

## Determination 2006/124

### Determination regarding a code compliance certificate for a house at 60 Kingsford Drive, Stoke, Nelson



#### 1. The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004<sup>1</sup> (“the Act”) made under due authorisation by me, John Gardiner, Determinations Manager, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicants are the owners Mr and Mrs Bond (“the applicants”) and the other party is the Nelson City Council (“the territorial authority”).
- 1.2 The matter for determination is the territorial authority’s decision to refuse to issue a code compliance certificate for a 12-year-old house because of the age of the consent and the absence of complete inspection records.
- 1.3 In order to determine that matter, I must first decide whether the building complies with the Building Code.
- 1.4 In making my decision, I have considered the documentation received from the parties, the report of the independent expert commissioned by the Department to advise on this dispute (“the expert”), and the other evidence in this matter including

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<sup>1</sup> The Building Act 2004 is available from the Department’s website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

an earlier report on the house by the expert but commissioned by the owner. In regard to the cladding, I have evaluated this information using a framework that I describe more fully in paragraph 7.1.

- 1.5 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.

## **2. The building**

- 2.1 The building work consists of a single-storey detached house situated on a level site, which is in a medium wind zone for the purposes of NZS 3604<sup>2</sup>. The house is simple in plan and form. Construction is conventional light timber frame constructed on concrete slabs. The pitched roof has hip and valley junctions, and 500mm wide eaves and verge projections.
- 2.2 The expert has verified that the external wall framing timber is untreated Douglas Fir.
- 2.3 The external walls of the house are clad with a brick veneer which is separated by a 40mm wide drained cavity from the inner timber-framed wall. The gable end of the house is clad in fibre-cement weatherboards fixed directly through the building paper to the framing.

## **3. Sequence of events**

- 3.1 The territorial authority issued a building consent on 28 October 1994. According to the applicants, the house was completed in November 1994.
- 3.2 The territorial authority carried out various inspections from 26 September 1994. (I note that the first inspection predated the issuing of the consent). However there are no records of a pre-line or a final building inspection having been carried out. While the territorial authority has a record of matters identified in a Notice to Rectify that was dated 2 February 1995, apparently after an inspection at about that time, it could not locate the Notice itself.
- 3.3 The builder wrote to the applicants on 6 September 2006, stating that items listed on the Notice to Rectify pertaining to the basin taps and terminal vent had been rectified.
- 3.4 An application for a determination was received by the Department on 12 September 2006.

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<sup>2 2</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

## 4. The submissions

- 4.1 The applicants, in a statement dated 7 September 2006, described the background leading up to this determination. They were unable to obtain any relevant records but were sure that a code compliance certificate had been issued for the house.
- 4.2 The applicants forwarded copies of:
- the plans and specifications
  - some building consent and inspection records
  - the correspondence with the territorial authority.
- 4.3 In a letter to the Department dated 3 October 2006, the territorial authority noted that the primary reasons for refusing to issue a code compliance certificate were the “age of the consent” and the absence of complete inspection records. The territorial authority also stated that it could not locate a copy of the Notice to Rectify.
- 4.4 The territorial authority forwarded copies of a summary setting out the history of the territorial authority’s involvement in the construction process.
- 4.5 Copies of the evidence were provided to each of the parties. Neither party made any further submissions in response to the submission of the other party.
- 4.6 A copy of the draft determination was sent to the parties on 30 November 2006. The draft was issued for comment and for the parties to agree a date when all the building elements installed in the house, apart from items that have to be rectified as described in paragraph 7.3.1, complied with the Building Code Clause B2 Durability.
- 4.7 In a letter to the Department dated 5 December 2006, the territorial authority said it did not accept the determination as it disagreed that certain inspections had been carried out. In particular, the territorial authority said:

Our records indicate that the excavation for removal of topsoil beneath floor slab required further inspection. It would appear that confirmation that the engineer had carried out penetrometer tests had been received, which our inspector recorded against the consent as ‘part’ approved. Further inspection was required.

Our records indicate no inspections were carried out for the pre-pour of the floor slab, which would have included the inspection of waste pipes, nor is there a record of an inspection of the sewer or stormwater drains (including pressure test) prior to trenches being filled.

I acknowledge the territorial authority’s submission and have amended the determination accordingly.

- 4.8 With respect to the parties agreeing a date when compliance with clause B2 was achieved, both the territorial authority and the applicant cited 12 December 1994.

## 5. The grounds for code compliance

- 5.1 The territorial authority has stated that in the absence of complete inspection records, it did not have sufficient grounds on which to be satisfied that the building work is code compliant. The territorial authority has advised that it did not complete all inspections with respect to site excavation, the pre-pour of the concrete slab and for the stormwater and sewer drains prior to the backfilling of trenches.
- 5.2 While the omission of these inspections is significant, the nature of the house's construction and its cladding, along with the absence of any significant problems that would otherwise have become evident in the 12-years since it was completed, allows me to conclude that the house is performing adequately with respect to the hidden elements that were not inspected by the territorial authority.
- 5.3 In addition, a visual inspection of accessible components along with the investigations undertaken by the expert, provides grounds on which I can form a view that the building as a whole complies with the building code.

## 6 The expert's report

- 6.1 The expert inspected the house on 11 October 2006 and again on 17 November 2006, and furnished two reports that were completed on 12 October 2006 and on 20 November 2006 respectively. The expert removed the internal linings at two locations to observe the construction and to carry out moisture tests. I am prepared to accept that the exposed details are representative of and apply to other similar situations throughout the house.
- 6.2 The expert took non-invasive moisture readings internally and no elevated readings were noted. Invasive moisture readings were taken into the wall framing at two locations and readings of 12% were obtained in each instance. Moisture levels above 18% recorded after cladding is in place generally indicate that external moisture is entering the structure.
- 6.3 The relevant observations made by the expert in the two reports can be amalgamated and summarised as saying:
- the brickwork is in good condition and shows no signs of mortar joint cracking or settlement
  - the concrete block foundations appear sound
  - the garage concrete slab is a continuation of the main house slab, the cracks in the slab are caused by shrinkage, and there are no signs of settlement
  - there is no sign of corrosion of the roof tiles
  - the aluminium joinery is satisfactorily set into the brick veneer

- the roof trusses appear straight and true and adequately held down and there is insulation in the ceilings that has settled in some places
- there is fibreglass insulation installed in the walls.

6.4 The expert also noted that there were some cladding items that required rectification. These were:

- the insufficient ground clearance at the base of the brick veneer at some locations
- the hardened and cracked seals at the joints of the weatherboard to the gable end
- the lack of sealant to the junction between the top of the windows and the eaves soffit and to the top and sides of the meterbox
- the unsealed opening in the foundations where the waste pipes penetrate the building.

6.5 The expert also noted areas that require maintenance, including the roofs, spoutings and where re-painting is required.

6.6 Copies of the expert's report were provided to each of the parties on 27 November 2006.

## **7. Evaluation for code compliance: The cladding**

### **7.1 Evaluation framework**

7.1.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solution<sup>3</sup>, in this case E2/AS1, which will assist in determining whether the features of this house are code compliant. However, in making this comparison, the following general observations are valid:

- Some Acceptable Solutions cover the worst case, so that they may be modified in less extreme cases and the resulting alternative solution will still comply with the Building Code.
- Usually, when there is non-compliance with one provision of an Acceptable Solution, it will be necessary to add some other provision to compensate for that in order to comply with the Building Code.

7.1.2 The approach in determining whether building work is weathertight and durable and is likely to remain so, is to apply the principles of weathertightness. This involves the examination of the design of the building, the surrounding environment, the design features that are intended to prevent the penetration of water, the cladding system, its

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<sup>3</sup> An Acceptable Solution is a prescriptive design solution approved by the Department that provides one way, but not the only way, of complying with the Building Code. The Acceptable Solutions are available from the Department's website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

installation, and the moisture tolerance of the external framing. The Department and its antecedent, the Building Industry Authority, have also described weathertightness risk factors in previous determinations<sup>4</sup> (refer to Determination 2004/1 *et al*) relating to cladding and these factors are also used in the evaluation process.

- 7.1.3 The consequences of a building demonstrating a high weathertightness risk is that building solutions that comply with the Building Code will need to be more robust. Conversely, where there is a low weathertightness risk, the solutions may be less robust. In any event, there is a need for both the design of the cladding system and its installation to be carefully carried out.

## 7.2 Weathertightness risk

7.2.1 In relation to these characteristics I find that the house:

- is built in a medium wind zone
- is single storey
- is simple in plan and form
- has 500mm eaves and verge projections
- is clad with brick veneer which was an Acceptable Solution at the time of construction as it is now
- has no decks or balconies
- has external wall framing that is not treated to a level that provides resistance to the onset of decay if the framing absorbs and retains moisture.

7.2.2 When evaluated using the E2/AS1 risk matrix, all elevations of the house demonstrate a low weathertightness risk. The matrix is an assessment tool that is intended to be used at the time of application for consent, before the building work has begun and, consequently, before any assessment of the quality of the building work can be made. Poorly executed building work introduces a risk that cannot be taken into account in the consent stage but must be taken into account when the building as actually built is assessed for the purposes of issuing a code compliance certificate.

## 7.3 Weathertightness performance

7.3.1 Generally the external cladding appears to have been installed in accordance with good trade practice. However, I accept the expert's opinion that remedial work is necessary in respect of:

- the insufficient ground clearance at the base of the brick veneer at some locations

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<sup>4</sup> Copies of all determinations issued by the Department can be obtained from the Department's website.

- the hardened and cracked seals at the weatherboard joints at the gable end
- the lack of sealant to the junction between the top of the windows and the eaves soffit, and to the top and sides of the meter box
- the unsealed opening in the foundations where the waste pipes penetrate the building.
- any other building elements associated with the above that are consequently discovered to be in need of rectification.

## 8 Conclusion

- 8.1 I am satisfied that the house is weathertight now and therefore the cladding complies with clause E2. However, as there are a number of items to be remedied to ensure it remains weathertight and thus meets the durability requirements of the Building Code, I find that the cladding does not comply with clause B2.
- 8.2 I conclude that, because the faults identified with the cladding system occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 7.3.1 will result in the building remaining weathertight and the cladding being in compliance with clauses B2 and E2.
- 8.3 In addition, based on a combination of the inspections carried out by the territorial authority and the two building inspections undertaken by the expert, I also conclude that, with the exception of clause B2, the remainder of the building elements also comply with the requirements of the Building Code. I have discussed B2 compliance later in this determination.
- 8.4 As regards those elements that were open to inspection, the territorial authority could have made inspections similar to those made by the expert. Had it done so, it would presumably have come to the same conclusions as I have about rectification work.

## The durability considerations

### 9 Discussion

- 9.1 The territorial authority has concerns about the durability, and hence the compliance with the building code, of all the elements of the building, taking into consideration the issue of the building consent in October 1994. The owner has confirmed that the work was completed in November 1994.
- 9.2 The relevant provision of clause B2 of the Building Code recognises 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 It is not disputed, and I am therefore satisfied, that all the building elements installed in the house, apart from items that have to be rectified as described in paragraph 6.4 complied with clause B2 on 14 December 1994 (refer paragraphs 4.8).

9.5 In order to address these durability issues, I sought some clarification of general legal advice about waivers and modifications. I have now received that clarification and the legal framework and procedures based on this clarification are described in previous determinations (for example, Determination 2006/85) and are used to evaluate the durability issues raised in this determination.

9.6 I continue to hold the views expressed in the previous relevant determinations, and therefore conclude that:

- (a) the territorial authority has the power to grant an appropriate modification of clause B2 in respect of all of the elements of the building if the applicant applies for such a modification.
- (b) it is reasonable to grant such a modification, with appropriate notification, because in practical terms the building is no different from what it would have been if a code compliance certificate had been issued in December 1994.

9.7 I strongly recommend that the territorial authority record this determination and any modification resulting therefrom, 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:

- (a) the cladding on the building does not comply with clause B2 of the Building Code, and accordingly I confirm the territorial authority's decision to refuse to issue a code compliance certificate
- (b) the remainder of the building elements of the house comply with all the clauses of the Building Code, including B2 as amended (see 10.1(d) below)
- (c) all the building elements installed in the building complied with clause B2 on 12 December 1994



- (d) should the applicants so request, the territorial authority must modify its decision to issue the building consent to the effect that the building consent is amended as follows:

The building consent is subject to a modification to the Building Code to the effect that, clause B2.3.1 applies from 12 December 1994 instead of from the time of issue of the code compliance certificate for all of the building elements except those elements set out in paragraph 7.3.1 of Determination 2006/124.

- (e) once the defects set out in paragraph 7.3.1 of this determination have been fixed to its satisfaction, the territorial authority is to issue a code compliance certificate in respect of the building consent as amended.

10.2 I note that the territorial authority has issued a Notice to Rectify dated February 1995. The territorial authority should now formally withdraw that Notice and issue a notice to fix, as required by section 435, that requires the applicants to bring the building into compliance with the Building Code, identifying the defects listed in paragraph 7.3.1, but not specifying how those defects are to be fixed. That is a matter for the applicants to propose and for the territorial authority to accept or reject. It is important to note that the Building Code allows for more than one method of achieving compliance.

10.3 I would suggest that the parties adopt the following process to meet the requirements of paragraph 10.2. Initially, after withdrawing the February 1995 Notice to Rectify, the territorial authority should issue the notice to fix, listing all the items that the territorial authority considers to be non-compliant. 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 issues. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 20 December 2006.

John Gardiner  
**Determinations Manager**