



Determination 2009/54

Refusal to issue a code compliance certificate for a six-year-old house completed under the supervision of a building certifier at 100 Koutunui Road, Athenree



1. The matters to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004¹ (“the Act”) made under due authorisation by me, John Gardiner, Manager Determinations, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicant is the owner Mrs J Tubman (“the applicant”), and the other party is the Western Bay of Plenty District Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.2 The determination arises from the authority’s decision to decline to issue a code compliance certificate for a six-year-old house. The refusal arose because the authority was not satisfied that the building work complies with certain clauses of the Building Code² (First Schedule, Building Regulations 1992), as the building work had been undertaken under the supervision of Bay Building Certifiers Limited (“the building certifier”) which was duly registered as a building certifier under the former Building Act 1991, but ceased to operate as a building certifier before it had issued a code compliance certificate for the building work.

¹ The Building Act 2004 is available from the Department’s website at www.dbh.govt.nz.

² The Building Code is available from the Department’s website at www.dbh.govt.nz.

1.3 I consider that the matter for determination, in terms of sections 177(a), 177(b) and 188 of the Act³ is whether the authority's decision to refuse to issue the code compliance certificate is correct and therefore I must consider the following:

1.3.1 Matter 1: The external envelope

Whether the external envelope of the house complies with Clauses B2 Durability and E2 External Moisture of the Building Code. The "external envelope" includes the cladding, its configuration and its components, junctions with other building elements, formed openings for windows, etc, penetrations, decks, parapets, and the proximity of building elements to the ground.

1.3.2 Matter 2: The remaining Building Code clauses

Whether the remaining building elements comply with the relevant clauses of the Building Code.

1.3.3 Matter 3: The durability considerations

Whether the building elements comply with of the Building Code Clause B2 Durability taking into account the age of the building work.

1.4 In order to determine the matters, in this particular case, I must address the following questions:

- (a) Are there reasonable grounds to form the view that the building work as a whole complies with the Building Code? If so, a code compliance certificate can be issued (refer 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? If so, can the appropriate certificate can be issued in due course (refer paragraph 10).

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. I have evaluated this information using a framework that I describe more fully in section 7.

2. The building

2.1 The building work consists of a large, two-storey, detached house situated on a flat site in a semi-rural area, which is in a high wind zone for the purposes of NZS 3604⁴. Construction of the house is conventional light timber frame, with a concrete slab and perimeter concrete footings, and generally clad in brick veneer to the ground floor and textured monolithic cladding to the upper floor, and aluminium joinery. The house has a 27° pitched, steel clad roof with a 600mm soffit overhang.

2.2 The ground floor cladding is brick veneer, with a cavity system, with textured fibre-cement cladding between the top of the windows and soffit. Part of one of the walls to the south elevation and the entire upper floor is clad in textured fibre-cement.

2.3 There is an enclosed deck area off the upper-storey master bedroom, above part of the ground floor living space. The deck has a butynol water proof membrane and the

³ 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

⁴ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

balustrade is lined with face fixed fibre-cement cladding and 350mm high glass panels that form the top of the balustrade.

- 2.4 The expert engaged by me (refer to paragraph 1.5) noted that he was unable to inspect any of the concealed timber framing. Given the date of construction and the lack of other evidence, I consider the external wall framing is likely to be untreated.

3. Background

- 3.1 The authority issued a building consent (No. 68195) on 19 November 2002, based on a building certificate issued by the building certifier. I have not seen a copy of the building consent.

- 3.2 The building certifier carried out the following inspections during construction:

- footings on 2 December 2002 (which passed)
- underfloor on 10 December 2002 (which passed)
- preline/building and preline/plumbing on 18 February 2003 (which passed)
- drainage on 7 April 2003 (which passed)
- final/plumbing and final/building on 9 May 2003 (which failed).

- 3.3 The building certifier ceased to operate as a building certifier on 30 June 2005.

- 3.4 As a consequence of the failed final inspections of 9 May 2003, final/plumbing and final/building inspections were carried out on 22nd September 2005 by Bay Inspections Limited (refer to paragraph 3.5). The inspection notes stated 'require electrical certificate. 24/3/2006 received electrical compliance certificate. 28/03/06 CCC and documentation sent to [the authority].'

- 3.5 In a pro-forma letter to the applicants, dated 20 June 2006, the authority explained that when the building certifier ceased operating, an agreement had been made between Bay Inspections Limited ("the regulatory agent") and the authority, to complete outstanding inspections on the building certifier's projects and make recommendations regarding the issuing of code compliance certificates. The authority went on to explain that the liability for building work imposed by the Act meant that:

...before [the authority] accepts such liability by issuing Code Compliance Certificates, it must be satisfied inspections carried out by [the building certifier] and [the regulatory agent] were satisfactory to confirm projects have been completed to the standards required by the Building Acts 1991 and 2004. Unfortunately our experience to date is that these inspections, supporting documentation and evidence are not satisfactory to support [the authority] issuing Code Compliance Certificates. Regrettably this lack of satisfactory inspection detail puts [the authority] in the position where it is unable at this time to accept liability for these deficient projects or issue Code Compliance Certificates.

The authority explained that further inspections were therefore required to determine the code compliance of the building in order to determine future options.

- 3.6 The authority carried out an assessment of the house on 22 September 2006, and, in a letter to the applicants dated 12 October 2006, raised the following items:

1. There is no anticapillary gap around the bottom of the cladding inside the upper floor deck.

2. The plans show the deck barrier as being clad with [fibre-cement] cladding for the full height with a metal cap flashing on the top of it.
The design has been changed to a stepped down barrier with a flat wooden capping with a sealant bead underneath and the upper part of the barrier in glass.
The wooden capping has opened at the joints, timber seems to be deteriorating.
If there is no other waterproof membrane system under the timber capping the untreated structural timber in the barrier may be starting to break down.
3. There is no evidence on the file confirming that the glass barrier as constructed will support the impact loads likely to be imposed on it.

3.7 The authority also said, on completion of outstanding matters that:

...Council will not issue a Code Compliance Certificate for the building. That being the case, Section 91 of the [Act] requires that you apply for a Certificate of Acceptance... Council then decides it is able to issue a Certificate of Acceptance it will only cover those elements of the building that can be readily inspected and compliance with the Building Code determined.

3.8 The Department received an application for a determination on 31 March 2009.

4. The submissions

4.1 In a covering note to the Department, the applicants explained that the code compliance certificate documentation was completed on 22 September 2005 and the authority did not acknowledge it until 28 March 2006. The applicants believe that they were treated unfairly as the documentation was sent to the authority in September, and believe that the authority did not issue the code compliance certificate because it knew that there were changes in policy coming about private inspection companies.

4.2 The applicant forwarded copies of:

- some plans and drawings
- the inspection records
- the correspondence from the authority.

4.3 Copies of the submissions and other evidence were provided to each of the parties. The authority acknowledged the application but made not submission in response.

4.4 A draft determination was issued to the parties on 18 June 2009. The draft was issued for comment and for the parties to agree a date when the building complied with Building Code Clause B2 Durability.

4.5 Both parties accepted the draft without comment and agreed that compliance with Clause B2 was achieved on 31 May 2003.

5. Grounds for the establishment of code compliance

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

5.2 In this case the evidence consists of the summary of inspections carried out by the building certifier and the regulatory agent, the final inspection by the authority, as well as the report by the expert I commissioned to provide additional evidence.

- 5.3 In this case, the authority does not believe it can rely on the building certifier's and regulatory agent's reports and any decision it makes with respect to compliance is limited by what items it is able to inspect. I first need to decide if I can rely on those inspections that were undertaken by the building certifier and regulatory agent, particularly in regard to inaccessible building components.
- 5.4 In the absence of any evidence to the contrary, I take the view that I am entitled to rely on the inspections undertaken by the building certifier and regulatory agent, but I consider it important to look for evidence that corroborate these records and can be used to verify the inspections were properly conducted.
- 5.5 In this particular case, corroboration comes from the visual inspection of the accessible components by the expert, which can be used to verify whether the inspections were properly conducted.
- 5.6 I note that the inspection summary indicates that ten inspections were required for the project, and seven of these inspections were carried out, although I note that the summary shows that some of these inspections were combined. It appears that the final building and plumbing inspections, carried out by the building certifier failed, but the re-inspections, carried out by the regulatory agent, passed, and the regulatory agent noted that the code compliance certificate and documentation was sent to the authority.
- 5.7 In summary, I find that the following allows me to form a view as to the code compliance of the building work as a whole:
- The summary of inspections carried out by the building certifier and regulatory agent, which indicates satisfactory inspections of the inaccessible components.
 - The expert's report as outlined below.

6. The expert's report

- 6.1 As mentioned in paragraph 1.5, I engaged an independent expert to provide an assessment of the condition of those building elements subject to the determination. The expert is a member of the New Zealand Institute of Building Surveyors.
- 6.2 The expert visited the house on 27 April 2009, and furnished a report that was completed on 15 May 2009. The expert noted that the authority carried out a final inspection and had noted the non-complying items set out in paragraph 3.6.
- 6.3 The expert noted that the brick veneer cladding was in excellent condition and the fibre-cement cladding was well fixed and aligned with a very good standard of finish. No evidence of cracking, paint flaking, or premature deterioration was apparent. The expert also noted that the flashings were tidy and effective.
- 6.4 Commenting specifically on the external envelope, the expert noted that:
- the ground clearances are adequate
 - weep holes to the brick veneer cladding are provided in accordance with NZS 3604
 - the fibre-cement sheets are extended over the window head flange, which is an acceptable practice, and the window heads are well protected by the soffit overhang

- the fibre-cement cladding is continuous and painted behind obstructions
 - the roof tiling is sound, the apron flashings appropriate, and the penetrations are flashed.
- 6.5 The expert noted that the joinery to the fibre-cement cladding has not been installed in accordance with the manufacturers' specifications as there is no in-seal strip/silicone sealant behind the flange and cladding. There are no sill flashings, although these were a recommendation by the manufacturer but not a requirement.
- 6.6 The expert observed that the fibre-cement clad wall to the upper storey of the east elevation exceeds 5.4 metres in length, and does not have a control joint in accordance with manufacturers' specifications, but there is no evidence of movement or cracking.
- 6.7 The expert observed that water disposed from the higher to lower roof areas requires a spreader to be fitted to the outlet in order to direct the water away from the cladding.
- 6.8 The expert inspected the interior of the house and took non-invasive moisture content readings internally, and found no evidence of moisture. The expert took 11 invasive moisture content readings at areas considered to be at risk, and noted the following elevated readings of:
- 22% at the north-east corner of the balustrade inside the deck area
 - a moisture content that was likely to be over 80% and too wet for reliable measurement, at the north-west corner of the balustrade inside the deck area.
- 6.9 The expert noted there is no capillary gap around the bottom of the cladding of the deck balustrade and water is entering the concealed cavity of the balustrade. There are also no flashings to the wall and balustrade junctions. The balcony balustrade construction was not in accordance with the consented design.
- 6.10 The expert also assessed compliance with other relevant building code clauses relevant to this house, and made the following comments:

Code Clause	Observations
B1	There is no evidence of structural stress or excessive movement and the building certifier passed the footing, underfloor and slab inspections
C1	Heating and cooking facilities are electrical
E1	The dwelling is elevated to allow natural run off, there are externally fitted gutters, and down-pipes disposing into the Council drainage system
E3	Functional and performance requirements of Clause E3 have been met
F2	Bathroom glazing complies with NZS 4223: Part 3: 1999, however it was not possible to verify that the glazing to the balcony balustrade is safety glass
F4	The height of the balustrade does not meet the requirements of Clause F4
G1, G2, G3	Functional requirements of Clauses G2.2 and G3.2.1 have been met and all facilities are in good working order

G4	Functional requirements of Clause G4.2 have been met
G12, G13	Household water supply is sourced from the Council supply foul water is conveyed to gully traps and into the Council system
H1	Blanket type insulation is installed in roof space and the building certifier passed the preline inspection on 18 February 2003 so it is reasonable to assume walls meet insulation requirements applicable at the time.

6.11 A copy of the expert's report was provided to the parties on 27 May 2009.

7. Evaluation framework for code compliance

7.1 I have evaluated the code compliance of this building by considering the following two broad categories of the building work:

- The weathertightness of the external building envelope (clause E2) and durability (clause B2 insofar as it relates to clause E2).
- The remaining relevant code requirements.

In the case of this house, weathertightness considerations are addressed first.

7.2 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solutions⁵, 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 one or more other provisions to compensate for that in order to comply with the Building Code.

Matter 1: The external envelope

8. Weathertightness

8.1 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. Weathertightness risk factors have been described in previous determinations⁶ (for example, Determination 2004/1) relating to cladding and these factors are also used in the evaluation process.

8.2 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

⁵ 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.

⁶ Copies of all determinations issued by the Department can be obtained from the Department's website.

robust. In any event, there is a need for both the design of the cladding system and its installation to be carefully carried out.

Weathertightness risk

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

Decreasing risk

- has protected roof to wall intersections
- has generally 600mm eaves

Increasing risk

- is built in a high wind zone
- is a two-storey building
- has a simple envelope shape but with two cladding types
- has an enclosed deck, exposed in plan, at first floor level located over a habitable space.

8.4 The house has been evaluated using the E2/AS1 risk matrix. The risk matrix allows the summing of a range of design and location factors applying to a specific building design. The resulting level of risk can range from “low” to “very high”. The risk level is applied to determine what claddings can be used on a building in order to comply with E2/AS1. Higher levels of risk will require more rigorous weatherproof detailing; for example, a high risk level is likely to require a particular type of cladding to be installed over a drained cavity.

8.5 When evaluated using the E2/AS1 risk matrix, the weathertightness features outlined in paragraph 8.3 show that all elevations of the house demonstrate a medium weathertightness risk rating. I note that, if the details shown in E2/AS1 were adopted to show code compliance, the monolithic cladding on this house would require a drained cavity.

Weathertightness performance

8.6 Generally the cladding appears to have been installed in accordance with good trade practice. However, taking account of the expert’s report, I conclude that remedial work to the fibre-cement cladding is necessary with respect to the following deficiencies:

- the window jambs are vulnerable because there is no sealant at the joinery behind the flange and cladding in accordance with the manufacturer’s specifications and no sill flashings in accordance with the manufacturer’s recommendations
- there is no spreader fitted to the outlet to direct the water away from the cladding
- there is no capillary gap and water is entering the concealed cavity of the balustrade at the balcony and there are no flashings to the wall and balustrade junctions.

8.7 I note that the upper storey wall to the east elevation does not have a control joint in accordance with the manufacturer’s specifications. However, as the wall is marginally over the 5.4m upper limit for such joints, the wall is well protected by the

eaves overhang, and the cladding to this wall has performed adequately, I accept that the control joints are not required in this instance.

8.8 Notwithstanding the fact that the fibre-cement cladding is fixed directly to the timber framing, thus limiting drainage and ventilation behind the cladding, I have noted the following compensating factors that assist the performance of the cladding in this particular case:

- apart from the noted exceptions the cladding is installed to good trade practice
- there are no cracks in the cladding
- moisture penetration is limited to the upper floor balcony area where defects have been identified.

8.9 I consider that these factors help compensate for the lack of a drained cavity and can assist the building to comply with the weathertightness and durability provisions of the Building Code.

Weathertightness conclusion

8.10 I consider the expert's report establishes that the current performance of the claddings is inadequate because there is currently water penetrating into the building at the balcony balustrade. Consequently, I am satisfied that the external envelope does not comply with Clause E2 of the Building Code.

8.11 In addition, the building work 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 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.

8.12 Because the faults identified with the cladding systems occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 8.6 will result in the house being brought into compliance with Clauses B2 and E2. While the level of moisture ingress at the balcony is due to the defects noted in paragraph 8.6, I consider that as part of the rectification of the faults to the balcony, full investigation is required to assess the extent of the damage.

8.13 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 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).

Matter 2: The remaining Building Code clauses

9. Discussion

9.1 Based on the expert's comments as outlined in 6.10, I consider that the height of the balustrade is not in compliance with Clause F4 Safety from Falling, and the glazing of the glass panels installed to the balustrade were not marked as safety glass in accordance with Clause F2 Hazardous building materials.

9.2 Based on the expert's assessment of visible components of the building, together with the inspection records and other documentation, I therefore consider that the building complies with the provisions of the remaining relevant code clauses, with the exception of Clauses F2 and F4.

10. The appropriate certificate to be issued

10.1 Having found that the building can be brought into compliance with the Building Code, I must now determine whether the authority should issue either a certificate of acceptance or a code compliance certificate.

10.2 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 authority may, on application, issue a certificate of acceptance or a code compliance certificate. In the case of this building work, I note that the applicant has not sought a certificate of acceptance.

10.3 I am of the view that a code compliance certificate is the appropriate certificate to be issued in this situation, once the defects are remedied to the satisfaction of the authority, as I have reasonable grounds to conclude the building work can be brought into compliance with the Building Code.

Matter 3: The durability considerations

11. Discussion

11.1 There are concerns about the durability, and hence the compliance with the building code, of certain elements of the house taking into consideration the substantial completion of the building work in 2003.

11.2 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).

11.3 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.

11.4 The delay since the substantial completion of the house raises the issue of when all the elements of the house complied with Clause B2, given that various elements of the building are now well through 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.

- 11.5 It is not disputed and I am therefore satisfied, that all the building elements complied with Clause B2 on 31 May 2003, refer paragraph 4.5.
- 11.6 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.
- 11.7 I continue to hold that view, and therefore conclude that:
- (a) the authority has the power to grant an appropriate modification of clause B2 in respect of the building elements
 - (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 for the house had been issued when the building work was substantially completed in 2003.
- 11.8 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.

12. What is to be done?

- 12.1 I note that the authority has not issued a notice to fix. A notice to fix should be issued that requires the owners to bring the house into compliance with the Building Code, identifying the defects listed in paragraph 8.6 and 9 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 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.
- 12.2 I would suggest that the parties adopt the following process to meet the requirements of paragraph 12.1. Initially, the authority should issue the new notice to fix. 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, as to the rectification or otherwise of the specified issues. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.
- 12.3 The authority shall issue a code compliance certificate once the items listed in the notice to fix have been fixed to its satisfaction.

13. The decision

- 13.1 In accordance with section 188 of the Building Act 2004, I hereby determine that:
- the external envelope does not comply with Clauses B2 and E2 of the Building Code
 - of remaining building elements, the deck balustrade does not comply with Clauses F2 and F4 of the Building Code

and I accordingly confirm the authority's decision to refuse to issue a code compliance certificate.

13.2 I also determine that:

- (a) all the building elements installed in the building, apart from the items that are to be rectified, complied with Clause B2 on 31 May 2003.
- (b) the building consent is 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 31 May 2003 instead of from the time of issue of the code compliance certificate for all building elements, provided that the modification does not apply to those elements of the building which have been altered or modified as set out in determination 2009/56.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 29 July 2009.

John Gardiner
Manager Determinations