Department of Building and Housing
Te Tari Kaupapa Whare

Determination 2011/037

Refusal to issue a code compliance certificate for a 12-year-old house with fibre-cement weatherboard cladding at 82 Taniwha Place, Tauranga

1. The matters to be determined

1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004[1] ("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 applicants are the owners, R and D Jones ("the applicants"), and the other party is the Tauranga City Council ("the authority"), carrying out its duties as a territorial authority or building consent authority.

1.2 This determination arises from the decision of the authority to refuse to issue a code compliance certificate for a 12-year-old house. The refusal arose because:

- the authority is not satisfied that the building work complies with certain clauses2 of the Building Code (First Schedule, Building Regulations 1992); in particular in regard to its age
- the building work had been undertaken under the supervision of Bay Building Certifiers ("the building certifier"), which was duly registered as a building certifier under the former Building Act 1991, but which ceased operating as a certifier before it had issued a code compliance certificate for the house.

[1] The Building Act 2004, the Building Code the Compliance Documents, past determinations, and guidance documents issued by the Department are available from the Department's website at www.dbh.govt.nz or by contacting the Department on 0888 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.

1.3 The matter to be determined[3] is therefore 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 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 fibre-cement weatherboards, 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 6.

1.3.2 Matter 2: The remaining Building Code clauses

Whether the building work complies with the remaining clauses relevant to this house. (I consider this matter in paragraph 7.)

1.3.3 Matter 2: The durability considerations

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

1.4 I note that a building consent was issued in 2000 for a detached garage building on the same site. I have received no information about the status of that building consent and the owners' application is limited to the house only. This determination therefore does not consider the detached garage.

1.5 I also note that the building certifier inspected the construction of this house. The certifier ceased operating as a building certifier in July 2005, but continued operating under a different name as a contractor providing inspection services for the authority. This determination refers to both entities as "the authority's contractor".

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

2. The building work

2.1 The building work consists of a detached single-storey house situated on a large level rural site in a high wind zone for the purposes of NZS 3604[4]. The L-shaped house is fairly simple in form and is assessed as having a low weathertightness risk.

2.2 Construction is generally conventional light timber frame, with concrete foundations and floor slab, fibre-cement weatherboards, aluminium windows and profiled metal roof cladding. The 30° pitch gabled roofs have eaves of about 400mm overall and verge projections of about 250mm to the west, south and part of the east elevation. On the remaining east elevation and the north elevation, 30° pitch lean-to verandahs are attached to the walls below the upper gutters.

2.3 The wall cladding is horizontal 7.5mm fibre-cement weatherboards fixed through the building wrap to the framing. The proprietary cladding system includes jointers, mouldings and scribers provided by the manufacturer.

[3] Under sections 177(1)(b) and 177(2)(d) of the Act
[4] New Zealand Standard NZS 3604:1999 Timber Framed Buildings

2.4 The expert noted no evidence of timber treatment. Given the lack of evidence and the date of framing installation in 1998, I consider that the wall framing of this house is not treated.

3. Background

3.1 The authority issued a building consent for the house (No. 2136) on 30 September 1998 under the Building Act 1991, based on a building certificate from the authority's contractor dated 4 September 1998.

3.2 The authority's contractor carried out the following inspections:

- Foundations on 30 September and 1 October 1998 (which required an engineers report for ground conditions).
- Annotation dated 2 October 1998, noting that a report and producer statement had been received from the engineers.
- Pre-pour slab inspections on 19 October 1998 (which passed, noting 'engineer has been out; rechecked compaction of reinstated ground').
- Pre-line plumbing inspection on 9 December 1998 (which passed).
- Pre-line building inspection on 9 December 1998 (which noted 'batts in walls & ceiling').
- Drainage inspection on 10 December 1998 (which noted 'septic okay but soakage still to be done'). I note that the as-built plan shows the septic tank position and field tiles for soakage.
- Pre-line building re-inspection on 14 December 1998 (which passed).
- Solid fuel heating on 28 June 1999.

3.3 No final inspection is recorded. I have seen no correspondence from the authority or the authority's contractor to the applicants advising why the code compliance certificate was unable to be issued. A code compliance certificate was not sought until 2010, at which time the applicants were apparently told by the authority that a code compliance certificate would not be issued 'because time had elapsed.' The authority provided no formal advice to the applicants giving the reasons for its refusal to issue the code compliance certificate as required by section 95A of the Act.

3.4 The Department received an application for a determination on 10 January 2011 and sought additional information from the authority on the reasons for the refusal of a code compliance certificate. In an email dated 25 January 2011, the authority stated that its concerns related to 'Clause B2 and not having inspected any of the building work'. I address this further in paragraph 9.

4. The submissions

4.1 Within the application, the applicants excluded the detached garage building from their application. The applicants stated that they had contacted the authority about the compliance of the house and had been informed that the authority would not issue a code compliance certificate because 'time had elapsed'.

4.2 The applicants provided copies of:

- the drawings
- the building consent application documentation
- the building consent and the building certificate
- various other drawings and information.

4.3 The authority acknowledged the application and made no submission. In making no submission, the authority has not provided any evidence to me as to why they believe the house is not code-compliant.

4.4 A draft determination was issued to the parties on 16 March 2011. The draft was issued for comment and for the parties to agree a date when the house complied with Building Code Clause B2 Durability.

4.5 The authority accepted the draft without comment and proposed a durability commencement date of 14 December 1998. In a response received on 14 April 2011, the applicants accepted the draft without comment and proposed a durability commencement date of 2 February 1999.

4.6 The differences in the dates proposed are not significant given the elapsed time periods in respect the consent. I have therefore chosen the more conservative of the two dates (14 December 1998) for inclusion in the final determination.

5. The expert's report

5.1 As mentioned in paragraph 1.6, I engaged an independent expert to assist me in the evaluation of the external building envelope and the other matters identified by the authority. The expert is a member of the New Zealand Institute of Building Surveyors. The expert inspected the house on 17 February 2011 and provided a report that was completed on 9 March 2011.

5.2 General

5.2.1 The expert considered that the overall standard of workmanship was generally good, with the fibre-cement weatherboards 'well fixed and aligned', with no evidence of 'failure or premature deterioration'. The expert noted that the house was generally well maintained, although the weatherboards were due for repainting.

5.2.2 The expert noted that the house generally appeared to accord with the consent drawings and specifications, except that the verandah adjacent to the family room

had been closed in to form a conservatory and a solid fuel heater had been installed in that area.

5.2.3 The expert noted that the fibre-cement weatherboards were installed using the manufacturer's accessories to external and internal corners, with concealed back soakers and sealant to board joints as recommended by the manufacturer. The expert considered that clearances to the adjacent ground or paving were satisfactory.

5.2.4 The expert noted that windows and doors were face-fixed against the weatherboards, with metal head flashings to all windows, timber scribers sealed at the jambs and no signs of moisture penetration. The metal head flashings projected above the jamb scribers and the expert observed that most window and door heads were well protected by verandahs and eaves.

5.3 Moisture levels

5.3.1 The expert inspected the interior of the house, taking non-invasive moisture readings internally, and noted evidence of moisture in the interior wall beside the ensuite shower cubicle. Invasive moisture readings into the dividing wall were over 80%, indicating a likely plumbing leak into the wall (see paragraph 7.1.4).

5.3.2 The expert noted no evidence of moisture penetrating the exterior walls. Because of the weatherboard cladding, the expert took invasive moisture readings through interior linings at areas considered at-risk, and noted no elevated levels.

5.4 Commenting specifically on the external envelope of the house, the expert noted that:

- the hose tap penetration is unsealed
- the bottom of the apron flashings rely on sealant only for weatherproofing, with no kickout provided.

5.5 The expert also assessed the house for compliance with the other relevant clauses of the Building Code. I have included his comments in paragraph 7.

5.6 A copy of the expert's report was provided to the parties on 11 March 2011.

Matter 1: The cladding

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

Increasing risk

- the house is in a high wind zone

- although fairly simple in form, there are some complex roof to wall junctions
- the 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

- it is a single-storey house
- there are eaves and verandahs to shelter most of the cladding
- there are no decks attached to the house.

6.2.2 When evaluated using the E2/AS1 risk matrix, these features show that the 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 fibre-cement weatherboards would not require a drained cavity.

6.3 Weathertightness performance

6.3.1 Generally the claddings appear to have been installed in accordance with good trade practice and to the manufacturer's recommendations at the time. However, taking account of the expert's report, I conclude that remedial work is necessary for:

- the unsealed hose tap
- the bottom of the apron flashings.

6.4 Weathertightness conclusion

6.4.1 I consider the expert's report establishes that the current performance of the building envelope is adequate because there is no evidence of moisture penetration. Consequently, I am satisfied that the house complies with Clause E2 of the Building Code.

6.4.2 However, the building envelope is also required to comply with the durability requirements of Clause B2. Clause B2 requires that a building continues to satisfy all the objectives of the Building Code throughout its effective life, and that includes the requirement for the house to remain weathertight. Because the cladding faults may allow the ingress of moisture in the future, the building work does not comply with the durability requirements of Clause B2.

6.5 Because the faults identified with the claddings occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 6.3.1 will result in the building envelope being brought into compliance with Clause B2 of the Building Code.

6.6 The expert has noted that the fibre-cement weatherboards are due for repainting. Effective maintenance of claddings is important to ensure ongoing compliance with Clause 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 remaining Building Code clauses

7. Discussion

7.1 Taking account of the expert's report and the consent drawings, I make the following observations with respect to the remaining clauses relevant to this house:

7.1.1 B1 Structure

- The house is a simple conventional structure and the inspection summary records satisfactory inspections of the foundations, floor slab, bracing and framing. An engineer's inspection history and producer statement was provided for soil conditions and compaction.
- The expert also noted no evidence of structural stress or excessive movement after twelve years.

7.1.2 C Fire Safety

- The expert noted that smoke alarms had not been installed. While these were not a code requirement when the house was constructed, I strongly suggest the owners to install smoke detectors in accordance with Acceptable Solution F7/AS1.

7.1.3 E1 Surface water

- An as-built drainage plan was submitted to the authority and the inspection summary indicates satisfactory inspections of drainage.
- The expert noted that the house is sited on the higher part of the site, which would be unlikely to flood even under extreme weather conditions. The expert also noted that the ground falls away from the house, which allows natural run-off of surface water.

7.1.4 E3 Internal moisture

- As noted in paragraph 5.3.1, the expert recorded very high moisture levels in the interior wall adjacent to the ensuite shower cubicle. As this accommodates the shower fittings, it is likely that the moisture results from a plumbing leak.
- However, the expert noted that moisture could be a result of defects in the waterproofing membrane underlying the shower tiles. Pending further investigation, I am therefore not satisfied that the ensuite bathroom is resistant to internal moisture.

7.1.5 F2 Hazardous building materials

- Exterior glazed doors are conventional units that would have been inspected during pre-line inspections; indicating that safety glass is likely to be installed where required.

- The expert also observed safety markings in the shower doors.

7.1.6 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, the interiors were inspected by the authority's contractor and the drawings show adequate provision to comply with the requirements.
- On inspecting the ceiling space, the expert noted that the bathroom fans had been disconnected from ducting and did not exhaust to the outside.
- The expert noted that all other facilities were 'in good working order' and would meet the functional requirements of relevant clauses.

7.1.7 G12 Water Supplies

- The expert noted that the house is connected to mains water supply and observed that water pressure was good and plumbing fixtures operated satisfactorily.
- The inspection summary indicates satisfactory pre-line plumbing inspections, although I note the need to investigate the likely plumbing leak to the ensuite shower wall.

7.1.8 G13 Foul Water

- The inspection summary recorded that the septic tank was satisfactory but that the soakage system was incomplete. An as-built plan subsequently submitted to the authority shows the position of the field tile soakage area.
- The expert was informed by the applicants that the soakage was completed shortly after the inspection and has been operating without apparent problems over the past twelve years.
- The expert also noted that the rims to gully traps are sufficiently clear of the adjacent paving level.

7.1.9 H1 Energy Efficiency

- The inspection summary indicates that satisfactory preline inspections were undertaken, and insulation was noted in walls and ceilings.
- The expert has also observed that ceiling insulation had been installed.

7.2 Other clauses: conclusion

7.2.1 Taking account of the expert's report and the other evidence, I consider that the following areas require investigation and appropriate repair if necessary (applicable clauses are provided in brackets):

- investigation into the adequacy of the waterproof membrane to the tiled interior wall to the ensuite shower (Clause E3)
- the disconnected bathroom exhaust fans (Clause G4)
- the likely plumbing leak to the tiled ensuite shower wall, with investigation and repair of any moisture damaged framing (Clauses G12, B1).

7.2.2 Based on my assessment as outlined in paragraph 7.1, I consider that the expert's report, the authority's contractor's inspection records and the other documentation, allow me to conclude that the building work is likely to comply with the remaining relevant clauses of the Building Code.

Matter 3: The durability considerations

8. Discussion

8.1 There are concerns regarding the durability, and hence the compliance with the building code, of certain elements of the building taking into consideration the age of the building work completed in 1998.

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 1998 and the applicants' 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 1998.

8.5 I am satisfied that all the building elements, with the exclusion of those items to be rectified as described in paragraphs 6.3.1 and 7.2.1, complied with Clause B2 on 14 December 1998 (refer paragraph 4.6).

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, on request of the owner, in respect of all the building elements.

(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 1998.

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

9. The authority's actions

9.1 As noted in paragraph 3.3, the authority has not formally advised the applicants of the reasons for its refusal to issue the code compliance certificate as required by section 95A of the Act. In addition, I have noted in paragraph 4.3 the lack of any submission from the authority, which might have provided evidence to me as to why it believes this house is not code compliant. Neither the authority nor the authority's contractor have inspected this house since 1999, which must indicate the authority has a limited basis on which to make any judgement as to compliance.

9.2 In addition the authority also appears to maintain that one of the reasons for its concern is that it did not carry out the inspections during the construction of this house. However, as mentioned in paragraph 1.5, the building certifier undertaking the inspections was doing so on the authority's behalf and is now operating under a different name as the authority's agent to provide inspection services for the authority.

9.3 On the information presented to me it appears the applicants were unable to ask the authority to undertake inspections of their house as this task fell to the authority's contractor. I am of the opinion that the authority cannot deny any responsibility for the actions of its agent. To now use the lack of authority inspections as a reason for refusing to issue a code compliance certificate does not, in the circumstances, appear reasonable.

10. What is to be done now?

10.1 The authority should inspect the house and issue a notice to fix that requires the owner to bring the house into compliance with the Building Code, identifying the defects and investigations listed in paragraph 6.3.1 and paragraph 7.2.1 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 specify how the defects are to be remedied and the building brought to compliance with the Building Code. That is a matter for the owners to propose and for the authority to accept or reject.

10.2 I suggest that the parties adopt the following process to meet the requirements of paragraph 10.1. The applicants should produce a response to the notice to fix in the form of a detailed proposal as to the investigation and rectification or otherwise of

the specified matters. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

11. The decision

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

- the external envelope does not comply with Building Code Clause B2
- the bathroom fans do not comply with Clause G4
- pending further investigation, the ensuite shower does not comply with Building Code Clauses E3, G12 and B2

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

11.2 I also determine that:

(a) all the building elements installed in the house, apart from the items that are to be rectified as described in Determination 2011/037, complied with Clause B2 on 14 December 1998.

(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 14 December 1998 instead of from the time of issue of the code compliance certificate for all the building elements, except the items to be rectified as set out in paragraph 6.3.1 and paragraph 7.2.1 of Determination 2011/037.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 18 April 2011.

John Gardiner
Manager Determinations