Ministry of Business, Innovation & Employment | Building & Housing

Determinations 2021/051

Regarding the refusal of a code compliance certificate and the issue of a notice to fix for a 14-year-old house at 82 Melrose Rd, Mt Roskill, Auckland

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, Ministry of Business, Innovation and Employment ("the Ministry")[2], for and on behalf of the Chief Executive of the Ministry.

1.2 The parties to the determination are:

- the building owner, J Chacko ("the applicant")
- Auckland Council[3] carrying out is duties as a territorial authority or building consent authority ("the authority").

[1] The Building Act, Building Code, Compliance documents, past determinations and guidance documents issued by the Ministry are all available at www.dbh.govt.nz or by contacting the Ministry on 0800 242 243.
[2] After the application was made, and before the determination was completed, the Department of Building and Housing was transitioned into the Ministry of Business, Innovation and Employment. The term "the Ministry" is used for both.
[3] The building consent was issued and inspections undertaken by Auckland City Council, which was transitioned into the Auckland Council. The term authority is used for both.

1.3 This determination arises from the authority's decision to refuse to issue a code compliance certificate and to issue a notice to fix for a 14-year-old house because it was not satisfied that the building complied with certain clauses of the Building Code[4] (First Schedule, Building Regulations 1992). The authority's concerns primarily relate to the weathertightness of the exterior of the building envelope (refer paragraph 3.8).

1.4 The matter to be determined[5] is whether the authority was correct in its decision to refuse to issue a code compliance certificate and to issue a notice to fix for the dwelling. In deciding this I need to consider whether the external cladding to the building ("the cladding") complies with Clause B2 Durability and Clause E2 External Moisture of the Building Code. The cladding includes the components of the exterior building envelope (such as the wall claddings, the windows, the roof claddings and the flashings, as well as the way the components have been installed and work together. I consider this in paragraph 6.

1.5 Matters outside this determination

1.5.1 The notice to fix cites contraventions of Clauses B1 Structure and H1 Energy Efficiency. There are no specific identified items relating to these clauses in the notice to fix. This determination is therefore limited to the building's compliance with clauses as identified in paragraph 1.4.

1.5.2 The notice to fix states that the applicant may apply to the authority for a modification of the durability requirements in order to allow the durability periods to commence from the date of substantial completion. I leave this to the parties to resolve in due course.

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

2 The building work

2.1 The building work is a two storey, light timber framed house located on a slightly sloping site in a low to medium wind in terms of NZS3604[6]. The house is founded on a concrete ground floor slab, with concrete masonry foundations and foundation walls.

2.2 The cladding is a mix of flush finished fibre-cement sheet cladding direct fixed to the framing over building wrap, and brick veneer. The brick veneer is limited to the lower floor (northeast elevation) and the short returns on the southeast and northwest elevations.

2.3 The roof is concrete tile with a 27.5º pitch. Joinery is powder coated aluminium. Given the lack of evidence and the date of construction in 1998, I consider that the timber is unlikely to be treated.

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

3 Background

3.1 The authority issued building consent (BLD 39970691001) in 1997 under the Building Act 1991, with an amendment (BLD 39980595501) to that consent issued in 1998. Construction commenced and a final inspection was undertaken on 15 December 1999. This inspection noted the following outstanding items:

- non-return valve to shower over bath (upper floor)
- vent 100 to lower floor.

3.2 On 9 June 2003 a further final inspection was undertaken. This inspection passed, and the applicant was advised that a code compliance certificate would be issued on receipt of the following:

- advice of completion form
- site inspection records
- foundation observations
- development engineering approval.

A producer statement construction review (PS4) was issued on 7 September 1998 and reissued on 1 July 2003.

3.3 On 9 August 2004, following another final inspection, a notice to rectify (the equivalent to a notice to fix under the Building Act 2004) No. 1966 was issued to the applicant with an attached 'photo file'.

3.4 In a letter dated 2 December 2004 the authority advised the applicant that it had evaluated the building against the E2/AS1 risk matrix and that a ventilated cavity was not required but remedial work was required and the notice to rectify was amended to reflect that work.

3.5 On 28 June 2005, following a site meeting, the authority wrote to the applicant listing 20 items the authority considered required remediation as well as documentation required. I have seen no subsequent correspondence that relates to the content of this letter or site meeting. It appears that further site visits were undertaken on 8 July 2008 and 30 March 2010 without resolving the matter.

3.6 The Ministry received an application for a determination on 24 November 2011 and sought further information from the authority as to the matters in dispute.

3.7 The authority inspected the dwelling on 13 January 2012 and issued a notice to fix (No. 3967) with an attached 'photo file' on 19 January 2012. The notice identified a number of Building Code clauses that the building work was in breach of and listed details of the contraventions.

3.8 The authority identified various areas of concern in regard to Clauses E2 and B2 (including in summary):

- lack of spreader to downpipes from upper roof
- unsealed penetrations
- cracking to the cladding
- underlying flashings, with reliance on sealants
- window head flashing and bottom edge of cladding

- lack of control joints
- uncoated cladding.

3.9 The authority also included that the building work was in breach of Clauses B1 and H1 but did not identify the details of contravention (refer paragraph 1.5.1).

3.10 The applicant confirmed by email on 20 January 2012 that all of the items on the notice to fix, with the exception of the need for spreaders, were disputed as he had 'lived at the property from March 2003 and have had no problems'. The applicant was also of the view that as the two minor items that required remediation in 2003 had been fixed it was not reasonable to add new items in a new notice to fix after that time.

4 The submissions

4.1 The applicant provided:

- a letter outlining the chronology of events
- building consent drawings and some documents
- previous notices to fix
- an earlier 'photo file' prepared by the authority.

4.2 The applicant disagrees with the authority's view and is of the belief that there was not enough evidence to support the authority's assertions that the dwelling was not meeting the performance standards of the Building Code.

4.3 The authority made no submission in response to the application but provided some of the relevant building consent documentation by way of CD ROM.

4.4 A draft determination was provided to all parties on 5 April 2012.

4.5 The authority accepted the draft without further comment in a response received on 2 May 2012.

4.6 The applicant responded to the draft in a series of emails between 26 April 2012 and 15 July 2012. The applicant noted that the outstanding items noted in the inspections of December 1998 and 9 June 2003 had been attended to at the time, and that spreaders have now been fitted, cracks in the cladding filled, new sealant applied to the right of the upper floor shower, and the lower floor toilet connection to the foul drain was also rectified and broken/cracked sewer inspection pipe replaced.

5 The expert's report

5.1 As mentioned in paragraph 1.6, I engaged an independent expert to assist me. The expert is a registered architect[7] and a member of the New Zealand Institute of Architects. He visited the dwelling on 28 February 2012 and furnished a report on 1 March 2012.

[7] Registered Architects are under the Registered Architects Act 2005 treated as if they were licensed in the building work licensing class Design 3 under the Building (Designation of Building Work Licensing Classes) Order 2010.

5.2 General

5.2.1 The expert noted a number of variations from the consent drawings, including:

- the consent drawings show brick veneer on the southwest elevation and most of the southeast and northwest elevations, however flush finished, texture coated fibre-cement sheeting was installed
- on the upper level the consent drawings show two bedrooms, walk in wardrobe, ensuite, bathroom and two studies, which has been reconfigured to provide four bedrooms
- various windows have been added or moved as a consequence of the bedroom changes
- the offset indicated on the plans between the ensuite and the walk in wardrobe has been omitted and instead the whole wall has been built out under the fascia gutter system
- a pitched roof has been constructed outside the entrance.

5.2.2 The expert noted that cladding was generally straight and fair although some of the sheet joints on the southeast elevation were uneven. In general, the exposed parts of the flashings were tidy and effective. The standard of workmanship appeared to be generally competent.

5.3 Moisture testing

5.3.1 The expert undertook an internal, visual inspection and found no mould or other signs of moisture ingress apart from loose skirting board on the right hand side of the front door which the expert noted could be the consequence of uncoated fibre-cement at the end of the fascia gutter above and an apron flashing which lacked a kickout.

5.3.2 The expert took a number of invasive moisture readings at high risk locations including windows and end of sloping flashings. At the time of inspection no elevated or significantly variable moisture content readings were recorded.

5.4 The external envelope

5.4.1 Commenting specifically on the external envelope the expert restricted his observations to those issues raised by the authority in the notice to fix, noting the following:

Window and door flashings

- joinery was fitted with aluminium head flashings, but there were no sill or jamb flashings
- head flashings are sealed but there is no evidence of moisture ingress
- there were no sealant strips or sealant behind the window flanges

Roof

- the base of the sloping flashings lacked kickouts
- a hole had been cut through the flashing outside the upper level bathroom for heat pump pipework, the concrete tile lap had been reduced to 15mm and silicon used to seal the junction with the flashing

- spreaders have not been installed to three downpipes and there is a risk of leaks resulting from concentrated flow from downpipes over concrete tiles and flashings

Cladding

- horizontal control joints have been installed but not vertical control joints
- there is evidence of several cracks to cladding with some remaining unrepaired
- some penetrations were inadequately sealed
- spouting had been fixed before the texture coating and there were some small areas of uncoated fibre-cement sheets at the junctions behind spouting, and bottom edges have not been coated.

5.4.2 The expert concluded that there was no evidence that water is entering the cladding system and reaching the framing in sufficient quantity to cause risk of decay.

5.5 Other clauses

5.5.1 In regards to Clause E3 Internal Moisture, the expert noted a high non-invasive moisture reading in the wall lining to the right of the of the upper floor shower enclosure and considered that further investigation would be required to confirm the condition of the framing.

5.5.2 In regards to Clause G13 Foul Water, the expert concluded that the foul water drain from the lower floor toilet was affected by three issues:

- a repair had been made that relied on silicone only
- it was embedded in the concrete paving without any flexible collar, and
- the adjacent trap had no permanent grate or cover.

5.6 A copy of the expert's report was provided to the parties for comment on 1 March 2012.

6 Discussion

6.1 The notice to fix

6.1.1 The following table summarises my conclusions on the items listed within the notice to fix, dated 19 January 2012 and refers to related paragraphs within this determination.

Item	Summarise requirement	My conclusions about the remedial work required	Paragraph ref:
2.1	**Not installed as per acceptable or alternative solution for consent**		
2.1(a)	No spreaders to lower roof	Remedial work required	5.4.1
2.1(b)	Roofs and exterior walls to prevent moisture penetration	(non-specific item)	
2.1(c)	Cracking to claddings	Some remedial work required	5.4.1
2.1(d)	Inadequate flashings	Some remedial work required	5.4.1
2.1(e)	Window head flashing to cladding junction	Adequate in circumstances	5.4.1
2.1(f)	Lack of vertical control joints	Adequate in circumstances	5.4.1
2.1(g)	Cladding uncoated	Some remedial work required	5.4.1
2.1(h)	Unsealed penetrations	Some remedial work required	5.4.1
2.2	**Drainage and ventilation**		
2.2	Lack of cladding drainage & ventilation	Adequate in circumstances	5.4.2, 6.2.5 and 7.1

6.2 Weathertightness

6.2.1 The evaluation 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).

Weathertightness risk

6.2.2 The dwelling has the following environmental and design features which influences the weathertightness profile:

Increasing risk

- the house is two storey
- walls have monolithic cladding fixed directly over building paper to the timber framing
- the timber framing is most unlikely to be treated to a level that provides resistance to decay if it absorbs and retains moisture

Decreasing risk

- eaves
- low wind zone
- simple envelope complexity
- no decks or balconies

6.2.3 When evaluation using the E2/AS1 risk matrix, the weathertightness features outlined in paragraph 6.2.2 indicate the dwelling has a low risk rating. If details shown in the current E2/AS1 were adopted to show code compliance a drained cavity would not be required. This was acknowledged by the authority in a letter to the applicant dated 2 December 2004 (refer paragraph 3.4).

Weathertightness performance

6.2.4 Generally the claddings appear to have been installed in accordance with good trade practice. I also note the expert's findings and I accept that there are no elevated moisture levels and no evidence of external moisture penetration to the house after 14 years.

Weathertightness conclusion

6.2.5 I consider that 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. Consequently I am satisfied that the dwelling complies with Clause E2 of the Building Code.

6.2.6 In addition, the external 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 building work to remain weathertight.

6.2.7 I note that the cladding materials in the house are already 14-years-old, which almost is the minimum effective life required for these elements. There are however some cladding faults that are likely to allow moisture ingress in the future. I am therefore

satisfied that the dwelling does not comply with the durability requirements of Clause B2 of the Building Code with respect to Clause E2. Because the faults occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 5.4.1 will result in the external envelope being brought into compliance with Clause B2.

6.2.8 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 Ministry has previously described these maintenance requirements, including examples where the external wall framing of the building may not be treated to a level that will resist the onset of decay if it gets wet (for example, Determination 2007/60).

6.3 Other code clauses

6.3.1 I note that the expert has identified to other items of building work that do not comply with the Building Code, and I consider that the following items require further investigation and/or remedial work prior to authority considering the issue of a code compliance certificate

- the high moisture reading in the wall lining to the right of the upper floor shower (Clause E3), and
- the lower floor toilet connection to the foul drain (Clause G13).

6.4 Conclusion

6.4.1 I am satisfied that at the time of the authority's decision the dwelling did not comply with the Building Code and the authority made the appropriate decision to issue the notice to fix. However, I am satisfied that some items in the notice are likely to be adequate and I additional items have been identified that need to be addressed, so the notice should be modified accordingly.

7 What happens next?

7.1 The notice to fix should be modified to take account the findings of this determination, identifying the items identified as non-compliant in paragraphs 6.1.1and 5.5 and referring to any further defects that might be discovered in the course of investigation and rectification, but not specifying how the defects are to be fixed. It is not for the notice to fix to specify how the defects are to be remedied and the building brought to compliance with the Building Code. That is a matter for the owner to propose and for the authority to reject or accept. Any outstanding items of disagreement can be referred to the Chief Executive for a further binding determination.

7.2 The applicant has submitted that remedial work has been carried out subsequent to the issue of the draft determination. I note that this should have been carried out with the knowledge and agreement of the authority, and accordingly the notice to fix may take the remedial work into account. Once the authority is satisfied as to the compliance of any outstanding items, and the consent is amended to reflect the as-built construction and to modify Clause B2.3.1 (refer paragraph 1.5.2), a code compliance certificate is the correct certificate to be issued.

7.3 I note that the durability period for 5 year life elements has already expired and that very little time remains for the 15 year life elements. The repairs required to ensure the performance of these elements (including the cladding), for the balance of the durability period may therefore be quite limited.

8 Decision

8.1 In accordance with section 188 of the Act, I hereby determine that at the time of the authority's decision:

- the external envelope did not comply with Building Code Clause B2
- some components did not comply with Building Code Clauses E3 and G13

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

8.2 I also determine that the authority is to modify the notice to fix dated 19 January 2012, to take into account the findings of this determination.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 20 July 2012.

John Gardiner
Manager Determinations