

Determination

under the

Building Act 1991

No. 93/004: Means of escape from fire in the conversion of an office building to an apartment building

1. The matter to be determined

- 1.1 The matter before the Authority was a dispute over the issuing by a territorial authority of a building consent for alterations to a building for the purposes of:
 - (a) Changing the use of a building from an office building to an apartment building; and
 - (b) Subdividing the building by the deposit of a unit plan.
- 1.2 From here on, unless otherwise stated, reference to “the building” is to the building as it would be if altered in accordance with the building consent.
- 1.3 The basis of the dispute was whether the building consent had been issued in accordance with sections 46(2) and (4) of the Building Act 1991, and particularly whether the means of escape from fire and protection of other property comply as nearly as is reasonably practicable with the relevant provisions of the New Zealand Building Code (the First Schedule to the Building Regulations 1992). In making its determination the Authority has not taken into account any of the other provisions of the New Zealand Building Code.

2. The parties

- 2.1 The applicant was the New Zealand Fire Service, which is entitled to be a party under section 16(e) of the Building Act because, pursuant to section 29(5) of the Fire Service Act 1978, it has an obligation to give notice in writing to a territorial authority in respect of matters to which the Building Act relates. To avoid any suggestion of a conflict of interest, the New Zealand Fire Service Commission waived its right to be consulted under section 12(2) of the Building Act.
- 2.2 The other parties to the determination were the territorial authority which issued the building consent and the owner of the building to whom it was issued.

3. The sequence of events

3.1 From the submissions made by the parties and the documents made available to the Authority, the relevant sequence of events was:

- (a) In 1992 the owner commissioned a development design for the conversion of the building into an apartment building. In the course of design, discussions were held with officers of the territorial authority before drawings were submitted to the territorial authority on 17 December 1992 with an application under the then building bylaws for dispensation from the requirement for two means of egress.
- (b) On 29 January 1993 the territorial authority replied that the proposal was acceptable subject to certain conditions and that “An alternative means of egress is not required” and “The building does not need to be sprinklered”. By the date of the letter, as a result of the Building Act, the building bylaws no longer applied, and the conditions were expressed in terms of the Approved Documents issued by the Authority under section 49 of the Act, although the letter also referred to the previous bylaws.
- (c) The owner’s architects finalised the development design in accordance with the listed conditions, and in the last week of February 1993 the owners altered the building by constructing a “mock-up” apartment to be used for marketing purposes and by removing various building services. No building consent was issued for the building work concerned, but the territorial authority was aware of the work and it was understood that if the marketing was unsuccessful the owner would undo the work and the building would revert to being an office building. The owner had incurred about \$250,000 expenditure on the development to that stage.
- (d) By March 1993 it was clear that the marketing had been successful and the owner entered into agreements for sale of the apartments conditional on the issue of a building consent on terms satisfactory to the owner.
- (e) On 6 April 1993 the applicant wrote to the territorial authority expressing concern about the fire safety of the building, noting amongst other things the provisions of paragraph 2.2.1 of Approved Document C2/AS1 to the effect that except as permitted by paragraph 5 every occupied space in a building shall be served by two or more escape routes, and the provisions of paragraph 5.4.2 to the effect that in residential accommodation a single exit stair is acceptable if it serves no more than four floor levels, which may be increased to six floor levels if the building is sprinkler protected.
- (f) On 5 May 1993 the territorial authority replied to the applicant saying amongst other things that the territorial authority had waived the requirement

to upgrade the means of egress but had not waived the other fire safety features of the New Zealand Building Code.

- (g) On 4 June 1993 the owner submitted an application for building consent to the territorial authority.
- (h) On 4 June 1993 the territorial authority wrote to a firm of consulting engineers to engage their services in respect of the building. The letter was addressed to an employee of the firm (“the consultant”) whom the territorial authority had previously engaged as an independent fire design reviewer. The letter stated that the owner had been advised that it would not be required to install a sprinkler system and would not be required to create another means of egress.
- (i) On 14 June 1993 the consultant made an oral presentation of his draft report to a meeting of territorial authority officials.
- (j) On 17 June 1993 the consultant wrote to the territorial authority with his comments as requested, which were essentially those presented at the meeting on 14 June 1993.
- (k) On 13 July 1993 the territorial authority issued the building consent incorporating design changes recommended by the consultant. The estimated value of the building work under the building consent was \$3 million.
- (l) On the issue of the building consent the owner awarded contracts to building contractors, and arranged finance on a cost-to-complete basis. The agreements for sale of the apartments became unconditional.
- (m) On 25 August 1993 the Authority received the application for determination dated 23 August 1993 and acknowledgements of receipt of documents in respect of that application by the territorial authority and the owner also dated 23 August 1993.
- (n) By 23 August 1993 the progress of work under the building consent was well advanced.
- (o) On 20 and 27 October 1993 a hearing was held under section 19(4) of the Building Act in respect of the application. The work was continuing at the time of the hearing.

4. The building

- 4.1 The following description of the building is based on the documents placed before the Authority and the submissions of the parties.
- 4.2 The building has a basement and ten floors above the basement. There are 42 apartments, one on the ground floor and between two and seven on each of the 1st to the 9th floors. The apartments each have either 1, 2, or 3 bedrooms. About half of the ground floor contains commercial offices and a cafe. Parking is provided in the basement. The 9th floor (two penthouse apartments) was previously the plant room.
- 4.3 External access is provided by an external door. Internal access to the apartments is provided by two lifts from the ground floor to the 8th floor and by a single stair from the ground floor to the 8th floor, and a separate stair that goes from the 8th to the 9th floor. The stairs are 1170mm wide.
- 4.4 In the event of fire, the escape route is:
- (a) From an apartment on the 9th (top) floor: Through the lobby on that floor, down the separate stair to the 8th floor, through the lobby on that floor, down the stair to the ground floor, and through the ground floor lobby to the external door.
 - (b) From an apartment on the 1st to the 8th floor: Through the lobby on that floor to the stair, down the stair to the ground floor, and through the ground floor lobby to the external door.
 - (c) From the apartment on the ground floor: Through the ground floor lobby to the external door.
- 4.5 The building has:
- (a) An automatic fire alarm system with heat and smoke detectors (a Type 5 system as specified in Appendix B to Approved Documents C2, C3, C4), and
 - (b) An escape route pressurisation system whereby the stairs and lobbies are pressurised so that air flow will be from the stairs and lobbies in the direction of the apartments.
- 4.6 On the external faces of the building unprotected windows are above each other and vertically separated by approximately 2.2m from each other.

5. The submissions and the evidence

5.1 General

5.1.1 With its application, the applicant submitted drawings of the building correspondence between the applicant and the territorial authority and between the territorial authority and the owner, and internal memoranda between territorial authority officers and between the applicant's own officers. In response to the application, the owner and the territorial authority submitted correspondence between the parties and their consultants.

5.1.2 Each of the parties elected to speak and give evidence before the Authority as provided by section 19(4) of the Building Act, and a hearing was accordingly held on 20 and 27 October 1993.

5.1.3 At the hearing, the applicant was represented by one of its officers, while the territorial authority and the owner were each represented by counsel.

(a) The applicant's officer ("the officer") made oral submissions and gave evidence.

(b) Counsel for the owner made oral submissions as to the law, and one of the owner's directors ("the director") read a statement of evidence.

(c) Counsel for the territorial authority read submissions as to the law, one of the territorial authority's officers ("the building inspector") read a statement of evidence, and the consultant read a statement of evidence.

Those who gave evidence also answered questions from the other parties and from the Authority.

5.1.4 This determination does not discuss all of the submissions nor all of the evidence presented to the Authority. Some of the matters mentioned in 3 and 4 above are based on the submissions and the evidence.

5.2 Submissions as to the law

5.2.1 Counsel for the territorial authority made submissions as to the interpretation of the Building Act and particularly the legal issues arising out of the words "on reasonable grounds" and "reasonably practicable".

5.2.2 As to "reasonable grounds", he submitted that the assessment of what are reasonable grounds for a decision is to be made objectively in all the circumstances relevant at the time.

5.2.3 As to “reasonably practicable”, he submitted that:

(a) In assessing what is reasonably practicable the questions to be asked were:

“What are the risks? What are the necessary steps to eliminate them whether in terms of cost, time, or trouble? These things must be brought into reasonable balance.” *Marshall v Gotham Co.* [1954] AC 360.

(b) Stroud’s Judicial Dictionary 5th Edition stated:

“In deciding what measures are “reasonably practicable” within the meaning of s.2(1) of the [UK] Health and Safety at Work Act 1974 (c.37) the degree of risk has to be weighed against the sacrifice involved. The section does not impose an absolute duty, and where the sacrifice is disproportionately heavy compared to the likely risk it is not “reasonably practicable” that it should be made (*West Bromwich Building Society v Townsend* [1983] I.C.R. 257).”

5.2.4 Both counsel for the territorial authority and counsel for the owner submitted that the onus was on the applicant to give particulars of the respects in which it contended that the building did not meet the relevant requirements of the Building Act and to call evidence to establish those contentions. They further submitted that in the absence of any evidence to the contrary, the Authority had no choice but to find in accordance with the evidence brought by the territorial authority (the consultant’s evidence outlined in 5.5.5 to 5.5.7 below) that the building does comply with section 46 and to determine that the building consent is confirmed.

5.2.5 Counsel for the owner submitted that advice on the matter which the Authority was understood to have received from fire engineering consultants should be made available to the parties. The Authority noted that it acted after considering technical advice from its officers. As they could not be experts in all areas, its officers in turn were entitled to consult appropriate experts. The Authority considers that such technical advice is solely for the purpose of assisting the Authority to take all issues into account when making a determination on technical matters.

5.2.6 In response to questions, counsel for the owner agreed that what was reasonably practicable fell to be decided as at the time the building consent was issued. However, he submitted that the Authority could not ignore subsequent events, which could “tip the scales” if discretion was used. He was not saying there could be one decision at the time of the building consent and another decision now, but there was room for subsequent events to move the level of objectivity to the reality of the amount at stake.

5.3 *The applicant*

- 5.3.1 The applicant's letter of 6 April 1993 to the territorial authority was submitted. It drew attention to the provisions of paragraph 2.2.1 of Approved Document C2/AS1 to the effect that except as permitted by paragraph 5 every occupied space in a building shall be served by two or more escape routes, and the provisions of paragraph 5.4.2 to the effect that in residential accommodation a single exit stair is acceptable if it serves no more than four floor levels, which may be increased to six floor levels if the building is sprinkler protected. It also drew attention to the height of the building and the corresponding requirements of Table B1/7 of the annex to Approved Documents C2, C3, and C4 in respect of fire resistance ratings, automatic fire alarms with smoke and heat detectors, fire hose reels, fireman's lift control, emergency lighting in exitways, and fire riser mains. The letter concluded that "if it is not reasonably practical to bring the building into compliance for the safety of the occupants of the building, the change of use should not be permitted".
- 5.3.2 In response to questions from the Authority, the officer said that the applicant considered that the building should be required to include both a sprinkler system and two exit stairs.
- 5.3.3 The officer gave evidence that he had visited the building and established that in the event of a fire, fire-fighters would not be able to use a turn-table ladder to rescue people above the 6th floor. The owner submitted that the territorial authority could make access available to a position from which a turn-table ladder could reach higher up the building.

5.4 *The owner*

- 5.4.1 The director gave evidence as to the costs the owner would incur if the building consent were reversed or modified.
- 5.4.2 The current costs of providing a second stair could not be estimated. However, at the time the building consent was applied for the cost had been estimated, to the best of his recollection, as \$130,000 to \$150,000 plus the cost of the loss of about 4% of the floor area available for apartments.
- 5.4.3 The provision of a second stair was "prohibited by virtue of the presence of a light and air easement between the subject property and the adjoining property".
- 5.4.4 The direct cost of providing a sprinkler system now was estimated as likely to be \$145,000.
- 5.4.5 "The construction timetable would be delayed at least three months if the building specification and works needed to accommodate a sprinkler system."

5.4.6 That delay would involve:

- (a) The potential cancellation of certain sales contracts, to a value in excess of \$1 million, which contained a “sunset clause” entitling the purchaser to “walk away from the contract” if title were not issued by a specified date.
- (b) “Penalty interest being incurred as a result of such delay payable to our financier”, and
- (c) “Other subcontractor costs associated with delays in completion including the deletion of works to date, eg removal of the new ceilings.”

5.4.7 In response to questions, counsel for the owner estimated that if the owner could not meet its contracts its potential losses could be substantial.

5.5 *The territorial authority*

5.5.1 The owner’s architect’s letter of 17 December to the territorial authority was submitted. It was written in terms of the then bylaws (which would cease to be relevant after 31 December 1992) but essentially asked the territorial authority to give a dispensation from the requirement for two means of egress and to confirm that “apartments are not a change of occupancy from offices”.

5.5.2 The territorial authority’s letter of 29 January 1993 to the owner’s architect was submitted. It advised that the proposed conversion was acceptable and:

“(a) An alternative means of egress is not required”

“(b) The building does not need to be sprinklered”

subject to conditions that amounted to compliance with the other requirements of Approved Documents C2/AS1 and C3/AS1. The letter also said that under the Building Act the proposed conversion was “deemed a change of use”.

5.5.3 The building inspector gave evidence as to the occurrence of certain of the events outlined in 3.1 above. He said that he believed that the applicant’s concern was passed to the owner and discussed between the territorial authority and the owner. He also said that: “In exercising its powers under section 46(2) of the Building Act, [the territorial authority] requested an opinion of [the consultant], a specialist fire consultant, before making any decision as to whether the provisions of the New Zealand Building Code were being met as nearly as reasonably practicable”.

5.5.4 The territorial authority’s letter of 4 June 1993 to the consultant was tabled. It said that a dispensation not to install a sprinkler system and not to create another means of egress had been given “on the condition that all other aspects of the new fire documents C2, C3, and C4 were met”. It also said:

“The proposal has been criticised by [the applicant] mainly on the grounds of the lack of pressurisation of the stair enclosure.”

The letter said that the owner’s “proposals to create a positive pressure in the stairs and to also create a negative pressure in the lift shaft to prevent smoke logging of the lift foyer passageways” were enclosed, and concluded: “Your comments on this proposal would be appreciated”.

5.5.5 The consultant’s letter of 17 June 1993 was submitted. It discussed:

(a) The applicable section of the Building Act. It said:

“The proposed conversion is in our opinion, not a change of use and thus section 46(2) of the Act does not apply.”

(b) The fire rating and fire safety precautions listed in Table B1/7 of the annex to Approved Documents C2, C3, and C4. It concluded that the building met the listed items but drew attention to certain points that needed to be taken into account.

(c) Egress. It said:

We understand that to provide a second stair would be very difficult to achieve and would also probably affect the viability of the project. On the basis that fire ratings, fire safety precautions, exitway pressurisation etc complies with the Code it is our opinion that the “as nearly as is reasonably practicable” wording of section 46(4) of the Act can be cited in respect of the acceptance of the single means of egress.”

It then made various recommendations in respect of the pressurisation of the stair and the lift lobbies.

(d) Inter-apartment fire ratings. It said that it would “be necessary for the developer to demonstrate that the proposed inter-apartment wall construction complies with [the C3/AS1] fire rating requirement”.

The letter concluded that: “Subject to [the noted items] being incorporated into the application for building consent it is our opinion that consent can be issued in respect of Clause C2 of the Building Regulations 1992 on the basis that the means of escape for fire complies ‘as nearly as is reasonably practicable as if it were a new building’ ”.

5.5.6 The consultant gave evidence as to his experience in the field of specialist fire engineering design and his involvement with the building concerned. His statement of evidence continued in respect of:

- (a) Building Act compliance: Using a methodology issued by the New Zealand Fire Service he concluded that “in general terms the refurbishment can be considered as not being a change of use”.
- (b) Protection of other property. On the basis that the apartments, being held under unit titles, were “other property” in relation to each other and to the stair, the lobbies, and the lifts, he concluded that the fire ratings of the walls and floors complied with the acceptable solution. However, for fire spread up the face of the building C3/AS1 required a vertical separation of 2.5m whereas the building had a vertical separation of approximately 2.2m. He said that “2.2 metres was considered as meeting ‘as nearly as is reasonably practicable’ the requirements of Section 46”.
- (c) Egress. He noted that clause C2.3.2 of the New Zealand Building Code requires that the number of exitways shall be appropriate to various items. He discussed each of those items as applied to the building and concluded in each case that “this performance criteria is met”. He then made a similar examination of the items listed in clause C2.3.3 in respect of the features of an exitway and concluded that “compliance is or will be achieved” by the building’s exitway.

His evidence concluded:

“The real question is, is it reasonable to expect the owner to provide a second stair when the existing single stair has been shown to comply with the requirements of C2 as nearly as is reasonably practicable as if it were a new building.

“It is our opinion that given the fire ratings and fire safety systems provided, including the addition of pressurisation systems to both the horizontal and the vertical safe paths, the egress does comply as nearly as is reasonably practicable.”

5.5.7 In reply to questions, the consultant said that:

- (a) His statement of evidence, amongst other things, reported the methodology used in preparing his letter of 17 June 1993 to the territorial authority.
- (b) When he wrote his letter of 17 June 1993 he had received no instructions other than the letter of engagement from the territorial authority of 4 June 1993, and had not seen any correspondence on the matter. Asked to read the applicant’s letter of 6 April 1993 to the territorial authority, he said that

he could not relate that letter to his instructions from the territorial authority in its letter of 4 June 1993.

- (c) Since preparing his statement of evidence he had been instructed by counsel for the territorial authority that the building was undergoing a change of use in terms of section 46.
- (d) He accepted that if the building were a new building complying with the acceptable solutions then:
- (i) In accordance with clause 5.4.2 of C2/AS1, it would have two means of escape; and
 - (ii) In accordance with clause 4.4.5 of C3/AS1 it would have either
 - not less than 2.5m vertical separation between windows, or
 - a sprinkler system.
- (e) Neither his letter of 17 June 1993 nor his statement of evidence mentioned sprinkler systems because he had approached the review of the building on the basis that it was an existing building so that the question was “Does the building comply as nearly as is reasonably practicable with the New Zealand Building Code?”. He had chosen to use Table B1/7, which he accepted as a bench-mark or guide-line, and considered that the 60 minute fire rating specified in that table was intended to be the life safety rating for the building. If a fire started in an apartment people outside that apartment were safe for at least 60 minutes and it would not take that long for them to escape from the building by the single exit stair. As far as the vertical separation between windows was concerned, he had considered 2.2m to be as close to 2.5m as was reasonably practicable and so the question of sprinklers had not arisen.
- (f) Asked: “Why do you consider that the acceptable solution limits the number of levels that may be served by a single escape stair?” he responded that he was aware that for a residential building paragraph 5.4.2 of C2/AS1 required that:

No single internal exit stair shall serve more than four floor levels.
This may be increased to 6 levels if the building is sprinklered.

but did not know the background to that requirement. On the premise that the fire ratings in Table B1/7 and the other B1 tables were safety ratings, he saw no reason for allowing any increase in the number of levels served by a single exit stair if the building was sprinklered. It was all a matter of escape

times, and the B1 tables should require sprinklers for all buildings over four storeys if 60 minutes was not enough.

- (g) He accepted that sprinklers enhanced life safety by early extinguishment of a fire. He accepted that sprinklers would increase life safety in this or any other building.
- (h) Asked if the fire rating and fire protection measures included in the building were more than was required by Table B1/7 and therefore compensated for the lack of a second stair, he said that the pressurisation system was not required by Table B1/7, but the other fire rating and fire protection measures would be required in any case even if a second stair was provided.

6. The extent, if any, to which the building does not meet the requirements of section 46

6.1 General

6.1.1 The submissions and evidence have been outlined above because, as mentioned in 5.2.4 above, counsel for both the territorial authority and the owner argued that the consultant's evidence to the effect that the building complied with section 46 was the only evidence before the Authority and that the Authority had no choice but to find in accordance with that evidence.

6.1.2 The Authority does not accept those submissions. In processing an application for a determination the Authority does not see itself as acting as a court of law. In this case the Authority has approached its decision as if it were the territorial authority considering the owner's application for building consent but with the advantage of additional evidence and submissions from the parties. The Authority considers that there is no onus on the applicant to bring evidence and that the consultant's evidence is relevant but not conclusive. The most important evidence is the building itself as described in the documents and the submissions. Thus the Authority considers that it must address the question of whether that building complies with the relevant provisions of the New Zealand Building Code as nearly as is reasonably practicable, not the question of whether the applicant has established its contentions.

6.1.3 The specific points at issue are:

- (a) Whether the proposed building complies with the provisions of the New Zealand Building Code for means of egress and for protection of other property as nearly as is reasonably practicable to the same extent as if it were a new building;

and if not

- (b) What modifications to the building would achieve the required extent of compliance.
- 6.1.4 In assessing the extent to which the building complies with those provisions the Authority agrees with the consultant that the acceptable solutions may be used as bench-marks or guidelines.
- 6.1.5 Various matters which were mentioned in submissions and in evidence, such as access for firefighters, are not discussed below because after full consideration of all the circumstances those matters did not affect the Authority's decision.
- 6.1.6 The Authority accepted the assurance of the territorial authority that the recommendations of the consultant had been followed and the requirements of the acceptable solutions were in fact complied with except in respect of the second stair and the vertical separation between windows.
- 6.2 *Means of egress*
- 6.2.1 The requirements of the acceptable solutions for the number of internal exit stairs to be provided in a residential building can be summarised as:
- (a) Building not more than five storeys (stair serves not more than four levels): Single stair.
 - (b) Building not more than seven storeys (stair serves not more than six levels): Single stair plus sprinklers.
 - (c) Building not more than 34m high (usually about 11 storeys): Two stairs.
 - (d) Building not more than 58m high (usually about 16 storeys): Two stairs plus sprinklers.
 - (e) Building more than 58m high: Two stairs plus sprinklers plus smoke detectors.
- 6.2.2 The Authority does not agree that the requirements for the number of stairs and the provision of sprinklers relate solely to exit times. It considers that they relate to increased risk to life, particularly in taller residential buildings where people might be asleep when a fire occurs. One of those risks is that fire might enter a stair itself, or that because of smoke penetration or some other reason a stair might not provide a safe escape route.
- 6.2.3 In terms of the escape route, therefore, the building is less safe than a new building complying with the acceptable solutions.

6.2.4 That comparative reduction in safety is mitigated to some extent by the pressurisation system. It would be mitigated more by the provision of sprinklers. It would be eliminated by the provision of a second stair and a second external door. No other method of mitigating the reduction in safety was suggested by the parties or occurs to the Authority.

6.3 *Protection of other property*

6.3.1 The requirements of the acceptable solution for the openings in internal walls vertically above one another can be summarised as:

- (a) A vertical separation (“spandrel”) of not less than 2.5m, or
- (b) A horizontal projection (“apron”) of not less than 600mm, or
- (c) A sprinkler system.

6.3.2 In terms of the protection of other property, therefore, the building is less safe than a new building complying with the acceptable solutions.

6.3.3 That comparative reduction in protection would be mitigated by an increase in the height of the spandrel, by the provision of an apron, or by the provision of sprinklers. No other method of mitigating the reduction in safety was suggested by the parties or occurs to the Authority.

7. The extent to which it is reasonably practicable to reduce the extent to which the building fails to meet the requirements of section 46

7.1 *General*

7.1.1 The Authority accepts the submission of counsel for the territorial authority that the assessment of what are reasonable grounds for a decision is to be made objectively in all the circumstances relevant at the time. The degree of risk is to be balanced against the cost, time, trouble, or other “sacrifice” necessary to eliminate the risk. The Authority was not assisted by any evidence or submissions from the territorial authority as to its reasons for advising the owner, in the territorial authority’s letter of 29 January 1993, that an alternative means of egress was not required and the building did not need to be sprinklered.

7.1.2 The Authority asked counsel for the owner whether he considered that what is reasonably practicable should be decided now or at the time of building consent. He replied that the proper time at which the decision is to be made is the time of the building consent but that the Authority cannot close its eyes to subsequent events, which could “tip the scales” if discretion were used. Asked whether there could be one decision at the time of building consent and a different decision now, counsel repeated that the proper time was the time of building consent but that there was

“room for subsequent events to move the level of objectivity to the reality of the amount at stake”. The Authority accepts that events since the time of building consent are relevant to the degree of the “sacrifice” mentioned in the submission of counsel for the territorial authority.

7.1.3 For the reasons outlined below, the Authority has come to the conclusion that the building does not comply with the relevant provisions of the New Zealand Building Code “as nearly as reasonably practicable to the same extent as if it were a new building” as required by section 46 of the Building Act. The Authority gave careful consideration to the consultant’s evidence but does not accept the consultant’s view that the provision of means of egress is simply a matter of exit times so that if the fire ratings are high enough there is no need for a second exit stair. The Authority also considers that the consultant’s conclusion that the building does comply with section 46 might have been affected by:

- (a) The emphasis on pressurisation in the territorial authority’s letter of engagement of 4 June 1993, and particularly the statement that “The proposal has been criticised by [the applicant] mainly on the grounds of lack of pressurisation of the stair enclosure”.
- (b) The statements in that letter to the effect that the territorial authority did not require a second stair and a sprinkler system.
- (c) The consultant’s opinion, at the time he reported to the territorial authority, that the building was not in fact undergoing a change of use and therefore that section 46 did not apply. The Authority does not agree with that opinion.

7.1.4 The Authority notes that in fact the applicant’s letter of 6 April 1993 did not criticise the proposal “mainly on the grounds of lack of pressurisation”, in fact it did not mention pressurisation at all, see 3.1(e) and 5.3.1 above.

7.2 *Means of egress*

7.2.1 The degree of risk is indicated by the fact that a single exit stair serves nine levels in an un-sprinklered building whereas the acceptable solution permits a single stair to serve no more than four levels in such a building.

7.2.2 The provision of a second stair at the time of application for a building consent would have involved basic changes to the design of the building on which the marketing exercise had been based. The Authority accepts that such changes at the time of the building consent would probably have meant that the project was no longer viable. The Authority accepts that at the time of the determination it would not be reasonably practicable to install a second stair.

- 7.2.3 The Authority considers that it would have been reasonably practicable to provide a sprinkler system at the time of application for a building consent. There would have been no deletion of works done since the building consent was issued and therefore a sprinkler system at that time would have cost less than it would now. No matter when a sprinkler system were provided, it would not cause any reduction in the floor area available for apartments.
- 7.2.4 By a “sprinkler system” the Authority means an automatic fire sprinkler system with automatic smoke detection system (a Type 7 system as specified in Appendix B to Approved Documents C2, C3, C4).
- 7.2.5 The Authority accepts that providing a sprinkler system now is likely to cost about \$145,000 and the owner’s potential losses might be substantial.
- 7.2.6 Nevertheless, the Authority considers that the degree of risk with a single exit stair serving nine levels in an unsprinklered building outweighs the sacrifice necessary to provide a sprinkler.
- 7.2.7 On the other hand, the Authority accepts that having regard to all the circumstances it is not necessary to provide a second escape route.

7.3 *Protection of other property*

- 7.3.1 The reduction in the protection of other property because the spandrels are 2.2m instead of 2.5m is not of itself considered to justify increasing the spandrel, providing an apron, or providing a sprinkler system.

7.4 *Conclusion*

- 7.4.1 The Authority therefore concludes that this particular building will meet the relevant provisions of the New Zealand Building Code as nearly as is reasonably practicable if a Type 7 sprinkler system is substituted for the present Type 5 alarm system but with no other alteration to what is required by the current building consent.
- 7.4.2 Even with a sprinkler system, the building’s occupants, particularly those above the 6th floor, will be exposed to a greater risk than if the building were a new building complying with the acceptable solutions. However, the Authority considers that the steps that the owner would have to take in order to eliminate that additional risk go beyond what is reasonably practicable. That is a decision that arises from this particular case and is not to be taken as a precedent to the effect that in any conversion of an office building to an apartment building having more than six floors it is acceptable to provide a single exit route if the building is sprinklered.

8. The Authority's decision

- 8.1 In accordance with section 20(a) of the Building Act the Authority hereby modifies the territorial authority's decision to issue a building consent for the building by requiring that a Type 7 sprinkler system shall be substituted for the Type 5 alarm system but with no other alteration to what is required by the current building consent.

Signed for and on behalf of the Building Industry Authority on this 5th day of November 1993.

J H Hunt
Chief Executive