

## Determination 2006/107

### Refusal of a code compliance certificate for a building with a fibre-cement weatherboard cladding system at 2/53 Emano Street, Nelson



#### 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, Determinations Manager, Department of Building and Housing, for and on behalf of the Chief Executive of that Department (“the Department”). The applicant is the owner Ms Barrett (“the applicant”) and the other party is the Nelson City Council (“the territorial authority”).
- 1.2 The matter for determination is whether it is correct for the territorial authority to decline to issue a code compliance certificate for a 12-year-old house.

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<sup>1</sup> The Building Act 2004 is available from the Department’s website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

- 1.3 The questions to be determined are:

**Issue 1: The cladding**

Whether I am satisfied on reasonable grounds that the weatherboard cladding as installed to the walls of the building (“the cladding”), complies with the Building Code (see sections 177 and 188 of the Act). By “the weatherboard cladding as installed” I mean the components of the system (such as the weatherboards, the flashings, the joints and the coatings) as well as the way the components have been installed and work together.

**Issue 2: The additional durability considerations**

Whether all the building elements installed in the house, apart from those items identified in paragraph 6.3.1 as requiring to be fixed, comply with clause B2 of the Building Code considering the time that has elapsed since the elements were constructed.

- 1.4 In making my decision, I have considered the submissions of the parties, the report of the independent expert commissioned by the Department to advise on this dispute (“the expert”), the legal opinion that I have obtained, and the other evidence in this matter. I have evaluated this information as it relates to Issue 1 using a framework that I describe more fully in paragraph 6.1. I have not considered any other aspects of the Act or the Building Code.
- 1.5 In this determination, unless otherwise stated, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

**2. The building**

- 2.1 The building work consists of a detached house situated on a sloping site, which is in a low wind zone for the purposes of NZS 3604<sup>2</sup>. The house is one and a half storeys high, with a garage in the basement level. Construction is conventional light timber frame, with a concrete slab and concrete block foundations and retaining walls to the basement, and a timber-framed sub-floor to the single-storey portion. The concrete block part-height walls are continuous around all sides of the basement. The house shape is very simple in plan and form with aluminium windows, fibre cement weatherboards, and a 14° pitch profiled metal gable roof with eaves and verge projections of about 500mm.
- 2.2 A timber-framed deck with a timber slat floor extends to the northeast from the living room. The deck has been roofed over with a clear profiled plastic canopy that is supported on timber posts and framing. A small ramp is sited below a window on the southwest elevation.
- 2.3 The specification calls for the wall framing to be “Douglas Fir equivalent to No 1 framing or No 1 framing Radiata Pine H3”. I have received no other written evidence as to the treatment, if any, of the external wall framing timber. However, given the

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<sup>2</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

date of construction in 1994, I accept that the external wall framing is likely to be boracic treated.

- 2.4 The walls of the house are clad with “Hardiplank” fibre-cement weatherboards fixed through the building wrap to the framing, with an acrylic paint finish applied over the boards and the sealant joints in the boards.
- 2.5 I have received no copies of producer statements or warranties for the cladding.

### **3. Sequence of events**

- 3.1 The territorial authority issued a building consent (which I have not seen) on 19 January 1994, and undertook various inspections during construction including a pre-line inspection on 9 March 1994.
- 3.2 The territorial authority carried out a plumbing and drainage inspection on 28 March 1994, and the inspection record notes “Final insp req’d”. It appears that no further inspection was carried out.
- 3.3 Following a request for a code compliance certificate, the territorial authority wrote to the applicant on 27 March 2006 explaining that the age of the house presented a problem with regard to the durability provisions of the building code and noting:
- As it is now approximately twelve years since construction commenced, it would not be appropriate for this period to be added to the durability time frames identified in the New Zealand Building Code. Nelson City Council therefore cannot be satisfied on reasonable grounds that the work now meets all the requirements of the building code, especially B2 durability and E2 external moisture.
- 3.4 The territorial authority did not issue a notice to fix as required under section 164(2) of the Building Act 2004.
- 3.5 An application for a determination was received by the Department on 11 April 2006.

### **4. The submissions**

- 4.1 Within the application, the applicant noted that a determination was needed as:
- Due to there being no record of final inspection I have been advised by NCC to take this step.
- 4.2 The applicant forwarded copies of:
- the plans and specifications
  - the letter dated 27 March 2006 from the territorial authority

- various other statements.
- 4.3 A copy of the applicant's submission was provided to the territorial authority, which made no submission in response.
- 4.4 The draft determination was sent to the parties on 11 October 2006. The draft determination was issued for comment and for the parties to agree a date when all the building elements installed in the house, apart from items that have to be rectified as described in paragraph 6.3.1 complied with the Building Code Clause B2 Durability. Both parties accepted the draft citing May 1994 as the time when compliance with B2 was achieved.

## Issue 1: The cladding

### 5. The expert's report

- 5.1 The expert inspected the claddings of the building on 25 and 29 May 2006, and furnished a report that was completed on 29 May 2006. The expert noted that the building generally appeared "to be sound and true and workmanship is generally of a good standard". However, the expert also noted that a lack of maintenance was apparent, and some areas indicated that insufficient consideration had been given to flashings and preventing water entry.
- 5.2 The expert noted that the windows appeared to be generally in accordance with the manufacturer's instructions at the time of installation. The windows were face-fixed with head flashings, no sill flashings and compressible foam seals under the flanges.
- 5.3 The expert took non-invasive moisture readings through linings of exterior walls throughout the house, and no elevated readings were noted. Invasive moisture readings were taken through the wall cladding, at window sills, bottom plates and other risky areas, and 2 elevated readings were recorded as follows:
- 32% at the bottom of the garage door jamb reveal.
  - 20% in the framing adjacent to the deck to wall junction.

Moisture levels above 18% recorded after cladding is in place generally indicate that external moisture is entering the structure.

- 5.4 Commenting specifically on the cladding the expert noted that :
- the projections of the window head flashings past the jamb flanges have not been sealed to the hardiplanks, and gaps are apparent
  - the compressible foam jamb seals are unpainted and have not been cut to match the weatherboard profile (contrary to the manufacturer's instruction), leaving gaps against the boards and further gaps at the tops of the jambs

- the weatherboards have soakers installed behind the joints, but some of these are out of alignment and there is a soaker missing above the garage door
- the sealant used at the weatherboard joints is in poor condition
- some of the weatherboard nails have been punched through the fibre cement, or are lifting
- the paint to the weatherboards is in poor condition and appears to be original.
- the garage door jambs are unsealed and unflashed, with the framing visible and the bottom of the timber reveal butting against the concrete paving
- the deck joists are poorly weatherproofed where they penetrate the wall cladding (with failing sealants), and the deck slats butt against the wall cladding with no flashing at the junction
- the meter box is poorly sealed and lacks a top flashing
- the roof sealants are in poor condition at the overlap in the ridge flashing and at the vent pipe penetration
- a downpipe is blocked
- the pipe and service penetrations through the cladding are poorly sealed.

5.5 At the garage walls, the expert noted that, although the base of the cladding lacks a 6mm capillary gap, the weatherboards overlap the basement concrete block by a generous amount, which has been effective in preventing moisture penetration into the wall framing (the moisture content was recorded at only 10%).

5.6 The expert also noted that the canopy above the entry deck had not been approved by the territorial authority and the following aspects of the deck appeared to be inadequate:

- The nail fixings to the wall.
- The structure of the timber framing and supports.
- The height of the balustrade.

5.7 On 7 June 2006 copies of the expert's report were provided to each of the parties.

5.8 The applicant responded to the expert's report in a letter to the Department dated 7 June 2006, noting that:

- the balcony balustrade was shown on the consent drawings and erected when the house was built

- the deck canopy was erected two years after the house was built, and consent for the work was not sought as it was not realised that this was needed.

## 6. Evaluation for code compliance

### 6.1 Evaluation framework

6.1.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solution<sup>3</sup>, in this case E2/AS1, which will assist in determining whether the features of this house are code compliant.

However, in making this comparison, the following general observations are valid:

- Some Acceptable Solutions cover the worst case, so that they may be modified in less extreme cases and the resulting alternative solution will still comply with the Building Code.
- Usually, when there is non-compliance with one provision of an Acceptable Solution, it will be necessary to add some other provision to compensate for that in order to comply with the Building Code.

6.1.2 The approach in determining whether building work is weathertight and durable and is likely to remain so, is to apply the principles of weathertightness. This involves the examination of the design of the building, the surrounding environment, the design features that are intended to prevent the penetration of water, the cladding system, its installation, and the moisture tolerance of the external framing. The Department and its antecedent, the Building Industry Authority, have also described weathertightness risk factors in previous determinations<sup>4</sup> (refer to Determination 2004/1 *et al*) relating to cladding and these factors are also used in the evaluation process.

6.1.3 The consequences of a building demonstrating a high weathertightness risk is that building solutions that comply with the Building Code will need to be more robust. Conversely, where there is a low weathertightness risk, the solutions may be less robust. In any event, there is a need for both the design of the cladding system and its installation to be carefully carried out.

### 6.2 Weathertightness risk

6.2.1 In relation to these characteristics I find that this house:

- is built in a low wind zone
- is a maximum of two storeys high
- is very simple in plan and form

<sup>3</sup> An Acceptable Solution is a prescriptive design solution approved by the Department that provides one way, but not the only way, of complying with the Building Code. The Acceptable Solutions are available from the Department's website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

<sup>4</sup> Copies of all determinations issued by the Department can be obtained from the Department's website.

- has eaves and verge projections of about 500mm above all walls
- has fibre cement weatherboards which are fixed directly to the framing
- has external wall framing that is treated, so providing resistance to the onset of decay if the framing absorbs and retains moisture.

6.2.2 When evaluated using the E2/AS1 risk matrix, the elevations of this house demonstrate a low weathertightness risk. The matrix is an assessment tool that is intended to be used at the time of application for consent, before the building work has begun and, consequently, before any assessment of the quality of the building work can be made. Poorly executed building work introduces a risk that cannot be taken into account in the consent stage but must be taken into account when the building as actually built is assessed for the purposes of issuing a code compliance certificate.

6.2.3 I note that E2/AS1 does not require the provision of a drained cavity for the fibre cement weatherboard wall cladding installed to the walls of this house.

### **6.3 Weathertightness performance**

6.3.1 Generally the cladding appears to have been installed in accordance with reasonable trade practice, however, some junctions, penetrations and edges are not well constructed as described in paragraph 5.4. I accept the expert's opinion that work is necessary to fix the following:

- unsealed window head flashing projections
- unpainted and poorly sealed compressible foam at the window jambs
- poorly sealed weatherboard joints and missing or misaligned soakers
- poor condition of the nail fixings and the paint coating to the weatherboards
- inadequate weatherproofing of the garage door jambs, and the lack of clearance of the bottom of the timber reveal to the concrete paving
- inadequate weatherproofing of the deck to wall junction, including the joist penetrations
- inadequate weatherproofing of the meter-box and other service penetrations through the cladding
- poor condition of the roof sealants at the ridge flashing and vent pipe
- blocked downpipe.

6.3.2 I note the expert's comment in paragraph 5.5 on the junction of the weatherboards and the concrete block wall, and accept that the large overlap provides adequate protection of the wall framing.

- 6.3.3 I note the expert's comments in paragraph 5.6 with regard to the unauthorised canopy over the deck, and draw these to the attention of the territorial authority.
- 6.3.4 I also note that the expert has commented on the lack of a smoke detector in the living room. Although smoke alarms were not a requirement at the time of construction, I recommend that they be installed in accordance with the current requirements of the building code.

## 7 Conclusion

- 7.1 I am satisfied that the current performance of the cladding is not adequate because it is allowing water penetration into the building at present. Consequently, I am satisfied that the building does not comply with clause E2 of the Building Code.
- 7.2 In addition, the building is also required to comply with the durability requirements of clause B2. Clause B2 requires that a building continues to satisfy all the objectives of the Building Code throughout its effective life, and that includes the requirement for the house to remain weathertight. Because the cladding faults on the building are likely to allow the ingress of moisture in the future, the house does not comply with the durability requirements of clause B2.
- 7.3 I consider that, because the faults that have been identified with the cladding system occur in discrete areas, I am able to conclude that satisfactory rectification of the building elements set out in paragraph 6.3.1, and of any other elements that are consequentially discovered to be in need of fixing, will result in the building becoming and remaining weathertight and in compliance with clause E2. I have given further consideration to the question of B2 compliance under issue 2 in this determination.
- 7.4 I note that this house has not been well maintained. Effective maintenance of claddings is important to ensure ongoing compliance with clauses B2 and E2 of the Building Code and is the responsibility of the building owner. Clause B2.3.1 of the Building Code requires that the cladding be subject to "normal maintenance", however that term is not defined in the Act.
- 7.5 I take the view that normal maintenance is that work generally recognised as necessary to achieve the expected durability for a given building element. With respect to the cladding, the extent and nature of the maintenance will depend on the material, or system, its geographical location and level of exposure. Following regular inspection, normal maintenance tasks should include but not be limited to:
- where applicable, following manufacturers' maintenance recommendations
  - washing down surfaces, particularly those subject to wind-driven salt spray
  - re-coating protective finishes
  - replacing sealant, seals and gaskets in joints.



## 8 The decision

- 8.1 In accordance with section 188 of the Act, I hereby determine that the cladding system as installed does not comply with clause E2 of the Building Code. There are a number of items to be remedied to ensure that the house becomes and remains weathertight and thus meets the durability requirements of the code. Consequently, I find that the house does not comply with clause B2. Accordingly, I confirm the territorial authority's decision to refuse to issue a code compliance certificate.
- 8.2 I also find that fixing the items outlined in paragraph 6.3.1 will consequently result in the house being weathertight and in compliance with clause E2. Work to correct these items may expose additional associated defects that are not yet apparent. All rectification work is to be completed to the approval of the territorial authority.
- 8.3 I note that the territorial authority has not issued a notice to fix. A notice to fix should be issued requiring the owners to bring the house into compliance with the Building Code. The notice to fix may list the items to be rectified but it should not specify how compliance is to be achieved as that is for the owner to propose and for the territorial authority to accept or reject. It is important to note that the Building Code allows for more than one method of achieving compliance.
- 8.4 I would suggest that the parties adopt the following process to meet the requirements of paragraph 8.3. Initially, the territorial authority should issue a notice to fix, listing all the items that the territorial authority considers to be non-compliant. The owner should then produce a response to this in the form of a detailed proposal, produced in conjunction with a competent and suitably qualified person, on how they propose to fix the specified issues. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

## Issue 2: The additional durability considerations

### 9. Discussion

- 9.1 As set out in paragraph 3.3, the territorial authority has concerns about the durability, and hence the compliance with the building code, of all the building elements installed in the house taking into consideration the completion date of the building in 1994.
- 9.2 Before addressing these issues I sought some clarification of general legal advice about waivers and modifications. I have now received that clarification, which has enabled me to make this determination.
- 9.3 The building was substantially completed in 1994 and was subject to a plumbing and drainage inspection on 28 March 1994 by the territorial authority. No further inspections were carried out by the territorial authority.
- 9.4 The relevant provision of clause B2 of the Building Code recognises that building elements must, with only normal maintenance, continue to satisfy the performance

requirements of the Building Code for certain periods (“durability periods”) “from the time of issue of the applicable code compliance certificate” (clause B2.3.1).

9.5 These durability periods are:

- 5 years if the building elements are easy to access and replace, and failure of those elements would be easily detected during the normal use of the building
- 15 years if building elements are moderately difficult to access or replace, or failure of those elements would go undetected during normal use of the building, but would be easily detected during normal maintenance
- the life of the building, being not less than 50 years, if the building elements provide structural stability to the building, or are difficult to access or replace, or failure of those elements would go undetected during both normal use and maintenance.

9.6 It is not disputed, and I am therefore satisfied that all the building elements installed in the house, apart from items that have to be rectified as described in paragraph 6.3.1, complied with clause B2 in May 1994. This date has now been confirmed by both the applicant and the territorial authority since the publication of the draft determination.

9.7 Section 433 provides that a building consent granted under the Building Act 1991 must be treated as if it were a building consent granted under section 49 except that section 93 (which stipulates the time in which a building consent authority must decide to issue a code compliance certificate) does not apply.

9.8 Section 67 of the Act provides that a territorial authority “may grant an application for a building consent subject to a waiver or modification of the building code” subject to “any conditions that the territorial authority considers appropriate”. I take the view that a territorial authority may grant such a waiver or modification only when it is reasonable to do so in the circumstances. (Section 69 effectively excludes the provision of waivers or modifications to the Building Code for access and facilities for use by people with disabilities)

9.9 Section 45(5) provides that an application for an amendment to a building consent granted under section 49 must be made as if it were an application for a building consent and section 45 “applies with any necessary modifications”.

9.10 I take the view that those sections are to be read as enabling a territorial authority to amend a building consent (whether granted under the Act or the former Act) by incorporating a waiver or modification of the Building Code.

9.11 Once the outstanding matters arising from Issue 1 are addressed to the territorial authority’s satisfaction, the territorial authority may then issue a code compliance certificate against the amended consent.

## 10 Procedure

- 10.1 Should the territorial authority have concerns about procedure, I take the view that:
- (a) Sections 92(1) and 94(1)(a) establish that a code compliance certificate must relate to all of the building work covered by the building consent to which that certificate relates. I take that to mean the building consent as amended (if at all) prior to the granting of the code compliance certificate. (See paragraph 10.5 below for a discussion of section 436).
  - (b) Section 92(1) also establishes that it is no longer possible to issue an interim code compliance certificate (as it was under section 43(4) of the former Act).
  - (c) An amendment to building consent under section 45(5) does not create a new building consent in the sense that it is possible to issue separate code compliance certificates for the original building consent and for the amendment. After all, if an amendment deletes particular work as specified in the original consent and substitutes different work as specified in the amendment, then the work covered by the original consent will never be completed and accordingly it will be impossible to grant a code compliance certificate in respect of that work as distinct from the work specified in the amended consent.
  - (d) Amendments to building consents are not confined to changing the building work covered by the building consent concerned but may also change the other matters covered by the building consent such as procedures for inspection and so on, including any waivers or modifications of the Building Code.
  - (e) Any waiver or modification the Building Code should be documented in the territorial authority's records of the property to ensure that potential purchasers and subsequent owners are aware of the waiver or modification. If the waiver or modification was made by way of a determination then that determination should be identified on the Land Information Memorandum, with a copy of the determination on the property file for the building.
- 10.2 In coming to this view, I have had to consider section 436 of the Act, which sets out the transitional provision for issuing code compliance certificates for building work consented under the former Act.
- 10.3 Under section 43(3) of the former Act, a territorial authority was required to issue a code compliance certificate if it was satisfied that the building work complied with the Building Code subject to any previously approved waiver or modification.
- 10.4 The relevant parts of section 436 state:
- (2) An application for a code compliance certificate in respect of building work to which this section applies must be considered and determined as if this Act had not been passed.

- (3) For the purposes of subsection (2), section 43 of the former Act—
- (a) remains in force as if this Act had not been passed; but
  - (b) must be read as if—
    - (i) a code compliance certificate may be issued only if the territorial authority is satisfied that the building work concerned complies with the building code that applied at the time the building consent was granted; and
    - (ii) section 43(4) were omitted.

10.5 In Determination 2006/87, issued on 11 September 2006, I said

“4.2.12 There are two possible interpretations of section 436:

- a code compliance certificate may be issued only if the territorial authority considers the building work complies with the Building Code in force at the time the building consent was granted; or
- a code compliance certificate may be issued if the territorial authority considers the building work complies with the Building Code in force at the time the building consent was granted, but allowing for any waivers and modifications to the Building Code incorporated in the building consent.

“4.2.13 The first interpretation is premised on section 436(3)(b)(i) replacing section 43(3) of the 1991 Act. It relies on the use of the word “only” in section 436(3)(b)(i) as excluding the possibility of the territorial authority considering anything other than compliance against the Building Code in force at the time the building consent was granted, meaning that a territorial authority would not be able to consider any waivers or modifications to the Building Code that were incorporated in the building consent.

“4.2.14 In comparison, the second interpretation is that section 436(3)(b)(i) does not replace section 43 of the 1991 Act, but that it must be read alongside section 43(3) as much as possible. Under this interpretation, section 436(3)(b)(i) should be read as modifying section 43(3) only in respect of the new element it adds to the code compliance certificate test; it merely changes the version of the Building Code that compliance should be measured against, from the version in force at the time the application for a code compliance certificate was made, to the version in force at the time the building consent was granted.

“4.2.15 The effect of the first interpretation would be that owners who have been granted waivers or modifications to the Building Code (whether under the 1991 Act or through an amendment to a consent under the 2004 Act) would never be able to obtain a code compliance certificate. Essentially, these owners, who may have relied in good faith on waivers or modifications legitimately granted to them, would be left in perpetual limbo.

“4.2.16 This would be most undesirable. It would be the reverse of the usual situation under both the 1991 and 2004 Acts and, in my view, does not fit with the purpose and scheme of the Building Act 2004. As far as possible, an owner should obtain a code compliance certificate for all work requiring a building consent and for which a consent was granted. A grant of a waiver or modification should not stop this.

“4.2.17 Furthermore, there is nothing in the transitional provisions of the 2004 Act that supports such a result; for cases where waivers or modifications have been granted, the Act does not provide for any outcome other than to obtain a code compliance certificate. In comparison, section 437(1)(b) provides for an owner to obtain a certificate of acceptance if they are unable to obtain a code compliance certificate because the building certifier no longer exists.

“4.2.18 For the reasons set out above, I prefer the second interpretation relating to section 436(3)(b)(i)”.

10.6 I continue to hold that view, and therefore conclude that:

- (a) The territorial authority has the power to grant an appropriate modification of clause B2 in respect of all the building elements installed in the house, apart from items that have to be fixed as described in this determination if the applicant applies for such a modification.
- (b) It is reasonable to grant such a modification, with appropriate notification, because in practical terms the building is no different from what it would have been if a code compliance certificate had been issued in May 1994.

10.7 I strongly recommend that the territorial authority record this determination, and any waiver resulting therefrom, on the property file and any LIM for the property.

## 11 The decision

11.1 In accordance with section 186, I hereby determine:

- (a) that all the building elements installed in the house, apart from items that are to be fixed as described in this determination, complied with clause B2 at 1 May 1994.
- (b) that, should the applicant so request, the territorial authority must modify the territorial authority’s decision to issue the building consent to the effect that the building consent is amended as follows:

This building consent is subject to a modification of the Building Code to the effect that clause B2.3.1 applies from 1 May 1994 instead of from the time of issue of the code compliance certificate for all building elements except those elements set out in paragraph 6.3.1 of Determination 2006/107.

- (c) that, once the defects set out in paragraph 6.3.1 of this determination have been fixed to its satisfaction, the territorial authority is to issue a code compliance certificate in respect of the building consent as amended.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 10 November 2006.

John Gardiner  
**Determinations Manager**