



Determination 2010/110

The refusal to issue a code compliance certificate for an six year old house at 6 High Street, Kirwee



1. The matter 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. The applicants are the owners C and S Singh, (“the applicants”) acting through the former owner and builder, (“the builder”). The other party is the Selwyn District Council (“the authority”), carrying out its duties and functions 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 six year old house because it was not satisfied that it 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 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(b)(i) of the Act (prior to 7 July 2010)

Matter 1: the external envelope

Whether the external envelope, 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, its configuration and components, junctions with other building elements, formed openings and penetrations, and the proximity of those building elements to the ground.

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.

- 1.4 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 dwelling is a north facing single storey house, located on a level site in a high wind zone for the purposes of NZS 3604⁴ and during winter can experience snow loading.
- 2.2 Construction is generally conventional light timber frame, with a concrete slab, monolithic wall cladding, aluminium joinery and profiled metal roofing. The house has a low weathertightness risk (refer paragraph 6.3). The roof has a 20° pitch and is timber framed and clad in corrugated prepainted steel with eaves of approximately 600mm.
- 2.3 The monolithic cladding is a face fixed 7.5mm texture coated fibre-cement system over building wrap, finished with a high build paint membrane.

3. Background

- 3.1 A building consent (Number 041179) was issued by the authority on 30 November 2004 under the Building Act 1991.
- 3.2 Inspections were undertaken during construction and an inspection notice dated 6 April 2006 notes details of the cladding system and 'need to clarify with processor as to system approved before continue [sic]'. The notice also stated that amended plans showing changes to the floor plan and windows would be required. A fax dated 6 April 2006 from the authority confirmed that 'the cladding direct fixed with coating and painting is acceptable'.
- 3.3 The final inspection was not carried out until 6 July 2009. This inspection was failed and six items were listed that required attention including 'minor cracking to joints – plaster system: to supply [authority] with [producer statement]'

⁴ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

- 3.4 A final re-inspection was carried out on 16 July 2009 which passed the cladding, the six items listed in the previous inspection, and noted that the work was in accordance with the building consent.
- 3.5 On 20 October 2009, the authority received an application for a code compliance certificate. In a letter dated 20 November 2009, the authority refused to issue the code compliance certificate stating that:
- the cracking to joints of the plaster system referred to in the inspection notice of 6 July 2009 may have compromised the durability of some building elements
 - the applicator of the exterior plaster cladding system, who also provided the construction statement, is not an approved applicator for that system and therefore it has not been installed as per manufacturer's specifications.
- 3.6 The application for a determination was received by the Department on 22 June 2010.

4. The submissions

- 4.1 In a covering letter with the application, the builder submitted that:
- the authority was aware at all times that the cladding system was being installed by the builder who was not approved as required by the BRANZ appraisal certificate. At no time did the authority indicate to the builder that this would result in the authority's refusal to issue a code compliance certificate, and
 - cracking is to be expected and there is no evidence that this cracking had compromised or would compromise the durability.
- 4.2 In the application the builder provided copies of:
- plans
 - correspondence between the builder and authority
 - photographs and location of cracks on drawings
- 4.3 In response to the application the authority provided copies of:
- building consent documentation
 - the producer statement for construction dated 8 October 2010
 - inspection notices dated 6 July 2010 and 16 July 2010.
- 4.4 The authority also submitted its reasons for reasons for refusing to issue a code compliance certificate were:
- The exterior plaster cladding system was not installed by an approved applicator and therefore it did not meet the requirements of the statements and conditions of the BRANZ appraisal certificate No. 530. A producer statement was issued by the applicator as required under the consent conditions.

However, the applicator, and signatory of the producer statement, issued the produce statement to himself as the owner of the property.

- Cracking to joints of the plaster system had occurred and the authority was concerned that this could compromise the durability of the cladding.
- No maintenance had been undertaken since the cladding had been installed.
- Amended plans for changes to the floor plan and windows had not been provided as requested by the authority.

4.5 The draft determination was issued to the parties on 17 September 2010. The draft was issued for comment and for the parties to agree a date when the building elements, with the exception of any items requiring rectification, complied with Clause B2 Durability.

4.6 The applicants accepted the draft without comment. The authority did not accept the draft and in a letter to the Department dated 27 September 2010 submitted, in summary, that:

- amended plans to reflect the as-built work were still necessary
- the insufficient gap between the cladding and the foundation noted by the expert being should be included in the building's risk assessment and the matters to be remedied, also stating that 'if it is not rectified it will not comply with NZS 3604 75.2.1, E2/AS: 1 9.1.3.3, it will also invalidate the [product] warranty'.

4.7 I have amended the determination as appropriate. The monolithic cladding is already highlighted as a factor increasing the risk profile of the building. I note that compliance with the Building Code is demonstrated by a building's ability to meet the relevant performance requirements and not necessarily by strict adherence to product recommendations, and similar.

4.8 The parties agreed that compliance with B2 Durability, with the exception of any items requiring rectification, was achieved on 1 September 2005.

5. The expert's report

5.1 As mentioned in paragraph 1.4, 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. He visited the building on 26 July 2010 and furnished a report that was completed on 2 August 2010. A copy of this report was provided to the parties on 5 August 2010.

General

5.2 The expert noted that the dwelling had generally been completed in accordance with the supplied plans apart from some changes to the joinery. The expert also noted that no specifications were provided but that the technical information and detailing provided could be considered acceptable at the time.

Wall cladding

- 5.3 The expert noted that cladding system as applied on this dwelling should be considered an alternative system since:
- the building consent was issued under the 1991 Building Act
 - the document offered as part of the consent documents is dated prior to the issue of E2/AS1 details. The E2/AS1 details are dated 2006.
 - the system approved by the authority was for a face fixed fibre-cement sheet.
- 5.4 The expert noted that overall the quality of the cladding installation had been good and that it had been well maintained. The cladding had, in most cases, been finished to 50mm below the bottom plate and control joints installed in accordance with the manufacturer's recommendations. The expert found the recessed joints and corner junctions have been finished with details that are in excess of the technical requirements.

Moisture readings

- 5.5 The expert undertook invasive moisture testing at a number of external locations in the external envelope. No elevated readings were found
- 5.6 The expert removed a section of the cladding from below bedroom 2 window where cracking had occurred. The expert was able to conclude that the junction had been constructed correctly. The expert also found that all penetrations had been adequately sealed.
- 5.7 The expert noted the following items requiring rectification:
- In one section of the north wall the surrounding ground had been built up with pea straw to within 60mm from the base of the cladding.
 - Sections of the cladding do not have the recommended 6mm horizontal capillary gap between the bottom edge of the cladding to the foundation.
 - Some minor hairline wall cracks had occurred, but many were only in the paint and could be addressed with regular inspections and maintenance.

Windows and doors

- 5.8 The expert noted that head flashings had been installed and extended 30mm past the frame. Even though the joinery has been face fixed, destructive testing indicated to the expert that there were adequate jamb seals. Sill flashings have been fitted and it was noted that all flashings had been installed in accordance with E2/AS1 (July 1992). The expert noted that the installation was also in accordance with the manufacturer's recommendations.

Roof

- 5.9 The expert noted that the roof was well maintained, that the roofs had adequate fall and discharge into external gutters which discharge into the storm water system and that there were no signs of previous internal leaking.

Compliance with Clause G13 Foul water

- 5.10 The expert observed that most of the gully traps did not comply with the minimum 25mm above paved ground and 100mm above unpaved ground as required by paragraph 3.3.1 of Acceptable Solution G13/AS2.
- 5.11 A copy of the expert's report was provided to the parties for comment on 5 August 2010.
- 5.12 In a submission dated 23 August 2010, the authority disagreed with the expert's opinion that 'the overall quality of installation [of the cladding] is very good and in my view overall has been well maintained'. The authority noted that the builder's submission indicated that no maintenance had been carried out and furthermore the presence of cracking to the plaster system provided evidence that the cladding had not been well maintained. The submission also said the term used by the expert ('Radiata H1') did 'not identif[y] a treatment level'.
- 5.13 The builder, through his solicitor, responded to the expert's report and the authority's submission in a letter dated 16 September 2010. The letter provided evidence from the supplier that the framing timber was treated to 'Radiata H1.2'.

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 apply the principles of weathertightness. This involves the examination of the design of the building, the surrounding environment, and 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 walls have monolithic cladding fixed directly to the framing
- the house is in a high wind zone
- there is inadequate ground clearance in one small area

Decreasing risk

- the house is single storey and simple in plan and form
- the joinery has head and sill flashings and jamb seals
- most walls have eaves and verges to shelter the cladding.

- 6.3 When evaluated using the E2/AS1 risk matrix, the weathertightness features outlined in paragraph 6.2 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.

Weathertightness performance

- 6.4 Generally the house is well constructed. However, taking into account the expert's comments in paragraphs 5.7, I conclude the remedial work is required as follows:
- adequate clearance from the cladding to ground on the northern elevation.
 - the hairline cracking in the cladding
 - lack of a horizontal capillary gap between the bottom edge of the cladding and the foundation in some places.

Weathertightness conclusion

- 6.5 I consider the expert's report establishes that the current performance of the building envelope is adequate because there is no evidence of any water penetration through the cladding. Consequently, I am satisfied that the house complies with Clause E2 of the Building Code.
- 6.6 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 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 (insofar as it relates to Clause E2)
- 6.7 The faults identified in the cladding are discreet in nature. I am therefore of the view that satisfactory rectification of the items outlined in paragraph 6.4 will result in the cladding being brought into compliance with Clause B2.
- 6.8 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 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).

Compliance with other code requirements

- 6.9 In order to comply with code clause G13, the gulley traps are required to be rectified to prevent the ingress of surface water into the foul water system.

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 owner’s 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 1 September 2005. This date has been agreed between the parties, refer paragraph 4.8.

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, if this is requested by the owner.
- 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 [date agreed by the parties].

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 6.4 and 6.9 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.
- 8.4 I note the authority has requested amended plans to reflect the as-built work (refer paragraphs 4.4 and 4.6). I leave the provision of the appropriate documentation to be resolved between the parties.

9. The decision

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

- the gully traps do not comply with Clause G13 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 as described in Determination 2010/110, complied with Clause B2 on 1 September 2005
- 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 1 September 2005 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 paragraphs 6.4 and 6.9 of Determination 2010/110.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 4 November 2010.

John Gardiner
Manager Determinations