



Determination 2010/118

Refusal to issue a code compliance certificate for ten year old additions to a house at 166 Poike Road, Tauranga



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 Gardiner, Manager Determinations, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department.
- 1.2 The parties to the determination are:
 - the applicants who are the owners, TJ & AL Finlayson (“the applicants”)
 - the Tauranga City Council (“the authority”), carrying out its duties and functions as a territorial authority or building consent authority.
- 1.3 This determination arises from the decision of the authority to refuse to issue a code compliance certificate for 10-year old additions to a house because it was not

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

satisfied that the additions complied with certain clauses² of the Building Code (First Schedule, Building Regulations 1992).

1.4 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:

1.4.1 **Matter 1: the external envelope**

Whether the external envelope to the additions and alterations, as installed on the building, complies with Building Code Clauses B2 Durability and E2 External Moisture (First Schedule, Building Regulations 1992). The 'external envelope' includes the cladding to the additions, its configuration and components, junctions with other building elements, formed openings and penetrations, and the proximity of those building elements to the ground.

1.4.2 **Matter 2: the durability considerations**

Whether the elements that make up the building work comply with Clause B2 Durability of the Building Code, taking into account the age of the building work.

1.5 In making my decision, I have considered the submission of the applicants, 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

2.1 The building is sited on a sloping site in a low wind zone in terms of NZS3604⁴. The original building is a single storey dwelling constructed in the 1960's. It is founded on timber pile foundations and in general terms, constructed of timber framing and timber joinery. The cladding to the original building is stucco which has been textured and painted.

2.2 The additions are founded on concrete foundations/concrete floor and basement masonry retaining walls. The remainder is constructed of timber framing (visibly marked as being H1 Boron treated), clad with face-fixed texture painted 7.5mm fibre-cement sheeting. The joinery is aluminium, with the exception of one timber window. 100x100mm timber posts to the verandah on the west elevation of the house are clad with EIFS.

2.3 The roof is a 15° pitched hip roof clad with corrugated steel.

2.4 The dwelling features a timber slated deck which is fixed onto the house wall and supported on the outer edge by three 100mm x 100mm timber posts.

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 section 177(b)(i) of the Act (prior to 7 July 2010)

⁴ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

3. Background

- 3.1 In March 1995 the applicants were issued a building consent (No. 95/368) to undertake additions and alterations to an existing dwelling. These alterations comprised the basement double garage and rumpus room, first floor lounge extension, master bedroom and ensuite, and deck.
- 3.2 Five site inspections were completed between March 1995 and September 1995, with a preline/plumbing inspection completed in June 2002. Failed inspections noted the completion of ceiling/roof framing and the provision of as-built drainage plans; the latter have since been supplied.
- 3.3 I have received no information to indicate a final inspection was undertaken.
- 3.4 In September 2008, the applicants were advised by the authority that assessment of building code compliance for the purposes of issuing a code compliance certificate would require the applicants to engage the services of a building surveyor to undertake a fully invasive moisture test on the building work.
- 3.5 The applicants applied for a determination, which was received by the Department on 12 May 2010.

4. The submissions

- 4.1 The applicants forwarded copies of the plans, invoices, and photos of the construction and the completed building works.
- 4.2 The authority acknowledged the application but made no submission in response.
- 4.3 A draft determination was issued to the parties on 18 August 2010. The draft was issued for comment and for the parties to agree a date when the house complied with Building Code Clause B2 Durability.
- 4.4 The parties agreed that building elements, with the exception of the items to be rectified (refer to paragraph 6.3), complied with Clause B2 on 29 September 1995.

5. The expert's report

- 5.1 As mentioned in paragraph 1.5, I contracted an independent expert to assess the weathertightness of the house. The expert is a member of the New Zealand Institute of Building Surveyors. The expert visited the building on 18 June 2010 and furnished a report that was completed on 8 July 2010. A copy of this report was provided to the parties on 19 July 2010.

5.2 General

- 5.2.1 The expert concluded that the general layout and construction of the addition appeared to correspond with the consented drawings.

- 5.2.2 The expert noted that the overall standard of the workmanship/finish was below average. In particular the expert noted that while the cladding appeared to be well aligned, the standard of finish was below average. The expert also commented that head flashings were well protected from adverse weather conditions. Hip flashings and flashings around roof penetrations were also well fixed.

5.3 Moisture levels

- 5.3.1 The expert inspected the interior of the house and took non-invasive and invasive moisture readings at areas of risk. No visual evidence of moisture penetration was apparent.
- 5.3.2 The expert undertook invasive moisture testing at 13 high risk locations in the external envelope. The following elevated readings were found:
- 19% and 21% below the deck at the deck/wall junction (left and right side respectively)
 - 19% at the bottom plate between garage and rumpus room
 - 20% at the bottom of the deck post at the ground floor (right side)
 - 28% at the bottom of the deck post at the first floor (right side)

I note that elevated moisture readings or those that vary significantly generally indicate that moisture is entering the framing and further investigation is required.

5.4 Observations about the external envelope

Flashings at windows and doors

- 5.4.1 The expert noted that head flashings did not extend 30mm past the window frame but that with the exception of the garage window (north elevation) all window/door heads were well protected by either the soffit or extended roof overhang.
- 5.4.2 The window and head flashing to the aluminium window of the garage was considered to be poorly installed and would require attention.
- 5.4.3 Additionally, the expert noted that corner sill tray flashings had been omitted at the window/cladding junctions and these needed to be fitted.

Roof and roof flashings

- 5.4.4 The expert concluded that the roofing appeared to be in sound condition and that hip flashings were well fitted and penetrations appropriately sealed.
- 5.4.5 Both down pipes to the front of the dwelling discharge the water onto the ground. This practice allows the water to pond around the wall cladding and around the outer support area of the deck. The down pipes should be connected to the drainage system.

Control joints and sheet layout

- 5.4.6 Vertical movement control joints are required by the sheet manufacturer at 5.4m centres. However, none of the walls exceeded this length.

Cracking in the cladding

- 5.4.7 Cracks at the sheet joints were evident to the left hand side of the timber window.

Ground clearance

- 5.4.8 The EIFS-clad posts onto deck level and the ground levels to the front of the garage and rumpus room and deck/wall junction at the entrance do not meet the requirements of E2/AS1. Generally these areas are well protected from adverse weather conditions but elevated moisture readings were recorded in the framing timbers between the garage and rumpus room.

Timber deck/walls and junctions

- 5.4.9 A slatted timber deck is fixed through the ribbon plate and cladding onto the wall. Whilst this is not in accordance with the current code E2/AS1 and is therefore an alternative solution to Building Code requirements it appears that the building elements at this junction are performing as there is no evidence of premature deterioration or evidence of excessive moisture build-up.

Connection of downpipes to surface water drainage system

- 5.4.10 The expert noted that two downpipes were not connected to the surface water drainage system and surface water was being discharged close to the junction of the cladding and the ground.

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).

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 west elevation is two storey
- there is a timber deck off the living room

Decreasing risk

- there is a 600mm soffit overhang and extended roof cover to the front elevation

- the dwelling is in a low wind zone
- three of the elevations are only single storey
- the building is simple in plan and form.

6.2.2 When evaluated using the E2/AS1 risk matrix, the weathertightness features outlined in paragraph 6.2.1 show the house has a low weathertightness risk rating. I note that, if the details shown in the current E2/AS1 were adopted to show code compliance, the cladding on this building would not require a drained cavity.

6.3 Weathertightness performance

6.3.1 Taking into account the expert's comments in paragraphs 5.3 and 5.4, I conclude that remedial work is required in respect of the following defects:

- cracks in the cladding
- ground and deck/cladding clearance, including cladding around the posts at ground and deck level
- lack of sill flashing to the timber window and head flashing to the garage window, and poor installation of the garage window
- exposed polystyrene to the EIFS cladding to top of the verandah posts
- lack of flashing at the deck/wall junction (particularly at the outer ends of the deck where the moisture content levels were moderately elevated)
- the connections of the downpipes that are discharging near the ground to cladding junction.

6.4 Weathertightness conclusion

6.4.1 I consider the expert's report establishes that the current performance of the building envelope is not adequate because it is allowing water penetration through the cladding in at least one area at present. Consequently, I am satisfied that the house does not comply with Clause E2 of the Building Code.

6.4.2 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 is currently allowing the ingress of moisture, the building work does not comply with the durability requirements of Clause B2.

6.4.3 The faults identified in the external envelope are discreet in nature and have not led to a systemic failure of the cladding. I am therefore of the view that satisfactory rectification of the items outlined in paragraph 6.3 will result in the external envelope being brought into compliance with Clauses E2 and B2.

6.4.4 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 Department 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)

Matter 2: the durability considerations

7. Discussion

- 7.1 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).
- 7.2 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.
- 7.3 In this case the delay between the completion of the building work 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.
- 7.4 It is not disputed, and I am therefore satisfied, that all the building elements, apart from the matters that are to be rectified, complied with Clause B2 on 29 September 1995. This date has been agreed between the parties, refer paragraph 4.4.
- 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 the view, and therefore conclude that:
- The authority has the power to grant an appropriate modification of Clause B2 in respect of the building elements.
 - 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.

7.7 I strongly suggest that the authority record this determination, and any modification resulting from it, on the property file and also on any LIM issued concerning this property.

8. What is to be done?

8.1 The authority should issue a notice to fix requiring the owners to bring the building into compliance with the Building Code. The notice should identify the defects listed in paragraphs 6.3.1 and refer to any further defects that might be discovered in the course of investigation and rectification. The notice should not specify how those defects are to be fixed and the building brought into compliance with the Building Code, as that is a matter for the owners to propose and the authority to accept or reject.

8.2 In response to the notice to fix, the owners should produce a detailed proposal describing how the defects are to be remedied. The proposal should be submitted to the authority for approval. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

8.3 Once the agreed matters have been rectified to both parties' satisfaction, the authority may issue a code compliance certificate in respect of the building consent.

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 E2 and 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:

- a) all the building elements installed in the house, apart from the items that are to be rectified as described in Determination 2010/118, complied with Clause B2 on 29 September 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 29 September 1995 instead of from the time of issue of the code compliance certificate for all of the building elements, except for the items to be rectified as set out in paragraph 6.3.1 of Determination 2010/118.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 2 December 2010.

John Gardiner
Manager Determinations