



## Determination 2015/001

### Regarding the refusal to issue a code compliance certificate for a 16-year-old house with mixed claddings at 40 Ongare Point Road, Katikati



#### 1. The matters 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 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 owners of the house, F & N Boyle (“the applicants”)
  - Western Bay of Plenty District Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.3 This determination arises from the decision of the authority to refuse to issue code compliance certificate for the 16-year-old house because it was not satisfied that the building work complied with certain clauses<sup>2</sup> of the Building Code (First Schedule, Building Regulations 1992). The authority’s concerns regarding compliance of the building work primarily relate to the weathertightness of the house and recent remedial work carried out to the monolithic cladding (“the remedial work”).
- 1.4 The matter to be determined<sup>3</sup> is therefore whether the authority was correct to refuse to issue a code compliance certificate. In deciding this, I must consider whether the external building envelope of the house complies with Clause B2 Durability and Clause E2 External Moisture of the Building Code that was in force at the time the consent was issued. The building envelope includes the components of the systems (such as the wall claddings, the windows, the roof claddings and the flashings, and including the recent remedial work), as well as the way the components have been installed and work together. I consider this matter in paragraph 6.

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

<sup>2</sup> 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.

<sup>3</sup> Under sections 177(1)(b) and 177(2)(d) of the Act

## 1.5 Matters outside this determination

- 1.5.1 I note the applicants have indicated the solid fuel heater is to be removed. Accordingly I have not considered the compliance of the heater as installed.
- 1.5.2 I also note that the applicants may apply to the authority for a modification of the durability provisions for the 16-year-old house to allow the specified periods to commence from the date of substantial completion in 1998 and I leave this to the parties to resolve when the house has been made code-compliant. I have commented on maintenance and durability in paragraph 6.3.
- 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.

## 2. The building work

- 2.1 The building work consists of a detached house that is two-storeys in part, situated on gently sloping land in a rural site and in a high wind zone for the purposes of NZS 3604<sup>4</sup>. The foundations are generally a suspended timber floor on piles, with a concrete slab to the garage.
- 2.2 The expert takes the front entry and garage as facing northwest and this determination follows that convention. The house is moderately complex in form and is assessed as having a moderate weathertightness risk.
- 2.3 Construction is conventional light timber framing. External walls are clad in a mix of vertical cedar weatherboard, fibre-cement rusticated weatherboard, and texture-coated fibre-cement sheet, which are direct fixed to the framing, and brick veneer over a cavity to part of the garage. Sub-floor cladding is plywood and timber slats.
- 2.4 Face fixed exterior joinery is powder coated aluminium, and the pitched roof is clad in coated metal tiles. Eaves project a minimum of 650mm to the majority of the building perimeter. Concrete paving and plywood decking encompasses the north elevation, with open timber decking extending around the east and south elevations.
- 2.5 The expert observed framing timbers stamped as H1. The expert took samples from a cavity batten and framing, and the laboratory testing showed that Boron was detected in the two samples tested. Given this evidence, I am of the view the timber is treated to a level that will provide some resistance to decay if it gets wet.

## 3. Background

- 3.1 The authority issued a building consent no. 57843 to the applicants on 26 March 1997 under the Building Act 1991.
- 3.2 The authority’s record indicate at least two inspections where carried out by the authority during construction from February 1997 to November 1998, and including a pre-line inspection on 9 October 1998 which passed.
- 3.3 The last recorded inspection was a final inspection carried out on 15 December 2005. The inspection records note ‘monolithic cladding upper storey (no cavity) – refer to [senior building officer]’ and listed a number of other items requiring attention and noted the proprietary cladding was ‘in good order’. The authority wrote to the applicants on 16 December 2005, listing the items requiring attention as follows:

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<sup>4</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

1. Glass in hallway to change to safety glass
2. Vertical risers on balustrades to reduce to no more than 100m apart
3. Upstairs basin trap to alter to a vented trap
4. Heater in main bedroom area to secure to hearth
5. Spreader required on top roof downpipe
6. Brick veneer to vent as discussed
7. Terminal vent to clip
8. Producer statement required for texture coatings.

3.4 On the same date, 16 December 2005, the applicants received a code compliance certificate in relation to building consent No. 57433 for a separate building on the site described as a haybarn/implement shed.

### **3.5 The refusal to issue a code compliance certificate**

3.5.1 In preparation for selling the property, the applicants became aware that the house did not have a code compliance certificate. It appears that the applicants approached the authority in regards to obtaining a code compliance certificate. From later correspondence it appears that the authority then visited the property on 26 June 2014.

3.5.2 The authority wrote to the applicants on 14 August 2014 to advise that 'there are some elements [the authority] is at this time unable to be satisfied meet the requirements of the [Building] Code'. The authority stated that:

These relate to the weathertightness of the [proprietary fibre-cement] cladding and the enclosed deck adjacent to the upstairs bedroom. ...

Also the installation of the solid fuel heater in the upstairs bedroom and the deck were not included in the approved plans so you will need to make [an] application to amend the building consent. ...

3.5.3 In regards to the site visit in June 2014, the authority noted that 'peaking' of the fibre-cement cladding at joints was observed, and that the authority's officer had advised the applicants not to undertake repair work until the cause had been ascertained and the condition of the framing timber checked. The authority stated

It does not appear that the work you have undertaken is in accordance with the [fibre-cement manufacturer's] manual or was inspected by [the authority].

3.5.4 The authority also advised that without a report from a suitably qualified and experienced person to assess the compliance of the building work, the authority's decision was to refuse to issue the code compliance certificate.

### **3.6 The remedial work**

3.6.1 Remedial work was carried out to repair vertical cracks to fibre-cement sheet joints to two gable end wall some time around October 2014. The repair work comprised installing 30x3mm aluminium strips over the vertical sheet joints. The strips were screw-fixed through the cladding into the framing behind, bedded in sealant and painted.

3.6.2 The applicants approached the manufacturer of the fibre-cement regarding the method used for installing expansion joints; in response the manufacturer noted that the method was 'not tested or used' but that the cladding is now over 15 years old and the authority should make an independent decision on whether the cladding has met the durability requirements of the Building Code.

## **4. The submissions**

### **4.1 The initial submissions**

- 4.1.1 The applicants' provided a submission outlining some of the background to the events, noting that when the code compliance certificate was issued for the haybarn/implement shed in 2005 the applicants had mistakenly thought the house had received a code compliance certificate.
- 4.1.2 The applicants submitted that after carrying out the remedial work to the fibre-cement cladding, the authority had advised that it did not approve of the method used. The applicants also noted their intention to remove the solid fuel heater currently located in the upper bedroom.
- 4.1.3 The applicants forwarded copies of the following documents:
- An email from the cladding manufacturer regarding the method used in the remedial work.
  - Drawings setting out the remedial work carried out to install vertical joints in the fibre-cement cladding.
  - Various items of correspondence from the authority.
  - A warranty from a paint supplier, dated 4 September 2014.
  - Photographs of remedial work carried out (undated).
  - Building consent documentation and inspection records.
- 4.1.4 The authority made no submission in response to the application for determination.
- 4.1.5 After receiving the expert's report the authority noted in an email, dated 9 December 2014, that the determination should continue to its conclusion, and that it 'had not been asked to review and approve any remedial work, and have not inspected and certified any remedial work that potentially may be another subject to future determination'. In a further email dated 10 December 2014 the authority said that no agreement had been made as to how the remedial works would be carried out.

### **4.2 The draft determination and the submissions received**

- 4.2.1 A draft determination was issued to the parties for comment on 15 December 2014.
- 4.2.2 The applicants accepted the draft in a response received on 21 January 2015. The applicants advised that further remedial work had been carried out, including the removal of the fire, and that the work had been assessed by the expert<sup>5</sup> and by the authority. The applicants noted that 'detailed drawings' had been provided to the authority before this work was undertaken, and advice was received from a 'certified contractor'.
- 4.2.3 The applicants provided the following:
- An email from the authority to the applicants (undated but after the parties received the expert's report), noting that the applicants should not undertake any remedial work until the final determination is issued and any resulting proposals for remedial work are approved.

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<sup>5</sup> The inspection by the expert was carried at the request of the owner without the Ministry's knowledge

- Correspondence between the expert and the applicants, with the expert noting in his letter of 7 January 2015 that he had carried out a further site visit on 31 December 2014 and observed that:
  - Leaking was still occurring at the master bedroom window despite a new apron flashing installed, and that further testing was required.
  - Unsealed fibre-cement visible at the end of the apron flashing junction at the west gable south gutter, and unsealed plywood installed over the fibre-cement sheet at the end of the gutter, needed to be sealed.
  - Horizontal weatherboards have been satisfactorily sealed.
  - The enclosed deck drain has had a downpipe installed, draining into soakage clear of the house.
  - Additional balusters have been installed and the stair landing is now compliant.
- Photographs of remedial works carried out in December 2014.
- Drawing of the section through decking showing extended drain to the deck.
- Description of the qualifications and experience of one of the applicants as a builder.
- A letter dated 4 September 2014 supporting a Producer Statement PS3 for the application of the coating system to the gable ends and top storey.

4.2.4 In a submission received on 30 December 2014, the authority accepted the draft but sought guidance on the following matters:

- ‘...how the remedial works can be signed off and by whom?’ as there was no indication in the determination on ‘how the remedial works would be designed/considered, approved and inspected’.
- ‘...how remedial works [in] paragraph 5.5.3 are to be resolved?’
- ‘...some remedial works have already been carried out without approval nor any inspection [by the authority]. ...given the type of remedial works, should any inspection be required other than the final visual inspection?’

### **4.3 My response to the party’s submissions**

- 4.3.1 Paragraph 7.1 of the draft determination said the applicants should seek approval from the authority for remedial works identified in the draft determination. I note that both the Ministry’s covering letter accompanying the draft determination, and the authority’s email (refer paragraph 4.2.3, 1<sup>st</sup> bullet) explicitly advised the applicants not to carry out remedial work without prior approval or oversight by the authority.
- 4.3.2 Despite this it appears the applicants undertook remedial work without obtaining the authority’s approval. The expert was asked by the applicants to assess the work. The authority carried out at least one site visit when the remedial work was being performed.
- 4.3.3 The authority has requested guidance about the completion of the remedial work and how compliance is established. In order to assist the parties I have provided comment in paragraphs 4.3.4 to 4.3.6 below. I note that this determination does not consider the compliance of the building work carried out after the application for determination was made.

- 4.3.4 Site inspections are necessary to verify the compliance of completed building work. An owner, and/or the person undertaking the work, is responsible for obtaining any necessary approvals and consents, which in respect of the remedial work may constitute a major or minor amendment to the consent (refer section 14B of the Act (see Appendix A).
- 4.3.5 To overcome the lack of inspections or oversight by the authority it is for the applicants to provide appropriate evidence as to the compliance of the completed work so that the authority can be satisfied on reasonable grounds that compliance has been achieved; the authority may carry out such inspections as it considers necessary. In situations where the authority did not carry out particular inspections itself, it is entitled to rely on inspections by others (in this case the Ministry's expert), or verification by another means.
- 4.3.6 The Building Code is a performance-based document; assessment for a code compliance certificate where an inspection has been missed should take into account the actual performance of the building work (for example by way of "hose-testing" described by the expert in correspondence with the applicants) along with information provided by the applicants.

## **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 member of the New Zealand Institute of Building Surveyors. The expert inspected the house on 11 and 12 November 2014, providing a report dated 1 December 2014 which was provided to the parties.
- 5.2 The expert noted that his inspection was to assess the building work related to the remedial work carried out to the fibre-cement cladding to the gable ends, and the enclosed deck.

### **5.3 General**

- 5.3.1 The expert noted that the exterior cladding and internal linings are reasonably straight and fair, with cladding penetrations and aluminium joiner to cladding junction generally well sealed. The expert considered the building had generally been finished 'to an acceptable trade standard'.
- 5.3.2 The expert observed that the cladding has been in place for 17 years and has largely satisfied the durability performance requirements, with the apparent exception of a leak below the master bedroom window.
- 5.3.3 The expert also observed changes in the as-built work from the consent documents:
- A free standing solid fuel heater installed in the upstairs bedroom rather than an enclosed heater in the ground floor lounge. The applicants have indicated the heater is to be removed.
  - Modifications of the layout to: stairwell and associated access from the garage has been modified, the upstairs bathroom, and the floor plan extended to include a study.

### **5.4 Moisture investigations**

- 5.4.1 The expert inspected the exterior cladding and some areas of external framing, taking two timber samples for analysis from roof and wall framing at the northeast corner of

the upstairs bedroom (see also paragraph 5.5.2). The expert noted that extensive non-invasive moisture content readings and 16 invasive readings were all within acceptable limits, with drill shavings in good condition.

5.4.2 The expert forwarded the two timber samples to a testing laboratory for analysis and the laboratory report dated 23 November 2014 included the following (in summary):

- Both samples indicate presence of Boron; most likely treated according to Hazard Class 1 of MP3640:1992<sup>6</sup>.
- No established decay or incipient brown rot in either sample.
- Presence of fungal growths suggestive of growth over a prolonged period and including recent activity.

5.4.3 The expert noted that the staining present suggests that leaking has occurred slowly over a long period, but the presence of ants nearby implies that leaking may also have occurred fairly recently, such as over winter. The framing was dry, with moisture levels of less than 8%.

## 5.5 The external envelope

5.5.1 Commenting on the remedial work, the expert noted that no weathertightness issues were found in relation to the unconventional vertical joint repairs to the gable cladding or the deck construction. Although not repaired in accordance with the cladding manufacturer's instructions, the joints are well sealed. Isolated staining was apparent on gable wall framing which the expert considered may date back to exposure during construction, and the leak below the east elevation gable is not related to the joint repairs.

5.5.2 The expert observed a loose apron flashing strip below the east elevation master bedroom window, noting that water may have entered through a gap where building wrap is visible, or at the jamb/cladding junction prior to recent painting, or through the sloping window sill mitre junction. Water staining was found on the carpet "smoothedge" in the corner of the bedroom, and on the rafter, jackstud, and bottom plate framing below the window. The expert considered that proper installation of the apron flashing upstand would be likely to prevent further water entry, and hose testing following repairs would confirm weathertightness.

5.5.3 The expert noted the following items that he considered may require remedial work:

- Unsealed fibre-cement visible at the end of the apron flashing junction at the west gable/south gutter, and unsealed plywood installed over the fibre-cement sheet at the end of the gutter.
- Horizontal weatherboards installed with end joints on the same vertical line and no back soakers. The joint sealant has failed with gaps visible through the sealant.
- Enclosed deck drain dropping through soffit onto open decking below.

## 5.6 Remaining items at issue

5.6.1 The expert commented on the stair balusters, noting that no intermediate balusters have been installed at the landing to reduce the 120mm wide gaps.

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<sup>6</sup> NZMP 3640:1992 Specification of the minimum requirements of the NZ Timber Preservation Council Inc.

## **6. Discussion**

### **6.1 The external envelope**

- 6.1.1 Taking account of the expert's report, the external envelope appears to have been constructed in accordance with good trade practice and applicable manufacturers' instructions at the time of construction. In addition the remedial work carried out to install vertical joints to the fibre-cement cladding, though not in accordance with the manufacturer's instructions, is well detailed and effective.
- 6.1.2 The expert's report has satisfied me that, with the exception of the east elevation master bedroom window outlined in paragraph 5.5.2, there is no evidence of current moisture penetration into the timber framing and the external envelope has satisfied the required minimum 15-year durability period described in Clause B2.3.1.
- 6.1.3 Because the identified fault occurs in a discrete area, I am able to conclude that satisfactory investigation and rectification of item outlined in paragraph 5.5.2 is likely to result in the building envelope being brought into compliance with Clauses E2 and B2 of the Building Code.

### **6.2 Other outstanding items**

- 6.2.1 I hold the view that the stair balusters to the landing do not comply with Clause F4 of the Building Code that was current at the time the consent was issued.

### **6.3 Maintenance and durability**

- 6.3.1 The relevant provision of Clause B2 of the Building Code requires 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, refer Appendix A).
- 6.3.2 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. The Ministry has previously described these maintenance requirements, including examples where the external wall framing of the building may not be treated to a level that will resist the onset of decay if it gets wet (for example, Determination 2007/60).
- 6.3.3 I have considered this issue in many previous determinations and I maintain the view that:
- (a) the authority has the power to grant an appropriate modification of Clause B2 in respect of all the building elements, if requested by an owner
  - (b) it is reasonable to grant such a modification, with appropriate notification, as in practical terms the building is no different from what it would have been if a code compliance certificate for the building work had been issued at the time of substantial completion in 1995.

I therefore leave the matter of amending the building consent to modify Clause B2.3.1 to the parties once outstanding matters are resolved.

- 6.3.4 A modification of the Code's durability provisions will allow the durability periods stated in B2.3.1 to commence from the date of substantial completion. This means that the claddings have already met the 15-year minimum durability period required by the Building Code. However, the expected life of the building itself is a minimum

of 50 years and careful attention to the performance of the claddings is needed to ensure that the external envelope continues to protect the underlying structure for its minimum required life of 50 years.

- 6.3.5 In the case of this particular house, and for the benefit of the applicants, I note the expert has identified items which I consider will require attention in order to ensure ongoing weathertightness of the cladding system (refer paragraph 5.5.3).

## **7. What happens next?**

- 7.1 I suggest that the parties adopt the following process. The applicants should bring the items identified in paragraphs 5.5.2 and 6.2.1 into compliance with the Building Code.
- 7.2 The building consent should be amended to reflect the as-built work (refer paragraph 5.5.3), and an application can then be made to the authority for a modification of Clause B2.3.1. A code compliance certificate can then be issued once the authority is satisfied as to the remediation of the non-compliant items identified in paragraph paragraphs 5.5.2 and 6.2.1.
- 7.3 Any outstanding items of disagreement can be referred to the Chief Executive for a further binding determination.

## **8. The decision**

- 8.1 In accordance with section 188 of the Building Act 2004, I hereby determine that:
- the exterior building envelope does not comply with Clauses E2 and Clause B2 of the Building Code that was in force at the time the consent was issued
  - the stair baluster at the landing does not comply with Clause F4 of the Building Code that was in force at the time the consent was issued
- and, accordingly I confirm the decision of the authority to decline to issue a code compliance certificate for building consent No. 57843.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 27 January 2015.

John Gardiner  
**Manager Determinations and Assurance**

## Appendix A

A.1 The relevant sections of the Act include:

### 14B Responsibilities of owner

An owner is responsible for—

- (a) obtaining any necessary consents, approvals, and certificates:
- (b) ensuring that building work carried out by the owner complies with the building consent or, if there is no building consent, with the building code:
- (c) ensuring compliance with any notices to fix.

A.2 The relevant sections of the Building Code include:

**B2.3.1** *Building elements* must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the *specified intended life* of the *building*, if stated, or:

- (a) the life of the building, being not less than 50 years, if:
  - (i) those *building elements* (including floors, walls, and fixings) provide structural stability to the *building*, or
  - (ii) those building elements are difficult to access or replace, or
  - (iii) failure of those building elements to comply with the building code would go undetected during both normal use and maintenance of the building.
- (b) 15 years if:
  - (i) those *building elements* (including the *building envelope*, exposed plumbing in the subfloor space, and in-built chimneys and flues) are moderately difficult to access or replace, or
  - (ii) failure of those *building elements* to comply with the *building code* would go undetected during normal use of the *building*, but would be easily detected during normal maintenance.
- (c) 5 years if:
  - (i) the *building elements* (including services, linings, renewable protective coatings, and *fixtures*) are easy to access and replace, and
  - (ii) failure of those *building elements* to comply with the *building code* would be easily detected during normal use of the *building*.

### Limits on application

Performance B2.3.1 applies from the time of issue of the applicable *code compliance certificate*. *Building elements* are not required to satisfy a durability performance which exceeds the *specified intended life* of the *building*.