



## Determination 2012/046

### Refusal to issue a code compliance certificate for an 18-year-old house at 361 Oira Road, Drury



#### 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 current 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 the determination are:
- M McCarthy, the owner of the house (“the applicant”)
  - Auckland Council (including its previous capacity as Papakura City Council)<sup>2</sup> (“the authority”), carrying out its duties as a territorial authority and a building consent authority.
- 1.3 This determination arises from the authority’s refusal to issue a code compliance certificate on the grounds that the house does not comply with certain clauses<sup>3</sup> of the Building Code (Schedule 1 of the Building Regulations 1992). The clauses in question are B1 Structure, B2 Durability, E2 External moisture, and F4 Safety from falling.

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

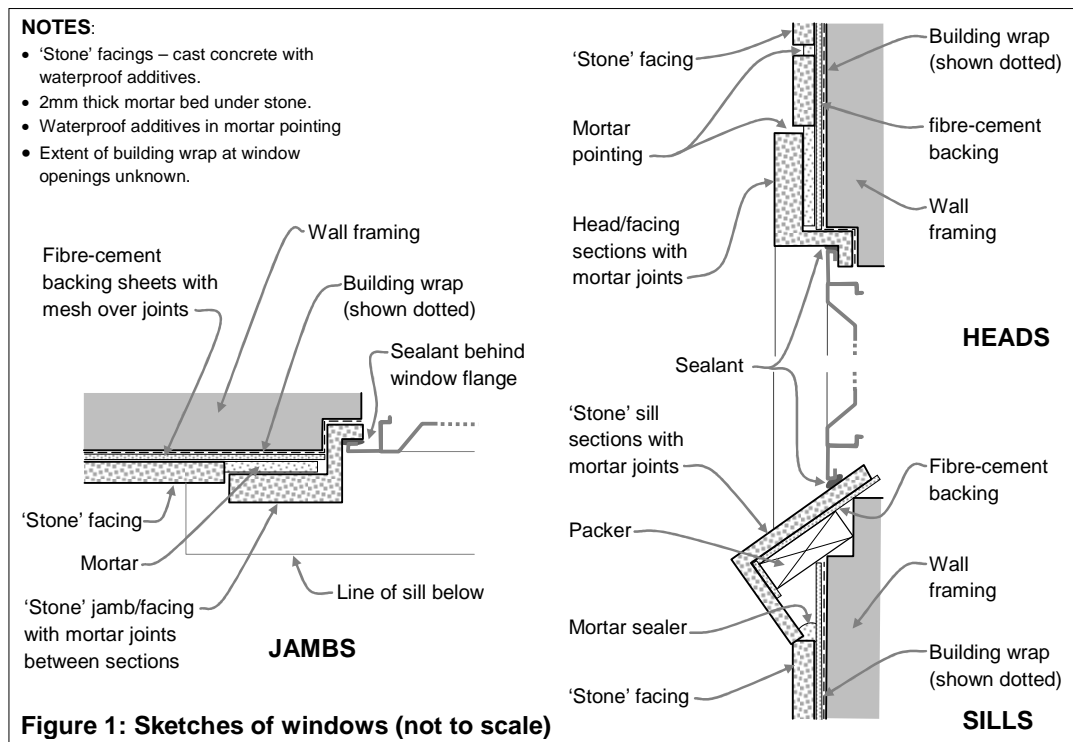
<sup>2</sup> The area in which the building work is located was formerly under the jurisdiction of the Papakura District Council. The term “the authority” refers to both.

<sup>3</sup> In this determination, unless otherwise stated, references to sections are to sections of the respective Building Acts and references to clauses are to clauses of the Building Code.

- 1.4 The matter to be determined<sup>4</sup> is therefore whether the authority correctly exercised its power when it refused to issue a code compliance certificate for the house. In making this decision I must consider whether the house complies with the Building Code that was current at the time the building consent was issued
- 1.5 In making my decision, I have considered the submissions of the parties, the report of the expert commissioned by the Department to advise on this dispute (“the expert”), and the other evidence in this matter.

## 2. The building work

- 2.1 The building work in question consists of a two-storey house and attached garage (“the house”) situated on a level site in a medium to high wind zone for the purposes of NZS 3604<sup>5</sup>.
- 2.2 The building is of timber-frame construction with concrete ground floor slabs and timber-framed intermediate floors. The steeply pitched roof, which is covered with pre-finished metal tiles, has hip and valley junctions, and 500mm wide eaves projections.



- 2.3 A projecting tile, membrane clad deck on the north elevation is supported on clad columns, and there is a small cantilevered tiled membrane clad roof over the front door.
- 2.4 The wall and column cladding consists of a 20 to 30mm thick stone facing bonded with proprietary modified cement adhesive to a 7.5mm thick fibre-cement backing that is directly fixed over building paper to the exterior wall framing (“the cladding”). The cladding has also been coated with a moisture repellent.

<sup>4</sup> Under sections 177(1)(b) and 177(2)(d) of the Act

<sup>5</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

2.5 The aluminium joinery units are set into specially cast sections of the stonework. The following Figure 1 is an interpretation of the window installation based on the expert's descriptions, photographs, and technical literature:

2.6 The expert is of the opinion that the exterior wall framing has been treated in some instances with H1 and in other instances with H3 equivalent treatments. However, there is also a possibility that some untreated timber may have been used.

### 3. Background

3.1 The authority issued building consent No. 010491 for the house on 18 October 1993, under the Building Act 1991 ("the former Act").

3.2 On 10 July 1996, the authority issued a notice to rectify (the equivalent to a notice to fix under the Building Act 2004), noting that the exterior cladding failed to meet the provisions of Building Code clauses B1 and E2.

3.3 Based on a recommendation from the stone suppliers, a waterproof sealant was applied to the faces of the cladding. This was completed by 21 October 1996.

3.4 On 16 December 1996, the authority issued a letter confirming that it was satisfied that the cladding now complied with the requirements of the Building Act. The authority consequently withdrew the notice to fix.

3.5 The authority undertook a further inspection on 7 February 2012, and in a letter to the applicant dated 10 February 2012, set out the requirements of Clauses B1, B2, and E2. The authority stated that it was not satisfied that the house complied with the Building Code in some respects and these issues were described on the notice to fix attached to the letter.

3.6 The notice to fix was dated 16 February 2012. The notice set out a brief background history and noted that the cladding relied heavily on the waterproofing system. I summarise the other main issues raised in the notice as:

- The cladding did not comply with Clauses B1, B2 and E2 in regards to seven matters as listed in the notice.
- There was no drainage cavity installed.
- It was recommended that smoke detectors be installed.
- A range hood extractor vent needed to be installed on the east elevation.
- One downpipe clip needed to be installed.
- The windows lacked restrictors. (I note that the notice to fix incorrectly cites the requirements of 'clause 2.1.1 of the clause F4 Safety from Falling', where 2.1.1. is a paragraph from the Acceptable Solution.)
- Due to the age of the house, the compliance of the building elements with the durability requirements of the Building Code was in question.

The notice also required the applicant to provide a "scope of works" and stated that the applicant could apply for a 'waiver and modification' in regard to the durability issues (refer paragraphs 7.1 to 7.3).

3.7 The Department received an application for a determination in respect of the house on 29 March 2012.

## 4. The submissions

4.1 In a covering letter forwarded with the application, the applicant generally agreed with the background as described by the authority and made the following points:

- The interior linings had not been fixed until the applicant was sure that the house was watertight, and up to the present time there was no evidence of moisture entry. Nor was any detected by the authority during its latest inspection.
- The applicant did not agree with the authority's argument that the cladding did not comply with the manufacturer's instructions. The technical data provided with the specifications contained details for thermal movement, etc. and the contention that there was a lack of control joints could not be proved.
- The applicant could not explain why the two stones by the bedroom 5 window were cracked but these could easily be fixed.
- The applicant had researched and obtained advice as to how best to arrive at an "acceptable solution" regarding the cladding.

4.2 The Department sought clarification of the disputed items on the notice to fix, and in a letter to the Department dated 28 March 2012 the applicant stated that the only items in the notice to fix he agreed with were those relating to the range hood extractor vent and the downpipe clip.

4.3 The applicant provided copies of:

- some plans of the house
- the notice to fix dated 16 February 2012
- the technical data relating to the cladding that was provided with the building consent application.
- correspondence with the authority.

4.4 The authority did not provide a formal submission but did provide copies of:

- the building consent
- the notice to rectify dated 10 July 1996
- background documentation leading up to the waterproofing of the cladding and the issuing and withdrawal of the first notice to rectify.

4.5 A draft determination was issued to the parties for comment on 16 May 2012. In a response received on 13 June 2012 the authority accepted the draft without further comment.

4.6 The applicant submitted a response to the draft in a letter to the Department dated 28 May 2012. The applicant submitted that the openable windows complied with Clause F4 saying:

... [paragraph 1.2.1(b) of F4/AS1<sup>6</sup>] states 'No components between the heights of 150mm and 760mm above floor level which can provide a toe hold'. [Paragraph] 1.2.2 then goes on to discuss low risk areas then [paragraph] 1.2.3 states 'These

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<sup>6</sup> Current at the time the consent was issued being F4/AS1 1st Edition: effective 1 September 1993 to 18 August 1994 (Refer Appendix A.2)

dimensional limitations apply also to any openable window or panel in a barrier'. It is my interpretation that windows are only relevant under [paragraph] 1.2.

My response to this is discussed in paragraphs 6.3.2 to 6.3.4. In respect of the deck the applicant noted that:

...the deck has two outlets and the top of the nib walling of the deck is lower than the floor level of the house so in the advent of a flood the water would spill over. As to the unsealed outlet it is waterproof and [it] is only the tails of the [butyl rubber] that [are] not glued.

I accept that an addition overflow is not necessary in this situation.

## 5. The expert's report

- 5.1 As described in paragraph 1.5, I engaged the services of an expert who is a member of the New Zealand Institute of Building Surveyors, to assist me. The expert examined the house on 16 April 2012 and produced a report dated 1 May 2012. Copies of this report were forwarded to the parties on 2 May 2012.
- 5.2 The report described the house in general terms and gave some of the background to the dispute. The expert noted some minor differences between the house as constructed and the consented plans.
- 5.3 Apart from a partially replaced area of decay in a window jamb liner, the expert observed no other obvious signs of moisture ingress in the interior of the house. However, there was evidence of moisture ingress at the soffit of the small roof over the front door. The expert also carried out a series of invasive moisture-level inspections and found elevated readings at the external framing at the bathroom and in a bottom plate located under one apron flashing.
- 5.4 The expert removed a section of the soffit lining at the small roof area and found evidence of extensive decay. The expert considered it was likely that damage may also have spread to the adjoining house walls.
- 5.5 A panel was cut out of the deck soffit and the expert identified the timber as being stamped generally with H3, with one beam stamped H1. There was no evidence of moisture ingress or damage.
- 5.6 The expert took a sample from the external wall framing and a sample from the roof framing above the front door. These samples were sent to a wood and building materials specialist for analysis. The wall framing sample was found to be likely treated with the equivalent of an H1.2 treatment, and the roof framing sample was likely to only be treated to an H1 level if it was treated at all. However, the expert suspected that the latter sample had been treated to the H1 level.
- 5.7 I summarise below the specific observations of the expert as set out in the report:

### The cladding

- The lack of major cracking in the cladding faces suggested the presence of control joints. While the cracks evident in the mortar lines of the cladding must clearly absorb moisture, the amount of such absorption may not pose a problem. However further destructive investigation is required to form a properly reasoned conclusion.

- The nature and the construction of the cladding means that the chance of capillary rise at its base was far less than that expected in a normal fibre-cement clad dwelling. An accurate reading taken in a bottom plate at the base of the cladding recorded a low relative moisture content.
- The junction between the sill and jamb sections at the exterior joinery units provide a possible avenue for water to enter by capillary attraction should a crack open up. Also, there was no obvious “escape route” for any moisture that entered these junctions.
- The head section terminated behind the joinery units and this elevated the sealant to a “critical” status, although the depth of the head recess provided additional protection. In addition, the flat surface of the head cladding could allow water entry that did not have an easy escape route, and this was occurring in at least one location.
- After considering the manufacturer’s instructions current at the time the house was consented, the expert reached the conclusion that the lack of waterproofing to the fibre-cement backing sheets was not contrary to those instructions.

### **The roofing**

- The expert attributed the damage found in the area of the small roof over the front door to problems at the junctions of the roof and the house and at the termination of the roof membrane.
- The apron flashing between the library and the workshop had an unsealed end that had likely allowed the ingress of moisture.
- The apron flashing above the laundry was partly buried in the cladding and lacked a properly formed end deflector. At present, while there were no evident problems, the potential for risk was obvious.
- The roof penetration at the chimney flue apparently leaked on occasions.

### **The deck**

- There were no separate overflows installed in the deck and one outlet was inadequately secured.
- The vertical fixings securing the balustrade posts were ‘relatively fragile’.
- The construction of the edge adjoining the cladding provided the potential for drainage and drying as well as providing a capillary break.
- The tops of the columns supporting the deck were flat and these may allow moisture to penetrate the column, which in turn, had no drainage capability.

### **Safety from falling**

- The expert considered that at the time the building consent was issued, there was no requirement to provide safety catches to the windows. (This is discussed in paragraph 6.3.1.)

5.8 In conclusion, the expert was of the opinion that high quality work was evident in the construction of the house and this indicated a ‘high level of care and responsibility’

that was significant and relevant. However, there was some evidence of decay, and due to some concerns regarding the cladding, the expert considered further investigation of some details is required.

## **6. Compliance with the Building Code**

### **6.1 General**

6.1.1 Based on the conclusions of the expert as described in paragraph 5.7, I accept that certain building elements of the house do not comply with the requirements of the Building Code. The defects associated with these elements are:

- the problems relating to the junctions of the small roof over the front door with the house walls and at the termination of the roof membrane
- the unsealed end to the apron flashing between the workshop and the library
- the buried apron flashing above the laundry and the lack of a properly formed end deflector
- the leak associated with the chimney flue roof penetration
- the unsealed outlet to the deck
- the inadequate fixings to the balustrade posts.

6.1.2 The authority also raised the issues of a lack of a range hood extractor vent, one downpipe clip and cracked stones and the applicant has accepted that these omissions should be rectified or are easily fixed.

### **6.2 Weathertightness of the external envelope**

6.2.1 Though there are defects in the cladding at present that are allowing moisture ingress and others that are not durable, these are isolated in nature and I do not consider these show a systemic failure of the cladding system. I also note that the cladding has been in position for some 18 years and the quality of the workmanship is high.

6.2.2 In accordance with the observations set out above, I accept that the house was not code compliant at the time of the authority's last inspection, and confirm the authority's decision to refuse to issue a code compliance certificate.

6.2.3 While I am of the view that defects to the cladding system can be remedied and made code compliant, as noted by the expert the ongoing performance of the system is reliant on effective maintenance. Effective maintenance is important to ensure ongoing compliance with the Building Code and is the responsibility of the building owner. The Department has described these maintenance requirements in previous determinations, (for example, Determination 2007/60).

### **6.3 The compliance of the windows in respect of Clause F4**

6.3.1 I do not accept the expert's view that Building Code Clause F4 'Safety from falling' did not require safety catches to windows at the time the consent was issued in October 1993. At this time Clause F4.3.1 said that a barrier shall be provided where 'people could fall 1 metre or more from an opening in the external envelope or floor of a building, or from a sudden change of level within or associated with a building ...'. An openable window is an 'opening in the external envelope'.

- 6.3.2 The applicant has submitted that the windows are compliant under paragraph 1.2 of F4/AS1 that was current at the time the consent was issued (refer paragraph 4.6).
- 6.3.3 Paragraph 1.2 of F4/AS1<sup>7</sup> describes barrier construction, with paragraph 1.2.1 describing dimensions for barriers in buildings ‘likely to be used by children under the age of 6 years’. Paragraph 1.2.2 describes dimensions for barrier construction in low risk areas and ‘buildings not frequented by children’. Paragraph 1.2.3 states ‘these dimensional limitations apply also to any openable window or panel in a barrier’, which I take to be the dimensions described in both paragraphs 1.2.1 and 1.2.2.
- 6.3.4 The house is a building that children under the age of 6 are likely to frequent, and the house cannot be considered a ‘low risk area’ as described in paragraph 1.2.2.
- 6.3.5 The applicant has stated that no windows in the house have a sill height below 760mm. While this would appear to satisfy F4/AS1, I note that openable window to the bath on Level 1 will not satisfy paragraph 1.2.1(b) as the bath surround itself provides a toehold to the adjacent openable window. I also note that the glazing to the windows adjacent the bath must comply with Clause F2 Hazardous building materials and I leave this to the parties to resolve.

## 7. Building Code Clause B2 Durability: Waivers and Modifications

- 7.1 In the notice to fix the authority has stated that the applicant may apply for ‘a waiver and modification under section 67 of the Building Act 2004, to [waive] the requirements of clause B2 (Durability) ...’.
- 7.2 Waivers and modifications<sup>8</sup> allow authorities to exercise judgement when dealing with unusual building compliance situations. Waivers and modifications relate to specific performance requirements of the Building Code that an authority has considered and agreed do not need to be met for a specific building project.
- 7.3 I consider that in this instance there are no grounds on which a waiver of Clause B2 would be appropriate as there are no apparent reasons that the building work should not comply with those provisions of the Building Code, and that the reference to waiving the requirements of Clause B2 has been made in error. The form ‘Notification of Waiver or Modification of the Building Code’<sup>9</sup> required under section 68 of the Act includes a clarification of the terms “Waiver” and “Modification” (refer Appendix A).
- 7.4 However, I accept that the age of the building work raises concerns regarding the durability, and hence the compliance with the Building Code, of certain elements of the house, taking into consideration the age of the building work.
- 7.5 I continue to hold the views expressed in previous relevant determinations; that an authority, following the appropriate application from the owner, has the power to grant a modification to the Building Code requirements of an existing building consent without a determination (refer also to the article titled ‘Modification of

<sup>7</sup> Current at the time the consent was issued, refer Appendix A.2

<sup>8</sup> Under section 67 of the Act

<sup>9</sup> <http://www.dbh.govt.nz/UserFiles/File/Publications/Building/Building-Act/notification-of-waiver-or-modification.pdf>



durability periods' in Codewords Issue 39, August 2009<sup>10</sup>). As such I leave this matter to the parties to resolve in due course.

- 7.6 I strongly suggest that the authority record this determination and any modifications resulting from it, on the property file and also on any LIM issued concerning this property.

## **8. What happens next?**

- 8.1 The notice to fix should be modified and reissued; taking into account the findings of this determination, identifying the items requiring remedial work as listed in paragraphs 6.1.1, 6.1.2, and 6.3.5, and referring to any further defects that might be discovered in the course of investigation and rectification but not specifying how those defects are to be fixed. It is not for the notice to fix to stipulate directly how the defects are to be remedied and the house brought to compliance with the Building Code. That is a matter for the owner to propose and for the authority to accept or reject. It is important to note that the Building Code allows for more than one means of achieving code compliance.
- 8.2 The applicant should then produce a response to this in the form of a detailed proposal, produced in conjunction with a competent and suitably qualified person, as to the rectification or otherwise of the specified matters. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.
- 8.3 I also note that the expert has described some minor differences between the house as constructed and the consented plans. I recommend that the parties take the necessary steps to amend the original consent to record the as built construction.

## **9. The Decision**

- 9.1 In accordance with section 188 of the Building Act 2004, I determine that the house does not comply with Clause E2, Clause B2, and F4 Safety from falling of the Building Code that was current at the time the building consent was issued; and accordingly I confirm decision of the authority to refuse to issue a code compliance certificate.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 19 June 2012.

John Gardiner  
**Manager Determinations**

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<sup>10</sup> Codewords articles are published by the Department and are available on the Department's website at [www.dbh.govt.nz/codewords-index](http://www.dbh.govt.nz/codewords-index)

## Appendix A: Guidance material, the relevant Acceptable Solution

- A.1 From the form 'Notification of Waiver or Modification of the Building Code', published by the Department, dated 17 August 2011.

### What is a Waiver?

A TA can waive the requirement for a particular application for a building consent, or part of an application, to comply with an aspect of the Building Code. In most cases waivers will relate to a particular performance requirement of a specific clause of the Building Code (eg C3.3.2 (d)). However, sometimes it may be appropriate to waive an entire Building Code clause.

### What is a Modification?

In relation to an application for a building consent a TA can modify a performance requirement of the Building Code. This is usually done by modifying a performance requirement of the Building Code so that the functional requirement and objectives of the clause are still met. A common example is the modification of B2.3.1, which relates to the durability of a particular element and when the durability period applies from.

- A.2 Acceptable Solution F4/AS1 1st Edition: effective 1 September 1993 to 18 August 1994.

### ACCEPTABLE SOLUTION F4/AS1

#### 1.0 BARRIERS IN BUILDINGS

##### 1.1 Barrier heights

1.1.1 Minimum barrier heights shall be 1000 mm on floors and landings, and 900 mm on stairs or ramps, measured from the *pitch line* or *nosings*.

*Comment:*

*A handrail can be constructed as an integral part of a barrier. Refer NZBC D1 "Access Routes".*

##### 1.2 Barrier construction

###### 1.2.1 Buildings used by young children

In any *building* likely to be used by children under the age of 6 years, barriers shall have:

- No openings through which a 100 mm diameter sphere can pass,
- No components between the heights of 150 mm and 760 mm above floor (or stair nosing) level which can provide a toehold, and
- The triangular opening formed by the riser, tread and bottom rail at the open side of a stairway shall be of such a size that a 150 mm diameter sphere cannot pass through it.

*Comment:*

*Where barriers are provided for protection at a change of level in any building classified as Housing they will need to be constructed to restrict young children. Commercial buildings containing shops or health care facilities are also likely to need barriers that will restrict young children as are some Communal Residential and Communal Non-residential buildings such as motels and museums.*

###### 1.2.2 Low risk areas

In areas used exclusively for emergency or maintenance purposes in *buildings*, and in other *buildings* not frequented by children, barriers may have openings with maximum dimensions of either:

- 300 mm horizontally (between vertical balusters), or
- 460 mm vertically (between longitudinal rails).

1.2.3 These dimensional limitations apply also to any openable window or panel in a barrier.

###### 1.2.4 Balconies with fixed seating

Where a balcony or mezzanine floor accommodates fixed seating, a front barrier as shown in Figure 1 may be used as an alternative to Paragraph 1.2.1 and shall have:

- A minimum height of 700 mm above floor level,
- A horizontal projection extending at least 700 mm forward of the barrier at the top rail level, and
- No opening through which a 100 mm diameter sphere can pass.

*Comment:*

*This solution is expected to be used mainly in places such as assembly halls, theatres and cinemas.*

