



Determination 2011/009

Refusal to issue a code compliance certificate for a 13-year-old house with monolithic and brick veneer claddings at 2 Vereker Court, Rototuna, Hamilton



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 and builder of the house, G Steel (“the applicant”), and the other party is the Hamilton 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 a code compliance certificate for a 13-year-old house, because it is not satisfied that the building work complies with the Building Code (First Schedule, Building Regulations 1992). The refusal arose because:
- the authority cannot locate its inspection records for the house
 - the authority also has concerns about:
 - the compliance of the house with relevant clauses² of the Building Code
 - the age of the house.

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

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.

1.3 The matter to be determined³ therefore is whether the authority was correct to refuse to issue a code compliance certificate. In deciding this, I must consider:

1.3.1 Matter 1: The external envelope

Whether the external building envelope of the house complies with Clause B2 Durability and Clause E2 External Moisture of the Building Code. The building envelope includes the components of the systems (such as the brick veneer, the monolithic claddings, the windows, the roof cladding and the flashings), as well as the way the components have been installed and work together. (I consider this in paragraph 7.)

1.3.2 Matter 2: Other clause requirements

Whether the house complies with the remaining relevant clauses of the Building Code. (I consider this in paragraph 8.)

1.3.3 Matter 3: 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 9.)

1.4 The available evidence

1.4.1 Based on the information supplied, I consider there is sufficient evidence available to allow me to reach a conclusion as to whether the building work complies with the Building Code. This determination therefore considers whether it is reasonable to issue a code compliance certificate. In order to determine that, I have addressed the following questions:

- (a) Is there sufficient evidence to establish that the building work as a whole complies 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?

1.4.2 In making my decision, I have considered:

- the applicant's submission
- the report from the applicant's building inspection company ("the inspection company")
- the authority's inspection records and photographs of its final inspection on 19 January 2011
- the report of the expert commissioned by the Department to advise on this dispute ("the expert")
- the other evidence in this matter.

³ Under section 177(1)(b) and 177(2)(d) of the Act

2. The building work

- 2.1 The building work consists of a single-storey detached house situated on a gently sloping site assumed to be in a medium wind zone for the purposes of NZS 3604⁴. The house is reasonably simple in plan and form and is assessed as having a low weathertightness risk (see paragraph 7.2).
- 2.2 The three-bedroom house is a 'boomerang' shape, with an attached garage/workshop wing. The 30° pitch hipped and gabled roof generally has eaves and verge projections of more than 600mm overall, except for several projecting walls where the overhang is reduced to the gutter width only.
- 2.3 The construction is conventional light timber frame, with concrete block foundations and a concrete floor slab, brick veneer and monolithic wall claddings, aluminium windows and concrete tile roofing.
- 2.4 The expert did not test any timber samples. However, he inspected the consent documentation in the authority's property file and noted that treatment to wall framing was specified. Given that this house was constructed by the applicant, I accept that the external wall framing is likely to be treated.

2.5 The wall claddings

- 2.5.1 Most of the walls are brick veneer, which incorporates a drained and ventilated cavity. Within the brick veneer wall cladding, texture-coated fibre-cement panels are installed above window and door heads.
- 2.5.2 The remaining walls are clad in a form of monolithic cladding known as EIFS⁵. In this instance, the EIFS consists of 40mm polystyrene backing sheets fixed directly to the framing over the building wrap, to which a mesh-reinforced textured coating system has been applied. The proprietary system includes purpose-made flashings to windows, edges and other junctions.

3. Background

- 3.1 The authority issued a building consent (which I have not seen) for the house (No. 96/2321) on 18 November 1996 under the Building Act 1991. The expert has confirmed that no records of inspections undertaken by the authority can be located.

3.2 The construction

- 3.2.1 In a letter to the applicant dated 18 November 1996, the authority approved the building consent and listed the consent conditions, which included requirements for:
- a foundation inspection
 - building and plumbing pre-pour concrete inspections
 - building and plumbing pre-lining inspections
 - stormwater and foulwater drainage inspections.

⁴ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

⁵ Exterior Insulation and Finish System

- 3.2.2 As the builder of the house, the applicant has stated that he knows that ‘all relevant inspections of the time were obtained’; and I take this to include the inspections listed above. I also note that the authority has not disputed that it carried out inspections during construction of the house.
- 3.2.3 Construction appears to have been undertaken during 1997; and the parties have agreed that the house was occupied by 1 November 1997 (see paragraph 4.1). However, it appears that no final inspections were requested and no code compliance certificate was applied for.

3.3 The authority’s available records

- 3.3.1 During 2006, the authority sent out pro-forma letters to some owners with older outstanding building consents; informing them that it had not been advised whether building work was complete and ready for a final inspection. Unless contacted, LIM⁶ records would note that these outstanding consents had not received code compliance certificates, which could affect future sales of the properties. According to the authority, such a letter had been sent to the applicant and I note that the expert sighted a letter dated 15 October 1996 ‘requesting further information’.
- 3.3.2 The authority’s computer records included two entries referring to building consent 1996/2321. ‘General Memo’ number 1 dated 18 January 2007 stated:
- The above Building Consent will be microfilmed and scanned as an incomplete record. The job card, inspection checksheets etc are missing.
- ‘General Memo’ number 2, also dated 18 January 2007, was stamped ‘No CCC – No response from owner to correspondence’ and stated:
- Owners have not advised Council of building work and we have not issued a Code Compliance Certificate due to the age of the consent.
- 3.3.3 In 2007 the authority developed a policy for managing building consents issued under the Building Act 1991; and its ‘Building Unit Policy’ dated 25 May 2007⁷ outlined the policy as (in summary):
- Code compliance certificates will not be issued for consents issued under the former Act.
 - Consent records will be removed from circulation and stored.
 - Code compliance certificate applications will be refused and owners given options to:
 - apply to the Department for a determination, or
 - obtain a building report from an independent expert to lodge on the file.
 - Any information on the property file will be made available on the LIM.
- 3.4 When the house was offered for sale in 2010, it was discovered that no records existed on the authority’s property files. The applicant was then informed that a code compliance certificate would not be issued due to the age of the building consent.

⁶ Land Information Memorandum

⁷ Sourced from another determination for a house inspected by the same authority

3.5 The inspection company's inspection report

3.5.1 The authority's verbal refusal appears to be in accordance with its general policy (see paragraph 3.3.3) and the applicant elected to obtain a building report; engaging the inspection company to inspect the house.

3.5.2 The inspection company inspected the house and provided a 'Building Inspection' report' dated 17 December 2010. The inspection company visually inspected the exterior and interior of the house, taking non-invasive moisture readings and limited invasive moisture readings using short probes into the interior linings. No signs of water ingress were observed.

3.5.3 The inspection company comments on the construction included (in summary):

The external envelope (E2)

- Cladding clearances above ground comply with E2/AS1.
- Brick veneer:
 - is in good condition with no signs of structural movement
 - has 'tight and consistent' mortar joints
 - has top and bottom vents in accordance with NZS 3604
 - slightly overhangs the foundations to provide a drip edge.
- EIFS cladding:
 - is in good condition, with no evidence of cracking or movement
 - includes uPVC base mouldings with a drip edge and 6mm drainage gap.
- Flush-finished fibre-cement panels:
 - overlap the heads of windows installed within the brick veneer.
- Concrete tile roofing:
 - has satisfactory pliable flashings around penetrations
 - has pliable apron flashings at roof to wall junctions, with adequate clearance from the upper EIFS.

The other clauses

- The structure (B1):
 - foundations and wall claddings show no signs of settlement or movement
 - there are no cracks or signs of movement in the interior linings
 - timber roof trusses are fixed in accordance with NZS 3604.
- The site is elevated, with no signs of ponding (E1)
- Bathrooms have fans vented to the outside (E3)
- Clearances to the tops of gully traps are satisfactory (G13)
- Fibreglass insulation is installed to the ceiling space (H1).

3.5.4 The inspection company concluded that:

...although this dwelling was constructed circa 1996 it has been constructed [to] a high standard and that many of the high risk areas that have been identified through

the building industry have been thought through and would generally comply with the Building Regulations as stated above.

3.6 The Department received an application for a determination on 23 December 2010.

4. The submissions

4.1 In a statement dated 21 December 2010, the applicant outlined the background to the dispute and noted that he and the Authority had agreed that the date the house was occupied was 1 November 1997. The applicant stated that no correspondence had been received in regard to the outstanding building consent (see paragraph 3.3.1). The applicant also noted the missing inspection records; adding 'as the builder I know that all relevant inspections of the time were obtained'.

4.2 The applicant provided copies of:

- the letter dated 18 November 1996 approving the building consent
- the authority's computer records
- the inspection company's report on the house.

4.3 The authority's final inspection

4.3.1 As the authority did not provide a submission in response to the application for a determination, in an email to the authority dated 17 January 2011 the Department sought further information about the house in the form of a visual inspection. In response, the authority undertook a limited visual non-invasive inspection.

4.3.2 The authority carried out building and plumbing inspections on 19 January 2011 and ticked relevant items on the checklists, noting that the use of safety glass could not be confirmed. The checklists identified the following minor matters (the applicant has now provided confirmation that these matters have since been resolved):

- No cowl cages fitted to terminal vents.
- No seismic restraints fitted to hot water cylinder.
- The lack of clamps and siphon bend to the dishwasher pipe.

4.4 The authority provided copies of:

- the final inspection checklists dated 19 January 2011
- photographs taken during the inspection.

4.5 A draft determination was issued to the parties on 9 February 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.

4.6 Both parties accepted the draft without comment and agreed that compliance with Clause B2 was achieved on 1 November 1997.

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 The authority accepts that the inspection records have been mislaid and does not deny that inspections were carried out on this house. In the absence of any evidence to the contrary, I therefore take the view that I am entitled to rely on the applicant's statement that all necessary inspections were satisfactorily carried out. However, I consider it important to look for evidence to support this view.
- 5.3 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 inspection company's report on the house.
 - The authority's records and photographs of its final inspections.
 - The expert's report as outlined below.

6. The expert's report

- 6.1 As mentioned in paragraph 1.4.2, 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 26 January 2011, providing a report dated 8 February 2011.

6.2 General

- 6.2.1 The expert noted that overall construction quality was 'above average', with the claddings 'well fixed and aligned' and flashings 'tidy and effective'. The claddings had been well maintained, with no evidence of 'cracks or other imperfections'.
- 6.2.2 The expert also noted that the roof tiles were 'well fitted' and the apron flashings were 'properly constructed'. Roof penetrations appeared to be flashed in accordance with 'best trade practice'.
- 6.2.3 The expert inspected the interior of the house, taking non-invasive moisture readings internally, and noted no evidence of moisture. The expert also took 3 invasive moisture readings (from 13% to 16%) through the cladding below exposed window sills, along with 6 invasive readings (from 14% to 18%) through internal linings and trim. Taking account of an internal equilibrium reading of 16%, the expert concluded the moisture readings to be satisfactory.

6.3 The wall claddings

- 6.3.1 The expert noted that the EIFS cladding had 'no visible cracking' and that no control joints were required for the small areas of cladding. The plaster coating appeared to have been applied in accordance with the manufacturer's specifications.

- 6.3.2 The expert noted that the brick veneer walls were ‘well finished with no signs of structural cracking’ and observed weep holes and a small overhang to create a drip line at the bottom of the brickwork.
- 6.3.3 The expert noted that the clearances below the EIFS and brick veneer to the adjacent paving and ground levels were satisfactory on all elevations, with planting and pebble areas well maintained.
- 6.4 Windows and doors**
- 6.4.1 The windows and doors installed in the EIFS cladding have metal head flashings and are recessed by the cladding thickness, except at the projecting garage bay where the window is face-fixed. At the large window to the north wall of the lounge, the expert noted that the EIFS overlapped and protected the semi-circular window head, with additional shelter provided by the verge overhang.
- 6.4.2 The windows installed in the brick veneer walls are recessed by about 80mm, with a panel of fibre-cement overlapping the window head flange in lieu of a head flashing. Sloping bricks form a traditional sill that projects beyond the brick veneer below. The window heads are sheltered beneath deep eaves and there is a cavity behind the brick veneer that provides drainage around the window jambs.
- 6.5 The expert also commented on the compliance of the house with other relevant clauses of the Building Code (considered in paragraph 8.2), concluding that the house complies with all relevant clauses of the Building Code.
- 6.6 A copy of the expert’s report was provided to the parties on 8 February 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

- although fairly simple in form, there are some complex roof to wall junctions, some unconventional window joinery and two types of wall claddings
- some walls have monolithic cladding fixed directly to the framing
- some walls have limited eaves or verges to shelter the claddings

Decreasing risk

- the house is single-storey and sited in a medium wind zone

- the house is fairly simple in plan and form
- most of the walls are sheltered by roof projections
- most of the cladding is brick veneer, with a drained and ventilated cavity
- the external wall framing is likely to be treated to a level that provides resistance to decay if it absorbs and retains moisture.

7.2.2 When evaluated using the E2/AS1 risk matrix, these features show that all elevations of the house demonstrate a low weathertightness risk rating. I note that, if the details shown in the current E2/AS1 were adopted to show code compliance, the monolithic claddings would not require a drained cavity.

7.3 Weathertightness performance

7.3.1 Taking account of the expert's report, the claddings appear to have been installed in accordance with good trade practice and with the manufacturers' instructions at the time of construction.

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 the house complies with Clauses E2 and B2 of the Building Code.

7.4.2 Effective maintenance of claddings is important to ensure ongoing compliance with Clauses B2 and E2 of the Building Code and is the responsibility of the building owner. The Department has previously described these maintenance requirements (for example, Determination 2007/60).

Matter 2: Other clause requirements

8. Discussion

8.1 In assessing the compliance of this house with other relevant Building Code clauses, I have taken into account:

- the consent drawings
- the inspection company's report
- the expert's report
- the authority's final inspection checklists and the likelihood that satisfactory inspections were carried out during construction, despite the lack of records.

8.2 With respect to the remaining code clauses relevant to this house, I make the following observations:

- **B1 Structure**

The house is a fairly simple conventional structure and the expert noted that the structure appeared compliant. The reports and final inspections noted no visible signs of problems after 13 years.

- **E1 Surface water**

The house site is gently sloping, with the ground sloping away from the walls. The reports and final inspections noted no visible signs of problems after more than 13 years. The expert also observed adequate provision for stormwater disposal and noted that gully traps were adequately clear of the surrounding ground.

- **E3 Internal moisture**

The inspection company noted that bathrooms were vented to the outside. The authority's final inspections noted no visible signs of problems and the expert saw no evidence of interior moisture.

- **F2 Hazardous building materials**

The expert observed safety glass to the proprietary shower cubicles. I also note that the glazed aluminium doors are conventional units likely to include safety glass where required. The doors should also have been inspected during construction.

- **G1 to G8 (Personal hygiene, Laundering, Food preparation, Ventilation Interior environment, Natural light, Electricity and Artificial light)**

The house generally complies with the consent drawings and the drawings show adequate provision to comply with the requirements.

The expert noted satisfactory bathroom, laundry and kitchen facilities, appropriately sized opening windows, and satisfactory natural and artificial lighting in all areas. The authority's final inspection noted no visible signs of problems.

- **G12 Water Supplies and G13 Foul Water**

The expert noted that the facilities and systems appeared to be operating satisfactorily. The reports and final inspections noted no visible signs of problems after more than 13 years.

- **H1 Energy Efficiency**

The drawings call for ceiling and wall insulation, with the reports and final inspections confirming fibreglass insulation in the ceiling space. The expert also observed mineral fibre wall insulation behind an electrical outlet.

8.3 Based on the above observations, I consider that the expert's report, the inspection company's report, the authority's final inspections and the other evidence, provide me with reasonable grounds to conclude that the building work complies with the remaining relevant clauses of the Building Code.

Matter 3: The durability considerations

9. Discussion

- 9.1 The authority also has concerns regarding the durability, and hence the compliance with the building code, of certain elements of the house taking into consideration the age of the original building work completed in 1997.
- 9.2 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).
- 9.3 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.
- 9.4 In this case the delay between the completion of the building work in 1997 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 1997.
- 9.5 According to the applicant, the date of occupation of the house has been agreed between the parties (see paragraph 4.1). It is not disputed, and therefore I am satisfied that all the building elements installed in the house complied with Clause B2 on 1 November 1997 (refer paragraph 4.6).
- 9.6 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.
- 9.7 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 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 1997.

9.8 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.

10. The decision

10.1 In accordance with section 188 of the Building Act 2004, I hereby determine that:

- the external envelope complies with Building Code Clauses B2 and E2
 - the house complies with the remaining relevant clauses 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 the house complied with Clause B2 on 1 November 1997.
- (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 November 1997 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 16 February 2011.

John Gardiner
Manager Determinations