Department of Building and Housing
Te Tari Kaupapa Whare

Determination 2010/69

Refusal to issue a code compliance certificate for an eight year old house with monolithic cladding at 3 Acton Vale, Rototuna North, Hamilton

1. The matter 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 applicant is the owner A Haddock ("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 an eight year old house because it was not satisfied that the house complied with Clauses B2 "Durability" and E2 "External Moisture" of the Building Code (First Schedule, Building Regulations 1992).

[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.

1.3 The matter to be determined[2] 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 envelope to the house ("the external envelope") complies with Clause B2 Durability and Clause E2 External Moisture of the Building Code. The external envelope includes the components of the systems (such as the cladding system, the windows, the roof claddings and the flashings), as well as the way the components have been installed and work together.

1.3.2 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.

1.4 In making my decision, I have considered the submissions of the parties, the report of the independent expert ("the expert") commissioned by the Department to advise on this dispute, and the other evidence in this matter.

2. The building

2.1 The building work consists of a single-storey detached house situated on a level residential site in a medium wind zone for the purposes of NZS 3604[3].

2.2 The house is constructed on a concrete slab foundation with light timber framing. The external envelope has EIFS[4] cladding of painted textured plaster over 60mm polystyrene. The joinery throughout is aluminium, and the roof is a conventional long-run corrugated steel design with adequate pitch and externally mounted guttering.

2.3 The external wall framing is 100 x 50 kiln dried pine. The expert was unable to determine whether the external wall framing timber was treated, however given the date of construction I consider the external wall framing is unlikely to be treated to a level that would provide resistance to decay.

3. Background

3.1 The authority issued a building consent (No. 2002/1242) for the house and garage on 8 July 2002 under the Building Act 1991. Various inspections were carried out by the authority in 2002 and an interim code compliance certificate was issued on 15 November 2002. A producer statement for the cladding was requested as a condition to issuing the interim code compliance certificate.

3.2 The authority wrote to the applicant on 19 October 2005, stating that 'The [Act] requires an owner to advise the territorial authority when the building work has been completed. To date, we have not received advice that this work has been completed, although we did carry out several inspections in 2002.' In the letter, the authority also offered to carry out a code of compliance inspection at no cost to the applicant.

3.3 A Producer Statement for the EIFS cladding dated 20 January 2006 was received by the authority on 25 January 2006.

[2] In terms of section 177(b)(i) of the Act
[3] New Zealand Standard NZS 3604:1999 Timber Framed Buildings
[4] Exterior insulation and finishing system

3.4 A fax from the authority was received by the applicant on 8 February 2006 stating that:

> Due to the dwelling now being more than two years old and the recent weathertightness issues, and the fact that the dwelling is clad in a monolithic type cladding system, it will require an independent inspection to report on the weathertightness of the building by a BRANZ accredited adviser.

The building surveyors report

3.5 At the request of the applicant, a visual, non-invasive inspection of the dwelling was undertaken by a building surveyor on 28 January 2010. The building surveyor noted the following:

- There were hairline cracks in the exterior cladding and some of the cladding had been impact damaged.
- There were higher than normal moisture readings at the toilet window junction and above the front entry junction.

3.6 The building surveyor undertook a further inspection on 9 February 2010 and noted the house had been repainted and windows, soffits, and pipework had been sealed, the paint had covered the hairline cracks, and the loose sheets of cladding had been fixed into place. The building surveyor noted the plastic kick outs had not been installed to the apron flashings as recommended, although the apron flashings had been sealed, and the timber edging under the cladding at the front of the house had not been removed, although the owner had indicated that the timber bottom sheet of cladding is fixed over the original house cladding rather than the actual height of the concrete foundations.

3.7 The authority wrote to the applicant on 10 March 2010 to advise that:

> as a result of the [building surveyors] report provided dated 3rd February 2010 there was no health and safety issues identified and the building is safe and sanitary but due to the age of the consent we are not in a position to be able to issue a code compliance certificate.

3.8 The authority was of the view that it could not be satisfied on reasonable grounds that the durability and weathertightness provisions of the Building Code, and the other relevant requirements of the Building Code had been met and maintained in the period since the building consent was issued.

3.9 An application for a determination was received by the Department on 25 March 2010.

4. Submissions

4.1 The applicant forwarded copies of:

- the plans and specifications
- the authority's inspection record, producer statement for the cladding, and interim code compliance certificate
- correspondence with the authority
- the building surveyors report.

4.2 The authority did not acknowledge the application and made no submission.

4.3 The first draft determination was sent to the parties for comment on 14 June 2010. The draft was issued for comment and for the parties to agree a date when the

building work, with the exception of the items requiring rectification, complied with Building Code Clause B2 Durability.

4.4 The authority accepted the determination but noted that the building surveyor had identified higher than normal readings at the toilet window junction and above the front entry junction, and that these had not been commented on by the expert. The authority proposed a B2 date of 15 November 2002 being the date the interim code compliance certificate was issued.

4.5 The applicant accepted the determination and wished to have included in the decision a list of specific items and how they are to be rectified. I refer the applicant to paragraphs 6.6 and 8. The applicant submitted that compliance with B2 was achieved on 1 November 2002.

5. The expert's report

5.1 As mentioned in paragraph 1.4, I engaged an independent expert to provide an assessment of the condition of those building elements subject to the determination. The expert is a member of the New Zealand Institute of Building Surveyors. The expert inspected the house on 13 April 2010 and furnished a report that was completed on 17 May 2010.

General

5.2 The expert noted that the house generally appeared to be constructed in accordance with the consented drawings.

5.3 The expert noted that although the roof has been fitted at an adequate pitch, the cladding does not achieve the required finish of 50mm behind the fascia to help prevent water entry.

5.4 The expert also stated that the owner had advised that the PVC sill flashings had cupped and that the plaster coating had delaminated and the window sills had recently been re-plastered over prior to repainting.

Moisture levels

5.5 The expert took non-invasive and moisture content readings, as well as internal inspection panel cut-outs. No elevated readings were observed, however the expert noted that due to the recent dry weather and drought like conditions, readings should not be considered relevant.

5.6 The expert removed a section of plaster from a window corner on the rear garage wall, and found that side and sill flashings are in place and sealed in the corners.

5.7 The expert also drilled three small holes through the internal skirting into the bottom plate below the corners of the curved window in the north lounge wall, and two holes through the plasterboard to the trimming plate of the curved window. The expert noted that the shavings from all the holes appeared to be sound.

5.8 Non-invasive investigations found that rainwater could easily gain access to and damage the timber wall framing around the eyebrow detailing on the north lounge wall and above the west entranceway. In addition the metal fascia detail was not sufficient as it was fitted before the cladding, so the cladding does not finished behind the cladding and is not sealed.

Weathertightness observations

5.9 Commenting on the weathertightness detailing, the expert noted:

Ground clearances

- the bottom edge of the cladding is finished into a rebate formed in the edge of the concrete slab, which could hold water at the bottom edge of the cladding (I note a flashing was included in the designers original detail)
- there is no clearance between the cladding and the ground level in some areas, particularly at the north and east elevations

Roof to wall junctions

- the cladding is not complete behind the metal fascias and metal barges

Flashing details

- the eyebrow flashing relies on sealant for waterproofing.

5.10 A copy of the expert's report was provided to each of the parties on 17 May 2010.

Matter 1: The external envelope

6. Weathertightness

6.1 The approach in determining whether building work is weathertight and durable and is likely to remain so, is to examine the design of the building, the surrounding environment, the design features that are intended to prevent the penetration of water, the cladding system, its installation, and the moisture tolerance of the external framing.

Weathertightness risk

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

Increasing risk

- the house has narrow soffit overhangs and no eaves to some elevations
- the roof to wall intersections are partly exposed

Decreasing risk

- the house is in a low wind zone
- the house is a single storey
- the house is simple in plan and form with a single cladding type
- the house has no decks.

6.3 I note that, if the details shown in the current E2/AS1 were adopted to show code compliance, the EIFS cladding on this building would require a drained cavity. However, I also note that a drained cavity was not a requirement of E2/AS1 at the time of construction.

Weathertightness performance

6.4 Generally the cladding appears to have been installed in accordance with good trade practice. However, taking account of the expert's report, I conclude that the detailing is unsatisfactory, and consequently remedial work is necessary in respect of the following:

- the detailing of the metal fascia, the eyebrow, and the barge
- the detailing where the cladding is finished into a rebate formed in the edge of the concrete slab (or confirmation that flashing is in place)
- the clearances from the bottom edge of the cladding to the ground.

6.5 I consider that these factors will contribute to the compliance of the building with the weathertightness and durability provisions of the Building Code.

6.6 I note the expert's view that the moisture readings should not be considered relevant and the building surveyor's 'higher than normal readings' at the toilet window junction and above the front entry junction (refer paragraph 4.4). The weathertightness of the house requires further investigation and the applicant should engage a suitably qualified person to undertake a thorough investigation of the external envelope to determine the extent of the defects and produce a detailed proposal describing how the defects are to be remedied.

Weathertightness conclusion

6.7 The expert did not find evidence of moisture in the external framing of the building. However, the current performance of the external envelope is unlikely to be adequate in normal weather conditions because there are details that are unsatisfactory and are likely to result in moisture ingress.

6.8 The building work is 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.

6.9 Because the cladding bottom edge details and fascia, barge, and eyebrow detail 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.

6.10 Effective maintenance of the coatings and seals, including any cracking in the plaster that may appear, 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.

Matter 2: The durability considerations

7. Discussion

7.1 The authority has concerns about the durability, and hence the compliance with the Building Code, of the house, taking into account the age of the building work.

7.2 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).

7.3 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.

7.4 The six year delay between the completion of the building work and the applicant's 2010 request for a code compliance certificate has raised concerns with the authority that various elements of the house are now well through, or at the end of, their required durability periods, and would consequently no longer comply with Clause B2, if a code compliance certificate was issued that was effective from today's date.

7.5 There is very little difference between the dates proposed by the parties (refer paragraphs 4.4 and 4.5). I have accepted the date the interim code compliance certificate was issued (being 15 November 2002) for inclusion in the final determination.

7.6 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.

7.7 I continue to hold that view, and therefore conclude that:

- the authority has the power to grant an appropriate modification of Clause B2 in respect of all the building elements
- 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 towards the end of 2005.

7.8 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.

8. What is to be done now?

8.1 I note that the authority has not issued a notice to fix. A notice to fix should be issued that requires the owner to bring the building work into compliance with the Building Code, identifying the items listed in paragraph 6.4 and referring to any further defects that might be discovered in the course of rectification, but not specifying how those defects are to be fixed. It is not for the notice to fix to stipulate directly how the defects are to be remedied and the house brought to compliance with the Building Code. That is a matter for the owner to propose and for the authority to accept or reject.

8.2 I would suggest that the parties adopt the following process to meet the requirements of paragraph 8.1. Initially, the authority should issue the notice to fix. The owner should then produce a response to this in the form of a detailed proposal, produced in conjunction with a competent and suitably qualified person, as to the rectification or otherwise of the specified items. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

9. The decision

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

- the external envelope does not comply with Clause B2 of the Building Code, and accordingly, I confirm the authority's decision to refuse to issue a code compliance certificate

9.2 I also determine that:

- all the building elements installed in the house, apart from the items that are to be rectified, complied with Clause B2 on 15 November 2002.
- 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 15 November 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 Determination 2010/69.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 26 July 2010.

John Gardiner
Manager Determinations