



Determination 2011/111

The code compliance of barriers to a swimming pool formed by a stair and landing balustrade at 6 Winn Road, Freemans Bay, Auckland



1. The matter to be determined

- 1.1 This is a Determination under Part 3 Subpart 1 of the Building Act 2004¹ (“the Act”) made under due authorisation by me, John Gardiner, Manager Determinations, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department.
- 1.2 The parties to this determination are:
- the owner of the property, Dr M Moriarty (“the applicant”)
 - the Auckland Council carrying out its duties and functions as a territorial authority and a building consent authority (“the authority”).
- 1.3 This determination arises from the authority’s refusal to issue a code compliance certificate for a swimming pool and pool barrier on the basis that the balustrade to a

¹ The Building Act 2004, Building Code, compliance documents, past determinations and guidance documents issued by the Department are all available at www.dbh.govt.nz or by contacting the Department on 0800 242 243.

stair and landing, which forms part of the barrier for the pool, does not comply with Clause F4² of the Building Code (First Schedule, Building Regulations 1992).

1.4 I therefore take the view that the matter to be determined³ is whether the authority was correct to refuse to issue the code compliance certificate. In deciding this I must consider whether the as-built barrier complies with Clause F4 of the Building Code.

1.5 In making my decision, I have considered the submissions of the parties and the other evidence in this matter.

1.6 In this determination:

- The Building Act 2004 with its sections is referred to as sections of the Act (“the Act”)
- The Fencing of Swimming Pools Act 1987 with its sections is referred to as sections of the FOSP Act (“the FOSP Act”).

1.7 In this determination, I will refer to the following legislation and standards, the relevant parts of which are set out in Appendix A.

- Clause F4: Safety from Falling of the Building Code, referred to as Clause F4.
- The Schedule to the FOSP Act (“the Schedule”), with its clauses referred to as clauses of the Schedule.
- NZS 8500: 2006: Safety Barriers and Fences around Swimming Pools, Spas and Hot Tubs, referred to as NZS 8500.

2. The swimming pool and barrier

2.1 The swimming pool is located in the back yard adjacent to the house. I have not been provided with the consented plans; however, from the photographs submitted it appears that two sides of the immediate pool area are fenced by a glass pool fence and the third side by a wooden boundary fence to the property. There does not appear to be any dispute between the parties as to the compliance of these barriers and I do not consider them further in this determination.

2.2 The fourth side of the pool is enclosed by external stairs that lead to the upper floor veranda of the house. The stairs existed when the pool was built.

2.3 The stairs are in two flights, separated by a small intermediate landing (“the landing”). The landing appears to be about 1.5m² and its floor is approximately 1.5m above the ground level around the pool. The area under the stairs and landing has been closed in for storage. Two doors giving access to the storage open into the immediate pool area. The storage area, the external stair and landing, along with the timber balustrades form the fourth side of the pool barrier.

2.4 The balustrade on the stairs consists of a simple design of upright posts, evenly spaced balusters and a top rail. The balustrade on the landing is of a similar design, with the addition of a bottom rail. I have not been provided with dimensions or spacing for any of these elements.

² In this determination, unless otherwise stated, references to sections and clauses are to sections of the Building Act 2004 and clauses of the Building Code respectively.

³ Under section 177(1)(b) and 177(2)(d) of the Act.

- 2.5 On the stairs the height of the balustrade, measured at right angles to the stair pitch line is approximately 820mm. I have not been provided with a height for the balustrade on the landing, although the applicant states it is 1m high and, from the photographs this appears to do so.
- 2.6 Access to the immediate pool area at the bottom of the stair is via a glass pool gate, located between the glass pool fence and the outside of the stair balustrade. The latch for this gate is attached to the bottom post of the balustrade and is accessible through the balusters as well as over the top of the balustrade and the gate. I am not aware of whether the gate is fitted with self-closing and self-latching mechanisms.
- 2.7 From the photographs of the gate supplied with the application, it appears that the latch currently does not comply with Clause F4.3.5(a) of the Building Code. However, the applicant has indicated that he will make the gate latch compliant (refer paragraph 3.6) and I therefore leave this matter to the parties to resolve, and do not consider it further in this determination.

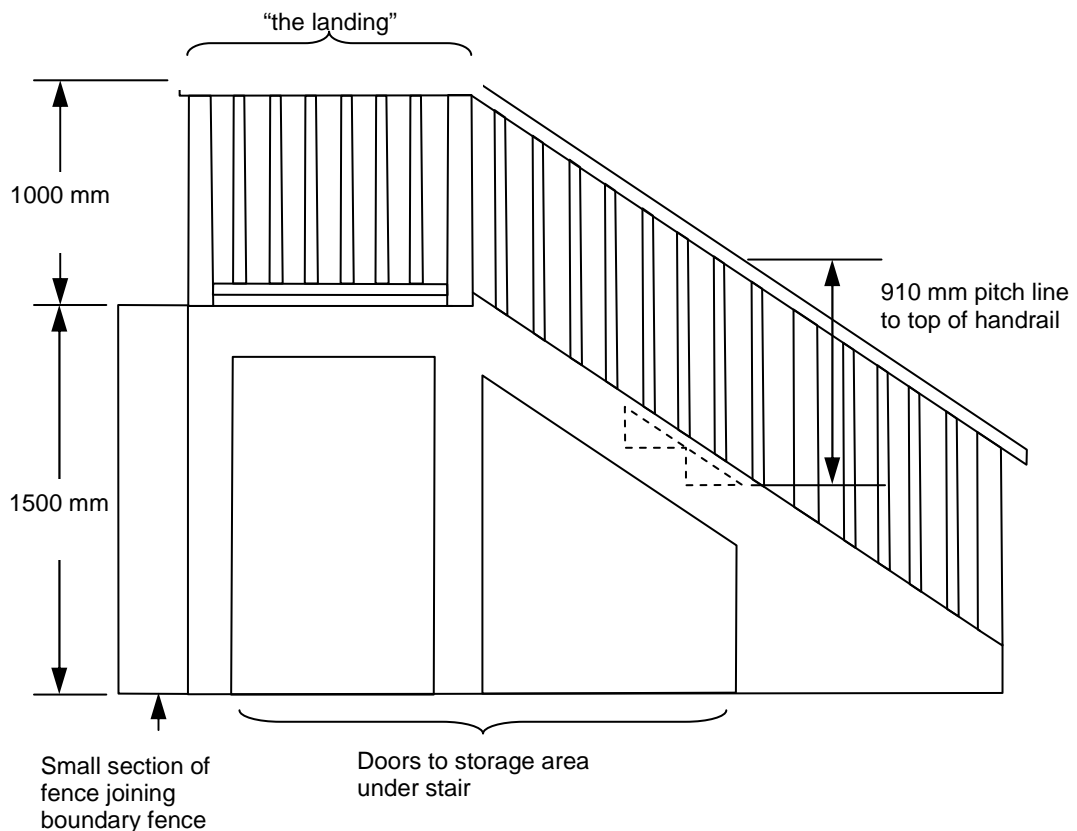


Figure 1: Elevation showing the stair landing and balustrade

3. Background

- 3.1 Around May 2006 the authority issued a building consent (BLD 2006-1008101) under the Building Act 2004 for the construction of the swimming pool. I have not seen a copy of the consent.

- 3.2 The plan submitted for the consent indicated the pool fence was to be 'fenced in accordance with the Fencing of Swimming Pools Act 1987 to detail by others'. The site plan notes two sides of the pool enclosed by glass pool fence, (north west and north east) the third (south east, along the boundary) by a 'new 1200 high timber pool fence' and the fourth (south west) as '1200 high pool fence'.
- 3.3 There is no reference on the approved plans to the stairs and landing to the south west of the pool fence. I note also that a section drawing on the plans indicates that the south west side to be fenced with a '[proprietary] pool fence or similar' at the edge of the deck; however this section does not show the existing stairs.
- 3.4 The authority inspected the work on 4 December 2009 and 15 January 2010. On both occasions, the inspection failed the pool barrier on two counts: the stair balustrade was under the required height of 1.2m; and access to the gate latch needed to be restricted so that it could only be opened by reaching over the gate or the balustrade.
- 3.5 The authority wrote to the applicant on 22 January 2010 noting that
- ...the approved plans show the balustrade to be 1.2 metres in height. Because the plans form part of the building consent, the information shown must be adhered to as required by the Building Act 2004.
- 3.6 On 6 February 2010, the applicant wrote to the authority advising that he would 'make the necessary adjustments' to make the gate latch compliant, and apply for a determination about the balustrade height.
- 3.7 The applicant wrote to the Department requesting a determination on 8 March 2010. However, due to delays in providing information needed for the determination to proceed, the application was not accepted until 18 May 2011.

4. The submissions

- 4.1 In the covering letter to the application dated 8 March 2010, the applicant stated that the stair balustrade was 1m high and that raising it would have a 'significant aesthetic impact, as it would then not be 'neatly tied in' to the rest of the house, in particular to the balustrade along the upper veranda which was also 1m high. The applicant sought a determination to enable him to retain the existing stair balustrade.
- 4.2 The applicant also stated that he believed the balustrade 'to be safe with regard to small children being able to climb it to enter the pool area' and that he was willing 'to assume full and total responsibility for any injury sustained as a result of someone climbing the existing stair balustrade to enter the pool enclosure' and that he was 'providing a safe environment for my children and any others who may visit'.
- 4.3 The applicant provided copies of photographs of the stairs, landing, balustrade, and the pool enclosure, and the other pool fencing.
- 4.4 In response to a request for further information from the Department, the authority provided copies of its swimming pool inspection records and correspondence with the applicant from its files. It also provided copies of photographs taken on 3 June 2011 of the balustrade and swimming pool enclosure with some measurements marked on the photographs.

4.5 My response to the applicant's submission

- 4.5.1 The applicant has stated that he will 'assume full and total responsibility for ... someone climbing the existing stair balustrade to enter the pool enclosure.'
- 4.5.2 Though the applicant's intention may be to manage the behaviour of his children and any visiting children, and to take responsibility for their actions and any subsequent injury, my decision must be made in terms of the Act and its Regulations.
- 4.5.3 As noted in Determination 2006/22, on average, houses in New Zealand change ownership in the order of every 7 years. I take the view that in considering what activities are likely to be undertaken I must take account of both present and future owners of the house. Management practices will change from owner to owner and generally cannot be enforced under the Act.

4.6 The draft determination

- 4.6.1 The draft determination was issued to the parties for comment on 7 September 2011. The authority accepted the draft without comment.
- 4.6.2 The applicant's responded to the draft by providing a detailed proposal to install a new timber balustrade to the stairs and landing that would meet the requirements of F4. In my view this would meet the shortcomings of the existing barrier as outlined below; however, the final decision as to compliance rests with the authority once the proposed work has been completed.

5. Discussion

5.1 General

- 5.1.1 The authority has refused to issue a code compliance certificate on the grounds that the stair and landing balustrade does not comply with either the consented plans or the requirements of the Building Code with respect to the balustrade forming part of the pool barrier.

5.2 Does the balustrade comply with the consented plans?

- 5.2.1 I note that the details provided on the approved consent plans (refer paragraph 3.2) provided limited information on the pool barrier other than its requirement to comply with the FSOP Act, and this was to be 'detail[ed] by others'. The plans did not include the stair and landing balustrade as forming part of the pool fence.
- 5.2.2 The letter dated 22 January 2010 from the authority to the applicant states its view that the approved plans show 'the balustrade to be 1.2m in height.' In my opinion this was not the case as the plan shows this barrier, in section AA, as '[proprietary] pool fence (or similar)'. However, this of itself does not detract from the view that the approved plans indicate that the fence to the pool was to be at 1200mm high on all sides.
- 5.2.3 In my view the pool barrier as installed does not comply with the building consent.

5.3 Does the existing balustrade comply with the Building Code?

- 5.3.1 When considering whether or not a particular building element or building work complies with the Building Code, it can be useful to consider the solutions provided in the relevant Acceptable Solutions. Acceptable Solutions are not the only way of establishing compliance; however they provide a useful standard against which to measure required performance.
- 5.3.2 In this case, acceptable solution F4/AS1 cites the Schedule of the FOSP Act as a means of establishing the compliance of swimming pool barriers with Clause F4⁴.
- 5.3.3 The Schedule specifies that swimming pool fences shall be at least 1.2m high. It also includes requirements that:
- spacing between adjacent vertical posts shall not exceed 100mm
 - any horizontal supports, rails, etc 'that are accessible for use for climbing from the outside' shall be spaced at least 900mm apart.
- 5.3.4 I also consider it appropriate to look at the safety measures set out in NZS 8500. Although NZS 8500 is not currently cited in the compliance document for Clause F4, it was approved by the Standards Council and must command respect as representing the consensus of the major national bodies represented, arrived at after a process of public consultation. As such, it can provide guidance in this matter.
- 5.3.5 In Determination 2009/12, I considered the code compliance of a barrier on a stair. In that determination, I formed the view that the stair barrier formed part of the perimeter fence of the swimming pool and, as such, must comply with Clause F4.3.3. I was also of the view that the stair fell within the category of a balcony, as described in Clause 3.8(a) of NZS 8500.
- 5.3.6 I consider that the same reasoning applies in this situation; with the addition that category of a balcony in Clause 3.8(a) of NZS 8500 applies to the landing as well as the stairs leading up to it. Although the NZS 8500 refers specifically to barriers for balconies, I am of the view that the same requirements apply to any similar area that is directly above and within 2400mm vertically of the immediate pool area, and that can be reached from the house or from elsewhere outside the immediate pool area.
- 5.3.7 This means that the stair balustrade up to and including the balustrade to the landing itself is required to comply with the requirements of the Building Code for swimming pool barriers.
- 5.3.8 The Schedule and NZS 8500 specify that such barriers shall be at least 1200mm high. However, I note that neither the FOSP nor NZS 8500 contemplates how this height is to be measured for stairs. While Figure 3.1 of NZS 8500 specifies fencing dimensions perpendicular to sloping ground as 1200mm, in my view the height of barriers to stairs is measured vertically from the stair nosing (the pitch line) to the top of the handrail as shown in both Figure 4 of F4/AS1, and Figure 25 of D1/AS1. This is also consistent with the position taken in Determination 2009/12.
- 5.3.9 The current stair balustrade, if measured from the pitch line of the stair, is 910mm high; the solid rail to the bottom of the stair balustrade provides a toehold to the

⁴ Paragraph 1.2.7 of F4/AS1 in the *Compliance Document for New Zealand Building Code Clause F4 Safety from Falling – Third Edition*.

barrier. The landing balustrade is 1000mm high; with the bottom rail providing a toehold that makes the balustrade easier to climb.

- 5.3.10 Given that the location of the bottom rail to landing balustrade and the solid barrier to the bottom of the stair barrier, it is unlikely that there is a distance of 900mm between the top and bottom rails to either barrier, as required by clause 5A(a) of the Schedule.
- 5.3.11 I do not know the dimension of the gaps between the vertical members making up the balustrade to the stair and the landing: this dimension should be verified as compliant.
- 5.3.12 Having decided that the balustrade to the stairs and landing does not comply with the Acceptable Solution, I must consider whether it has any mitigating features that might cause it to comply with Clause F4 as an alternative solution: this was the approach taken in Determination 2009/12.
- 5.3.13 Determination 2009/12 considered the elements of the barriers, to both the stair and landing, and came to the view that these elements, in particular the wide top rail, were sufficient to make the barriers as difficult to climb as a barrier described in F4/AS1. In this instance, there does not appear to be anything unusual or exceptional about the elements making up the barrier, i.e., their size or placement, that would compensate for the barriers' inadequate height, as was the case in Determination 2009/12.
- 5.3.14 Accordingly, I conclude that the stair and landing barriers do not comply with Clauses F4.3.4(b) or F4.3.4(f) of the Building Code and the authority was correct to refuse to issue a code compliance certificate.

5.4 The storage area under the stairs

- 5.4.1 No mention has been made by the parties of what is being stored under the landing and stairs. As this storage area opens into the immediate pool area, it is important that whatever is stored is associated with the use of the pool (for example the pool pump and filtration system). If, however, items are being stored that are not connected with the pool, then this storage area must be separated from the immediate pool area with a complying pool fence.
- 5.4.2 I also note that if there is access to the storage area under the stairs other than from the two doors, i.e. from outside the immediate pool area; then that access would also need to be a complying pool gate or door.

5.5 Conclusion

- 5.5.1 As I have found that the balustrade in its current configuration does not comply with the requirements of Clause F4 of the Building Code, or with the consented plans, I consider that the authority was correct in its decision to refuse to issue the code compliance certificate.

6. What is to be done now?

- 6.1 The authority should now issue a notice to fix requiring the owner to bring the pool barrier into compliance with the Building Code, however, it should not specify how

that is to be achieved. That is a matter for the owner to propose, by way of an amendment to the building consent, and the authority to accept or reject.

7. The decision

- 7.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the balustrade to the stair and landing that form part of the swimming pool barrier does not comply with Clause F4 of the Building Code, and accordingly the authority was correct to refuse to issue a code compliance certificate.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 22 December 2011.

John Gardiner
Manager Determinations

Appendix A: The legislation, the Acceptable Solution, and the New Zealand Standard

A1. Building Code Clause F4 requires:

F4.3.3 Swimming pools having a depth of water exceeding 400mm, shall have barriers provided.

F4.3.4 Barriers shall:

- (a) Be continuous and extend for the full height of the hazard,
- (b) Be of appropriate height,
- (c) ...
- (f) In the case of a swimming pool, restrict the access of children under the age of 6 years to the pool or the immediate pool area,
- (g) Restrict the passage of children under the age of 6 years of age when provided to guard a change of level in areas likely to be frequented by them

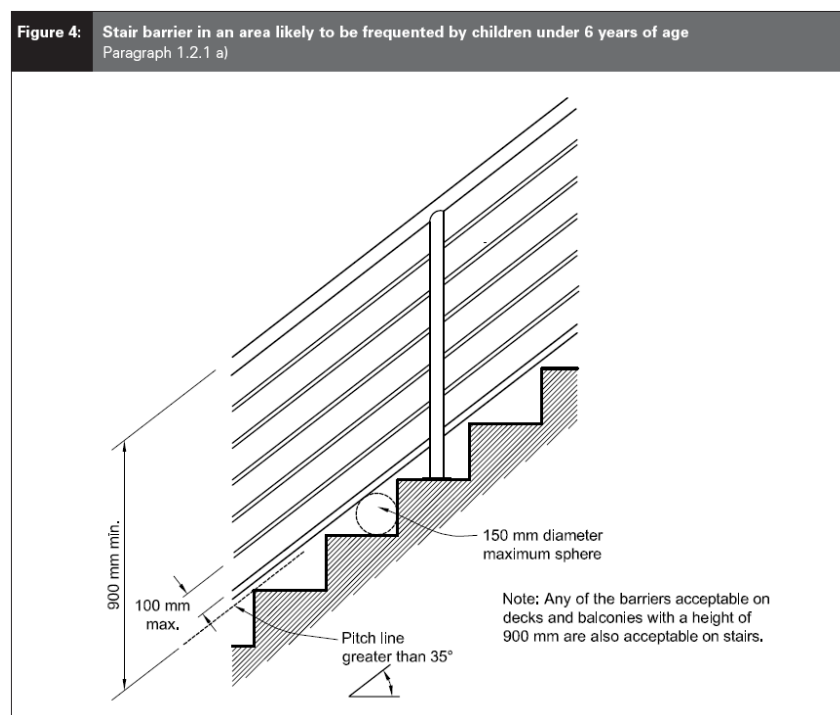
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F4.3.5 Barriers to swimming pools shall have in addition to performance F4.3.4:

- (a) All gates and doors fitted with latching devices not readily operated by children, and constructed to automatically close and latch when released from any stationary position 150mm or more from the closed and secured position, but excluding sliding and sliding-folding doors that give access to the immediate pool surround from a building that forms part of the barrier, and
- (b) No permanent objects on the outside of the barrier that could provide a climbing step.

A2. Acceptable Solution, F4/AS1, includes:

1.2.7 The Schedule to the Fencing of Swimming Pools Act 1987 is a means of establishing compliance with NZBC Clause F4.



A3. Schedule to the Fencing of Swimming Pools Act, Means of compliance for fences under this Act, includes:

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.
- (2) ...

Materials

- 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.

A4. The relevant clause of NZS 8500 includes:

Figure 3.1

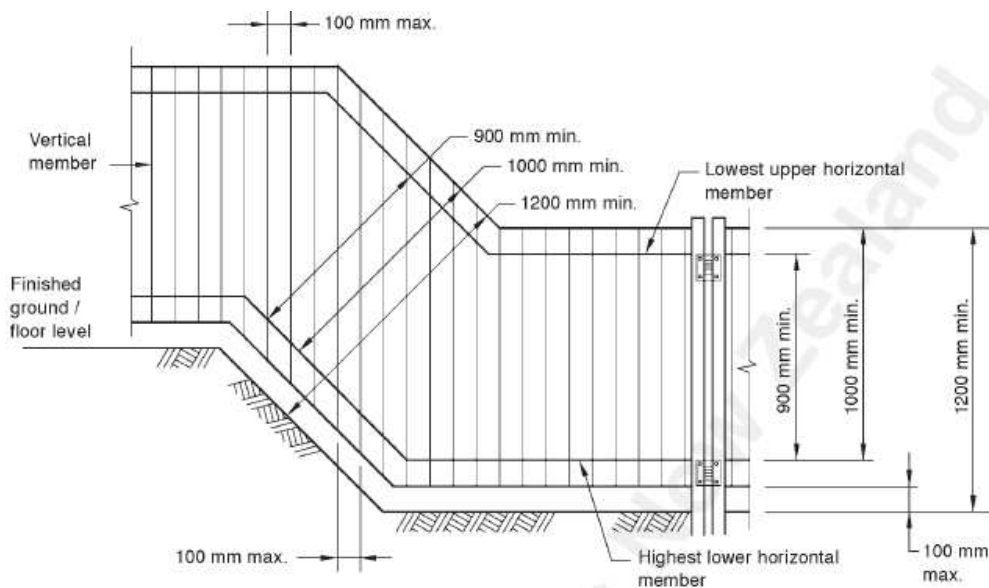


Figure 3.1 – Perpendicular fencing dimensions on sloping ground

3.8 Balcony

Where a balcony projects into the immediate pool area . . . the following shall apply:

- (a) Where the distance from the floor of the balcony to the pool finished floor level is less than 2400mm, and where the windows and doors to the balcony do not comply with 3.6 and 3.7, the balcony shall include a pool safety barrier which complies with the requirements for a barrier in this Standard;

Figure 3.8 (part) includes:

