



Determination 2014/060

Regarding the authority's proposed exercise of its powers to refuse to grant a building consent for an alteration to an existing building by requiring fire resistance rating of two existing external walls at 25 Adams Drive, Pukekohe, Auckland

1. The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004¹ (“the Act”) made under due authorisation by me, John Gardiner, Manager Determinations and Assurance, Ministry of Business, Innovation and Employment (“the Ministry”), for and on behalf of the Chief Executive of the Ministry.
- 1.2 The parties to the determination are:
- the owner of the single level commercial building, R Charles (“the applicant”)
 - Auckland Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.3 I have provided the New Zealand Fire Service Commission (“the NZFS”) with the determination documentation for comment by way of consultation under section 170 of the Act.
- 1.4 This determination arises from the authority's refusal to accept proposed alterations to an existing commercial building unless two existing external walls are upgraded in relation to fire resistance rating. The applicant has prepared plans for a building consent but has not formally lodged this consent with the authority, pending the outcome of this determination.
- 1.5 The matter to be determined² is therefore whether the authority was correct in the proposed exercise of its powers to refuse to grant building consent with respect to fire resistance rating of the existing external walls.
- 1.6 In making my decision, I have considered the submissions of the parties, the report of the expert commissioned by the Ministry to advise on this dispute (“the expert”) and the other evidence in this matter.

¹ The Building Act, Building Code, compliance documents, past determinations and guidance documents issued by the Ministry are all available at www.dbh.govt.nz or by contacting the Ministry on 0800 242 243.

² Under sections 177(1)(b), 177(2)(a) and 177(3)(f)

2. The building work

- 2.1 The existing single level commercial building was constructed in 1987 and covering around 270m² including a factory floor and a small office and amenities space. The building has concrete floors throughout with steel portals clad in corrugated steel. The office area has timber framing and plasterboard walls. The distances between the existing building and the property boundaries on the south and west sides are approximately 5.5m and 1.5m respectively.
- 2.2 The proposed building work consists of an extension (“the extension”) to enclose an open courtyard on the south side of the existing building. The extension would cover 140 m² and is to be of steel frame and tilt slab construction with metal cladding. The building will be extended to be situated approximately 0.2m from parts of the south and east boundaries.

3. Background

- 3.1 On 15 March 2014 the applicants obtained a fire report from a fire safety consultant company (“the fire report”) to determine the fire safety features for the extension, based on the Acceptable Solutions C/AS5. In summary, the relevant sections from the fire report stated:
- The existing building is used as a workshop therefore no fire sprinklers and cross ventilation is required (C/AS5 1.1 the building is capable of storage less than 5m so WB applies).
 - There is a requirement to provide 180min fire resistance rating for property protection safety, to be applied to the entire new south wall (being 0.2m from the boundary) and a new section of the east wall (being 1.5m from the boundary).
 - All escape routes within the building are to be considered as open paths, the fire report concludes the number of escape routes and the width of the escape routes comply with C/AS5.
 - An automatic Type 3 fire alarm and emergency lighting systems are required for the entire building, and three illuminated exit signs in relation to life safety features.
- 3.1.1 At some stage prior to April 2014 the applicant approached the authority to seek their requirements on proceeding with a building consent proposal for the extension. The applicant stated he met with an officer of the authority who informed him a 180 minute fire rating was required for the existing external walls of the building.
- 3.2 On 3 April 2014 following an inquiry from the applicant, an officer of the Ministry provided information regarding the requirements of section 112 of the Act, and the Acceptable Solutions relevant to fire safety.
- 3.3 At some stage between 3 April 2014 and 23 April 2014 the applicant and the authority discussed the fire rating required, and verbally agreed to reduce the requirement to 90 minutes.
- 3.4 On 23 April 2014 the applicant emailed the authority asking for written confirmation of the authority’s ‘acceptable requirement for remedial fire cladding for the existing end wall of [the] building’. The authority responded on the same day stating

As per our conversation in regards to the 90min fire rating to the existing external wall as an ANARP solution. Also note that this wall needs to be flush to the underside of the roofing as per detail in C/AS1.

3.5 The Ministry received an application for determination on 9 September 2014.

4. The submissions

4.1 The applicant provided a written submission with their application for determination, providing a background to the application and information about the existing building and the proposed alteration of the lean to. In summary the applicant contended that:

- The fire risk is minimal for a single level commercial building which is basically open plan except for the office space. Fire egress will not be enhanced by installing remedial cladding as requested by the authority.
- The fire risk will be reduced by the removal of the current southern wall.
- The upgrade required by the authority is not necessary to comply with the Building Code as nearly as reasonably practicable when considering the existing structure.
- The northwest wall is 1.5m from the legal boundary and another 6.5m from the neighbouring structure. If the neighbour were to build to the boundary they would be required to erect a 180 minute fire wall rating as the applicant is required to with the proposed extension.
- The small south west office wall is 6.9m from the southern neighbour. The applicant questions whether fire containment for the tilt slab construction will 'actually enhance our current status'.
- The cost of both walls is around \$14,000 to complete.

4.2 The applicant provided copies of the following documentation with the application:

- The fire report.
- Photographs of the building and site for the proposed alteration.
- Architectural drawings showing the addition to the existing building.
- Email correspondence with the authority dated 23 April 2014.
- Email correspondence with the Ministry dated 3 April 2014.
- Quotation of the cost involved to the northeast factory wall

4.3 The authority did not make a submission in response to the application.

4.4 A draft determination was issued to the parties for comment on 3 November 2014.

4.5 The applicant accepted the draft without further comment in a response received on 4 November 2014.

4.6 The authority responded on 18 November 2014, noting in reference to paragraphs 3.3 and 3.4, the authority is of the view that the new perimeter walls should be 180 minute fire walls. The authority also submitted:

(2) [The authority] remains concerned that the contemplated building work 'will create an undesirable (and at worst dangerous) situation whereby some of the perimeter walls of the newly created fire cell meet (current) code compliance

requirements, whilst others do not even appear to meet the code compliance standards applicable at the time of construction.

(3) [The authority] therefore suggests that it would be sensible for the applicant to take the opportunity, whilst having building work carried out at the property, to upgrade the fire resistance of the existing perimeter walls to current standards.

4.7 In response to the authority's submission, I note here that although it may be considered prudent for the applicant to address the standard of the remaining existing building, the requirement under the Act in relation to an alteration is compliance with section 112. In addition, section 124 sets out the regulatory actions available to the authority where the authority considers a building is dangerous under section 121 of the Act. The ability for the authority to exercise its powers under section 124 is not restricted by the date of construction, or by whether the building work has a code compliance certificate.

4.8 A copy of the draft determination was provided to the NZFS on 2 December 2014. The NZFS provided a written submission on 11 December 2014 through legal advisors regarding matters directly relevant to the NZFS, in summary:

- As confirmed in the draft determination the proposed extension façade walls have a fire rating sufficient to comply with the Building Code.
- The NZFS recognises the statutory constraints of section 112. In relation to means of escape from fire, section 112(1)(a) states that a building will comply as near as is reasonably practicable with the relevant provisions of the Code. The issue for this determination did not require further consideration of these matters.
- The NZFS requests section 112 is quoted in full to avoid misunderstanding in paraphrasing.
- In relation to other code compliance issues, section 112(1)(b) states the building as a whole must maintain the same or a better level of performance against the code. The NZFS note there is a potential conflict between sections 17 and 112(1) of the Act, however accept the sections can be interpreted together on the basis that new building work must comply with the Building Code and the building as a whole must maintain the same or better performance for section 112(1)(b). The NZFS acknowledge this approach has been adopted in a number of determinations.
- Some situations arise where it is difficult to address items of building work in isolation against the requirements of the Building Code; however this is not an issue for the current situation. The NZFS submit the appropriate expert assessment has been completed in this case.

5. The expert's report

5.1 As mentioned in paragraph 1.6, I engaged an independent expert to assist me. The expert is a chartered professional engineer with a specialisation in fire. The expert provided a report dated 21 October 2014 which was provided to the parties on 22 October 2014. The following comments are provided in summary.

5.2 The applicant's fire report used Acceptable Solution C/AS5 as the basis for demonstrating compliance with the Building Code, and compared the existing building and the altered building using this solution. C/AS5 is applicable for working businesses, factories, workshops and ambient storage buildings up to 5m in storage height. The existing 4-bay shed area has a 'knee and apex height' of

approximately 4m and 5.5m respectively and the extension clear height ranges between 3.5 to 4m.

- 5.3 The extension is an alteration to an existing building and therefore section 112 applies. The south and east facades of the existing building are approximately 24m and 11.4m long respectively. In reviewing C/AS5 at Table 5.2/1 for fire cell boundary setbacks, for a fire cell greater than 10m in length, the distance to the boundary needs to be 12m for a non-fire rated façade and therefore does not comply with the current provisions of the Building Code for external fire spread. The relevant legislation that applies is section 112(1)(b)(ii) which states that after the building work, the external boundary fire exposure must continue to comply at least to the same extent as before the alteration.

5.4 The extension

- 5.4.1 Under C/AS5 Clause 2.3.1 the extension façade walls are to have a property rating of 180 minutes. The building plans show the walls as pre-cast concrete panels with a 450mm parapet, therefore the new extension walls fully comply in relation to external fire spread.

5.5 The existing building

- 5.5.1 The south wall's fire spread exposure is reduced by the extension; leaving only 14m² unprotected which is still less than the stated 23m² as permitted by Table 5.3 of C/AS5. The east wall shows the fire spread exposure will not change. The north and west façade walls will not change in the alterations so were not assessed.
- 5.6 In summary, the expert contended that the fire design as currently outlined does not expose the south or east boundaries any more than is the existing case and therefore complies with section 112(1)(b)(ii) of the Act.

6. Discussion

- 6.1 The requirements of section 112 apply when an existing building is altered. In the current case there is no dispute that the proposed extension comes within the definition of 'alter' under the Act including 'rebuild, re-erect, repair, enlarge, and extend the building'. Section 112 states:

(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,—

(a) the building will 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) the building will,—

(i) if it complied with the other provisions of the building code immediately before the building work began, continue to comply with those provisions; or

(ii) if it did not comply with the other provisions of the building code immediately before the building work began, continue to comply at least to the same extent as it did then comply.

- 6.2 The issue the authority is concerned with is external fire spread. There is no indication the building will not comply with means of escape from fire and access for people with disabilities. The expert concluded the existing building did not comply with the current Building Code with respect to external spread of fire (refer paragraph 5.3). Therefore the existing building does not comply with the current Building Code and the test under s112(1)(b)(ii) applies, in that the existing building must continue to comply at least to the same extent as before.
- 6.3 The proposed extension creates a separation distance of around 0.2m to the south and east boundaries. The applicant's fire report specifies these are to have a property rating of 180/180/180 minutes. This is interpreted as stability to resist structural collapse (180 minutes), integrity to resist passage of flames (180 minutes) and insulation characteristics to resist the transfer of heat to a specified level in 180 minutes. Referring to Clause 2.3.1 of C/AS5, fire resistance ratings ("FRRs") states
- Property rating = 120 minutes. This applies to fire rating requirements in Part 5. Control of external fire spread except that where the storage height is greater than 3.0m and the building is closer than 15m to any relevant boundary the rating shall be 180 minutes
- As noted by the expert, the building plan shows the walls to the extension to be pre-cast concrete panels with a 450mm high parapet, and therefore the extension fully complies with C/AS5 for external fire spread.
- 6.4 For the south wall, the addition of the extension will reduce the fire spread exposure below that existing previously and therefore the situation has improved. The expert's assessment of the south wall is that the unprotected façade area will be 14m² after the extension, which is a better situation to the 94m² unprotected area that currently exists. In accordance with C/AS5 Table 5.3, a single area of 23m² is permitted; 14m² is well within this.
- 6.5 For the east wall, the addition of the extension will maintain an identical fire spread exposure to that which currently exists as the unprotected area remains at 63m².
- 6.6 I therefore agree with the expert that the proposed extension does not expose the south or east boundaries to any greater degree from that occurring in the existing building before the alteration. In addition, the south wall will have a reduced unprotected area in relation to fire spread exposure, increasing the fire safety of the wall. I consider section 112(1)(b)(ii) is satisfied, in that for the east wall the building complies at least to the same extent as before, and for the south wall the building exceeds the current situation in terms of compliance with C/AS5.

7. The decision

- 7.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the authority is incorrect in its proposed exercise of powers to refuse to grant building consent in respect of the external fire spread of the existing walls of the building.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 15 December 2014.

John Gardiner
Manager Determinations and Assurance

Appendix A

A.1 The relevant clauses of the Act

7 Interpretation

alter, in relation to a building, includes to rebuild, re-erect, repair, enlarge, and extend the building

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.

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,—

(a) the building will 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) the building will,—

(i) if it complied with the other provisions of the building code immediately before the building work began, continue to comply with those provisions; or

(ii) if it did not comply with the other provisions of the building code immediately before the building work began, continue to comply at least to the same extent as it did then comply.

A.2 The clause of C/AS5

2.3 Fire resistance ratings

FRR values

2.3.1 Unless explicitly stated otherwise in this Acceptable Solution, the *fire resistance ratings (FRRs)* that apply for this *risk group* shall be as follows:

Life rating = 60 minutes. This applies to *fire* rating requirements in Part 3: Means of escape and Part 4: Control of internal fire and smoke spread.

Property rating = 120 minutes. This applies to *fire* rating requirements in Part 5: Control of external fire spread except that where the storage height is greater than 3.0 m and the *building* is closer than 15 m to any *relevant boundary* the rating shall be 180 minutes.