



Determination 2011/012

Refusal to issue a code compliance certificate for an 11-year-old part of a house with monolithic cladding at 541 Redoubt Road, Flat Bush, Manukau



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 Forbes-Brown (“the applicant”) and the other party is the Auckland Council² (“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 a code compliance certificate for part of a house (“the original house”) that is 11 years old because it was not satisfied that the building work complied with certain clauses³ of the Building Code (First Schedule, Building Regulations 1992). The authority’s concerns about the compliance of the building work relate to its age and weathertightness.

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 After the application was made, and before the determination was completed, Manukau City Council was transitioned into the Auckland Council. The term authority is used for both.

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.

1.3 The matter to be determined⁴ is therefore whether the authority was correct to refuse to issue a code compliance certificate in respect of the building consent for the original house. In deciding this, I must consider:

1.3.1 Matter 1: The external envelope

Whether the external claddings in the original 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 monolithic cladding, the windows, the roof cladding and the flashings), as well as the way the components have been installed and work together. (I consider this matter in paragraph 7.)

1.3.2 Matter 2: The durability considerations

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

1.4 The building consents

1.4.1 Four building consents have been issued for work on the property as shown in Table 1. It is noted that the original house was built under consent No. 99/2750, however, subsequent records for the original house incorrectly refer to the consent issued for the carport addition (No. 99/4580), refer also paragraph 4.2.

Table 1

Stage	Description	Consent number	Date issued	CCC status	Comments
One	Original house	BC 99/2750	25/08/1999	CCC refused	Completed – recorded under BC 99/4580
	Carport addition	BC 99/4580	08/10/1999	Interim CCC issued 04/02/2004	Carport not built – house recorded under carport consent number
Two	2-bedroom addition	BC 02/5312	13/01/2003	CCC issued 07/02/2005	
Three	4-bedroom addition and detached carport	BC 03/3643	23/10/2003	CCC issued 13/07/2004	

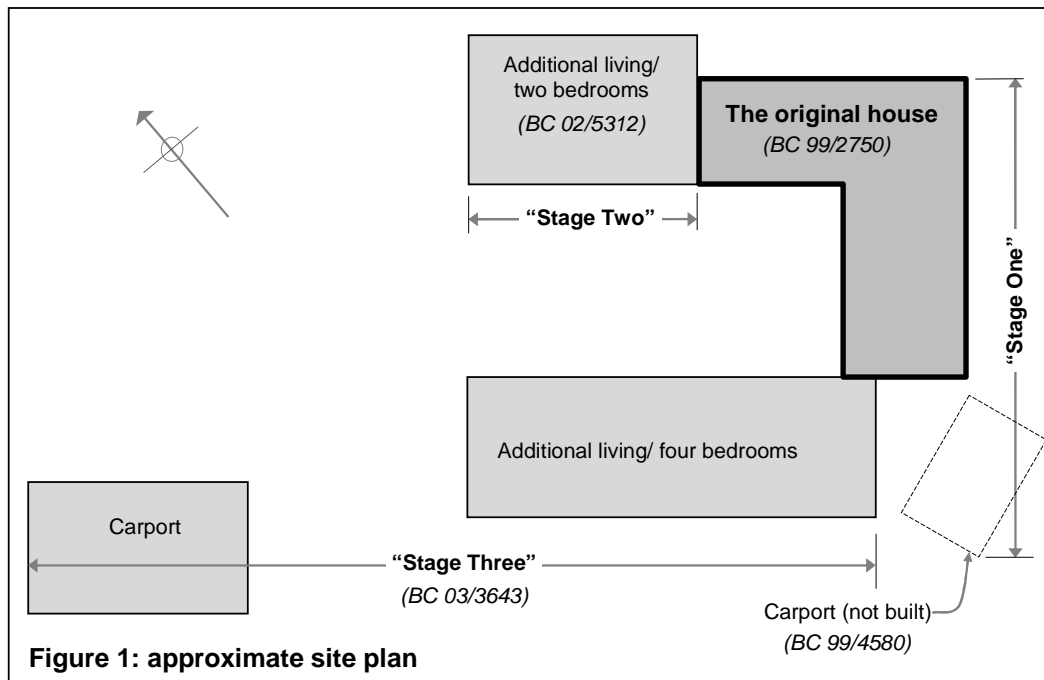
1.4.2 Two further building consents were issued for this property; with each additional consent issued with a code compliance certificate (“CCC”) as shown in Table 1. This determination is limited to considering the code compliance of the original house being consent No. 99/2750. The remaining consents are not considered in this determination.

1.5 In making my decision, I have considered the submission of the applicant, the report of the expert commissioned by the Department to advise on this dispute (“the expert”) and the other evidence in this matter.

⁴ Under section 177(1)(b) and 177(2)(d) of the Act

2. The completed building

- 2.1 The building work considered in this determination is the original house in the first stage (“Stage One”) of the construction of a large house on a flat rural site in a high wind zone for the purposes of NZS 3604⁵. The work took place over about five years as shown in Table 1. The completed house is a large U-shaped nine-bedroom residence. Stage One is in the eastern corner of the completed house as shown in Figure 1:



3. The building work

- 3.1 Stage One was the original house and consisted of a simple single-storey detached building. Construction is conventional light timber frame, with concrete foundations and floor slabs, monolithic cladding, aluminium windows and asphalt shingle roofing.
- 3.2 Stage One has a 30° pitch gable roof with eaves of about 350mm overall, except for a one metre deep verandah to the southwest wall of the lounge and a projecting bathroom wall on the northwest elevation. Stage One is very simple in plan and form and is assessed as having a low weathertightness risk (see paragraph 7.2).
- 3.3 The cladding system to the walls is a form of monolithic cladding system known as EIFS⁶, which consists of 80mm polystyrene backing sheets fixed directly to the framing over the building wrap and finished with 6mm fibreglass-reinforced cement-based plaster and an acrylic paint coating. The cladding was a proprietary EIFS system at the time of installation (although no longer available), and includes purpose-made flashings to windows, edges and other junctions.

⁵ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

⁶ Exterior Insulation and Finish System

- 3.4 The expert observed no evidence that the wall framing was treated. Given the date of construction of the house in 1999 and the lack of other evidence, I consider the wall framing is untreated.

4. Background

- 4.1 The authority issued a building consent for the house (No. BC 99/2750) on 18 August 1999 under the Building Act 1991 on the basis of a building certificate issued by a building certifier dated 25 June 1999.
- 4.2 A second separate building consent (No. BC 99/4580) was issued on 7 October 1999 'to add carport', also on the basis of a building certificate issued by a building certifier. Although the carport was never constructed, the building certifier subsequently used BC 99/4580 as the reference number for all inspections and other records instead of the original consent number for the house.
- 4.3 According to the building certifier's 'job card', construction started in September 1999 and inspections included pre-line inspections on 22 November 1999 and gip-nail inspection on 30 November 1999. The job card also notes that the carport was deleted from the consent. According to the applicant, the house was substantially completed by 1 December 1999.
- 4.4 In a statement dated 23 October 2001, the building certifier referred to a final inspection carried out on 17 December 1999 and identified items requiring attention 'prior to the issue of a [CCC]'. I note that no outstanding items referred to defects to the wall cladding. The building certifier noted that a further inspection would be required.
- 4.5 In 2003, the building certifiers' scope of approval was amended and limited to the claddings included in E2/AS1⁷ current at the time and 'only in respect of ordinary residential buildings'. This limitation prevented the certifier from approving wall claddings that were outside the scope of E2/AS1, and accordingly from issuing a certificate to cover the entire original house.
- 4.6 It appears the construction of Stages Two and Three delayed final inspections of Stage One until early 2004. The building certifier issued an interim code compliance certificate on 4 February 2004 for the original house, which stated that it was:
- An interim code compliance certificate in respect of part only of the building work under the above building consent as specified below:
- Excludes wall cladding outside scope E2AS1 NZBC
- The copies of the interim code compliance certificate supplied to me by both the parties show this document was unsigned; the certificate's validity is therefore in doubt. I also note the interim code compliance certificate was issued in respect of the consent for the carport (No. BC 99/4580), and not the original house (No BC 99/2750).
- 4.7 The building certifier's approval as a building certifier expired in October 2004.

⁷ The Acceptable Solution to Clause E2 of the Building Code

- 4.8 The lack of a final code compliance certificate for the house appears to have come to light when the property was intended to be sold in 2010. Discussions took place between the parties as to the possible options to resolve the matter. The applicant accepted that durability provisions should start from substantial completion of Stage One noting 'we were living in the house by about early December 1999'.
- 4.9 The Department received an application for a determination on 3 August 2010. The Department requested the authority to clarify which Building Code clauses were in dispute. In a response dated 19 August 2010, the authority advised that the disputed clauses were Clause B2 and E2. Further information was sought from the parties to allow the application to proceed, the last of which was received on 14 December 2010.

5. The submissions

- 5.1 In a letter to the Department dated 8 December 2010, the applicant outlined the background to the situation. The applicant noted the confusion created by the building consent for the carport, which he believed superseded the original building consent for the house as all inspections and the interim code compliance certificate were recorded under the carport consent and the carport was deleted from that consent.
- 5.2 The applicant forwarded copies of:
- the consent application documents for the original house
 - the consent drawings for the original house
 - some drawings of Stage Two and Stage Three
 - the building consents for the original house and for the carport addition
 - the building certifier's statement dated 23 October 2001
 - the certifier's interim code compliance certificate dated 4 February 2004
 - information from the LIM dated 23 July 2010
 - correspondence with the authority
 - a photograph of the house and other information.
- 5.3 In addition to the above information, the authority forwarded copies of:
- the specifications for the original house
 - the building certifier's inspection records
 - the consent drawings of Stage Two and Stage Three
 - the correspondence with the applicant.
- 5.4 The draft determination was issued to the parties on 27 January 2010. The draft was issued for comment and for the parties to agree a date when the Stage One work complied with Building Code Clause B2 Durability.

- 5.5 The applicant accepted the draft without comment; the authority advised that the interim code compliance certificate referred to in the draft had been issued by the building certifier. I have amended the determination accordingly. The parties agreed that compliance with Clause B2 was achieved on 23 December 1999.

6. The expert's report

- 6.1 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 Architects. The expert inspected the house on 27 December 2010, providing a report dated 12 January 2011.

6.2 General

- 6.2.1 The expert noted that the original consent drawings did not show the later additions to the house but Stage One of the house generally appeared to accord with the consent drawings, except that a bathroom had been added to the southeast – between the laundry and the family room.
- 6.2.2 The expert noted that the overall quality of construction appeared 'sound', with the cladding 'straight and true' and the paintwork 'free from discolouration or other signs of premature deterioration'. However, some maintenance was due, including cleaning of the plaster to prevent lichen growth.
- 6.2.3 The expert noted that the cladding was not a currently available proprietary EIFS system and he was unable to compare details with the manufacturer's instructions at the time of installation. The coating exposed at the window cut-out was a 6mm thick dense cement-based plaster reinforced with glass fibre mesh.
- 6.2.4 The expert could observe uPVC base moulding at the bottom of the EIFS, with clearances varying from about 50mm to 140mm. Taking account of the lack of evidence of moisture penetration, the expert considered that clearances were satisfactory and also noted that no control joints were needed for the cladding.

6.3 Windows and doors

- 6.3.1 The aluminium joinery is recessed by the thickness of the cladding, with metal head flashings and steeply sloping projecting polystyrene sills. At doors, the sill flanges overlapped the concrete slab edge, with uPVC jamb flashings visible beneath sills.
- 6.3.2 The expert removed coating at the jamb to sill junction of a lounge window, observing the uPVC jamb flashings butting into the sill flashings, with the plaster applied over the flashings. Although jamb flashings were not sealed to sill flashings, sealant was applied between the flashings and the window frame and the plaster, with more sealant applied after window installation between the flanges and plaster.
- 6.3.3 Taking account of the sheltered window heads and the lack of evidence of moisture penetration, the expert considered that the window and door installation was satisfactory in the circumstances.

6.4 Moisture levels

- 6.4.1 The expert inspected the interior of the house, taking non-invasive moisture readings and noted no evidence of moisture penetration.
- 6.4.2 The expert carried out invasive moisture testing to window and door junctions using long probes from the inside, recording moisture levels from 12% to 13%. Although higher moisture levels could be expected during wetter seasons, the expert considered the margin below 18% to be sufficiently large to confirm that no moisture has entered the untreated timber framing and the walls would remain weathertight providing the cladding was well maintained.
- 6.5 A copy of the expert's report was provided to the parties on 17 January 2011.

Matter 1: The external envelope

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 Stage One has the following environmental and design features which influence its weathertightness risk profile:

Increasing risk

- the house is in a high wind zone
- the monolithic wall cladding is fixed directly to the framing
- the external wall framing is not treated to a level that provides resistance to decay if it absorbs and retains moisture

Decreasing risk

- the walls have eaves projections to shelter the cladding
- Stage One is single-storey and very simple in form
- one wall has a deep verandah to shelter the cladding
- the window and door heads are protected by the soffits.

- 7.2.2 When evaluated using the E2/AS1 risk matrix, these features show that all elevations of Stage One demonstrate a low weathertightness risk rating and the direct-fixed cladding is therefore not an alternative solution to the current E2/AS1.

7.3 Weathertightness performance

- 7.3.1 Generally the claddings appear to have been installed in accordance with good trade practice and there is no evidence of moisture penetration after 11 years. Notwithstanding that the wall cladding is fixed directly to the framing, thus inhibiting free drainage and ventilation behind the cladding, these are compensating factors that assist its performance in this particular case and can allow the building to comply with the weathertightness and durability provisions of the Building Code.

7.4 Weathertightness conclusion

- 7.4.1 I consider the expert's report establishes that the current performance of the building envelope is adequate because it is preventing water penetration through the claddings at present, and that there are also no cladding faults on the house likely to allow the ingress of moisture in the future. Consequently, I am satisfied that Stage One complies with Clauses E2 and B2 of the Building Code.
- 7.4.2 I emphasise that each determination is conducted on a case-by-case basis. Accordingly, the fact that a particular cladding has been established as being code compliant in relation to a particular building does not necessarily mean that the same cladding system will be code compliant in another situation.
- 7.4.3 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 (for example, Determination 2007/60).

Matter 2: The durability considerations

8. Discussion

- 8.1 The authority has concerns regarding the durability, and hence the compliance with the building code, of certain elements of the building work in consent No. 99/2750 taking into consideration the age of the building work completed in 1999.
- 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 building work in 1999 and the applicant's request for a code compliance certificate has raised concerns that various elements of the building 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 a date in 1999.
- 8.5 It is not disputed, and I am therefore satisfied, that all the building elements complied with Clause B2 on 23 December 1999. This date has been agreed between the parties, refer paragraph 5.5.
- 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 an appropriate modification of Clause B2 in respect of all the building elements if this is 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 in 1999.
- 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 I suggest that the authority clarify its records for building consents No. 99/2750 and No. 99/4580 by ensuring that all records pertaining to the original house are moved within one single consent number in order to avoid any future confusion.

10. The decision

10.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the external envelope of the original house (building consent No. 99/2750) complies with Clauses E2 and B2 of the Building Code and accordingly, I reverse the authority's decision to refuse to issue a code compliance certificate.

10.2 I also determine that:

(a) all the building elements installed in building consent No. 99/2750 complied with Clause B2 on 23 December 1999.

(b) building consent No. 99/2750 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 23 December 1999 instead of from the time of issue of the code compliance certificate for all the building elements.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 21 February 2011.

John Gardiner
Manager Determinations