a property boundary it is my opinion the criterion must be applied to the *pool side* of the barrier. In coming to this view I have taken into account that the focus of paragraph 2.2.1(d) is on the pool side of the barrier, and the purpose of the criteria in paragraph 2.2.1 as discussed above. Not having projections or indentions on the pool side of a barrier that is on a boundary will restrict the ability of a young child to climb down into the immediate pool area from the top of the barrier.
- 5.9 In this case, the internal fences are projections from the north and west boundary fences that are more than 10mm from the face of the boundary fences and are within the 900mm high zone. It is my view that should a young child gain access to the top of either of the boundary fences, these projections provide toe and hand-holds that would assist a child in climbing down the pool side of the boundary fence.
- 5.10 I also note a boundary fence does not need to satisfy paragraph 2.1.6 of F9/AS1, which concerns ground features or objects outside a pool barrier within 1200mm of the top of the barrier, (see Appendix A). I am of the view that this criterion applies to trees outside the fence and cannot be applied to the trees that are inside the boundary fences in this case.
- 5.11 The barrier does not satisfy paragraph 2.2.1(d) of the Acceptable Solution. However, it does not follow that because the pool barrier does not satisfy the Acceptable Solution it does not comply with Clause F9.

Compliance as an alternative solution

- 5.12 The Building Code is performance-based and allows for the use of different methods to achieve compliance. An Acceptable Solution is not mandatory and a building consent authority cannot refuse to accept a design solution on the basis that it is not in accordance with an Acceptable Solution. In considering the pool barrier as an alternative solution, I must be satisfied that it meets the performance criteria of Clause F9.
- 5.13 As noted in paragraph 5.9 above, the internal fences at the junctions where they meet the boundary fences provide toe- and hand-holds that would assist a child climbing down the inside face of the boundary fence. It is also my view that the height and proximity of the trees relative to the boundary fences could assist a young child's descent down into the immediate pool area. While the branches may not be

- climbable as they would not provide a stable or strong platform for standing on, the branches close to the fences are able to be used as toe and/or hand holds for a young child to grasp.
- 5.14 However, the boundary fences present a sheer face on the outside. There are also no features of the boundary fences or any permanent objects or projections on the outside of the fences that would assist a young child to climb up from outside the barrier – thus the barrier complies with Clause F9.3.3 in this respect. While not determinative in this matter, I also accept the owner’s contention that children under five years of age are unlikely to be unsupervised on the footpaths outside the boundary fences.
- 5.15 I conclude therefore that the pool barrier, with regard to the boundary fences and junctions with internal sections of the barrier, and trees on the inside of the boundary fences, complies with Clause F9 of the Building Code.
- 5.16 It is important to note that the owners have an ongoing obligation under section 162C(4) of the Act for the pool barrier to remain compliant. The compliance of a pool barrier that is on or near a property boundary can be impacted by work carried out on the adjacent property, and is something over which the pool owner may have no control. The types of things that may occur on a neighbouring property that can impact on the compliance of a pool barrier that is constructed on or near a property boundary include a change to the adjacent ground level relative to the height of the barrier, or the construction of a structure or placement of an object against or close to the barrier.
- 5.17 In this case, the boundary fences are adjacent to public spaces that are accessible and visible to the owners. The adjacent land consists of footpaths, so it is less likely that permanent objects or projections will be placed or constructed on the outside of the boundary fences than if the boundary fences were bordering another residential property. In addition, the outside of the boundary fences are able to be inspected by the owners for ongoing compliance with this performance requirement.
- 5.18 Given the pool barrier consists in part of fencing on the property boundary, I encourage the owners to regularly inspect the area adjacent the boundary fences to ensure the ongoing compliance required by section 162C. I note that under section 162D of the Act, the authority is required to carry out periodic inspections of residential pools within its jurisdiction once every three years.

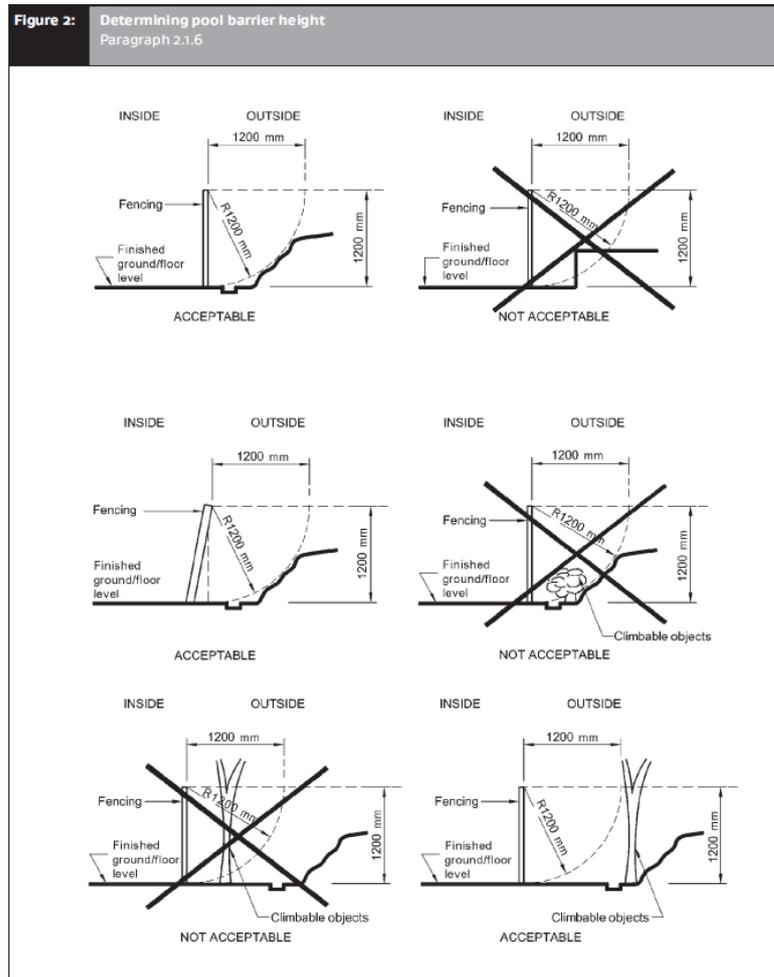
6. The decision

- 6.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the pool barrier complies with Building Code Clause F9 Means of restricting access to residential pools.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 16 October 2020.

Katie Gordon
Manager Determinations

Appendix A: Figure 2 of F9/AS1



Copyright in NZS 8500:2006 *Safety barriers and fences around swimming pools, spas and hot tubs* is owned by the Crown in right of New Zealand and administered by the New Zealand Standards Executive. Reproduced with permission from Standards New Zealand on behalf