



Determination 2017/051

Regarding the refusal to issue a code compliance certificate for a 10-year-old house with brick veneer cladding at 15 Devine Drive, Claremont Estate, Rolleston



Summary

This determination considers the compliance of the building work, and whether there were reasonable grounds for the authority to issue a code compliance certificate. The determination discusses inspections undertaken by the authority as a means of providing reasonable grounds on which to issue a code compliance certificate.

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 and Assurance, Ministry of Business, Innovation and Employment (“the Ministry”), for and on behalf of the Chief Executive of the Ministry.
- 1.2 The parties to the determination are:
 - the owner of the house, T Orchard (“the applicant”)
 - Selwyn District Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.3 This determination arises from the authority’s decision to refuse to issue a code compliance certificate for the 10-year-old house. The refusal arose because the authority was initially not satisfied the foundations complied with Clause B1. The applicant later refused to allow a final inspection to be carried out and the authority

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

was not satisfied that the building work complies with certain clauses² of the Building Code (First Schedule, Building Regulations 1992).

- 1.4 The matter to be determined³ is therefore the authority's exercise of its power of decision in refusing to issue the code compliance certificate. In deciding this matter, I must consider whether the authority had reasonable grounds at the time to be satisfied that the building work complied with the Building Code.
- 1.5 The dispute regarding whether the reinforcing had been installed in the concrete block foundations has been resolved, and is not considered within this determination.
- 1.6 In making my decision, I have considered the submissions of the parties, the report of the independent expert commissioned by the Ministry to advise on this dispute ("the expert") and the other evidence in this matter.

2. The building work and background

- 2.1 The building work considered in this determination is a single storey house with an attached double garage. The house is located in a high wind zone as defined in NZS 3604⁴.
- 2.2 The house has timber framed walls on a concrete slab with concrete block foundations. The gable roof is constructed with timber trusses, with pitches of 20° and 25°, and is clad with concrete tiles. The house is clad with brick veneer over a ventilated cavity.
- 2.3 The authority issued building consent No. 061941 for the house in November 2006, which was amended on 23 February 2007. The authority undertook the following inspections:
 - siting and foundation passed on 20 February 2007
 - slab inspection passed on 8 March 2007
 - pre-wrap inspection passed on 23 April 2007
 - post wrap inspection passed on 2 May 2007
 - half height veneer inspection passed 2 June 2007
 - pre-line building/plumbing inspection (bracing, plumbing, insulation) passed on 11 June 2007
 - post-line inspection (bracing) passed on 22 June 2007
 - sanitary/stormwater drainage passed on 4 July 2007
 - final inspection on 16 August 2007 failed pending additional exterior and interior items to be completed, and submission of additional documentation
 - final inspection on 23 August 2007: the building work items were completed, with the only outstanding item noted as being the producer statement (PS4) for the foundations.
- 2.4 The applicant applied for a code compliance certificate on 16 August 2007, which was placed on hold pending further information regarding the foundations.

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

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

⁴ New Zealand Standard NZS 3604:1999 Timber framed buildings

- 2.5 Correspondence between the parties continued in 2009 – 2010 regarding the requirement for a PS4 for the foundations. The authority recommended that verification of the reinforcing be provided, and stated one method could be to x-ray the foundations to confirm the reinforcing placement.
- 2.6 A further inspection of the foundations was carried out on 17 August 2016, with the inspection notes stating the following (in summary):
- the x-ray machine could not make an accurate recording/reading of the foundations, and unable to satisfy Clause B1 for the “missing steel”
 - the applicant refused a “full practical final” inspection, which is required when it has been over 3 months since the previous final inspection
 - the building work was then nine years old, and had been subject to significant earthquakes which may have impacted the structural stability of the foundations
 - no “EQC scope of works” or engineer confirmation of any repairs has been sighted or completed.
- 2.7 In a letter dated 19 August 2016, the authority refused to issue the code compliance certificate. The authority stated that the inspection had identified issues of non-compliance with the Building Code and the authority could not be satisfied on reasonable grounds that the building work complied with Clauses B1 and B2.
- 2.8 In a letter dated 23 August 2016, a structural engineering firm informed the authority that they had been engaged to verify the presence of foundation reinforcement. The letter confirmed that the foundation reinforcement was in place as per the consented drawings, and reinforcement to the garage floor slab was present.
- 2.9 On 30 August 2016, the authority emailed an agent acting for the applicant, advising that it was prepared to accept the structural engineering report which had confirmed the reinforcement in the foundations. The authority stated that although the foundation reinforcement was no longer an issue, a final inspection would still be required before the authority could issue a code compliance certificate.
- 2.10 The applicant emailed the authority on 19 October 2016, noting that the authority had already carried out foundation inspections in 2007 and a final inspection in August 2007.
- 2.11 On 10 October 2016 the authority advised the applicant that it was refusing to issue the code compliance certificate. The authority noted the issue regarding the foundation reinforcement was resolved and the applicant could reapply for a code compliance certificate. The authority reiterated that a final inspection would still be required should the applicant choose to reapply for a code compliance certificate, because the work was completed in 2007 and more than three months had passed since the last final inspection.
- 2.12 It appears that the applicant did not wish for a final inspection to be carried out, and a new application for the code compliance certificate was not made.
- 2.13 The Ministry received an application for a determination on 9 January 2017.

3. The submissions

3.1 The applicant included a submission with the application setting out a timeline of events. The applicant attached copies of the following documents with their application:

- consented foundation footing details
- inspection records
- building consent applicant checklist
- code compliance certificate application
- request for information letter regarding the building consent application
- section 95A letter dated 7 October 2010
- two request for information letters regarding the code compliance certificate
- code compliance certificate “circulation sheet”
- inspection notice dated 17 August 2016
- section 95A letter dated 18 August 2016
- correspondence between the parties
- Determinations 2007/131 and 2008/36.

3.2 The authority made no submission, but provided the building consent records on 13 February 2017, which included the following documents:

- letter from structural engineering firm regarding foundation reinforcement
- building consent No. 061941
- specification
- as built drawings and consented drawings.

3.3 A draft determination was issued to the parties for comment on 2 June 2017.

3.4 The applicant on 21 June 2017 accepted the draft determination without further comment.

3.5 The authority in an email dated 22 June 2017 accepted the draft determination without further comment.

4. The expert’s report

4.1 As mentioned in paragraph 1.6, I engaged an independent expert to assist me who is a member of the New Zealand Institute of Building Surveyors. The expert was engaged to carry out an assessment of the building work against the consented documentation, and provide information regarding the internal and external building features for general compliance. The expert visited the house on 11 May 2017 and provided a report on 23 May 2017, which was sent to the parties the next day.

4.2 General

4.2.1 The expert compared the constructed house with the building consent documentation and noted that overall the architectural shape and form of the building is in

accordance with the consented drawings. The expert observed no significant discrepancies between the consented documents and the constructed house.

4.2.2 The expert did not carry out invasive testing, but assessed the weathertightness risk factors for the building, noting the mitigating features as follows:

- A note on the consented drawings specified “untreated kiln dried radiata pine” for roof framing, trusses and ceiling joists, “untreated Douglas Fir” for the interior wall framing including the bottom plates, and “H1 treated...radiata pine” for the external wall framing. The pre-wrap inspection approved the interior framing and the pre-line inspection approved the “H3.1” external wall framing.
- The brick veneer is installed over a drained cavity.
- The construction quality is noted as “good”.
- The building is generally well presented and maintained, with landscaping yet to be completed.
- Generally the eaves project 600mm from the building envelope except over “bathroom wall projections”.

4.3 The expert’s observations

4.3.1 The expert made the following observations, which would have been apparent to the authority in a final inspection:

Clause B1 Structure

4.3.2 The consent conditions required as-built truss layout drawings and a producer statement. The as-built drawings were supplied to the authority but the producer statement was not on the file. The expert observed the missing producer statement was not noted among the documentation required at the final inspection in 2007, and considered that the lack of a producer statement is not a “significant impediment” to issuing the code compliance certificate. The expert observed that the roofline appeared “straight and true” with no sagging or visible indication of failure.

Clause B2 Durability

4.3.3 It appears that there were no ground clearance dimensions indicated on the consent drawings. When the expert scaled off the consented drawings, it showed ground clearance of 125mm below the brick veneer cladding or 225mm below the floor slab. The specification states all timber construction “shall conform with the principles laid down in NZS 3604 1999”.

4.3.4 The expert noted that the version of the Acceptable Solution E2/AS1 which was current at the time of construction (and NZS 3604:1999 which was a cited Standard in the applicable version of E2/AS1) set out minimum ground clearances of 100mm below finished concrete floor level to permanent paving and 150mm to unpaved ground.

4.3.5 The expert observed ground levels as follows:

- Less than 100mm clearance to the paving at the front entrance, with the pavers installed “slightly above” the weep holes in the brick veneer cladding – this could lead to ponding at the base of the cladding.

- The driveway gravel is built up just below the brick cladding to the garage entrance, not meeting the minimum clearance set out in E2/AS1.
- The north and east elevations have ground clearances ranging from 115 – 130mm below the floor slab to the paving, which satisfies E2/AS1.
- Where the east elevation is unpaved the ground levels satisfy E2/AS1 at 165mm below the floor slab.
- The west and south elevations where unpaved meet the minimum clearances, ranging from 225 – 265mm below the floor slab.
- The south elevation, where paved, has clearances between 110 – 120mm below floor slab, satisfying E2/AS1.
- Where the west elevation is unpaved the ground clearances range from approximately 90 – 140mm, not satisfying E2/AS1.

4.3.6 The expert summarised that generally the ground clearances satisfy E2/AS1 with the exception of the unpaved areas to the west elevation and garage entry. The expert commented that unpaved ground levels may build up over time with vegetation, which can increase the risk of dampness affecting the bottom plates of the wall framing. The expert is of the opinion that the gravel levels at the garage door are acceptable because ramping is required for the vehicle entry and the adjacent bottom plates have a clearance of approximately 100mm from the base of the brick veneer cladding.

4.3.7 In regard to the paved area at the front entrance that does not satisfy E2/AS1, that part of the cladding will be protected by the porch soffit. However, in areas where the cladding is protected by a smaller soffit, ponding could occur at the base of the brick veneer cavity. The expert noted that if a drainage channel was installed, this could mitigate the risk of ponding without needing to uplift all of the entry paving. The remaining paving has been installed with clearances that satisfy E2/AS1.

Clause G3 Food preparation

4.3.8 The expert observed that a kitchen bench was not sealed at the wall junction, but considered the lack of sealant was a maintenance issue only.

Clause G13 Foul water

4.3.9 The Acceptable Solution for G13 sets the minimum overflow level of the gully trap to be no less than 100mm to unpaved ground or 25mm when above paved surfaces. The expert observed approximately 40mm clearance to the unpaved ground, and noted there is a risk that surface water could enter the gully trap.

4.4 Conclusion

4.4.1 The expert considered the cladding clearances and gully trap clearance require remedial work to achieve code compliance.

4.4.2 The expert recommended that the kitchen bench be sealed as part of normal maintenance.

5. Discussion

5.1 The legislation

5.1.1 The relevant sections of the Act are as follows:

90 Inspections by building consent authorities

(1) Every building consent is subject to the condition that agents authorised by the building consent authority for the purposes of this section are entitled, at all times during normal working hours or while building work is being done, to inspect—

- (a) land on which building work is being or is proposed to be carried out; and
- (b) building work that has been or is being carried out on or off the building site; and
- (c) any building.

(2) The provisions (if any) that are endorsed on a building consent in relation to inspection during the carrying out of building work must be taken to include the provisions of this section.

(3) In this section, inspection means the taking of all reasonable steps to ensure that building work is being carried out in accordance with a building consent.

95 Issue of code compliance certificate

A building consent authority must issue a code compliance certificate if it is satisfied, on reasonable grounds,—

- (a) that the building work complies with the building consent;...

5.2 Issuing the code compliance certificate

5.2.1 Under section 95 of the Act, an authority must issue a code compliance certificate if it is satisfied on reasonable grounds that the building work complies with the building consent. When a code compliance certificate is issued, it is essentially a statement that the authority considers it has reasonable grounds to believe at that time the built work complies with the consented documents.

5.2.2 Inspections are a part of establishing that the building work is being carried out in accordance with the building consent. Once the building work is complete, the authority carries out a final inspection to satisfy itself that the completed building work complies with the building consent and accordingly that it will comply with the performance requirements of the Building Code and accordingly that it will comply with the performance requirements of the Building Code.

5.2.3 I note that the applicant has stated that several final inspections were conducted by the authority. However, as a substantial amount of time passed since the last final inspection, the authority wanted to carry out another inspection. I note that the authority was required to make a contemporaneous decision to issue the code compliance certificate, and that in doing so the authority can take into account the in-service performance of the building work in making its decision. I consider that, irrespective of the fact the foundation issue was resolved, without the benefit of carrying out an inspection or evidence provided by the applicant, the authority could not be satisfied on reasonable grounds that the building work complied with the building consent.

5.2.4 I conclude that the authority was correct to refuse the code compliance certificate because it did not have reasonable grounds to be satisfied that the building work complies with the building consent.

5.3 Compliance with the Building Code

5.3.1 The expert's report provides me with reasonable grounds on which to form a view as to whether the house complies with the building consent and the performance requirements of the Building Code. Generally, the house appears to have been built in accordance with the building consent, except for the following areas that the expert identified requires further work.

Clause E2 External moisture

5.3.2 The expert identified that the cladding clearances in some locations were less than less than the clearances provided for in E2/AS1. I note that the drawings detailed clearances in excess of those set out in E2/AS1, and the clearances as-built did not accord with the consented drawings. At the request of the applicant, the expert did not carry out invasive testing and therefore was unable to provide evidence as to whether these lower clearances have permitted water ingress. I note that the expert did not identify any obvious visual signs of damage that result from moisture penetration, and the house design is low risk.

5.3.3 The lower clearances increase the risk of water ingress, and I consider it salient to assess the likely damage that could occur. I note that the drawings specify the following timber treatments:

- roof framing - untreated kiln dried radiata pine
- interior wall framing – untreated Douglas Fir
- low risk external wall framing – H1 treated radiata pine

However, this contradicts the specification that states all timber framing is to be “H1.2 unless stated otherwise”, and lists the external wall framing to be treated to H3.1.

5.3.4 At the time the building consent was issued, the Acceptable Solution B2/AS1⁵ cited NZS3602:2003⁶ as the method to satisfy the Acceptable Solution. The timber treatment levels noted on the drawings would not meet the requirements of NZS3602:2003. According to the Standard in place at the time, when Radiata Pine is used for roof framing it is required to be treated to a minimum of H1.1. Also, the H1.1 treated timber for low risk buildings with masonry veneers was only permitted when the eaves over all the walls were 450mm wide. On the south elevation this is not the case, so the lower treatment level did not satisfy B2/AS1.

5.3.5 Establishing whether the specification or the drawings were followed is relevant in establishing if the wall framing complies with Clause B2. Based on the authority's inspection record, which noted “H3.1 exterior framing” in the pre-line inspection, I am of the view that H3.1 treated timber was installed for the external wall framing. Under the current timber treatment levels required to satisfy B2/AS1, wall framing must have a minimum treatment level of H1.2, which is required for situations protected from the weather but where there is a risk of moisture exposure conducive to decay. The installed H3.1 treated timber exceeds the current minimum level.

5.3.6 I consider it likely that should moisture ingress have occurred, the higher level of treated timber in conjunction with the ventilated cavity will prevent undue dampness or damage to the structural building elements. Therefore, I am of the view that the wall claddings comply with Clause E2.

⁵ Acceptable Solution B2 Durability

⁶ New Zealand Standard NZS 3602:2003 Timber and wood-based products for use in building

G3 Food preparation and prevention of contamination

- 5.3.7 The expert identified that the bench top was not sealed to the wall. Clause G3.3.2 requires that spaces for food preparation shall have interior linings and work surfaces that are easily cleaned.
- 5.3.8 G3/AS1 paragraph 1.6 states:
- Wall linings adjacent to appliances and facilities shall have surfaces that can be easily maintained in a hygienic condition.
- 5.3.9 I note that neither Clause G3.3.2 nor G3/AS1⁷ specifically require sealant to the bench/wall junction. However, the small gap between the bench and the wall will allow food particles and water to accumulate and cannot be easily cleaned. I consider that sealing the benchtop will prevent the accumulation of food particles and water between the wall and bench, and allow the junction to be easily cleaned.

G13 Foul water

- 5.3.10 In regard to the clearance to the overflow relief gully, although the clearance is not shown on the consent drawings, the specification states that the drainage is to be constructed “in compliance with [G13/AS1] and E1/AS1”.
- 5.3.11 In G13/AS1 gully traps are specified to be constructed to prevent the ingress of surface water because it can cause blockages. This is achieved through a sufficient clearance level of either 25mm above paved ground or 100mm above unpaved ground.
- 5.3.12 The reason that the lack of clearance is an issue is the potential for surface water to enter the gully trap and into the sewer system. It appears that there is an increased risk of surface water entering the gully trap because there are no sumps⁸.
- 5.3.13 Clause G13 requires drainage systems be built to avoid blockages, and a gully trap is not designed with filters to prevent silt, gravel and other debris from entering the sewer system. The gully trap as-built is at risk of surface water ingress which could block the drainage system, especially considering that there are no sumps to collect the surface water.

5.4 Missing producer statement

- 5.4.1 The expert identified that the producer statement for the trusses had not been provided, and it was listed as a condition on the consent. I consider it relevant to address this, even though it has not been requested by the authority.
- 5.4.2 As I have stated in previous determinations⁹, a producer statement is not a guarantee of compliance but is a professional opinion regarding compliance. The authority should not solely rely on the receipt of a producer statement to demonstrate code-compliance; it does not lessen the authority’s liability in regards to establishing compliance with the Building Code.
- 5.4.3 The construction of the roof was inspected by the authority, which recorded in its inspection that the trusses “appear to be [in the] correct position”. In the ten years since it has been constructed no faults have become apparent. In addition, the expert’s observation of no apparent failure from the exterior adds further evidence

⁷ Acceptable Solution G3 Food preparation and prevention of contamination

⁸ A sump is defined in Acceptable Solution E1 Surface Water as a chamber which is installed in the drain and incorporates features to intercept and retain silt, gravel and other debris.

⁹ *Determination 2013/053 Regarding the refusal to issue a code compliance certificate due to the lack of a producer statement for drainage work to a house* (Ministry of Business, Innovation and Employment) 17 September 2013

that it is meeting the performance requirements of Clause B1, particularly given that the house has been subject to significant earthquake activity.

5.5 Conclusion

- 5.5.1 I consider that the authority was correct to request another final inspection to establish whether the building work complied with the building consent and the performance requirements of the Building Code. Without inspecting the house, and in the absence of any other evidence, the authority did not have reasonable grounds on which to issue the code compliance certificate.
- 5.5.2 I am of the view the house complies with Clause E2, because although water ingress is possible, the ventilated cavity and high treatment level of the timber framing will prevent undue dampness and damage occurring. Also, because the framing for the external wall framing is treated to H3.1, I am of the view that should any water penetrate the wall framing the building elements are sufficiently durable to comply with B2 insofar as it applies to Clause B1.
- 5.5.3 I am of the view that the house does not comply with G13.3.2(b) because the drainage system, specifically the gully trap, has not been installed with adequate clearance to avoid blockages resulting from the ingress of surface water.

6. What happens next?

- 6.1 The inspection by the expert has identified areas that require remediation. I am satisfied that once the outstanding items are addressed the authority can issue a code compliance certificate.

7. The decision

- 7.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the authority correctly exercised its power of decision in refusing to issue the code compliance certificate for building consent No. 061941 and I confirm the authority's decision.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 7 July 2017.

John Gardiner
Manager Determinations and Assurance