



Determination 2011/064

Regarding the refusal to issue a code compliance certificate for a 16-year-old house with ply and batten cladding at 3 Mayroyd Terrace, Nelson

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 Gardner, Manager Determinations, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicant is owner of the house, the McNicol Family Trust acting through one of the Trustees (“the applicant”), and the other party is the Nelson 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 16-year-old house because it was not satisfied that the house complied with certain clauses² of the Building Code (First Schedule, Building Regulations 1992).

1.3 The matter to be determined³ 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 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 (the ply wall 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 matter in paragraph 6.

1.3.2 Matter 2: 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. I consider this matter in paragraph 7.

¹ The Building Act, Building Code, Compliance documents, past determinations and guidance documents issued by the Department are all available at www.dbh.govt.nz or by contacting the department on 0800 242 243

² In this determination, unless stated otherwise, references to the sections are sections of the Act and references to clauses are to clauses of the Building Code

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

- 1.4 The authority has advised the applicant of specific items that do not comply with Clauses B1, F4 and G12 (refer paragraph 3.3). I note that this information was not included in the determination application and I had not received this information from either party prior to engaging an expert. As I have not been advised that any these items are in dispute and the application specified only the matters as described in paragraph 1.3, the items that the authority considers do not comply with Clauses B1, F4 and G12 have not been considered further in this determination.
- 1.5 In making my decision, I have considered the submissions of the parties, the report of the expert commissioned by the Department to advise on this dispute (“the expert”) and the other evidence in this matter.

2. The building work

- 2.1 The building work consists of a two storey detached house, which is located on a steeply sloping site in a high wind zone and Corrosion Zone 1, for the purposes of NZS3604⁴. Construction is supported by a specifically designed cantilevered structural steel frame on three levels. The balance of the house being conventional light timber frame with ply and batten cladding.
- 2.2 The house is somewhat complex in plan and form. The roof is predominantly long run profiled metal roofing at a pitch of 25° with a small flat area of butyl membrane. On the northern elevation there is an open slat deck and walkway at the first floor level. The cladding is face fixed 9mm ply with battens at 600 mm centres.
- 2.3 The expert noted that the drawings specified timber to be H1.2 treated Radiata Pine no treatment was identified where the framing was visible during his assessment.

3. Background

- 3.1 The authority issued a building consent (940735) in January 1995 under the Building Act 1991. I have not seen a copy of the building consent.
- 3.2 The authority carried out inspections during construction in 1995 and a final inspection was undertaken on 5 December 1995.
- 3.3 On 23 March 2011 the authority carried out a further inspection following a request for a code compliance certificate. In a letter dated 1 April 2011 the authority advised that the inspection had revealed a number of items requiring attention, which included:
- documentation required; being an electrical certificate, as-built drainage plan, PS4 construction review, and confirmation that the dwelling location and the finished floor levels are in accordance with consented plans
 - installation of restrictor stays to windows
 - tempering of the water to sanitary fixtures

⁴ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

- address the construction of barriers to external decks and parking area (noting that the authority was not satisfied that the barriers met the requirements of Clause B1 or F4).

(Refer paragraph 1.4)

- 3.4 In its letter of 23 March 2011 the authority also noted that it had no records of any external cladding inspections and advised the applicant that a report would be required to show compliance with Clause E2.
- 3.5 The authority also advised that due to the time elapsed since the building works began in February 1995 it did not have reasonable grounds to be satisfied the work meets the requirements of the Building Code in regards to Clause B2 Durability and E2 External moisture.
- 3.6 The Department received the application for a determination on 18 April 2011.

4. The submissions

- 4.1 The initial application did not include a submission on the background to the matter but provided copies of the consent drawings and noted the matters for determination as being 'exterior weathertightness (E2) and durability (B2)'
- 4.2 In response to a request for further information, on 20 April 2011 the applicant forwarded a copy of the letter from the authority dated 1 April 2011, and general property information.
- 4.3 The authority did not acknowledge the application or make a submission in response.
- 4.4 A draft determination was issued to the parties on 30 May 2011. The draft was issued for comment and for the parties to agree a date when the house, with the exception of the items to be rectified, complied with Building Code Clause B2 Durability.
- 4.5 Both parties accepted the draft subject to correction of a date error, which has subsequently been amended.

5. The expert's report

- 5.1 As mentioned in paragraph 1.5, I engaged an independent expert to assist me. The expert is a member of the New Zealand Institute of Building Surveyors. The expert inspected the house on 11 May 2011 and provided a report that was completed on 13 May 2011.

General

- 5.2 The expert did not identify any difference between the as built layout of the house and the drawings provided.
- 5.3 The expert noted that the ply cladding appeared to be performing and meeting the requirements of the Building Code. He also noted that, with the exception of defects

outlined in section 5.6, the installation of the cladding appeared to be of good quality and that:

- generally the workmanship is of good quality and some consideration had been given to sealing the cladding to prevent water entry at junctions and service penetrations
- the roof installation and flashings appear sound, horizontal ply cladding joints have effective flashings and there are head flashings to the doors and windows
- the wooden battens are sufficiently wide and have weather grooves.

5.4 The expert made particular reference to the poor current condition of some areas of the ply wood, for instance the paint finish is fading and there are signs of surface deterioration, noting that in his view it could be attributed to the lack of maintenance. It appears that the exterior has not been recoated in the last five to eight years.

Moisture levels

5.5 The expert inspected the interior of the house, taking non-invasive moisture readings internally, and no evidence of moisture was observed. The expert then took ten invasive moisture readings through the cladding at areas considered higher risk, but noted no elevated readings.

5.6 Commenting specifically on the external envelope, the expert noted that:

- there were no back flashings at internal and external corners and there are some signs of moisture trapped behind the external corner battens
- there is a reliance on sealant, in particular where deck joists penetrate the north west cladding although this is protected from UV light to some extent
- the decking is touching the wall cladding in some places.

5.7 The expert considered that the cladding has met the performance requirements of the Clause E2 of the Building Code and has been watertight for 16 years. However for this to continue into the future the expert considers some remedial work is required, including:

- all plywood cladding surveyed and areas of failed or delaminating ply replaced
- the plywood cladding cleaned, and sealed with stain or paint
- a clear gap established between the decking, the decking stringer and the wall cladding
- all loose battens re-fixed in position
- the external corner battens made weathertight
- re-gluing of the loose butyl beneath the deck
- a drip edge established to deflect water away from the sunroom plywood soffit.

5.8 A copy of the expert's report was provided to the parties for comment on 20 May 2011.

Matter 1: The external envelope

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).

Weathertightness risk

6.2 The house has the following environmental and design features which will influence its weathertightness risk profile

Increasing risk

- the house is in a high wind zone
- walls have minimal eaves to shelter the cladding in some elevations
- there are roof to wall intersections within the boundaries of the exterior walls
- there is a slat deck and walkway at the first floor level

Decreasing risk

- the house has eaves in some places which provide shelter to some of the cladding.

6.3 When evaluated using the E2/AS1 risk matrix, these features show the elevations of the house demonstrate a moderate weathertightness risk rating. I note that, if the details shown in the current E2/AS1 were adopted to show code compliance, the ply cladding on this building would require a drained cavity. I also note that at the time of construction E2/AS1 did not require a drained cavity.

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 comments, I conclude the remedial work is necessary in respect of the external envelope as indicated in paragraph 5.7.

6.5 Notwithstanding the fact that the cladding is face fixed to the timber framing that will inhibit free drainage and ventilation behind the cladding, I have noted the following that have contributed to the performance of this cladding in this particular case:

- the cladding is generally installed according to good trade practice
- there is no evidence of moisture penetration.

Weathertightness conclusion

- 6.6 I consider the expert's report establishes that the current performance of the building envelope is adequate because it is not allowing water penetration through the cladding and into the structure. Consequently, I am satisfied that the house complies with Clause E2 of the Building Code.
- 6.7 However the building work 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, although minor, may allow the ingress of moisture in the future, the building work cannot be considered to comply with the durability requirements of Clause B2.
- 6.8 The faults identified in the cladding are discreet in nature and I am therefore of the view that satisfactory rectification of the items outlined in paragraph 5.7 will result in the cladding being brought into compliance with Clause B2.

Matter 3: The durability considerations

7. Discussion

- 7.1 The authority has concerns about the durability, and hence compliance with the Building Code, of certain elements of the building taking into consideration the substantial completion of the building work in 1995.
- 7.2 The relevant provision of Clause B2 of the Building Code requires the 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 In this case, the delay between the completion of the building work in 1995 and the applicant's request for a code compliance certificate in 2011 has raised concerns with the authority that various elements of the building are now well through or past the 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.

- 7.4.1 It is not disputed, and I am therefore satisfied that all the building elements, apart from the items to be rectified, complied with clause B2 on 5 December 1995. This date has been agreed between the parties (refer paragraph 4.5).
- 7.5 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.
- 7.6 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, on application from the owner
 - b) It is reasonable to grant such a modification because in practical terms, the building is no different from what it would have been if a code compliance certificate had been issued when the building work was completed in 1995.
- 7.7 I strongly suggest that the authority record this determination and any modifications resulting from it, on the property file and also on any LIM issued concerning this property.

8. What is to be done now?

- 8.1 The authority should issue a notice to fix to take account of the findings of this determination, identifying the areas listed in paragraph 5.7 and referring to any further defects that might be discovered in the course of the 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 owner to propose and for the authority to reject or accept.
- 8.2 I 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 applicant 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 specified matters. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.
- 8.3 Once the matters set out in paragraph 5.7 have been rectified to its satisfaction, the authority may issue a code compliance certificate in respect of the building consent amended as outlined in paragraph 7.

9. The decision

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

- the external envelope complies with Clause E2 of the Building Code
- the external envelope does not comply with Clause B2 of the Building Code insofar as it relates to Clause E2

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

9.2 I also determine that:

- a) All the building elements installed in the house, apart from the items that are to be rectified, complied with Clause B2 on 5 December 1995.
- 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 5 December 1995 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 2011/064.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 27 June 2011.

John Gardiner
Manager Determinations