



## Determination 2010/140

# The issuing of a code compliance certificate for the upgrading of the emergency lighting system of two buildings at Aoraki Polytechnic, Timaru

### 1. The matter to be determined

- 1.1 This is a Determination under Part 3 Subpart 1 of the Building Act 2004<sup>1</sup> (“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 applicant, the Timaru District Council, carrying out its duties and functions as a territorial authority and a building consent authority (“the authority”)
  - the owner of the building, Aoraki Polytechnic (“the owner”).
- 1.3 I also consider that the following are persons with an interest in the matter to be determined:
- the electrician who installed the emergency lighting (“the electrician”)
  - the firm of engineering consultants who were initially engaged to design the emergency lighting system (“the consultants”).
- 1.4 This determination relates to the issuing of a code compliance certificate for the upgraded emergency lighting system in two buildings within the Aoraki Polytechnic in Timaru.
- 1.5 I take the view that the matter for determination<sup>2</sup> is whether the authority was correct to issue a code compliance certificate for the upgraded lighting system.
- 1.6 In making my decision, I have considered the submissions of the parties and persons with an interest, the report from an independent firm of consulting engineers commissioned by the Department to advise on this dispute (“the expert”), and the other evidence in this matter. Relevant provisions of the Act and the Building Code are set out in Appendix A.

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<sup>1</sup> The Building Act, Building Code, Compliance documents, past determinations and guidance documents issued by the Department are all available at [ww.dbh.govt.nz](http://ww.dbh.govt.nz) or by contacting the Department on 0800 242 243.

<sup>2</sup> In terms of section 177(b)(i) of the Act (prior to 7 July 2010)

- 1.7 I have also forwarded the determination documentation to the New Zealand Fire Service Commission (“the NZFS”) by way of consultation under section 170.
- 1.8 I have not considered compliance with Clause G9 and I note the compliance of the electrical work itself is not in dispute. I note that all energy work is subject to the controls specified in the Electricity Act 1992, which establishes a self certifying regime under which the person undertaking the prescribed work issues a certificate to the effect that it complies with the Electricity Regulations 1997.

## **2. The background**

- 2.1 The consultants were engaged to design the upgrade to the emergency lighting system and subcontracted the design of the work to a lighting supplier who, on completion, transferred the design to the consultants’ drawings. These drawings together with the specifications formed the basis for the building consent application.
- 2.2 The authority issued a building consent (No 58379) dated 28 September 2007 for alterations to this building under section 112(a) in the form of the proposed emergency lighting system (“the consented plans”).
- 2.3 The work to upgrade the emergency lighting system was contracted to the electrician on the basis of the consented plans.
- 2.4 The electrician stated he had concerns regarding the consented plans and it appears various meetings were held and correspondence exchanged between the electrician, the authority and the consultants. In correspondence to the Department, the electrician explained that he was appointed by the consultants to take over the design and installation of the emergency lighting system and the electrician subsequently redesigned the system. Based on the submission of the electrician, it appears that only 15% of the work shown on the original consented plans eventually formed part of the system that was ultimately built.
- 2.5 On completion of the work, the consultants produced as built drawings of the emergency lighting system as installed and submitted them to the authority.
- 2.6 The electrician maintained that the emergency lighting system was not complete and needed, among other things, further light fittings to ensure the adequate safety of the users of the building. The electrician also raised concerns with the authority regarding the adequacy of the original consented plans, including signage above both faces of a set of double doors within the escape route.
- 2.7 At one site visit, the authority noted that due to the location of manual test switches, it was accepted that the test switches did not meet the requirements of AS/NZS 2293<sup>3</sup>. Following discussions with the representative of the owner it was accepted that full compliance with the standard was not practicable in the context of the alteration work proposed.
- 2.8 The electrician issued an ‘Electrical Certificate of Compliance’ dated 31 October 2008 for his work on the installed system.
- 2.9 The consultants issued a ‘Producer Statement – Construction’ dated 5 November 2008 in relation to the installed system. This stated that the contractor believed ‘on reasonable grounds that [the electrician] had carried out and completed ... all work

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<sup>3</sup> AS/NZS 2293 Emergency evacuation lighting for buildings - Inspection and maintenance

as specified in the attached particulars of the building works in accordance with the contract.

- 2.10 The authority's 'check sheet' relating to the as-built system was completed on 20 November 2008 and included the comment:
- Amended details accepted and satisfy BC requirements on reasonable grounds for [code compliance certificate] issue. Client acceptance Referred to in PS1 of 5/11/08 and field notes
- 2.11 The authority issued a code compliance certificate for the as-built system on 21 November 2008.
- 2.12 Due to the disagreement between the parties and persons with an interest regarding the sufficiency of the installation, the authority engaged the services of an independent firm of electrical and mechanical consulting engineers to review the two sets of drawings relating to the installation. The conclusions of this report have not been taken into account in the determination, as the conclusions were disputed by the electrician.
- 2.13 Following a complaint to the Department of Labour by the electrician about safety issues concerning the emergency lighting, the Department of Labour conducted an investigation into these issues. Following this investigation, a complaint dated 23 March 2009 was filed against the electrician by the Department of Labour with the Registrar of the Electrical Workers Registration Board, largely based on the report described in paragraph 2.12. An independent electrical inspector engaged by the Electrical Workers Licensing Board inspected the installation and in a report dated 17 April 2009, stated that the electrical work within the installation did not contravene the electrical wiring regulations. The committee of the Board subsequently decided that the complaint did not need to be heard by the Board.
- 2.14 According to the authority, following a request from the electrician to the New Zealand Fire Service ("NZFS") National Commander, an inspection and trial evacuation involving the as-built installation was carried out by the NZFS and the system was found to be satisfactory in terms of that inspection and trial evacuation.
- 2.15 In a letter to the Mayor of Timaru dated 20 April 2010, the electrician stated that he had public safety concerns regarding the installation to date, and also noted that additional light fittings would be required to remedy the defects he believed existed.
- 2.16 An application for a determination dated 14 May 2010 was received by the Department on 25 May 2010.

### **3. The building work**

- 3.1 The building work consisted of the installation of an emergency lighting system in Blocks A and C of a polytechnic complex. The system included cabling, switches, the installation of light fittings supplied by the owner, plus various connections and alterations to switchboards. The original specification stated that the light fittings were to comply with AS/NZS 2293 and must provide illumination for a duration of not less than 30 minutes as required by subparagraph 1.1.3 of Acceptable Solution F6/AS1. The specification also noted that both blocks already had sprinkler systems and multiple heat detectors installed at all levels.

3.2 Both blocks are three storeys high and comprise:

|                |  |
|----------------|--|
| <b>Block A</b> |  |
| Level 1        | Main entrance foyer, classrooms, training restaurant and kitchen, toilets, corridors, two stairwells |
| Level 2        | Library, classrooms, offices, toilets, corridors, two stairwells                                     |
| Level 3        | Classrooms, computer rooms, changing rooms, toilets, corridors, two stairwells                       |
| <b>Block C</b> |  |
| Level 1 (East) | Service areas, ancillary rooms, a stairwell  |
| Level 1 (West) | Classrooms, offices, toilets, corridors, a stairwell   |
| Level 2 (East) | Classrooms, offices, toilets, corridors, an entrance foyer, two stairwells                           |
| Level 2 (West) | Classrooms, computer rooms, offices, toilets, corridors, a stairwell                                 |
| Level 3 (East) | Computer rooms, offices, corridors, two stairwells   |
| Level 3 (West) | A computer room, offices, toilets, corridors, a stairwell  |

3.3 The following table compares the number of light fittings shown on the original plans prepared on behalf of the consultants and those installed by the electrician:

| Type of light fitting | Original consented plans | Installed |
|-----------------------|--------------------------|-----------|
| Exit                  | 65                       | 40        |
| Exit/arrow            | 6                        | 5         |
| Plain cover           | 9                        | 19        |
| Double-sided exit     | 3                        | 0         |
| Total                 | 83                       | 64        |

## 4. The submissions

4.1 The application from the authority, dated 14 May 2010, included a 'Summary of Facts' that outlined the background to the matter in dispute. The summary stated that Clause F6 was considered on an 'as near as reasonably practical' approach in terms of sections 112(1)(a)(i) and 112 (2)(b)(i).

4.2 The authority supplied copies of:

- various plans, specifications, the building consent and original consented plans
- the code compliance certificate
- some inspection records
- the consultants' producer statement – construction
- the electrical certificate of compliance
- the mechanical and electrical consulting engineers' report (refer to paragraph 2.12)
- the correspondence between the electrician and the authority and other persons.

- 4.3 The electrician wrote to the Department on 1 June and 24 June 2010 setting out some of the background to the dispute. In a further letter to the Department dated 28 June 2010, the electrician stated that, although he was not conversant with Clause F6, he undertook the design and installation of the emergency lighting in Blocks A and C. The electrician explained that, in doing this, he had made two assumptions. These were that the quickest way to exit the building is by way of the nearest stairwell, and, that upon reaching the ground floor, people need to be directed to the nearest building exit. The electrician established routes from every classroom, office, and occupied space. The electrician referred to the original consented plans that had been produced by the consultants and noted that his main concern (in varying the design which had been prepared by them) was that of public safety.
- 4.4 The electrician wrote again to the Department on 4 August 2010 and stated that no additional electrical work was required to bring the installation up to specification. He stated that during a test under night time conditions with halogen light fittings on the top and bottom landings, the light level throughout the landings and stairwells exceeded requirements. The electrician decided that a third halogen light fitting was required on the ground floor to further illuminate the internal doors.
- 4.5 The electrician supplied copies of:
- an annotated plan of level 1 of Block A
  - the correspondence between the electrician and the authority and other persons.
- 4.6 The electrician wrote to the Department on 17 August 2010, 31 August 2010, 2 September 2010, and 7 September 2010, reiterating his concerns about public safety and requesting the Department consider the three sets of consented drawings, the report commissioned by the authority (refer to paragraph 2.12), the report commissioned by the Department of Labour (refer to paragraph 2.13) and the transcript of a hearing that was held with a committee of the Electrical Workers Registration Board, which related to a competency-related complaint made against him on this matter.
- 4.7 Copies of the submissions and other evidence were provided to the parties.
- 4.8 Copies of a draft determination were forwarded on 20 September 2010 to the parties and to the persons with an interest in the matter to be determined.

#### **Post draft determination submissions**

- 4.9 The electrician provided the following submissions:
- numerous faxes requesting copies of all documentation held by the Department about the determination and the complaint to the Electrical Workers Licensing Board (refer to paragraph 2.13)
  - a submission dated 23 September including the following comments:
    - o the draft determination is inconclusive and fails to address the problems about public safety, as ‘It is what happened in the months and years following that first day that needs determining.’
    - o lighting levels on level 2 greatly exceed requirements without any additional fittings

- o additional directional arrows should be installed on stairwells
- o lights 5 and 6 as shown on the original consented plans (also referred to as attempt one) are only one example of an error in the original plans and there are at least a further 16 errors or omissions
- o the authority did not properly consider public safety, and this is evident in a statement in its response to the expert's report (refer to paragraph 5.7) of 'The issue to be decided by the determination was that relating to the emergency lighting only and did not include the means of escape.'
- a submission dated 28 September with copies of previous correspondence attached.

4.10 The authority did not accept the draft determination and in a submission dated 1 October 2010, noted:

- The original complaint from the electrician was about his concerns to what he considered to be unnecessary costs for the original design, rather than the compliance of the system. The electrical and mechanical engineers (refer to paragraph 2.12) noted in their report that the electrician's 'attitude is compounded by the apparent admission that he had intentionally left out fittings to see if the [authority] picked them up.'
- The NZFS did not check the emergency lighting system, but conducted a trial evacuation and considered the means of escape.
- The expert's knowledge and experience appears to be the design and installation of emergency lighting systems, and is limited in terms of means of escape. The issue of the inward opening door has been exaggerated; the door has been unaltered for many years, and while it does not fully comply with the acceptable solution, this is not a significant issue. The expert's report is inaccurate in that there was emergency lighting installed in the restaurant and other areas of the existing building. An operation and maintenance document was available to the expert, although this was not requested.
- The new design was treated as an amendment to the building consent. The consultants provided a producer statement for construction at the completion of the work. As the building consent was amended, the producer statement for construction is the correct statement as the contract in effect became the amended building consent.
- Section 17 requires that all work must comply with the Building Code with one exception; section 112 provides that an authority must not grant a building consent for an alteration to an existing building 'unless the [authority] is satisfied that after the alteration, the building will comply as nearly as is reasonably practicable... with the provisions of the Building Code that relate to... means of escape from fire.' This clearly infers that full compliance with the Building Code is not necessarily required, subject to certain conditions.

- The emergency lighting is a part of the means of escape from fire, and that is why it was upgraded. The lighting system is not fully compliant but is to as nearly as is reasonably practicable. The owner did not have to install the lighting, but chose to. The expert has reported on 100% compliance with respect to the emergency lighting system, and this approach is unreasonable. Even if only one light unit was installed, subject to its location, it would result in an improvement to the means of escape.
- It would be a retrograde step if the authority refused to accept existing work complying as nearly as is reasonably practicable. This could result in upgrading not taking place and subsequently the advantage of improving local building stock could be lost, which is the intent of section 112(2).

4.11 The owner and the consultants did not respond to the draft determination.

4.12 In response to the draft determination, as consultation under section 170 of the Act, the NZFS were in agreement with the approach and conclusion of the draft determination.

## **5. The expert's report**

5.1 As set out in paragraph 1.6, I engaged an electrical engineer ("the expert"), who is a lighting specialist, from a firm of consulting engineers to provide me with an assessment of the as-built system. The expert is a senior electrical engineer and a member of the Institution of Professional Engineers New Zealand (IPENZ).

5.2 The expert visited the site on 12 July 2010 during daylight hours and again the same evening, and provided a detailed report dated 29 July 2010. The report set out the background to the dispute, and in it the expert observed that:

- the owner was not required to upgrade the emergency lighting system but chose to do so in order to improve emergency access
- there were discrepancies between the original consented plans, the as-built plans, and the installed system.

5.3 The double doors referred to by the electrician (refer to paragraph 2.6) has the exit sign installed on the stairwell side of the doors, and takes people into the reception area, with the doors opening in the opposite direction to the direction of travel. This contravenes the requirement of subparagraph 3.17.3 of C/AS1 and the requirement of Clause C2.3.3(b) that escape routes shall be free of obstruction in the direction of travel.

5.4 In summary, the report found that in order for Blocks A and C to be fully compliant with Clause F6 of the Building Code:

- emergency lighting and exit signage should have been installed on the level 2 landing of Block C
- the double doors between space 22 and the reception area should altered to open in the direction of travel
- emergency lighting and exit signage should have been installed in the kitchen and restaurant when those areas were refurbished

- while the emergency lighting was generally satisfactory with respect to the stairs, corridors, final exits, and similar (with the exception of the level 2 landing of Block C), it does not appear that illumination of the remaining individual spaces within the building was considered.
- 5.5 The report also noted that ‘operation and maintenance’ documentation was not provided for the compliance schedule.
- 5.6 The report set out the following recommendations to amend the emergency lighting provisions:
- an additional emergency light be installed on the landing of level 2 of Block C to illuminate the stairwell and the landing and that an additional exit sign be installed directing people to go down the stair to the final exit
  - the double door between rooms 22 and 19 be turned around to open in the direction of travel
  - emergency and exit signage be installed, particularly in the restaurant and kitchen
  - consideration be given to the illumination of the remaining individual spaces within the building and their impact on the compliance of the escape routes to the building as a whole
  - operation and maintenance documentation be provided in respect of the testing, which is carried out using switches positioned around the building.
- 5.7 In a letter to the Department dated 12 August 2010, the authority responded to the expert’s report and raised the following issues:
- As identified by the compliance schedule for the complex, emergency lighting was already installed in the building prior to the issue of the building consent.
  - The issue to be decided by the determination was that relating to the emergency lighting only and did not include the means of escape.
  - The responsibility for ascertaining what is ‘as near as is reasonably practicable’ lies with a building consent authority. The authority had taken into consideration the requirements of both sections 112(1) and 112(2) prior to issuing the building consent. The upgrading of the system improved both the means of escape and access and facilities for persons with disabilities.
  - The authority accepted that the lighting system was not fully code-compliant but accepted it following consultation with the owner. The authority did not accept that the doors adjacent to Rooms 19 and 22 required to be altered and this was confirmed by the New Zealand Fire Service when it re-inspected the premises on 10 August 2010.
  - The authority did not believe that it was its responsibility to be involved in the design of the building.

## The decision of the authority to issue a code compliance certificate

### 6. Discussion

- 6.1 The installed system was significantly different to the design in the consented plans. Therefore, before considering the application for the code compliance certificate, the authority needed to have considered the Building Code compliance of the as built plans.
- 6.2 I have considered the authority's assessment of the as built plans and the evaluation of the producer statement, and I have come to the following views:
- 1) the authority had inadequate processes surrounding its consideration of the producer statement and the producer statement in this case was inadequate to support a decision to issue the code compliance certificate:
    - the producer statement supporting the as built plans was a 'Producer Statement – Construction' which was a statement that the consultants believed on reasonable grounds that the electrician had carried out the building work in accordance with the contract, not the building consent
    - it is unclear what tests were applied as to reliance on the producer statement from the consultants, and I note that while the representative of the consultants may be known to the authority, I note that he has no recognised professional affiliations
  - 2) the plans as subsequently submitted were considerably different from the plans as consented and should have alerted the authority to more carefully inspect the completed work, and the plans, in any event, did not establish Building Code compliance:
    - the as built plans do not demonstrate Building Code compliance, as the plans do not accurately reflect the system as actually installed in the building, the plans do not show the egress signs that are not also lights, and show some areas of the building and features, such as the illumination provided at the level 2 landing of Block C, which are not compliant with Clause F6 of the Building Code
    - there was no producer statement for the design of the building to support the authority's decision.
- 6.3 While reliance upon producer statements in such circumstances is not wrong, I note that the issues in this case are quite complex, and this suggests to me that the authority should have considered a more robust strategy than reliance on a producer statement alone.
- 6.4 Therefore, I am of the view that the authority did not have reasonable grounds to issue the code compliance certificate.

## **The Building Code compliance of the building work and existing building**

### **7. Discussion**

7.1 Because I am of the view that the authority did not have reasonable grounds to issue the code compliance certificate, and because of the background to this dispute, I have considered the framework that I believe is relevant in establishing Building Code compliance of the installed system.

#### **Framework for establishing the extent of Building Code compliance required under the Act**

7.2 The starting point for considering the requirements building work must comply with are the requirements in sections 16, 17 and 18 of the Act. These provisions specify the purpose of the Building Code, which is to prescribe the functional requirements for buildings and the performance criteria buildings must comply with in their intended use (section 16), that all building work must comply with the Building Code (section 17), and that building work is not required to achieve performance criteria in excess of those prescribed in the Building Code (section 18).

7.3 There are a range of further provisions in the Act that expressly set out different requirements that building work must comply with in particular situations and sections 17 and 18 must be read subject to these provisions.<sup>4</sup> For example, there are particular requirements in the Act regarding the standard for building work that alters an existing building (section 112), building work in respect of a building with a specified intended life less than 50 years (section 113), building work that involves a change of use (section 115), building work that includes a subdivision that affects a building (section 116A), and building work in respect of certain public buildings (section 118).

7.4 The work to upgrade the emergency lighting system was building work that required a building consent and section 49 required the authority to be satisfied that the provisions of the Building Code would be met if the building work was properly completed in accordance with the plans and specifications that accompanied the application.

7.5 Therefore, the Act required that the building work, which is the new work being done to the emergency lighting systems, on all levels of blocks A and C, must comply fully with the Building Code.

7.6 The relevant Building Code clauses the building emergency lighting system must comply with are Clause F6 'Visibility in escape routes' and Clause F8 'Signs' (the performance criteria in Clause F6.3.6 relating to visibility in escape routes expressly requires that escape routes have signs as required by Clause F8). The linkages between these two Building Code Clauses are very important and there is a similar requirement in Clause F8.3.3(b) that expressly requires compliance with the requirements for visibility in escape routes in Clause F6.3.4 and F6.3.5. These linkages reflect the common sense dependency between these two Building Code Clauses as there is little point in installing emergency lighting if there are no signs to

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<sup>4</sup> Section 17 only applies "to the extent required by this Act" and section 18(2) states section 18 is subject to "any express provision to the contrary in any Act".

indicate a building's escape routes. Similarly, there is no point installing signs in escape routes if there is no emergency lighting for people exiting the building to see the signs.

- 7.7 There are a number of provisions in the Act that prevent the authority issuing a building consent in certain situations unless certain additional criteria are satisfied. For example, the authority may not grant a building consent in respect of building work subject to a natural hazard (section 72) or building work in respect of an existing building (section 112) unless certain additional requirements are satisfied. These provisions only prevent the authority issuing a building consent if certain additional requirements are not satisfied.
- 7.8 The provisions don't have any impact on whether the proposed original building work will comply with the Building Code. The provisions should only be considered after the authority is satisfied proposed building work will comply with the Building Code (as required by section 49). Once the authority is satisfied proposed building work will comply with the Building Code the authority can then go on to consider to what extent the additional requirements apply and to extent the additional requirements require further building work to be carried out.
- 7.9 In respect of alterations to an existing building, section 112 prevents the authority from issuing a building consent unless the authority is satisfied that after the alteration the building will comply with the requirements of section 112(a) and (b). These paragraphs (a) and (b) of section 112 contain additional upgrading requirements in respect of means of escape from fire and access and facilities for persons with disabilities.
- 7.10 Therefore, with respect to the installation of the upgraded emergency lighting system:
- section 49 requires that the new building work, which is the upgraded sections of the emergency lighting system, must comply fully with the requirements of Building Code Clauses F6 and F8; and
  - section 112 requires that the building, as a whole, or the parts of the building affected by the alterations, after the alterations, must:
    - comply as nearly as is reasonably practicable with respect to the provisions of the Building Code relating to means of escape from fire, and
    - comply as nearly as is reasonably practicable with respect to the provisions of the Building Code relating to access and facilities for people with disabilities, and
    - continue to comply to as at least the same extent as before the alteration for all other Building Code clauses.

## Section 112 interpretation

- 7.11 The authority disagrees with my interpretation of section 112. The authority's position regarding alterations to existing buildings is that the wording of section 112 infers that full compliance with the Building Code is not necessarily required. While the authority agreed that section 17 requires that all work must comply with the Building Code, it is of the view that one exception is for alterations to existing buildings.
- 7.12 The section 112 test applies to the altered buildings, or parts of the buildings, rather than just the alterations. Section 112 states that a BCA must not grant a building consent for the alteration of an existing building '... unless the [authority] is satisfied that, **after the alteration**, the building will ...' (my emphasis) comply with the matters in section 112(a) and (b). I have further discussed the application of section 112 in previous determinations, such as 2009/060 and 2009/110.
- 7.13 The authority is correct that section 17 is subject to the upgrading requirements in section 112, but the authority appears to have overlooked the requirements of section 49 and the fact that section 112 only applies to prevent the authority issuing a building consent after it has first properly considered the application of section 49 to the proposed building work (the upgrading of the emergency lighting system).
- 7.14 There is an important distinction between proposed building work (such as the upgraded sections of the emergency lighting system in this case) and the requirements of section 112. The owner has chosen to upgrade the emergency lighting system although there is no legal requirement to do so. In this instance, the owner must fully comply with the requirements of the Building Code in respect of the proposed building work to upgrade the emergency lighting system. Section 112 imposes additional requirements in respect of the compliance of the building (after the alterations have been undertaken) with the building's means of escape from fire and access and facilities for persons with disabilities. If the owner chose not to upgrade the emergency lighting system section 112 would only require the means of escape from fire and access and facilities for persons with disabilities to be upgraded when some other alteration to the building was undertaken in the future.
- 7.15 I do not accept the authority's position that the application of section 112 only requires building work relating to means of escape from fire or access and facilities for persons with disabilities to comply as nearly as reasonably practicable with the requirements of the Building Code. This would allow a lower standard of compliance with the Building Code to be accepted in respect of building work relating to these matters. This would be contrary to the purpose of section 112, which is to elevate the matters in section 112 above the other Building Code clauses and require compliance with the matters in section 112 to be upgraded to the extent required by section 112 whenever any alteration is undertaken to a building.
- 7.16 The authority's position is that the owner should be able to choose to undertake a partial upgrade of the emergency lighting system. However, this position is not supported by the requirements of the Act. If the owner chooses to upgrade the emergency lighting system the owner must do so in accordance with the requirements of the Building Code or not at all. Building work may not be undertaken in partial compliance with the Building Code, notwithstanding that some benefits may be achieved from such a partial improvement in compliance. If the owner was unable to undertake the building work necessary to achieve full

compliance with the requirements of the Building Code in respect of the emergency lighting system then the work should not have been undertaken.

### **The compliance of the installed system**

#### The new building work

- 7.17 The expert found the lighting and exit signage installed at the Level 2 landing of Block C did not meet the requirements of Building Code Clause F6. Additional emergency lighting is therefore required at the landing to illuminate the stairwell and landing and that an additional exit sign be installed directing people to go down the stair to the final exit to ensure the upgraded sections of the emergency lighting system comply fully with the Building Code.

#### The existing buildings

- 7.18 As noted in paragraph 7.6, Clause C2 ‘Means of Escape’ references Clauses F6 ‘Visibility in escape routes’ and Clause F8 ‘Signs’. In accordance with section 112 of the Act, the buildings are required to comply as nearly as is reasonably practicable with the provisions of the Building Code that relate to means of escape from fire.
- 7.19 I note the expert found that the following parts of the existing buildings that did not comply with Clause C2, Clause F6 and Clause F8:
- the double doors between space 22 and the reception area do not open in the direction of travel
  - there was insufficient emergency lighting and exit signage installed in the kitchen and restaurant
  - the illumination of the individual, occupied spaces and rooms within the blocks are inadequate.
- 7.20 The existing buildings or parts of the buildings affected by the alterations, after the alterations are required to comply as nearly as is reasonably practicable with the provisions of the Building Code that relate to means of escape from fire. This means the fire safety of the completed escape systems within the buildings are required to comply to a standard of ‘as nearly as is reasonably practicable’.
- 7.21 The approach regarding the question of whether a building complies ‘as nearly as is reasonably practicable’ with particular provisions of the Building Code has been established and discussed in many previous determinations. This approach involves the balancing of the sacrifices and difficulties of upgrading against the advantages of upgrading and follows the approach of the High Court<sup>5</sup>.
- 7.22 Given the extent of illumination and exit signs provided, I consider that the non-compliances noted in paragraph 7.19 could have been able to be upgraded to full Building Code compliance at very little cost as a part of the alterations.
- 7.23 I also consider that the benefits of these items being fully Building Code compliant far outweigh the sacrifices of not completing this building work. Consequently, I consider that the authority did not correctly apply the as nearly as is reasonably practicable test when it evaluated the installed system, to ensure that the means of escape, after the alterations, would comply sufficiently.

<sup>5</sup> Auckland City Council v New Zealand Fire Service, 19/10/95, Gallen J, HC Wellington AP 336/93.

- 7.24 I note the expert assessed the buildings in terms of their compliance with the Building Code, rather than the buildings' compliance to as nearly as reasonably practicable, however, I have applied the as nearly as is reasonably practicable test to the compliance of the existing buildings in terms of the sacrifices and difficulties of upgrading against the advantages of doing so.
- 7.25 The authority also cited section 112(2) of the Act as a reason for not enforcing full compliance. I accept that section 112(2) provides for the situation where an owner decides not to undertake proposed alterations because the upgrade requirements of section 112(1) are considered too onerous or costly. Section 112(2) enables an authority to approve alterations where it is considered by the authority that the benefits of partial compliance with the requirements of section 112(1) will outweigh the detriment of not fully complying with all of those requirements. I have discussed the application of section 112(2) in Determination 2009/090.
- 7.26 In this case, I do not consider the authority's reference to section 112(2) to be appropriate, as the sacrifices in achieving full compliance (refer to paragraph 7.15) of the existing buildings, after the alterations, are insignificant in respect of the work that was done.

### **The original consented plans**

- 7.27 This determination, requested by the authority, is about the issue of the code compliance certificate with regard to alterations involving the installation of an emergency lighting system and the compliance of the completed building in terms of means of escape from fire after those alterations were completed. However, I note the dispute between the parties and persons with an interest centres on the safety of the work as consented. In that respect, I note the following:
- the electrician raised problems with lights 5 and 6 as shown on the original consented plans, referred to by the electrician in the correspondence to me as 'attempt 1 lights 5 and 6'
  - the electrician raised problems with the exit signs shown on both sides of door 22.
- 7.28 It is my view that the electrician correctly identified elements of the design of the emergency lighting system that would not have met the requirements of Clause F6 and Clause F8 if constructed in accordance with the original consented plans.
- 7.29 The appropriate response would have been for appropriate advice to have been sought for the design to be revised and building consent amendment applied for accordingly (either before or after the corrected building work was done) before the code compliance certificate was issued.

### **Public safety of the building**

- 7.30 The electrician maintains his concern about public safety in the building and has continued, throughout the determinations process, to say that his concerns about public safety are not being addressed.
- 7.31 I note that the Act is primarily about public safety, ensuring people who use buildings can do so safely and without endangering their health, and that people who use a building can escape from the building if it is on fire. These objectives are included in the purposes section of the Act.

- 7.32 The Building Code sets out the social objectives that buildings must achieve and the performance requirements, which are the criteria that buildings must deliver in order to meet the objectives.
- 7.33 This determination has considered the following Clauses of the Building Code, which are primarily about the safety of people in buildings during emergencies:
- Clause C2 ‘Means of Escape’, with one of its objectives to safeguard people from injury or illness from a fire while escaping to a safe place
  - Clause F6 ‘Visibility in Escape Routes’, with its objective to help safeguard people from injury in escape routes during failure of the main lighting
  - Clause F8 ‘Signs’, with one of its objectives to safeguard people from injury or illness resulting from inadequate identification of escape routes, or of hazards within the building.
- 7.34 Therefore, this determination is in fact primarily about public safety, as the determination has considered the Building Code compliance of the installed emergency lighting system and the buildings’ means of escape.

### **Conclusions**

- 7.35 It is my view that the emergency lighting system as installed to Blocks A and C does not comply with Building Code Clauses F6 and F8, and that the existing building does not comply as nearly as is reasonably practicable with the provisions of the Building Code that relate to means of escape from fire.
- 7.36 It is my view that the authority’s decision to issue the code compliance certificate was incorrect.
- 7.37 The authority should issue a notice to fix that requires the emergency lighting system be brought into compliance with the Building Code, and the means of escape from fire to be upgraded to the extent required by section 112 of the Act.

## **8. The decision**

- 8.1 In accordance with section 188 of the Act, I hereby reverse the authority’s decision to issue a code compliance certificate.

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 sections of the Building Act are:

**16 Building code: purpose**

The building code prescribes functional requirements for buildings and the performance criteria with which building must comply in their intended use.

**17 All building work must comply with building code**

All building work must 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.

**18 Building work not required to achieve performance criteria additional to or more restrictive than building code**

- (1) A person who carries out any building work is not required by this Act to—
- (a) achieve performance criteria that are additional to, or more restrictive than, the performance criteria prescribed in the building code in relation to that building work; or
  - (b) take any action in respect of that building work if it complies with the building code.

(2) Subsection (1) is subject to any express provision to the contrary in any Act.

**49 Grant of building consent**

- (1) A building consent authority must grant a building consent if it is satisfied on reasonable grounds that the provisions of the building code would be met if the building work was properly completed in accordance with the plans and specifications that accompanied the application.

(2) ...

**112 Alterations to existing buildings**

- (1) A building consent authority must not grant a building consent for the alteration of an existing building, or part of an existing building, unless the building consent authority is satisfied that, after the alteration, the building will—
- (a) comply, as nearly as is reasonably practicable... with the provisions of the building code that relate to—
    - (i) means of escape from fire; and
    - (ii) access and facilities for persons with disabilities (if this is a requirement in terms of section 118); and
  - (b) continue to comply with the other provisions of the building code to at least the same extent as before the alteration.
- (2) Despite subsection (1), a territorial authority may, by written notice to the owner of a building, allow the alteration of an existing building, or part of an existing building, without the building complying with provisions of the building code specified by the territorial authority if the territorial authority is satisfied that,—
- (a) if the building were required to comply with the relevant provisions of the building code, the alteration would not take place; and
  - (b) the alteration will result in improvements to attributes of the building that relate to—
    - (i) means of escape from fire; or
    - (ii) access and facilities for persons with disabilities; and
  - (c) the improvements referred to in paragraph (b) outweigh any detriment that is likely to arise as a result of the building not complying with the relevant provisions of the building code.

A2 The relevant provisions of the Building Code at the time the building consent was issued are:

**CLAUSE A2—INTERPRETATION**

**specified features**, for the purposes of Clause F6, means the following:

- (a) building elements that may act as obstructions:
- (b) safety features required under clauses of this code other than Clause 6 (for example, handrails required under Clause D1):
- (c) changes in direction:
- (d) stairs and ramps:
- (e) escape doors:
- (f) entries to a safe place.

**Clause F6 – Visibility in escape routes**

**Objective F6.1** The objective of this provision is to help safeguard people from injury in escape routes during failure of the main lighting.

**Functional requirement F6.2** Specified features in escape routes must be made reasonably visible by lighting systems, other systems, or both, during failure of the main lighting.

**Performance**

**F6.3.1** Specified features in escape routes must be made reasonably visible by lighting systems, other systems, or both, during failure of the main lighting.

**F6.3.2** The systems for visibility must operate to the following percentages of their design levels within the following times after failure of the main lighting:

- (a) 80% in 0.5 seconds in locations (examples of which are given in performance F6.3.3 where there is a high risk of injury due to delay in operation of the systems for visibility; and
- (b) 10% in 0.5 seconds, and 80% in 30 seconds, in stairs and in locations that are unfamiliar to users;
- (c) 10% in 20 seconds, and 80% in 60 seconds, in all other locations.

**F6.3.3** Examples of locations (referred to in performance F6.3.2(a)) where there is a high risk of injury due to delay in operation of the systems for visibility include:

- (a) areas where dangerous machinery is installed:
- (b) areas where hazardous processes take place:
- (c) clinical areas of hospitals:
- (d) prisons and other buildings in which people are detained:
- (e) any part of an escape route designed for use at any time by more than 250 people.

**F6.3.4** The systems for visibility must operate continuously in buildings of parts of buildings in the following risk groups for the following periods after failure of the main lighting:

- (a) risk group A, until restoration of the main lighting system:
- (b) risk group B, 90 minutes
- (c) risk group C, 30 minutes.

**F6.3.5** Despite performance F6.3.4, if a building or part of a building falls into both risk group A and risk group B, the systems for visibility must operate for whichever is the longer of the periods specified in performance F6.3.4(a) and (b).

**F6.3.6** Signs to indicate escape routes must be provided as required by Clause F8 “signs”.

**Clause F8 – Signs**

**Objective F8.1** The objective of this provision is to:

- (a) Safeguard people from injury or illness resulting from inadequate identification of escape routes or of hazards within or about the building,
- (b) Safeguard people from loss of amenity due to inadequate direction, and
- (c) Ensure that people with disabilities are to carry out normal activities and processes within buildings.

**Functional requirement F8.2** Signs shall be provided in and about buildings to identify:

- (a) Escape routes
- (b) Emergency related safety features,
- (c) Potential hazards
- (d) Accessible routes and facilities for people with disabilities.

**Performance**

**F8.3.1** Signs shall be clearly visible and readily understandable under all conditions of foreseeable use.

**F8.3.2** Signs indicating potential hazards shall be provided in sufficient locations to notify people before they encounter the hazard.

**F8.3.3** Signs to facilitate escape shall:

- (a) Be provided in sufficient locations to identify escape routes and guide people to a safe place, and
- (b) Remain visible during failure of the main lighting for the period required by performance F6.3.4 and performance F6.3.5.

**F8.3.4** Signs shall be provided in sufficient locations to identify accessible routes and facilities provided for people with disabilities.