



Determination 2010/76

Refusal to issue code compliance certificates for an 11-year-old house and extension at 529 Horokiwi Road, Wellington



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 S Greene, and the other party is the Wellington City Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.2 This determination arises from the decision of the authority to refuse to issue code compliance certificates for the building work carried out under two building consents because it was not satisfied that the house complied with certain clauses² of the Building Code (First Schedule, Building Regulations 1992).
- 1.3 The matter to be determined³ is therefore whether the authority was correct in its decision to refuse to issue the two code compliance certificates. In deciding this, I must consider:

¹ The Building Act, Building Code, Compliance documents, past determinations and guidance documents issued by the Department are all available at www.dbh.govt.nz or by contacting the Department on 0800 242 243.

² 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.

³ Under section 177(b)(i) of the Act

1.3.1 Matter 1: The external envelope

Whether the external claddings to the house (“the claddings”) comply with Clause B2 Durability and Clause E2 External Moisture of the Building Code. The claddings include the components of the systems (such as the wall cladding, the windows, the roof claddings and the flashings), as well as the way the components have been installed and work together. (I consider this matter in paragraph 6.)

1.3.2 Matter 2: Other relevant clause requirements

Whether various other elements in the building work comply with the relevant clauses of the Building Code. (I consider this matter in paragraph 7.)

1.3.3 Matter 2: The durability considerations

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

1.4 I note that interior alterations were carried out during 2009 under a separate building consent. That building work was issued with a code compliance certificate on 2 September 2009 and is not considered further in this determination.

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 paragraph 6.1.

2. The building work

2.1 The building work consists of a detached house and separate garage building situated on an exposed site in a wind zone requiring specific design for the purposes of NZS 3604⁴. Construction is generally conventional light timber frame, with the original house and the extension as shown in Figure 1.

2.2 The 1998 building consent (“the original house”)

2.2.1 The original two-storey house had timber pile foundations, metal weatherboard cladding, aluminium windows and doors, and profiled metal roofing. The house had a simple rectangular plan, with a 45°-pitched gable roof. On the south elevation, the central section of the roof extends from the ridge at 20° pitch to form a large dormer. A low-pitched verandah extended around the south and half of the west walls. There are no eaves projections, with verges at about 450mm.

2.2.2 Included in the 1998 consent was a proprietary garage building, which is rectangular in plan with a gable roof that has verge projections of about 150mm and no eaves. Construction is conventional light timber frame, with concrete foundations and floor slab, metal weatherboards, aluminium windows and profiled metal roofing. The expert observed that the garage framing was marked as ‘H1’ treated.

⁴ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

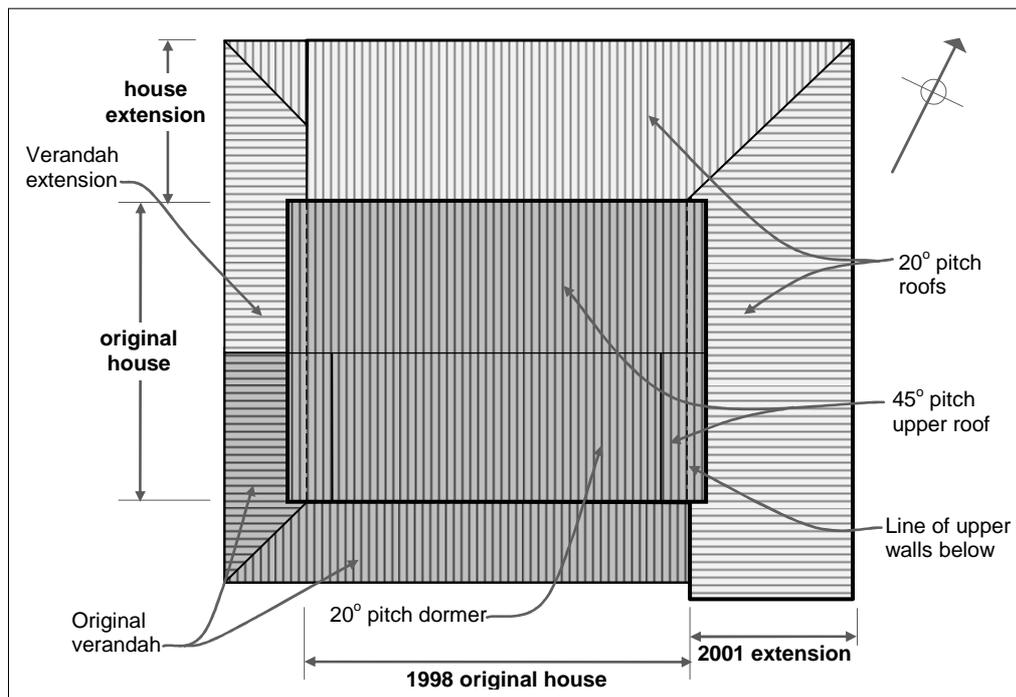


Figure 1: The original house plus extension

2.3 The 2001 building consent (“the extension”)

- 2.3.1 The 2001 building work added an extension to the north and east elevations to provide a tandem double garage area, a lounge area, a sunroom and the original verandah extended along the west elevation. The extension has concrete block foundations and a concrete slab. The claddings and windows match those of the original house and the 20° pitch lean-to roof has no eaves or verges.
- 2.4 The walls of the original house and the extension are clad in horizontal colour-coated steel weatherboards fixed through the building wrap directly to the framing timbers. When the extension was constructed, some of the cladding removed from the original house walls was re-used in the new exterior walls.
- 2.5 The expert noted that the framing to the extension was untreated, but was unable to confirm whether the original house framing was treated. Given the date of construction in 1998, I consider that the external wall framing to the original house is also likely to be untreated.

3. Background

3.1 The original house

- 3.1.1 The authority issued a building consent for the original house (No 43001) on 3 June 1998 under the Building Act 1991, and ten inspections were carried out of the construction from July 1998 to February 1999.

- 3.1.2 The authority's inspections included pre-line inspections on 22 December 1998 and 14 January 1999. A final inspection was carried out on 16 February 1999 and the inspection summary noted that there were 'several items to complete'.

3.2 The extension

- 3.2.1 The authority issued a building consent for the extension to the house (No 74568) on 28 March 2001 under the Building Act 1991. The project description was:

Addition of lounge, sunroom, extension of deck, conversion of bedroom to study and installation of inbuilt wood-burner.

- 3.2.2 The authority carried out five inspections of construction from July 2001 to November 2001, including foundation and slab inspections on 3 and 18 July 2001 and pre-line inspections on 13 and 30 November 2001. There is no record of a final inspection for the extension.

- 3.3 I have seen no records of further inspections or correspondence until the original owner wished to sell the property 2007. A site meeting between the owner and the authority was held on 8 May 2007 to discuss the inspection process. The authority's 'site report' noted that a final inspection was not carried out as the owner 'wanted further time to consider his options'.

- 3.4 A final inspection for the outstanding building consents was requested in a letter to the authority dated 1 July 2007. In its response dated 6 July 2007, the authority explained the durability requirements of the Building Code and stated:

It is possible that due to the age of the building work and the length of time that has passed since the work was completed, the [authority] may not be able to be satisfied that the durability requirements of the Building Code can be met. This means that code compliance certificates cannot be issued. Whether the building work falls within this category can only be determined after an inspection by the [authority].

- 3.5 I have seen no record that any inspections were undertaken. In 2009, the alterations described in paragraph 1.4 were carried out and issued with a code compliance certificate dated 2 September 2009.

3.6 The refusal to issue code compliance certificates

- 3.6.1 The property was then sold to the applicant, who sought code compliance certificates for the two outstanding building consents. In its response dated 31 March 2010, the authority explained the durability requirements of the Building Code and stated that it could not be assured of code compliance.

- 3.6.2 The authority noted that its refusal was 'not an indication that [the] building is failing or deficient, but simply that too long a period has elapsed since it was built'; and advised that if code compliance certificates were still wanted, a determination should be sought that would 'need to address all the building code clauses applicable' to the building work. The authority did not carry out a final inspection, explaining that:

It may still be necessary for [the authority] to carry out a final inspection after a [determination] has been made and any such final inspection will only take place after the confirmation of the [determination] decision.

3.7 The Department received an application for a determination on 12 May 2010.

4. The submissions

4.1 In a statement accompanying the application, the applicant outlined the background to the situation.

4.2 The applicant forwarded copies of:

- some consent documentation for both consents
- some correspondence with the authority
- the code compliance certificate for the 2009 alterations
- various other producer statements, calculations and information.

4.3 In a letter to the Department dated 14 June 2010, the authority explained that, when code compliance certificates were requested for building consents over five years old, a procedure was followed that involved reviewing the property file and inspection records; and then deciding whether there was sufficient evidence to allow compliance to be assessed in an inspection. In the case of these consents, the authority concluded it could not be satisfied on code compliance and therefore:

At this time the [authority] are unable to consider a Code Compliance Certificate for these building consents.

The [authority] believe that the Determination should be on all Code Clauses with particular focus on B2, E2 and E3.

4.4 The authority forwarded copies of:

- approvals of the two building consents
- various other correspondence and information.

4.5 A draft determination was issued to the parties on 30 June 2010. The draft was issued for comment and for the parties to agree dates when the work described in the two building consents complied with Building Code Clause B2 Durability.

4.6 Both parties accepted the draft. The authority provided calculated wind-speeds supplied by a Chartered Professional Engineer. The wind speeds to the northern and southern elevations indicated that the building would require specific engineering design. The information was dated June 2007 and had been supplied at the request of the authority. I note that the building consent application for the extension was supported by bracing calculations provided by a firm of consulting engineers.

4.7 The parties agreed that the building elements in the original house complied with Clause B2 on 16 February 1999, and that the building elements in the extension complied with Clause B2 on 1 February 2002.

5. The expert's report

5.1 As mentioned in paragraph 1.5, 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 June 2010 and completed a report on 14 June 2010.

5.2 General

5.2.1 The expert noted some variations from the consent drawings, which appear to relate to the 2009 alterations (see paragraph 1.4). Apart from those variations, the house generally appeared to accord with the consent drawings, except for some layout changes to the upstairs bathroom.

5.2.2 The expert described the overall construction quality as 'average – budget style' and considered that, after 12 years of wear, the claddings of the house were generally 'OK' except for the areas outlined in paragraph 5.4.

5.2.3 The expert noted that other general areas were 'completed to a compliant finished standard'; apart from several interior walls that required completion where linings had been removed to install a heat pump system.

5.2.4 The expert noted that most windows were single-glazed and marked with a rating for 'High wind zone level 2'. A small window in the sunroom and the large joinery unit in the lounge were double-glazed and unmarked. I note that the large unit was part of the 2009 alterations and the small window may also have been installed then.

5.3 Moisture levels

5.3.1 The expert noted evidence of past moisture damage at the ceiling and wall above the stairwell landing, which had resulted from a flashing leak that the owner has since had repaired. The expert found that non-invasive and invasive moisture readings in the vicinity were inconclusive and recommended further investigation of that area. There was no evidence of moisture problems in other areas in the house.

5.3.2 In the attached garage area, the plywood lining was mildew stained, which the expert concluded was probably due to rain blown through the very exposed open garage door. However, in a more sheltered area moisture levels at the bottom of the plywood-covered concrete block base wall were recorded at over 70% (refer paragraph 5.4).

5.4 Commenting specifically on the cladding, the expert noted that:

The metal weatherboards

- some cladding to the sunroom wall lacks sufficient clearance above the ground
- in the re-used metal weatherboards, many old nail holes are unsealed and one overlap junction is unsealed and loose
- although window jambs appear adequately sealed, the ends of the kitchen window head flashing are unsealed
- the junction of the sunroom corner with the verandah beam is unsealed

The original verandah/garage junction

- at the garage end of the verandah, the beam penetrates the cladding and the sealant at the junction is deteriorating, with mould apparent
- at the junction of the verandah floor with the garage wall, water can be seen flowing down the sub-floor concrete block, and moisture levels are very high in the adjacent garage plywood lining and skirting
- mid-way up the wall between the garage and the verandah, moisture levels are high below the junction of the verandah roof with the garage wall
- destructive investigation is needed, including removing linings, to establish the cause(s) of the moisture penetration into the wall

Other roof junctions

- above the sunroom lean-to, a gutter discharge is very exposed without a spreader, and a vent or overflow pipe is open-ended
- the source of the past leak above the stairwell requires further investigation to ensure that the cause(s) have been satisfactorily remedied.

5.5 Compliance with the other relevant code clauses

5.5.1 The expert assessed the house for compliance with the relevant clauses of the Building Code and made the following comments. I have expanded on these comments where appropriate.

5.5.2 B1 Structure

- The buildings are fairly simple conventional structures and there is no evidence of structural stress or excessive movement. The sub-floor piles are accessible and appeared satisfactory.
- Inspection records note satisfactory inspections of foundations and floor slab.
- Structural elements are largely unchanged, so the design engineer's producer statement and calculations remain relevant to the completed house

5.5.3 C1 Outbreak of fire

- I note that the new wood burner was installed in 2009, and covered by the code compliance certificate issued on 2 September 2009.

5.5.4 E1 Surface water

- The house site is elevated, with ground sloping away from walls.
- Roof water is collected by gutters and directed into water tanks.
- The authority's inspection records indicate satisfactory drainage inspections.

5.5.5 E3 Internal moisture

- All facilities are simple and appear to be code compliant.
- Extract fans in the kitchen and bathrooms have been removed and the holes sealed, but the areas are able to be adequately ventilated by opening windows.

5.5.6 F4 Safety from falling

- The stair handrail is satisfactory and the entry steps were relocated during the 2001 extension, with no balustrade now required.

**5.5.7 G1 Personal hygiene, G2 Laundering, G3 Food preparation
G4 Ventilation, G7 Natural light and G8 Artificial light**

- Taking account of the 2009 alterations, the house complies with drawings for both consents, which show adequate provision to comply with requirements.
- All facilities are operating satisfactorily and appear code compliant.
- Extract fans in the kitchen and bathrooms have been removed and the holes sealed, but the areas are able to be adequately ventilated by opening windows.

5.5.8 G12 Water Supplies

- Potable water is supplied from water tanks.
- Fixtures are operating satisfactorily and appear code compliant.
- The authority's inspection records indicate satisfactory plumbing inspections.

5.5.9 G13 Foul Water, G14 Industrial Liquid waste (onsite effluent disposal)

- Fixtures appear to be in good operating condition with no apparent problems.
- Sewerage is disposed of via a septic tank system, which also handles laundry waste. (I note the latter is covered by the 2009 code compliance certificate.)
- The authority's inspection records indicate satisfactory drainage inspections.

5.5.10 H1 Energy Efficiency

- The authority's inspection records indicate satisfactory pre-line inspections, which covered wall and ceiling insulation.

5.6 A copy of the expert's report was provided to the parties on 15 June 2010.

Matter 1: The external envelope**6. Weathertightness**

6.1 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).

6.2 Weathertightness risk

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

Increasing risk

- the house is exposed and in a very high wind zone
- the house is two-storeys in part
- the walls have no eaves to shelter the cladding

- there are some partly exposed roof to wall intersections

Decreasing risk

- some walls are sheltered by deep verandah roofs
- the house is fairly simple in plan and form.

6.2.2 When evaluated using the E2/AS1 risk matrix, these features show that all elevations of the house demonstrate a moderate weathertightness risk rating. I note that the metal weatherboards are beyond the scope of the current E2/AS1.

6.3 Weathertightness performance

6.3.1 Generally the claddings appear to have been installed in accordance with good trade practice. However, taking account of the expert's report, I conclude that remedial work is necessary in respect of the areas outlined in paragraph 5.4.

6.4 Weathertightness conclusion

6.4.1 I consider the expert's report establishes that the current performance of the building envelope is not adequate because it is allowing water penetration through some areas of the claddings at present. Consequently, I am satisfied that the building work does not comply with Clause E2 of the Building Code.

6.4.2 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.

6.4.3 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 5.4 will result in the building being brought into compliance with Clauses B2 and E2

6.4.4 The expert has noted various areas of the wall cladding that require maintenance. 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: Other relevant clause requirements

7. Discussion

7.1 The authority's records of satisfactory inspections together with the expert's report have provided me with reasonable grounds to be satisfied me that the building work complies with the other relevant clauses of the Building Code.

- 7.2 I note that the expert has not commented on whether smoke alarms are installed in the house. While these were not a requirement at the time the original house and the extension were constructed, I strongly urge the applicants to install these.
- 7.3 The authority has provided information on calculated wind speeds for the site that show the building would require specific engineering design.
- 7.4 I consider the authority was entitled to rely on the wind information available to it at the time the building consents were issued in order to determine compliance with the Building Code. Indeed if the code compliance certificate had been issued in respect of either consent, the authority could not now take any action in respect of the completed work unless the building was, in general terms, unsafe or insanitary. I also observe that any concerns about the work completed in 2001 could have been considered as part of the alterations completed in 2009.
- 7.5 With respect to Clause B1, the original building and the extensions have performed adequately for 9 and 11 years respectively. In my opinion, this proven performance in use plus the evidence of the expert provides sufficient grounds to establish that the building work complies with Clause B1.

Matter 3: The durability considerations

8. Discussion

- 8.1 There are also concerns regarding the durability, and hence the compliance with the building code, of certain elements of the house taking into consideration the ages of the two phases of the building work completed in 1999 and 2001.
- 8.2 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).
- 8.3 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.
- 8.4 In this case the delay between the completion of the different phases of the building work and the former owner’s request for code compliance certificates has raised concerns that various elements of the resulting house are now well through or beyond their required durability periods, and would consequently no longer comply with

Clause B2 if code compliance certificates for each of the building consents 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 respective dates in 1999 and 2002.

8.5 It is not disputed, and I am therefore satisfied that all the building elements installed in the original house complied with clause B2 on 16 February 1999, and that the building elements in the extension complied with Clause B2 on 1 February 2002, in both cases this excludes any matters that require rectification as described herein. These dates has been agreed between the parties, refer paragraph 4.7.

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) The authority has the power to grant, on application from the owner, an appropriate modification of Clause B2 in respect of all the building elements.
- (b) It is reasonable to grant such a modification, with appropriate notification, as in practical terms the resulting house is no different from what it would have been if a code compliance certificate for the building work under each building consent had been issued in 1999 and 2002 respectively.

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

9. What is to be done now?

9.1 The authority should now inspect the building work and issue a single notice to fix for both building consents that requires the owner to bring the building work into compliance with the Building Code. That notice to fix should identify the areas listed in paragraph 5.4 and refer to any further defects that might be discovered in the course of investigation and rectification, but should not specify how those defects are to be fixed. It is not for the notice to fix to specify how the defects are to be remedied and the building brought to compliance with the Building Code. That is a matter for the owner to propose and for the authority to accept or reject.

9.2 Once the matters set out in in paragraph 5.4 have been rectified to its satisfaction, the authority should, on application from the owner, issue code compliance certificates in respect of each of the building consents amended as outlined in paragraph 8.

10. The decision

10.1 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, and accordingly I confirm the decision of the authority to decline to issue the two code compliance certificates.

10.2 I also determine that:

- (a) all the building elements installed in the house, apart from the items that are to be rectified, complied with Clause B2 on 16 February 1999, with respect to the original house, and 1 February 2002, with respect to the extension.
- (b) the building consents are hereby modified as follows:

Building consent No. 43001

The building consent is subject to a modification to the Building Code to the effect that, Clause B2.3.1 applies from 16 February 1999 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 5.4 of Determination 2010/76.

Building consent No. 74568

The building consent is subject to a modification to the Building Code to the effect that, Clause B2.3.1 applies from 1 February 2002 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 5.4 of Determination 2010/76.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 23 August 2010.

John Gardiner
Manager Determinations