

Safety barrier for a jetty

1 THE MATTER TO BE DETERMINED

- 1.1 The matter before the Authority is a doubt as to whether a safety barrier is required on a proposed jetty. The territorial authority had granted building consent for the jetty with a safety barrier along one side. The owner now wished to amend the building consent so as to omit the safety barrier.
- 1.2 The Authority takes the view that it is being asked to determine whether the jetty, without a safety barrier, will comply with clause F4 “Safety from falling” of the building code (the First Schedule to the Building Regulations 1992), and if not whether it would be reasonable to grant a waiver or modification of that clause.
- 1.3 In making its determination the Authority has not considered any provisions of the building code other than as noted above.

2 THE PARTIES

- 2.1 The applicant was the owner of the jetty acting through a firm of consultants. The other party was the territorial authority.

3 THE JETTY

- 3.1 The proposed jetty is part of a private fresh water lake and wetland development. The site is not intended to be open to the general public, though there may be some use of the area by local residents.
- 3.2 The jetty is in effect a stepped timber platform 30 m long and 2.5 m wide running from the shore into the lake. On one side, the jetty abuts a gabion wall for 20 m of its length. The top of the wall is horizontal. The decking of the jetty starts at the same level as the wall with its level being reduced by 150 mm steps at 6 m, 12 m, and 18 m along its length.
- 3.3 At the outer end of the jetty, the water is 2 m deep and the decking is 0.5 m above the water surface. Towards the inner end of the jetty, the water is shallower (0.5 to 0 m deep) and the decking is 0.85 to 1.0 m above the water surface. The water level will be higher after heavy rain.
- 3.4 In other words, the decking varies from 1.0 to 2.5 m above the bed of the lake.

- 3.5 The drawings approved by the territorial authority for the building consent show a safety barrier for the full length of that side of the jetty that does not abut the gabion wall, but no barrier along the other side where the jetty extends beyond the wall. The barrier is shown as 1000 mm high with vertical balustrades spanning between horizontal rails at the top of the barrier and approximately 75 mm above the decking. It appears to be designed to restrict the passage of children under 6 years of age.

4 CLAUSE F4 OF THE BUILDING CODE

- 4.1 The relevant provisions of clause F4 of the building code are:

Provisions	Limits on application
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.	Performance F4.3.1 shall not apply where such a barrier would be incompatible with the intended use of an area, or to temporary barriers on construction sites where the possible fall is less than 3 metres.
F4.3.4 Barriers shall:	
(g) Restrict the passage of children under 6 years of age when provided to guard a change of level in areas likely to be frequented by them.	

5 THE SUBMISSIONS

- 5.1 The territorial authority made no specific submissions.
- 5.2 The applicant submitted that:
- (a) The applicant had decided that the construction of a jetty would “enhance the utilisation and amenity of the lake”.
 - (b) “The primary objective of the jetty is ascetic [*sic*] purposes though it will also be used for the maintenance of equipment”.
 - (c) “The design level of the jetty is to remain less than 1 m above the water surface of the lake.”
 - (d) The design and configuration of the proposed jetty is not dissimilar to that of most mariners [*sic*] for which handrails are not required.” A nearby marina, open to the public, had no safety barriers and the deck levels were “around 0.74 metres above the surface of the water”.

(e) “For people to access the lake area and the jetty they would have to walk . . . 400 to 500 metres [so that] they would be well aware of the aquatic environment that they are in so that it is contended that the handrail on the jetty could not be considered for the purposes of alerting people to the hazard of the adjacent water body.”

5.3 The applicant’s conclusion was that: “The general location of the site, the intended use/concept of the proposed jetty (height above water/relatively wide deck area) are such that the proposed jetty without a hand rail is the same as other applications in the area or else where [*sic*] in the region.”

5.4 In response to a query from the Authority, the applicant said:

The purpose of the jetty is aesthetic though there may be some recreational value in its presence. The jetty may at times be used to access small boats ie dingys [*sic*], and this may occur on either side of the jetty. . . .

Again given the aesthetic purpose of the jetty and its remote location the jetty should not be considered as a working jetty.

6 DISCUSSION

6.1 General

6.1.1 Obviously, no barrier is required along the side of the jetty that abuts the wall, because it is not possible for a person to fall from that part of the jetty. Thus the Authority need consider only the full length of the side of the jetty that is remote from the wall, plus the length of the other side that extends beyond the wall.

6.1.2 In Determination 99/012, which concerned the need for a safety barrier at the top of a retaining wall, the Authority took the view that “clause F4.3.1 is to be interpreted as requiring a barrier where it is reasonably foreseeable that people are likely to be at risk if there is no barrier”. Because the jetty is intended for use by people, and specifically for access to maintenance equipment, the Authority considers that it is reasonably foreseeable that people are likely to be at risk if there is no barrier.

6.2 Aesthetic considerations

6.2.1 The applicant submitted that the “primary objective” of the jetty was aesthetic. It is not clear whether that was intended to mean that:

- (a) The primary purpose of the jetty was to allow people to access a deck over water from which to view the surrounding scenery; or
- (b) The primary purpose of the applicant was to construct a jetty with an aesthetically desirable appearance.

Whatever the applicant intended, the jetty is clearly a “building” for the purposes of the Building Act and the building code, so that the only question before the Authority is whether it will safeguard people from injury caused by falling to the extent required by clause F4, and if not whether a waiver or modification is justified.

- 6.2.2 In Determination No. 92.1102, in which the applicant sought a waiver of clause F4 in respect of a safety barrier in an assembly service building, the Authority said:

The Authority recognises that the visual appearance of the handrail is appropriate to the intended use of the building concerned, but does not consider that a wish to achieve an appropriate appearance justifies a waiver of the requirements of the New Zealand Building Code.

- 6.2.3 The Authority takes the same view in this case.

6.3 Height of fall

- 6.3.1 The applicant pointed out that “the design level of the jetty is to remain less than 1 m above the water surface”.

- 6.3.2 The words “not possible for a person to fall more than 1 metre” in the Third Schedule to the Building Act were considered by the High Court in the *Northland RC v Fletcher Construction* case¹. That case concerned floating marina structures with their walking surfaces about 0.5 m above water level. The Court accepted a submission that the words were to be “interpreted in a way that measures the total depth of any descent whether the descent be through air or through water” and held that:

. . . when a person falls from a structure on to water . . . the person goes on falling until that fall is arrested, either by buoyancy arresting the downward motion, or by striking the bottom. Thus if the water under this structure were nowhere more than 0.25 m deep, it would not be possible for a person to fall more than 1 m because he would strike the bottom after falling 0.75 m. But in the present case it is common ground that the water beneath the floating marina structure is several metres deep.

The Authority takes the view that, as a matter of law, the same interpretation is to be applied to clause F4 of the building code.

- 6.3.3 From the applicant’s description of the jetty, its decking varies from 0.5 to 1.0 m above the water surface and from 1.0 to 2.5 m above the bed of the lake. In other words, it is possible for a person to fall more than 1 m from the jetty and therefore clause F4 requires a safety barrier to be provided unless such a barrier would be incompatible with the intended use of the jetty.

6.4 The intended use of the jetty

¹ *Northland RC v Fletcher Construction NZ and South Pacific Ltd* 24/4/97, Tompkins J, HC Whangarei CP41/96

- 6.4.1 Clause F.4.3.1 of the building code does not apply where a safety barrier “would be incompatible with the intended use”.
- 6.4.2 The applicant referred to the jetty “being used to access small boats”, which “may occur from either side of the jetty”. Therefore, and despite the applicant’s submission that it “should not be considered as a working jetty”, the Authority considers that it may be treated as being a “working wharf” as that phrase was used in Determination 95/004 in which it was determined that a safety barrier was incompatible with that use. However, the Authority considers that only one side of the jetty is needed for use as a working wharf. As mentioned in 6.1.2 above, the Authority considers that it is reasonably foreseeable that people are likely to be at risk if there is no barrier. Accordingly, the Authority considers that a safety barrier along one side of the jetty is not incompatible with its intended use as a working wharf.

6.5 Other similar structures

- 6.5.1 Whether other similar structures have safety barriers is irrelevant to this determination. That would be so even if the Authority had been given adequate information to decide whether the other structures complied with the building code or whether the territorial authority concerned has issued a waiver or modification. The Authority therefore takes no account of this submission.

6.6 Alerting people to the hazard

- 6.6.1 The applicant submitted that people visiting the jetty “would be well aware of the aquatic environment [and therefore] the handrail on the jetty could not be considered for the purposes of alerting people to the hazard of the adjacent water body”.
- 6.6.2 The Authority considers that submission to be irrelevant because the purpose of a safety barrier is to safeguard people from injury caused by falling, not to alert people to the danger of falling.

6.7 Children

- 6.7.1 The safety barrier shown in the building consent drawings appears to have been designed to restrict the passage of children under 6 years of age in accordance with clause F4.3.4(g) of the building code. However, from the applicant’s description of the location of the jetty, the Authority considers that it is not a location likely to be frequented by children under 6 years of age, although they may visit it from time to time in the company of older people.

6.8 Conclusion

- 6.8.1 Clause F4 of the building code requires a safety barrier to be provided unless it is incompatible with the intended use of the jetty. The Authority concludes that the intended use is as a working wharf so that a safety barrier is required along one side only, as shown in the building consent drawings.

- 6.8.2 However, that safety barrier is not required to restrict the passage of children under 6 years of age, so that a modification of the safety barrier shown in the building consent drawings would be acceptable. See, for example, paragraph 1.2.2 of the acceptable solution F4/AS1 in Approved Document F4.
- 6.8.3 The Authority does not consider that any waiver or modification of that requirement is justified for any of the reasons advanced by the applicant and set out in 5.2 above.

7 THE AUTHORITY'S DECISION

- 7.1 In accordance with section 20 of the Building Act, the Authority hereby confirms the territorial authority's decision not to grant an amendment to the building consent so as to omit the safety barrier.
- 7.2 However, the Authority determines that the jetty is not in a location likely to be frequented by children under 6 years of age, and would have no objection to a corresponding change to the safety barrier.

Signed for and on behalf of the Building Industry Authority on this 4th day of December 2001

W A Porteous
Chief Executive