

Safety barriers for a floating boardwalk

1 THE MATTERS TO BE DETERMINED

1.1 The matters submitted for determination by the Authority are:

- “1) Whether a safety barrier (handrail) is required on both sides of a floating section of a boardwalk which is situated in a tidal coastal marine area.
- “2) Or alternatively to install childproof gates similar to those used for swimming pools with appropriate signage at each end of the floating boardwalk and have no handrails on the floating boardwalk at all.”

1.2 The Authority takes the view that it is being asked in effect to determine whether the floating boardwalk, without safety barriers, complies with clause F4.3.1 of the building code (the First Schedule to the Building Regulations 1992), and if not whether a waiver of the requirement for safety barriers should be granted under section 20 of the Building Act 1991 on condition that childproof gates are installed.

1.3 In making its decision, the Authority has not considered whether the floating boardwalk complies with any other provisions of the building code.

2 THE PARTIES

2.1 The applicant was the territorial authority acting through the firm of consulting engineers (“the designers”). There was no other party because the territorial authority was also the owner of the marine walkway incorporating the floating boardwalk.

2.2 Because the matter arose out of a dispute between the applicant and the regional council, which was not a “party” in terms of section 16 of the Building Act, the Authority required the applicant to treat the regional council as an “appropriate person” under section 19(1)(b) and send it the application and accompanying documents so that it would be able to make submissions to the Authority.

2.3 That somewhat unusual state of affairs arose because the marine walkway was in a coastal marine area. For the purposes of the Building Act, the coastal marine area was under the jurisdiction of the regional council not the applicant, see the definition of “territorial authority” in section 2 of the Building Act. However, under section 25 the regional council had transferred its Building Act powers to the applicant.

3 THE BOARDWALK AND THE SEQUENCE OF EVENTS

- 3.1 The floating boardwalk section of the marine walkway (“the boardwalk”) crosses a tidal inlet approximately 150 m off the shoreline and is screened from view to a large extent by high mangroves. There are children’s playgrounds in the vicinity, one approximately 180 m from the start of the marine walkway and the other somewhat further away. The bed of the inlet is soft mud for a depth of about 1m.
- 3.2 The boardwalk is in effect a deck supported by pontoons. The bottoms of the pontoons are 0.6 m below the walking surface. The tide affects the full length of the boardwalk. At low tide the boardwalk will be resting on the seabed mud. At high tide (mean high watermark) the boardwalk will be floating on water 0.95 m deep, with its walking surface 0.4 m above the water.
- 3.3 Under the Resource Management Act, the applicant applied to the regional council for a resource consent for the construction of the marine walkway. The plans submitted for the resource consent showed the floating section as not having any safety barriers.
- 3.4 Under the Building Act, the applicant then applied to itself for a building consent. It decided that safety barriers were required for compliance with the building code, and applied to the regional council for approval to change the plans on which the resource consent had been approved so as to include safety barriers.
- 3.5 The regional council refused to approve the change on the grounds that:
- “With a handrail, the structure will be considerably larger and in particular, will interfere strongly with the natural character and visual amenity of the intertidal mangrove through which it passes. These adverse effects were neither contemplated nor expressly approved under the coastal permit. . . .
- “[The regional council has passed a resolution] to add floating boardwalks which meet the requirements of [the resolution], to the list of building work which are exempt from the need for a building consent and compliance with the Building Code.”
- 3.6 The regional council’s decision that a building consent was not required is not relevant to this determination, because section 7(1) of the Building Act provides that new buildings must comply with the building code whether or not a building consent is required.

4 THE BUILDING ACT AND THE BUILDING CODE

- 4.1 The relevant provisions of the Building Act are:

(a) Section 3(1):

In this Act, unless the context otherwise requires, the term “building” means any temporary or permanent movable or immovable structure [subject to certain exceptions that are not relevant to this determination]

(b) Section 7(1):

All building work shall comply with the building code to the extent required by this Act, whether or not a building consent is required in respect of that building work.

(c) Section 17:

If any doubt or dispute arises in respect of—

- (a) Whether particular matters comply with the provisions of the building code; or
- (b) The territorial authority's decision in relation to—
 - (i) The issuing of . . . any building consent . . . or
 - (iii) The granting or refusal of any waivers or modifications under section 34(4) of this Act; or . . .

any of the parties may apply to the Authority for a determination in respect of the doubt or dispute.

(d) Section 19:

The Authority—

- (a) May require the applicant for a determination to provide further documents in support of the application; and
- (b) Shall require the applicant to provide each of the other parties (if any) and any other appropriate person with copies of the application and any documents accompanying the application or provided under paragraph (a) of this subsection.

(e) Section 20:

A determination by the Authority in relation to a matter referred to it under section 17 of this Act may incorporate waivers or modifications and conditions that a territorial authority is empowered to grant or impose and shall—

- (a) Confirm, reverse, or modify the disputed decision to which it relates or determine the matter which is in doubt; and

(f) The Third Schedule:

A building consent shall not be required in respect of the following building work:

- (m) Any other building work in respect of which the territorial authority considers that a building consent is not necessary for the purposes of the Act because that building work either—
 - (i) Is unlikely to be carried out otherwise than in accordance with the building code; or
 - (ii) If carried out otherwise than in accordance with the building code, is unlikely to endanger people or any building, whether on the same land or on other property.

4.2 The relevant provisions of the building code are:

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:

- (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 applicant submitted that:

- (a) “At mean high tide the water depth is approximately 1 metres at the floating boardwalk. At low tide there is no water.”

However, in a letter to the regional council, the applicant said: “The seabed below the floating boardwalk consists of soft mud that is thigh [illegible word, presumably either “deep” or “high]. . . . At high tide the boardwalk will lie in water half a metre deep.”

- (b) The applicant “requires handrails to the . . . floating boardwalk, for safety reasons”.

- (c) The regional council “do not want handrails on the floating boardwalk in the open water for aesthetic reasons”.

5.2 Those submissions left the Authority uncertain as to the boardwalk’s height above water level and the depth of water. However, in response to a query from the Authority, the designers advised that at low tide the boardwalk’s pontoons will be resting on the seabed mud, and at high tide (mean high watermark) the boardwalk will be floating on water 0.95 m deep, with its walking surface 0.4 m above the water.

5.3 The applicant sent the regional council copies of the application and its supporting documents. The regional council did not acknowledge receipt and did not make any submissions to the Authority.

5.4 To ensure that the regional council had adequate opportunity to make submissions on the matter, the Authority sent it a draft of this determination. The draft was also sent to the applicant.

5.5 The regional council replied that it had identified “means of mitigating the adverse effects of the handrail” and accepted the draft subject to the removal of certain comments by the Authority. Because the regional council’s decision meant that there would no longer be any conflict between the building consent and the resource consent, those comments were no longer relevant and were accordingly removed.

5.6 The applicant accepted the draft.

6 DISCUSSION

6.1 Is the boardwalk a building for the purposes of the Building Act?

6.1.1 The Authority notes that in the *Northland RC v Fletcher Construction* case¹ it was common ground that a floating marina structure was a building for the purposes of the Building Act.

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

6.1.2 Similarly, in this determination there was no dispute that the boardwalk was a “building” for the purposes of the Building Act.

6.1.2 The Authority also takes the view that the boardwalk is a building and is therefore required to comply with the building code.

6.2 Are safety barriers required for compliance with the building code?

6.2.1 In the *Northland RC v Fletcher Construction* case, certain floating structures had their walking surfaces about 0.5 m above water level. In interpreting the words “not possible for a person to fall more than 1 metre” in the Third Schedule to the Building Act, 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 [which in that case had a freeboard of 0.5 m] 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. . . .

“ . . . [paragraph (i) of the Third Schedule uses] an arbitrary means of assessing whether a building consent is required. To qualify for the exemption the sole issue is whether the circumstances bring the case within or without the arbitrary assessment. It is not a matter of judging the degree of danger or risk, as it would have been had it provided for the exemption to apply only if there is a fall possible of a degree unlikely to result in injury.

. . . the only issue is whether the circumstances are within the specified parameters.
. . .

“It is no answer to say that a person falling from the marina may land flat on his or her back and not sink half a metre. That is of course a possibility. But . . . the phrase “from which it is not possible for a person to fall” [in paragraph (i) of the Third Schedule] means that all eventualities must be excluded. If a person fell from a marina 0.5 m above the top of the water in a vertical position, it is obvious that that person would fall more than one metre before his or her fall was arrested by buoyancy.”

6.2.2 The Authority takes the view that, as a matter of law, the same interpretation is to be applied to the phrase “could fall 1 metre or more” in clause F4 of the building code.

6.2.3 Despite the initial uncertainty mentioned in 5.2 above, the Authority accepts that at various states of the tide a water depth of up to 0.95 m will exist. It is therefore possible to fall more than 1 m from the boardwalk to the seabed and in particular, at high tide the fall would be 1.35 m to the seabed. It is irrelevant, following the judgment in the *Northland RC v Fletcher Construction* case set out in 6.2.1 above, whether buoyancy effects on a person falling would be sufficient to stop that person from hitting the seabed.

- 6.2.4 Thus the Authority does not need to take any account of the fact that the seabed is in fact soft mud that will not immediately arrest a person's fall.
- 6.2.5 The Authority concludes that people could fall 1 m or more from the boardwalk and therefore that safety barriers are required for compliance with clause F4.3.1 of the building code.

6.3 Are the barriers required to restrict the passage of children?

- 6.3.1 Clause F4.3.4(g) requires barriers to restrict the passage of children under 6 years of age "when located in areas likely to be frequented by them". In Determination 2001/9, the Authority discussed the term "likely to be frequented", and took the view that if a location is likely to be frequented by children then anyone visiting that location at an appropriate time could well expect children to be present on many if not most occasions.
- 6.3.2 It is approximately 180 m from the nearest children's playground to the start of the marine walkway, and 150 m along the walkway to the boardwalk. That is a significant distance for a child under 6. Furthermore, the boardwalk is of no special interest to children under 6, and the marine walkway itself is not on a well-travelled route to the playground or to any other destination with special relevance to children under 6. The Authority therefore considers that the boardwalk is not likely to be frequented by children under 6 and that accordingly the barriers are not required to restrict the passage of children.

6.4 Is a waiver or modification of the building code justified?

- 6.4.1 The applicant asked the Authority, if it decided that safety barriers were required, to determine whether a waiver of that requirement should be granted on condition that "childproof gates similar to those used for swimming pools with appropriate signage [shall be installed] at each end of the floating boardwalk".
- 6.4.2 The Authority infers that the applicant considers that ensuring that unaccompanied children are not present could justify a waiver of the requirement for safety barriers. The Authority disagrees. Safety barriers in all locations are required for the safety of people. Barriers in locations likely to be frequented by children are subject to an additional requirement on that account. The Authority's conclusion that the boardwalk is not in a location frequented by children means that the barriers are not subject to that additional requirement, but does not mean that the barriers are not required for safety.
- 6.4.3 The only basis for a waiver of the building code's requirement for safety barriers that has been cited to the Authority is that such barriers "will interfere strongly with the natural character and visual amenity" of the area. The Authority is in no position to assess such aesthetic considerations, but does not need to because, as it said in Determination 92.1102, and reiterated in Determination 2001/12, which both concerned safety barriers:

"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."

6.4.4 The Authority takes the same view in this case, and accordingly considers that a waiver of the requirement for safety barriers is not justified.

6.5 Conclusion

6.5.1 The Authority concludes that safety barriers are required for compliance with the building code, and that no waiver or modification of that requirement is justified.

6.5.2 The Authority concludes that the boardwalk is not in a location likely to be frequented by children under 6 and that accordingly the barriers are not required to restrict the passage of children.

7 THE AUTHORITY'S DECISION

7.1 In accordance with section 20 of the Building Act, the Authority hereby determines that:

- (a) A safety barrier is required on both sides of the boardwalk to comply with the building code; and
- (b) A waiver of the requirement for safety barriers is not justified.

Signed for and on behalf of the Building Industry Authority on this 4th day of November 2002

W A Porteous
Chief Executive