

## Determination 2011/003

### Refusal of a code compliance certificate for 10-year-old house additions and alterations completed under the supervision of a building certifier at 69 The Drive, Tauranga



#### 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, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicant is the owner, P Thompson (“the applicant”), and the other party is the Tauranga City Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.2 This determination arises from the authority’s decision to refuse to issue a code compliance certificate for additions and alterations carried out under two separate consents because the building work had been undertaken under the supervision of Bay Building Certifiers (“the building certifier”), which was duly registered as a building certifier under the former Building Act 1991 but which ceased operating as a certifier before it had issued a code compliance certificate for the work.

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

- 1.3 The authority made no submission in respect of the matters under dispute. However, it appears from the background (refer paragraphs 3.6 and 3.7) that the authority's concerns about the compliance of the building work relate primarily to the weathertightness of the exterior building envelope, therefore the determination considers compliance with Clauses B2 and E2 only.
- 1.4 I have not been made aware of the details of the alteration work carried out under Consent No. 3262, for construction of an extension to the existing dressing room. I therefore can make no determination in regards to this consent.
- 1.5 The matter to be determined<sup>2</sup> is therefore whether the authority was correct to refuse to issue a code compliance certificate in respect of consent No. 106. In deciding this, I must consider:

**1.5.1 Matter 1: The external envelope**

Whether the external envelopes of the additions and alterations (“the external envelope”) comply with Clause B2 Durability and Clause E2 External Moisture of the Building Code. The external envelope includes the components of the systems (such as the plaster and fibre-cement cladding, the windows, the roof tiles and the flashings), as well as the way the components have been installed and work together. (I consider this in paragraph 7.)

**1.5.2 Matter 2: The durability considerations**

Whether the building elements comply with Clause B2 Durability of the Building Code, taking into account the age of the house. (I consider this in paragraph 8.)

**The available evidence**

- 1.6 Based on the information available and records supplied, I consider there is sufficient evidence available to allow me to reach a conclusion on the code compliance of the alterations. This determination therefore considers whether it is reasonable to issue a code compliance certificate for the building work under consent No. 106. In order to determine that, I have addressed the following questions:
- (a) Is there sufficient evidence to establish that the alterations comply with the Building Code? I address this in paragraph 5.
  - (b) If not, are there sufficient grounds to conclude that, once any outstanding items are repaired and inspected, the building work will comply with the Building Code? I address this question in paragraph 9.
- 1.7 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 other evidence in this matter.

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

## **2. The building work**

2.1 The building work consists of two separate alterations to a two-storey detached house located on an exposed residential section in a high wind zone for the purposes of NZS 3604<sup>3</sup>. The altered house is fairly complex in plan and form, and is assessed as having a high weathertightness risk (refer paragraph 7.2.2).

### **2.2 The original house**

2.2.1 The original house was constructed in 1974, and has conventional light timber framing with vertical weatherboard and timber batten cladding. The 30° pitch roof has a gable and hip configuration, and is clad with metal tiles with a painted stone chip finish. The original house sits on foundation piles, perimeter concrete foundations and a solid poured concrete floor on the lower level.

### **2.3 The alterations**

2.3.1 Consent No. 106 was issued on 17 November 1999 for the construction of a new entry, adjacent staircase and ground floor bedroom, upgrading of an existing bathroom, extension of a bedroom, the addition of a new bedroom and living room and two first floor decks. The consent also included the removal or relocation of a number of building elements and fittings in relation to the new building work.

2.3.2 Consent No. 3262 was issued on 26 June 2000 for construction of an extension to the existing dressing room. I have not been made aware of the details of the alteration work carried out for this consent.

### **2.4 The exterior envelope**

2.5 Both the first and the second alterations have been clad with vertically aligned direct-fixed fibre-cement weatherboards with timber battens over the joints. In addition, the existing fibre-cement cladding on the existing garage has been coated with solid plaster, although this alteration does not appear to form part of either the first or the second building consent.

2.6 The roof of the additions has been clad with recycled metal tiles with a painted stone chip finish to match the existing roofing material.

2.7 The expert noted that he was unable to confirm whether the timber framing used for the alterations was treated, and stated that 'untreated kiln dried timber would have complied with NZS3602'. The applicant, however, has stated that boron treated timber was used. Given the date of construction in 1999 and 2000, I consider that the external wall framing used for the alterations is likely to be untreated.

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<sup>3</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

### 3. Background

- 3.1 The building consent (No. 106) for the first alteration was issued by the authority on 17 November 1999 under the Building Act 1991, based on a building certificate issued by the building certifier on 10 June 1999.
- 3.2 The building certifier carried out the following inspections for the first alteration:
- Footing inspection on 14 February 2000 (which passed, noting that ‘ground to be reduced in height later on’).
  - Pre-line/building and pre-line/plumbing inspections for the upstairs portion of the building work on 10 April 2000 (both of which passed).
  - Inspection for the downstairs portion of the building work on 13 April 2000 (which passed).
- 3.3 The building consent (No. 3262) for the second alteration was issued by the authority on 26 June 2000 under the Building Act 1991, based on a building certificate issued by the building certifier on 14 June 2000.
- 3.4 The building certifier carried out the following inspections for the second alteration:
- Footing inspection on 26 June 2000 (which passed).
  - Pre-line/building inspection on 10 July 2000 (which passed).
- 3.5 Without having carried out a final building inspection or issuing a code compliance certificate, the building certifier ceased to operate as a building certifier on 30 June 2005 and became ‘processing and inspections consultants’ operating on the authority’s behalf (“the contractor”).
- 3.6 The contractor carried out a final inspection for the authority for both building consents on 12 May 2010. In his subsequent letter to the owner dated 13 May 2010, the contractor stated that the following aspects of the additions were not in accordance with E2/AS1:
- Sealant had not been applied around at least one window between the window and the exterior cladding.
  - Sill flashings had not been installed.
  - Insufficient ground clearance had been provided between the solid plaster cladding and the ground.
  - The tiles on the new upper floor deck on the southwest side of the building were not properly adhered to the membrane lining, and on the day of the inspection water was sitting beneath the tiles.
  - The nib wall beneath the glass balustrade on the upper floor deck on the southwest side of the building provided a foothold not in accordance with NZBC F4/AS1 Safety from Falling), although access to the deck was only via a locked sliding door.
  - There was no apron flashing at the roof/wall intersection.

3.7 In its letter to the applicant dated 13 May 2010, the contractor also stated that the building work

appears to have been well done when measured against the standards of the time but ... I could not establish that the performance provisions of NZBC E2 (External Moisture) and the associated clause B2 (Durability) have been achieved.

The contractor also advised the applicant of the option for seeking a Determination.

3.8 The Department received an application for a determination on 30 July 2010.

## **4. The submissions**

4.1 The applicant provided copies of:

- the consent drawings and specifications for the first consent
- the correspondence between the parties.

4.2 The authority did not acknowledge the application for a determination or make a submission in response.

4.3 The draft determination was issued to the parties on 29 November 2010. The draft was issued for comment and for the parties to agree a date when the house complied with Building Code Clause B2 Durability.

4.4 The parties accepted the draft without comment, and also agreed that compliance with Clause B2 was achieved on 1 January 2001.

## **5. Grounds for the establishment of code compliance**

5.1 In order for me to form a view as to the code compliance of the building work, I established what evidence was available and what could be obtained, considering that the building work is completed and some of the elements were not able to be cost-effectively inspected.

5.2 Any decision made by the authority with respect to compliance of the house is limited by what items it is able to inspect and any records or further information available to it. I therefore needed to decide if I could rely on the inspections that were undertaken by the building certifier, particularly in regard to inaccessible building components.

5.3 In the absence of any evidence to the contrary, I take the view that I am entitled to rely on the inspection records, but I consider it important to look for evidence that corroborates or contradicts these records and can be used to verify that the building certifier's inspections were properly conducted.

5.4 In summary, I find that the following evidence allows me to form a view as to the code compliance of the building work as a whole:

- The inspections carried out by the building certifier, indicating satisfactory inspections of inaccessible components (see paragraphs 3.2 and 3.4)

- The expert's report (below).

## 6. The expert's report

6.1 As mentioned in paragraph 1.7, 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 10 September 2010 and provided a report that was completed on 16 October 2010.

6.2 The expert noted that the overall quality of construction, including the cladding finish, was 'satisfactory', and that 'the shape and form of the alterations are largely in accordance with ... the consent documentation'.

6.3 The expert also noted that the building's flashings were 'tidy and effective', and that they were 'not suspect'.

### 6.4 Moisture levels

6.4.1 The expert inspected the interior of the house and noted evidence of moisture ingress only at the bottom right hand side of the north elevation dining room sliding door.

6.4.2 The expert took ten invasive moisture readings in the exterior walls at areas considered at risk, and noted the following elevated readings or signs of moisture:

- 80% adjacent to the north elevation dining room sliding door
- 18% below the lower end of the bedroom 2 window on the north elevation.

I note that moisture readings above 18%, or which vary significantly, generally indicate that moisture is entering the structure and further investigation is needed, and that readings over 40% indicate that the timber is saturated and decay will be inevitable over time.

6.5 Commenting specifically on the external envelope, the expert noted that:

- the high moisture content at the bottom right hand side of the north elevation dining room sliding door is of concern, and the cause of this needs to be investigated and remediated
- there is insufficient ground clearance at the front of the garage where the plaster cladding is buried into the paving, which is resulting in moisture being absorbed into the cladding and onto the framing timbers
- the cap flashing and roof/balcony junctions for the enclosed second storey deck off bedroom 2 are not appropriately flashed and sealed
- there are cracks on top of the garage parapet walls which require regular maintenance
- adhesion between the tiles and the waterproofing membrane on the deck off the first floor bedroom has failed to remain durable, and there is evidence that water is ponding on the deck surface.

## **6.6 Compliance with other relevant code clauses**

- 6.6.1 The expert questioned the code compliance of a 150mm high nib to the deck from new first floor bedroom which provides a foothold to the 1000mm barrier to the deck.
- 6.6.2 Acceptable Solution F4/AS1 allows the existence of footholds to a maximum of 200mm above the deck. I consider that the deck barrier complies with Clause F4.
- 6.7 A copy of the expert's report was provided to the parties on 19 October 2010.

## **Matter 1: The cladding**

### **7. Weathertightness**

- 7.1 The evaluation of building work for compliance with the Building Code and the risk factors considered in regards to weathertightness have been described in numerous previous determinations (for example, Determination 2004/1).

#### **7.2 Weathertightness risk**

- 7.2.1 The house has the following environmental and design features which influence its weathertightness risk profile:

##### **Increasing risk**

- the building is two storeys and in a high wind zone
- the envelope is somewhat complex, in particular the roof to wall junctions
- there are no eaves at some locations to provide shelter to the cladding
- there is an enclosed deck at second storey level

##### **Decreasing risk**

- the eaves are generally 600mm.

- 7.2.2 When evaluated using the E2/AS1 risk matrix, these features show that the house has a high risk rating. I note that if the details shown in the current E2/AS1 were adopted to show code compliance, the fibre-cement cladding would require a drained cavity. However, I also note that a drained cavity was not a requirement of E2/AS1 at the time of construction.

#### **7.3 Weathertightness performance**

- 7.3.1 Taking into account the expert's report, although the claddings generally appear to have been installed in accordance with good trade practice, I conclude that remedial work is necessary to the areas outlined in paragraph 6.5.

#### **7.4 Weathertightness conclusion**

- 7.4.1 I consider the expert's report establishes that the current performance of the building envelope is not adequate because there is evidence of moisture penetration into the

untreated timber framing. Consequently, I am satisfied that the house does not comply with Clause E2 of the Building Code.

- 7.4.2 In addition, the building envelope 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 building work to remain weathertight. Because the cladding faults on the house are likely to allow the ingress of moisture in the future, the building work does not comply with the durability requirements of Clause B2.
- 7.4.3 Because the faults identified with the claddings occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 6.5 will result in the alterations being brought into compliance with Clauses B2 and E2 of the Building Code.
- 7.4.4 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 Department has previously described these maintenance requirements, including examples where the external wall framing may not be treated to a level that will resist the onset of decay if it gets wet (for example, Determination 2007/60).

## **Matter 2: The durability considerations**

### **8. Discussion**

- 8.1 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).
- 8.2 In previous determinations (for example Determination 2006/85) I have taken the view that a modification of this requirement can be granted if I can be satisfied that the building complied with the durability requirements at a date earlier than the date of issue of the code compliance certificate, that is agreed to by the parties and that, if there are matters that are required to be fixed, they are discrete in nature.
- 8.3 Clause B2.3.1 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. 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.



- 8.4 In this case the delay between the completion of the building work in 2001 and the applicants' request for a code compliance certificate has raised concerns that various elements of the building work are now well through or beyond their required durability periods, and would consequently no longer comply with Clause B2 if a code compliance certificate were to be issued effective from today's date. I have not been provided with any evidence that the authority did not accept that those elements complied with Clause B2 at the time of substantial completion of the additions and alterations.
- 8.5 It is not disputed, and I am therefore satisfied, that all the building elements, with the exception of the matters that are to be rectified, complied with Clause B2 on 1 January 2001. This date has been agreed between the parties, refer paragraph 4.4).
- 8.6 In order to address these durability issues, when they were raised in previous determinations, I sought and received clarification of general legal advice about waivers and modifications. That clarification, and the legal framework and procedures based on the clarification, is described in previous determinations (for example, Determination 2006/85). I have used that advice to evaluate the durability issues raised in this determination.
- 8.7 I continue to hold that view, and therefore conclude that:
- (a) In the general case an authority has the power to grant an appropriate modification, or waiver, of the building code if this is requested by an owner.
  - (b) In this instance the authority has the power to grant an appropriate modification of Clause B2 in respect of the building elements if this is requested by the applicant.
  - (c) 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 for the house had been issued when the building work was substantially completed in 2000.
- 8.8 I strongly recommend 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.

## **9. The appropriate certificate to be issued**

- 9.1 Having found that the building work can be brought into compliance with the Building Code, I must now determine whether the authority can issue either a certificate of acceptance or a code compliance certificate.
- 9.2 Section 437 of the Act provides for the issue of a certificate of acceptance where a building certifier is unable or refuses to issue either a building certificate under section 56 of the former Act, or a code compliance certificate under section 95 of the current Act. In such a situation, a building consent authority may, on application, issue a certificate of acceptance. In the case of these alterations, the owner is seeking code compliance certificates for the two building consents.

9.3 In this situation, where I have reasonable grounds to conclude that the building work can be brought into compliance with the Building Code, I take the view that code compliance certificates are the appropriate certificates to be issued in due course.

## **10. What is to be done now?**

10.1 The authority should issue a notice to fix that requires the owner to bring the alterations into compliance with the Building Code, identifying the items listed in paragraph 6.5 and referring to any further defects that might be discovered in the course of investigation and rectification. The notice to fix should not specify how those defects are to be fixed. 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.

10.2 Once the matters set out in paragraph 6.5 have been rectified to its satisfaction, the authority may issue a code compliance certificate in respect of the building consent as amended.

## **11. The decision**

11.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the alterations carried out under building consent No. 106 do not comply with Building Code Clauses B2 and E2 External Moisture, and accordingly I confirm the authority's decision to refuse to issue a code compliance certificate for consent No. 106.

11.2 I also determine that:

- (a) all the building elements installed in the building in respect of consent No. 106, apart from the items that are to be rectified as described in this determination, complied with Clause B2 on 1 January 2001.
- (b) the building consent is hereby modified as follows:

The building consent is subject to a modification to the Building Code to the effect that, Clause B2.3.1 applies from 1 January 2001 instead of from the time of issue of the code compliance certificate for all the building elements, except the items to be rectified as set out in paragraph 6.5 of Determination 2011/003.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 25 January 2011.

John Gardiner  
**Manager Determinations**