



## Determination 2012/004

### Regarding the refusal to issue code compliance certificates for a 12-year-old house and garage at 1 Selwyn Street, Coalgate



#### 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 current 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 owner, F Newton (“the applicant”)
- Selwyn District Council (“the authority”), carrying out its duties and functions as a territorial authority and a building consent authority.

1.3 This determination arises from the decision of the authority to refuse to issue code compliance certificates for the 12-year-old house and garage, because it is not satisfied that the building work complies with certain clauses<sup>2</sup> of the Building Code (First Schedule, Building Regulations 1992). The authority’s concerns about the compliance

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<sup>1</sup> The Building Act, Building Code, Compliance documents, past determinations and guidance documents issued by the Department are all available at [www.dbh.govt.nz](http://www.dbh.govt.nz) or by contacting the Department on 0800 242 243

<sup>2</sup> 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.

of the building work relate to its age, and to the weathertightness of the cladding taking into account the time taken to complete construction (refer paragraph 3.7).

- 1.4 I take the view that the matter to be determined<sup>3</sup> is whether the authority correctly exercised its powers when it refused to issue code compliance certificates for the house and garage. In deciding this, I must consider:

**Matter 1: Compliance with the Building Code**

- 1.4.1 Whether certain elements that make up the building work for both the house and garage comply with Clauses B1 Structure, B2 Durability, E2 External moisture, and H1 Energy efficiency of the Building Code that was current at the time that the building consent was issued, taking into account the age of the building work.

**Matter 2: The durability considerations**

- 1.4.2 Whether the elements that make up the building work for both the house and the garage comply with Clause B2 Durability of the Building Code, taking into account the age of the house.
- 1.5 In making my decision, I have considered the submissions of the parties, the report produced by the expert commissioned by the Department to advise on this dispute (“the expert”), and the other evidence in this matter. The relevant legislation is set out in Appendix A.

## **2. The buildings**

- 2.1 The buildings in question consist of a simple single-storey house and a separate garage constructed on a level site situated in a very high wind zone in terms of NZS 3604<sup>4</sup>.
- 2.2 The house is timber-framed with a concrete floor slab and foundations. The outside cladding is predominantly 70mm brick cavity veneer, with some areas of grooved plywood that sit over a brick sill. Plywood and black building paper are fixed to the wall framing behind the 40mm wide brick veneer cavity. The gable ends are lined with ply and paper above the brick veneer and overlaid with horizontal metal weatherboard sheet. The gable roof is clad with steel tiles.
- 2.3 The garage is also timber-framed with a concrete slab and foundations. The walls are clad with a combination of grooved plywood that sits over a brick sill, fibre-cement board, and vertical v-rib colour steel roofing profile sheet. A 40mm wide cavity is formed behind the grooved plywood lining on the west wall. The gable roof is clad with unpainted galvanised steel roofing. The expert has established that the garage was an existing structure, which was dismantled, relocated and reassembled at the property.
- 2.4 The expert noted that the wall framing to the house is H1 Boron treated and the bottom plate of the garage is H3 CCA treated.

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<sup>3</sup> Under sections 177(1)(b) and 177 (2)(d) of the Act

<sup>4</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

### 3. Background

- 3.1 On 13 March 1998 the authority issued building consent No R418237 for the house and building consent No R418238 for the garage, under the Building Act 1991 (“the former Act”).
- 3.2 From the information that I have received from the applicant, I believe that the construction of the house and the garage has continued up to the present time. The expert has also noted that the garage external wall coverings are still incomplete.
- 3.3 During construction of the house a layer of ply was fixed to the framing, apparently to protect the framing and improve the insulation. The ply was exposed to the weather for some time before being over-laid with building wrap and clad. The ply does not now contribute to compliance with Clauses E2 or B1 of the Code
- 3.4 Both the house and the garage were subject to various inspections carried out from mid-1998 up to late-2010, including the following:
- 21 June 2000; half height veneer - inspection record noting concerns about the durability of the ply cladding
  - 27 July 2000; half height veneer - inspection notice records ‘owner agreed to [brand] seal around windows as cover from brick not sufficient’
  - 14 September 2001; Post-line bracing, plumbing and half height veneer – noting minor items to be completed
  - 10 December 2002; “partial final” - noted five minor items to be completed.
- 3.5 On 6 October 2010 the authority carried out a final inspection; noting that item six from the previous inspection, ‘gable soffit to complete batten and seals and painting’, were yet to be completed. It was also indicated that no re-inspection was required.
- 3.6 Following an application for code compliance certificates, the authority wrote to the applicant on 9 August 2011. The authority stated that it was unable to issue code compliance certificates for the buildings due to the extended time that had elapsed between the issuing of the building consents and the date of the final inspections. This amounted to a time span of some 12 years. In particular, the authority could not be satisfied on reasonable grounds that the building elements would continue to satisfy the durability requirements of the Building Code after the issue of the code compliance certificates.
- 3.7 The authority also noted that during the inspections of the buildings, it had highlighted various issues that could “have a direct impact on weathertightness and moisture ingress”. The authority was of the view that the durability of certain building elements could have been compromised due to the incomplete nature of the building work.
- 3.8 The Department received an application for a determination on 2 September 2011.

## 4. Submissions

- 4.1 In a covering letter with the application, the applicant set out the background to the dispute and noted that, due to certain circumstances, the applicant had only recently completed the house. The applicant was of the opinion that he had complied with the requests and suggestions made by the authority's inspectors and that there was no evidence that moisture was entering the buildings. The applicant also considered that the buildings met the requirements of their respective building consents.
- 4.2 The applicant forwarded copies of:
- the letter from the authority to the applicant dated 9 August 2011
  - the inspection reports prepared by the authority
- 4.3 In an email to the Department dated 7 September 2011, the authority noted that it had concerns regarding Clauses B1, B2 and E2.
- 4.4 In a letter to the Department dated 9 September, the authority provided some background information and copies of the Building Consents and inspection records. The authority noted that its concerns were (in summary) the durability of the building work, in particular the time taken to complete construction and water ingress that may have occurred during the period that the cladding was incomplete.
- 4.5 A draft determination was issued to the parties on 8 November 2011. The draft was issued for comment and for the parties to agree dates when the house and garage complied with Building Code Clause B2 Durability.
- 4.6 The applicant accepted the draft without comment and both parties agreed that compliance with B2 was achieved on 1 December 2001 for both the house and the garage.
- 4.7 In a letter to the Department dated 28 November 2011, the authority accepted the decision in relation to the garage but did not accept the draft in relation to the house and submitted that
- the authority never accepted that the ply was not for bracing purposes
  - the consent (for the garage) was for a new building and it was not until after it was built that the authority discovered it was a relocated building
  - the ply contributes to clauses B1 and H1, because in addition to the bracing the brick veneer ties are connected to the ply
- 4.8 In regards to the house the authority also submitted that in its view a brick veneer cavity is designed as a 'wet' cavity i.e. moisture is expected to get in, and that there is a probability that moisture levels could rise and allow the existing brown rot to spread. The authority considered the probability was exacerbated given:
- the paving is 30mm higher than the bottom of the veneer rebate
  - the rebate is not water proofed
  - the underslab vapour barrier is returned some distance up the wall rather than being terminated at the bottom plate
  - mortar protrudes out the back of the veneer

- the half-height veneer inspection notice (27 July 2000) stated that there was insufficient cover to the window and that these would need to be sealed to the veneer
  - the lack of end closers on the cement fibre board head flashings.
- 4.9 The authority also noted a number of errors that have subsequently been corrected. I have taken account of the authority's full submission and the determination was amended as I considered appropriate.
- 4.10 A second draft determination was issued to the parties on 12 December 2011. In a letter to the Department dated 22 December 2011 the authority accepted 'in general the content' of the second draft determination and made no further comment.
- 4.11 In a letter received on 16 January 2012, the applicant accepted the draft determination, and commented as follows (in summary):
- The inspections by the authority at the time did not raise issue with the underfloor slab lining being folded up the external wall between the studs and ply fittings.
  - Brick ties were installed appropriately and all ties were checked for stud insertion.
  - In the preliminary report of a recent inspection subsequent to seismic activity in the region, no brick damage or cracked plaster between the bricks was noted.
- 4.12 The applicant also noted that a builder has been engaged to remedy snow damaged spouting, an engineer was providing a report on the garage, and that other requirements for the garage had been completed. (I note here that this information should be forwarded to the authority for its consideration; refer paragraph 7.)

## 5. The expert's report

- 5.1 As set out in paragraph 1.5, I engaged an independent expert, who is a member of the New Zealand Institute of Building Surveyors, to provide me with a report on the code-compliance of the buildings. The expert visited the site on 6 October 2011 and provided me with a report that was completed on 21 October 2011.
- 5.2 The expert described the construction of the buildings and the background to the dispute, and described certain installed elements of both the house and the garage that differed from those shown on the consented plans.
- 5.3 Commenting specifically on the external envelope, the expert noted that:

### The house

- The external and internal finishes were to a good standard.
- The foundations and slab complied with the requirements of Clause B1.
- The plywood behind the cavity brickwork complied with NZS 3602:1995, and while the building paper behind this lining is not fire rated, the distance from the site boundary ensured that this was not an issue.
- The overhangs to the cladding and the majority of ground clearances were code-compliant and met the requirements of Clause E2.

- The walls and ceilings were insulated with fibreglass batts and when some batts were removed for inspection they did not show any indication of moisture ingress damage. Accordingly, the house would meet the requirements of Clause H1.
- Non-invasive moisture readings taken at the interior of the external walls did not indicate any high readings.
- There was nothing to indicate that the bracing elements, which had been subject to pre-lining and post-lining checks by the authority, had been compromised by weathering.
- Minor adjustments of ground levels were needed to the house at the entry and adjacent the water tank

### **The garage**

- The foundations and slab complied with Clause B1.
- The ground clearances and overhangs to the cladding were considered code-compliant and the requirements of Clause E2 had been met.

5.4 In respect of the garage the expert also observed the following:

- While the framing was well constructed, the external wall cladding was incomplete and poorly finished.
- With the exception of the window to the North elevation, the garage windows and doors were not flashed. The finishing around all the doors and windows was poor with the defects sufficient to establish that the garage did not comply with Clause E2.
- Thresholds needed to be formed at the doorways to prevent the ingress of moisture.

5.5 The expert also noted that the garage required certification by an engineer in order to ensure it met the snow loading requirements of its location and to verify its compliance with Clause B1.

### **Moisture levels**

5.6 As part of the site inspection, the expert undertook a series of non-invasive and invasive moisture readings and removed a small section of the internal linings of the house to ascertain the construction of the exterior walls. The expert also removed samples of the plywood fixed to the exterior walls of the house and the bottom plate of the garage and forwarded them to an independent laboratory for testing.

5.7 The expert commented in detail about the requirements of Clause B2 in relation to the plywood fixed to the exterior walls of the house. He concluded that the timber framing behind the plywood was in good condition and 13% moisture content had been identified by an invasive reading at the bottom plate. The moisture content of the plywood was 15% although an independent laboratory test showed the presence of insipient brown rot through the depth of the plywood sample and considered it marginal in terms of the need for replacement. The expert was of the opinion that the moisture ingress had occurred prior to the installation of the brick veneer. Given that the plywood was now protected and unlikely to be exposed to the weather, the expert accepted that the requirements of B2 would be met.

- 5.8 As the laboratory test had indicated that the bottom plate of the garage was H3 CCA treated and was not subject to decay or toxic mould, the expert was of the opinion that, provided the current moisture ingress was alleviated, the garage would comply with the requirements of Clause B2.

## **6. Discussion**

### **6.1 Matter 1: Compliance with the Building Code**

#### *The house*

- 6.1.1 I consider the expert's report establishes that the performance of the external envelope of the house is adequate because it is preventing water penetrating through the cladding. Consequently, I am satisfied that the external envelope complies with Clause E2 of the Building Code.
- 6.1.2 However, the building envelope to the house 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.
- 6.1.3 Because the faults in the external envelope are likely to allow ingress of moisture in the future, I consider the house does not comply with the durability requirements of Clause B2 insofar as it relates to Clause E2. Taking into account the expert's opinion and the authority's submission, I consider that work is required in respect of
- the minor adjustments of ground levels required at the entry and adjacent the water tank.
  - sealant or similar required around windows where brick cover is insufficient
  - end closers required to the head flashings formed with cement fibre board.
- 6.1.4 In response to the authority's submission of 28 November 2011 (refer paragraph 4.8) I note that
- though the rebate is not waterproof I consider that it is not required in this instance given the configuration of the foundation and floor and vapour barrier
  - the return of the vapour barrier up the wall, rather than being terminated at the bottom plate, is an advantage
  - the cavity depth for brick, being 40mm in this case, is designed to allow for the mortar that protrudes from the back of the veneer.

#### *The garage*

- 6.1.5 I accept the expert's opinion in respect of the lack of compliance of the garage with Clauses E2 and B2 (refer paragraph 5.4). The garage's compliance with Clause B1 Structure is also to be verified by an engineer (refer paragraph 5.5).
- 6.2 As the building consents were issued under the former Act, the issuing of code compliance certificates is subject to the requirements of section 436 of the current Act. Accordingly, the buildings have to comply with the requirements of the Building Code that was in force at the time the building consents were granted in order for the code compliance certificates to be issued.

6.3 In light of the above I conclude that the authority was correct in refusing to issue the code compliance certificates for the house and garage.

#### **6.4 Matter 2: The durability considerations**

6.4.1 The authority has concerns regarding the durability, and hence the compliance with the Building Code, of certain elements of the house, taking into consideration the age of the building consents issued in March 1998.

6.4.2 The relevant provision of Clause B2 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).

6.4.3 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.

6.4.4 In this case, the delay between the substantial completion of the building work and the owner’s request for a code compliance certificate may well raise concerns that various elements of the building are now well through or beyond their required durability periods. They consequently would no longer comply with Clause B2 if a code compliance certificate were to be issued effective in the near future.

6.4.5 It is not disputed, and I am therefore satisfied, that all the building elements in respect of consents No R418237 for the house and No R418238 for the garage, excluding those items that are to be rectified as described in paragraphs 6.1.3 and 6.1.5 of this determination, complied with Clause B2 on 1 December 2001 (refer paragraph 4.6).

6.4.6 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.

6.4.7 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 if requested by an owner
- (b) it is reasonable to grant such a modification, with appropriate notification, as in practical terms the building is no different from what it would have been if a code compliance certificate for the building work had been issued in 1995.

- 6.4.8 If the above process is followed, then I 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.

## **7. What is to happen next?**

- 7.1 The expert has identified changes from the original documentation that are apparent in the constructed building work. The applicant should take the necessary steps to seek amendments to both the original building consents' documentation in accordance with the completed work.
- 7.2 The authority should issue a notice to fix that requires the owner to bring the building work relevant to both building consents into compliance with the Building Code, identifying the structural investigation required and the items to be rectified (as described in paragraphs 5.4 and 5.5, and 6.1.3) and referring to any further defects that may be discovered in the course of investigation and rectification. 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 owners to propose and for the authority to accept or reject.
- 7.3 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 the specified matters. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.
- 7.4 Once the matters set out in paragraph 7.1 and 7.2 have been rectified to its satisfaction, the authority may issue code compliance certificates for the house and garage in respect of building consents R418237 and R418238.

## **8. The Decision**

- 8.1 In accordance with section 188 of the Building Act 2004, I determine that:
- the house complies with Clauses B1 Structure, E2 External moisture, and H1 Energy efficiency of the Building Code
  - the house does not comply with Clause B2 Durability insofar as it relates to Clause E2 External moisture, and accordingly I confirm the authority's decision to refuse to issue a code compliance certificate for building consent No R418237
  - the garage does not comply with the Clauses B2, and E2 of the Building Code, and accordingly I confirm the authority's decision to refuse to issue a code compliance certificate for building consent No R418238. There is insufficient evidence to establish that the garage complies with Clause B1.
- 8.2 I also determine that:
- a) apart from the items that are to be rectified as described in Determination 2012/004, all the building elements in the house and garage complied with Clause B2 on 1 December 2001.

- b) building consent No R418237 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 December 2001 instead of from the time of issue of the code compliance certificate for all of the building, except for the items to be rectified as set out in Determination 2012/004.

- c) building consent No R418328 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 December 2001 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 Determination 2012/004.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 24 January 2011.

John Gardiner  
**Manager Determinations**

## Appendix A: The relevant legislation

A1 The relevant provisions of the Act are:

**436 Transitional provision for code compliance certificates in respect of building work carried out under building consent granted under former Act**

- (1) This section applies to building work carried out under a building consent granted under section 34 of the former Act.
- (2) An application for a code compliance certificate in respect of building work to which this section applies must be considered and determined as if this Act had not been passed.
- (3) For the purposes of subsection (2), section 43 of the former Act—
  - (a) remains in force as if this Act had not been passed; but
  - (b) must be read as if—
    - (i) a code compliance certificate may be issued only if the territorial authority is satisfied that the building work concerned complies with the building code that applied at the time the building consent was granted; and
    - (ii) section 43(4) were omitted.