



Determination 2010/139

The refusal to grant a waiver of Building Code Clause F4 for a deck barrier at 28B Howard Road, Northcote, North Shore (to be read in conjunction with Determination 2007/08)



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 building owner Mr B Wilson (“the applicant”), acting through the previous owner as agent
- the North Shore City Council² carrying out its duties and functions as a territorial authority or a building consent authority (“the authority”)

¹ The Building Act, 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.

² After the application was made, and before the determination was completed, North Shore City Council was transitioned into the Auckland Council. The term authority is used for both.

- 1.3 I also consider that the previous owner is a persons with an interest in the matter to be determined.
- 1.4 I take the view that the matter for determination³ is whether the decision of the authority to refuse to grant a waiver under section 67 of the Act, for a section of a barrier between an existing deck and a new lower deck (“the transition barrier”) with respect to Building Code Clause F4, was correct.
- 1.5 I have not been advised of any dispute regarding the sections of the barrier to the new (lower) deck and it appears that, apart from the height, the authority has not raised any other issues as to the compliance of the barrier.
- 1.6 In making my decision, I have considered the submissions of the parties and the other evidence in this matter. The relevant provisions of the Building Act 1991 (“the former Act”), the Building Code, and Approved Document F4 that applied at the time the work was completed are set out in Appendix A. The building work was carried out in 1996, and it therefore has to be considered in terms of the former Act. I note that the Building Code and the requirements of Approved Document F4/AS1 have not been amended since 1996 in respect of the matter at issue.

2. Background

- 2.1 The building work in question was subject to Determination 2007/08, which among other items, found that the deck to the south elevation of the house was not code-compliant. Regarding the deck, in Determination 2007/08 I said:
- 8.1 I note the expert’s comment in paragraph 5.6 on the inadequate barrier (balustrade) height at the changes in the deck levels. I also note the applicants’ comments regarding the original balustrade being lower than the heights applying at the level changes, but I observe that the deck is several metres above the ground at these areas. As I said in paragraph 1.7, the owner is seeking a waiver of the Building Code with respect to matters related to the deck barrier but the application for a waiver should be made to the territorial authority in the first instance.
- 8.2 I also note the expert’s observations on the deck structure in paragraph 5.7, and the subsequent recommendations in the engineer’s report dated 8 August 2006 (refer paragraph 3.9). I consider that the engineer’s report outlines the remedial work required for compliance with the structural provisions of the Building Code.
- 2.2 The applicant has stated that the remedial work to the deck listed in Determination 2007/08 has been carried out, with the exception of two items that are in the process of being rectified. Once rectified, these items will be referred to the authority.
- 2.3 From the information provided on behalf of the applicant, the applicant sought a waiver of Clause F4 in respect of the transition from the upper deck to the landing. The authority refused to grant this waiver.
- 2.4 An application for a determination was received by the Department on 28 June 2010.

³ In terms of section 177(c)(i) of the Act (Prior to 7 July 2010)

3. The building work

- 3.1 A timber-framed deck runs full length against the southeast elevation of the house. The original house and deck was built in the 1980's, and altered in late 1996. The original deck ("the existing deck") was extended to include a lower deck ("the lower deck") with a landing between the upper and lower decks ("the landing").
- 3.2 The transition barrier at the landing between the upper and lower decks comprises a length of approximately 2.8 metres, that is positioned beside a set of steps and a landing where the upper and lower decks are joined. The existing barrier ("the existing barrier") to the existing deck is 600mm high. Where the transition barrier joins the existing barrier, the height of the barrier is increases incrementally from 750mm at the step down to the landing, 910mm at the landing, and 1100mm at the step to the lower deck. The maximum fall height from the deck surface to the ground below in this area in question is approximately 2.5 metres.

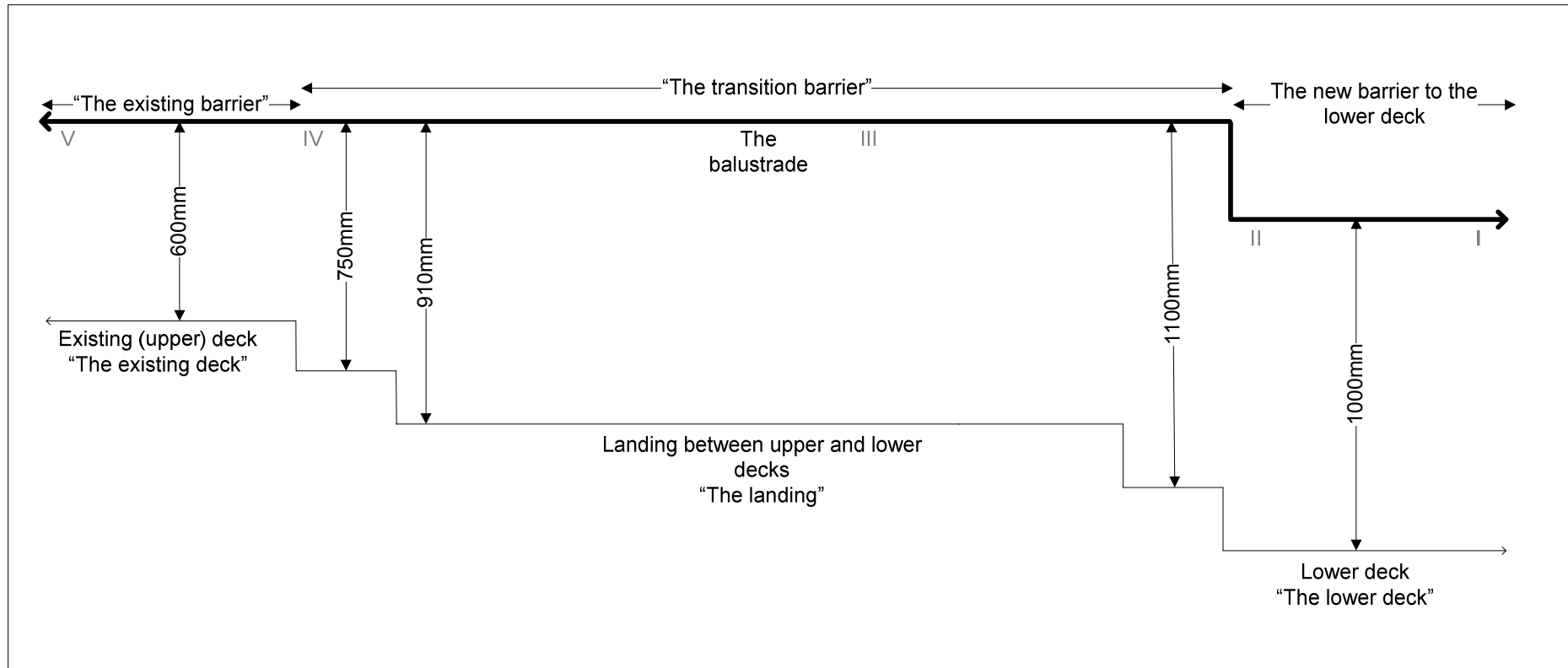


Figure 1: The barriers to the decks and landing

- Area I the barrier beside and adjacent to the lower deck
- Area II the barrier beside and adjacent to the stair between the landing and the lower deck
- Area III the barrier beside and adjacent to the landing area
- Area IV the barrier beside and adjacent to the stair between the landing and the upper deck
- Area V the barrier beside the upper deck

4. The submissions

4.1 In a covering letter addressed to the Department dated 22 June 2010, the previous owner described the deck in question and the background to the dispute. Reference was made to extracts from the expert's report that related to Determination 2007/08. In addition, the submission specifically noted:

- An application for a waiver, which was filed with the authority on 17 December 2009, was declined by the authority. Accordingly, the applicant was seeking a waiver through the determination process.
- The 600mm height of the barrier "complied with the Building Code at the time".
- To amend the existing 600mm high barrier would affect the barrier's appearance and any remedial work would not improve the safety of the deck or reduce the likelihood of an accidental fall from the deck.
- If the barrier were to be increased in height, it would cease to be helpful as a transition barrier protecting the steps.
- In the twenty or so years that the deck has been in place, no one has ever fallen onto the ground below the barrier in question, and any fall from that point would be unlikely to result in a serious injury.
- In the past, children had jumped from the section of the 600mm barrier that was above the lowest drop to the ground (at 1.5 metres), but were deterred from doing so where the drop was greater.
- A child could easily place or use a chair against a 1000mm legally-compliant barrier in order to scale it. A barrier only helped to guard against accidental falls.
- It was irrational to require the barrier to be code-complaint and safety will not be enhanced by such a requirement.

4.2 The applicant supplied copies of:

- a plan of the deck
- a set of photographs showing aspects of the deck.

4.3 Copies of the submissions and other evidence were provided to the parties.

4.4 A draft determination was issued to the parties for comment on 15 October 2010. Both parties accepted the draft without comment. Further consideration of the facts of the case led me to revise the draft determination. A second draft determination was issued to the parties on 7 December 2010. Both parties accepted the draft without comment.

5. Discussion

The compliance of the barriers to the decks, stairs and landing

- 5.1 Barriers are provided to reduce the likelihood of accidental fall and are required when people could fall a metre or more. Barriers are required by Clause F4.3.4(a) to be continuous and extend for the full extent of the hazard and by Clause F4.3.4(b) to be of appropriate height.
- 5.2 The building work consists of alterations to an existing building and in terms of the tests that must be met under the Act:
- the building work must comply with the Building Code (the transition barrier and new barrier to the lower deck) (section 7, section 35, and section 43 of the former Act)
 - the building, after the alteration, must comply to the same extent as before the alterations with respect to compliance with Clause F4 (section 38 of the former Act).
- 5.3 It is my view that I must consider whether the height of the barriers affords adequate protection to people at each of the areas of the deck (refer to Figure 1):
- Area I the barrier beside and adjacent to the lower deck
- Area II the barrier beside and adjacent to the stair between the landing and the lower deck
- Area III the barrier beside and adjacent to the landing area
- Area IV the barrier beside and adjacent to the stair between the landing and the upper deck
- Area V the barrier beside the upper deck.
- Area I The barrier beside and adjacent to the lower deck**
- 5.4 Table 1 of F4/AS1 requires a barrier height of 1000mm at balconies and decks of household units. The barrier beside the lower deck area measures 1000mm and therefore complies with F4/AS1.
- Area II The barrier beside and adjacent to the stair between the landing and the lower deck**
- 5.5 Table 1 of F4/AS1 requires a barrier height of 900mm at stairs and landings. This is measured from the pitch line (the line joining the leading edge of nosings or successive stair treads).
- 5.6 Figure 2 shows there is a small area where the height of the barrier is less than 900mm, however, this is less than 150mm in length and in general the barrier beside and adjacent to the stair between the landing and the lower deck are compliant.
- 5.7 F4/AS1 is only one way to comply with the performance requirements of the Building Code and it is my view that this area of the barrier complies with Clause F4 in that the barrier is of an adequate height to reduce the likelihood of accidental fall.

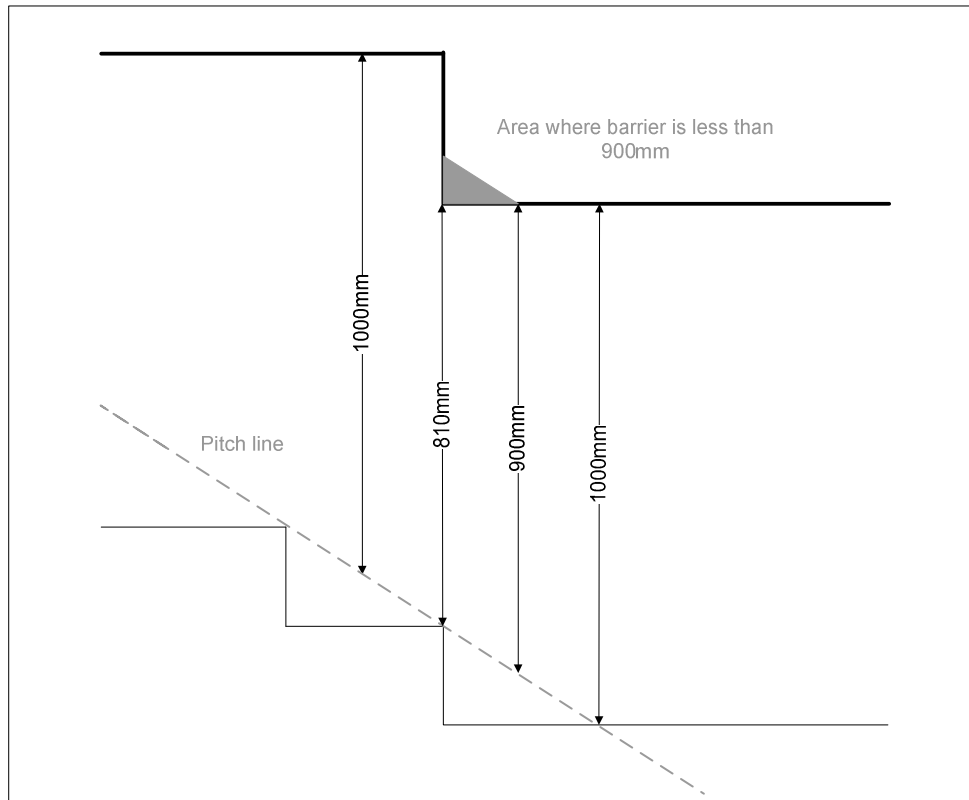


Figure 2: Area II showing the pitch line and area where the barrier is less than 900mm

Area III The barrier beside and adjacent to the landing area

- 5.8 Table 1 of F4/AS1 requires a barrier height of 900mm at stairs. The barrier at the landing area is 910mm and therefore complies with F4/AS1.
- 5.9 While the landing is significant in size, I consider it is reasonable to consider it a landing in this instance because it forms the sole outside route between the upper and lower decks, and because of the large size of the decks themselves. People are unlikely to congregate or linger in the landing area itself.

Area IV The barrier beside and adjacent to the stair between the landing and the existing deck

- 5.10 The barrier beside the stair between the landing and existing deck is between 600mm and 900mm from the pitch line of the stair. Figure 3 shows the area where the barrier is less than 900mm at the stair between the landing and existing deck.
- 5.11 I consider that the steps between the upper deck and landing area create a potential tripping hazard. A person stepping from the stair to the existing deck area is protected by a barrier that is significantly less than the 900mm required by F4/AS1 at that point.
- 5.12 The transition barrier to Area IV is in my view too low to provide protection for anyone who may trip or stumble at the steps when using the stair.

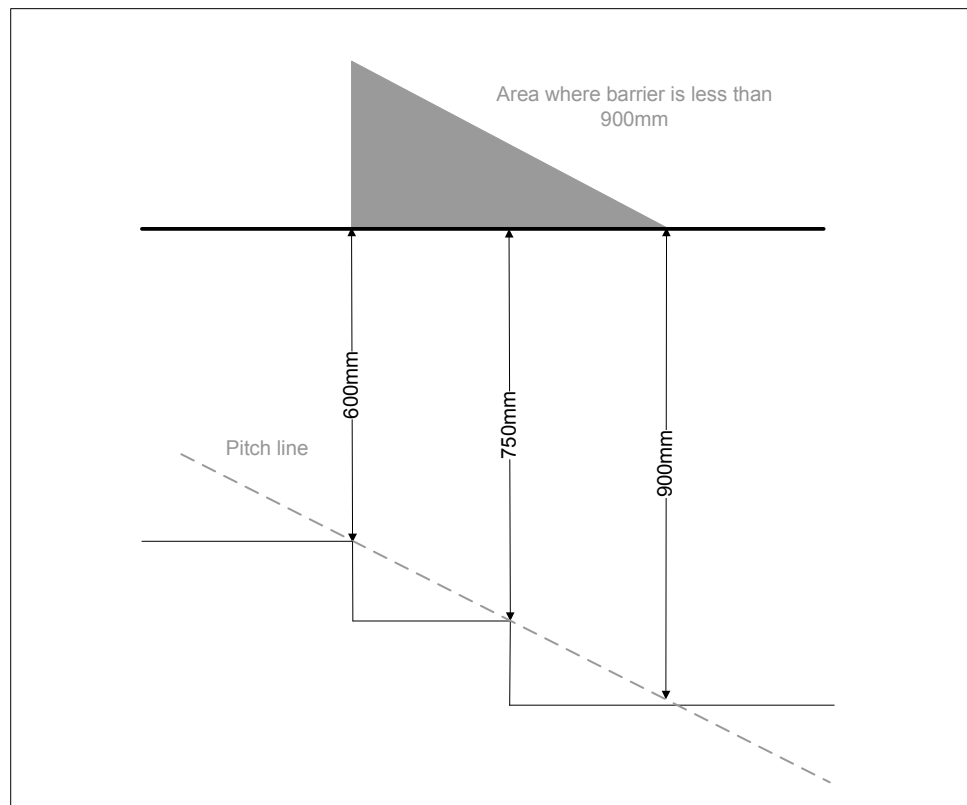


Figure 3: Area IV showing the pitch line and area where the barrier is less than 900mm

Area (V) The barrier beside the upper deck

- 5.13 The 600mm barrier beside the upper deck is existing. The existing barrier is not required to comply fully with the Building Code as it was built before the former Act came into effect. The building, after the alteration is required to comply to the same extent as before the alteration (refer to paragraph 5.2) with respect to Clause F4.
- 5.14 However, I consider that the stair between the upper deck and landing area is a potential tripping hazard (refer to paragraph 5.11) and it is my view lessens the extent of the compliance of the 600mm existing barrier i.e. there is a greater likelihood of accidental fall due to the presence of the stair than before the alteration.
- 5.15 This is only the case in the zone where the transition barrier meets the existing barrier.

Conclusion

- 5.16 I consider that the transition barrier does not comply with Clause F4 because the barrier beside the stair between the landing and upper deck is not of an adequate height to reduce the likelihood of accidental fall.
- 5.17 I consider that the existing barrier adjacent to the stair does not comply to the same extent as before the stair and transition barrier was added, as the presence of the stair creates a hazard that was not there before the alterations were completed.

6. Discussion

The refusal of the authority to grant a waiver of the requirements of Clause F4

- 6.1 As discussed in paragraph 4.4, in the first draft determination, I took the view that the transition barrier complied with the Building Code, and I therefore considered that a waiver was not required. As discussed in paragraph 2.3, the authority refused to grant a waiver of Clause F4 in respect of the transition barrier.
- 6.2 In exercising its powers under the Act, the authority must apply the principles of the Act listed in section 4.
- 6.3 I do not consider that it would be reasonable to grant a waiver or modification of Clause F4, and in not doing so, I am of the view that the authority acted reasonably. In coming to this decision, I have considered section 4 of the Act and taken account of section 4(2)(a)(i) and ‘the importance household units play in the lives of the people who use them’ and ‘the importance of the Building Code as it relates to household units’ and ‘the need to ensure that household units comply with the Building Code’.
- 6.4 Within the context of section 4(2)(a)(i), I do not consider that the modification in this case is minimal in terms of the objective, functional requirements, and performance criteria of Building Code Clause F4. Importantly, the functional requirement of Clause F4 states ‘Buildings shall be constructed to reduce the likelihood of accidental fall.’ The step between the upper deck and landing area is a potential tripping hazard and the barrier to this area is not adequate to reduce the likelihood of falling.
- 6.5 I acknowledge the applicant’s comments that no one has ever fallen onto the ground below the barrier in question, and that in any result, any fall would be unlikely to result in serious injury, however, this information cannot in itself change my view of the matter.
- 6.6 I acknowledge that given the configuration of the decks and barriers, and that these are already constructed and have been for a number of years, modifying the barriers is now a more difficult task. However, I note that there are a range of possible solutions.
- 6.7 Possible solutions could include:
- installing a permanent and fixed obstruction where the existing barrier and transition barrier meet, such as a planter box
 - providing a handrail to the area where the existing barrier and transition barrier meet
 - modifying the configuration of the barriers, so the transition barrier complies with the Building Code, and the level of compliance of the existing barrier is increased.

6.8 If the applicant selects a solution such as installing an obstruction such as a small planter box at the junction of the existing barrier and transition barrier, it is my view that the transition barrier would then comply with the Building Code, and the existing barrier would comply to the same extent as before the step was added. The obstruction would eliminate the tripping hazard and reduce the likelihood of accidental fall. I note that a waiver of Clause F4 would not be required in this case.

7. The decision

7.1 In accordance with section 188 of the Act, I confirm the authority's decision to refuse to grant a waiver of the Building Code under section 67 for the transition barrier in respect of Clause F4.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 23 December 2010.

John Gardiner
Manager Determinations

Appendix A: The relevant legislation

A1 The relevant section of the former Act is:

38 Alterations to existing buildings—No building consent authority shall be granted for the alteration of an existing building, unless the territorial authority is satisfied that after the alteration the building will—

- (a) Comply with the provisions of the building code for means of escape from fire; and for access and facilities for use by people with disabilities (where this is a requirement in terms of section 47A of the Act) as nearly as is reasonably practicable; to the same extent as if it were a new building; and
- (b) Continue to comply with the other provisions of the building code to at least the same extent as before the alteration.

A2 The relevant provisions of the Clause F4 Safety from falling of the Building Code are:

OBJECTIVE

F4.1 The objective of this provision is to help safeguard people from injury in caused by falling.

PERFORMANCE

F4.3.1 Where people could fall 1 metre or more from an opening in the external envelope or floor of a building, or from a sudden change of level within or associated with a building, a barrier shall be provided.

F4.3.4 Barriers shall:

- (b) Be of appropriate height

A3 The relevant provisions of Acceptable Solution F4/AS1 are:

1.1 Barrier heights:

1.1.1 Minimum barrier heights are given in Table 1.

Table 1: Minimum barrier heights

Building type	Location	Barrier height mm) (note 1)
Detached dwellings and within household units of multi-unit dwellings	External deck or balcony	1000
	Stairs, landings, ramps or edges of internal floors	900

NOTE:

1. Heights are measured vertically from floor level on floors, landings and ramps, and from pitch line or stair nosings on stairways.