



Determination 2014/005

Regarding the refusal to issue a code compliance certificate for an 9-year-old house with weatherboard and brick veneer claddings at 268 Weedons Ross Road, West Melton



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 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, G Grindell (“the applicant”)
- Selwyn District Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.

I note that the applicant is a licensed building practitioner and was also the builder of the house.

1.3 This determination arises from the decision of the authority to refuse to issue a code compliance certificate for the 9-year-old house because it was not satisfied that the building work complied with the Building Code (First Schedule, Building Regulations 1992). The refusal arose because the authority has concerns about

- the compliance of concealed elements with certain clauses² of the Building Code, given a lack of inspections by the authority
- the weathertightness of the building envelope
- the compliance of various other elements.

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

² 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 that was current at the time the consent was issued.

1.4 The matter to be determined³ is therefore whether the authority was correct to refuse to issue the code compliance certificate. In deciding this, I must consider:

1.4.1 Matter 1: The compliance of the unconsented work

Whether elements concealed within or under the concrete slab and foundations comply with the Building Code, taking into account the engineering oversight and the lack of authority inspections during construction. Specifically, whether

- the concealed structural elements comply with Clause B1 Structure
- the vapour barrier beneath the slab complies with Clause E2 External Moisture
- the concealed pipes comply with G12 water Supplies and G13 Foul Water.

I consider this matter in paragraph 7.

1.4.2 Matter 2: The compliance of the exterior envelope

Whether the exterior building envelope complies with Clause B2 Durability and Clause E2 External Moisture of the Building Code. The building envelope includes the components of the systems (such as the wall and roof claddings, the windows and the flashings), as well as the way components have been installed and work together. Any structural implications (Clause B1) associated with weathertightness are considered within this matter.

I consider this matter in paragraph 8.

1.4.3 Matter 3: Other Building Code requirements

Whether other elements identified by the authority comply with the Building Code; specifically, whether:

- the altered bracing complies with Clause B1 Structure
- the flue to the solid fuel burner complies with Clause C Fire Safety.
- the underground foul water drains, effluent tank and stormwater drains comply with G13 Foul Water.

I consider this matter in paragraph 9.

1.5 In making my decision, I have considered the submissions from the parties, the report of the expert commissioned by the Ministry to advise on this dispute (“the expert”), and the other evidence in this matter.

2. The building work

2.1 The building work consists of a large detached house which is two-storeys-high in part and is situated on a large level rural site in a high wind zone⁴ for the purposes of NZS 3604⁵. The expert has taken the garage doors as facing towards the north, and this determination follows that convention. The house is fairly complex in plan and form and is assessed as having a low to moderate weathertightness risk.

2.2 Construction is generally conventional light timber frame, with concrete foundations and floor slab, brick veneer wall cladding with timber weatherboards to the garage and the upper level, profiled metal roofing, and aluminium windows. The specification called for the wall framing to be ‘100 x 50 gauged (H1.1)’ and the

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

⁴ According to the engineer’s bracing calculations

⁵ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

authority's pre-line inspection record noted that the wall framing was 'H4'. Given this evidence, I consider the external wall framing is likely to be treated.

- 2.3 The 34° pitch hipped roof has no eaves, except at the recessed east wall of the dining area. At the west wall of the dining/family room, the roof extends at a lower pitch to form a veranda which extends around the corner as a lean-to veranda along the north walls of the lounge and bedroom. The roof also extends to form canopies above the north entry and the south laundry door, while a gable roof forms a canopy at the main south entrance.
- 2.4 The wall cladding to the attached garage and the upper level is rough-sawn radiata pine rusticated weatherboards, which are fixed through the building wrap directly to the framing and are coated with a stained finish. All of the remaining walls are clad in brick veneer.
- 2.5 The water supply for the house is provided from a well, with sewer waste disposal via a septic tank and drainage field some 70m away from the well. Stormwater from the roofs drains to a number of drainage soak holes.

3. Background

3.1 Construction prior to the building consent

- 3.1.1 The applicant was also the builder of the house and applied for a resource and building consent on 20 May 2004. The authority required truss design drawings to be provided and stopped work on the application until those were received. In the meantime, construction commenced and the concrete slab and foundations were completed prior to the building consent being issued.
- 3.1.2 The applicant maintains that the authority permitted construction to commence providing an engineer inspected the foundations and floor slab (see paragraph 3.2.2). Processing of the consent application did not recommence until 19 August 2004, with additional information sought and progressively received until 27 September 2004.

3.2 The building consent

- 3.2.1 The authority issued a building consent (No. 040716) under the Building Act 1991 during September 2004. Although the consent is dated 17 September 2004, it was subject to 'quoted costs paid in full' and was signed on 22 September 2004. According to the authority, the consent was not finally issued to the applicant until 29 September 2004.
- 3.2.2 Conditions attached to the building consent contained within it a schedule of required inspections during construction, which included:

The Engineer, or their representatives will carry out the following inspections as discussed and confirmed on 16th September 2004 by the owner.

C4 Excavation for foundations

C5 Reinforcing steel in foundation before concrete is poured.

C6 DPC/mesh/waste pipes to floor slab (concrete floor) before concrete is poured.

The Engineer, or their representatives will provide a Producer Statement Construction Review; as confirmed on 16th September 2004 by the owner.

A Producer Statement Construction Review will be required from your Plumber for the under slab waste pipes.

(I note that by this time, the above work would have been completed.)

3.2.3 In addition to the engineer's inspections, the consent conditions also listed required inspections to be carried out by the authority. These included inspections of

- pre-wrap structural framing and fixings
- half-height brick veneer cavity and ties
- pre-line building and plumbing
- post-line fixing of plasterboard bracing
- sewer, drainage and effluent disposal.

3.3 Construction

3.3.1 It appears that the engineer carried out inspections of the foundations and floor slab during August/September 2004, although I have not seen records of these inspections. The engineer provided a Producer Statement – PS4 – Construction Review dated 4 April 2012, which stated that he had provided:

Design and Observation Services in respect of the requirements of Clause(s) B1 and B2 of the Building Regulations 1992 for the foundation floor slab and underfloor pipework construction as described in consent documentation.

3.3.2 The authority's first record is of a pre-wrap inspection on 29 September 2004, and the inspection record notes:

- An Engineer will need to provide a Producer Statement Construction Review for C4, C5, C6 inspections as confirmed in building consent 16/9/04 by owners.
- Producer Statement will be required from the plumber for the under slab waste pipes.

3.3.3 The authority carried out the following inspections during construction:

- Pre-wrap on 29 September 2004, with the inspection record noting items to be completed and rechecked at the pre-line inspection.
- Pre-line building and plumbing inspections on 28 October and 1 November 2004, which passed.
- Post-line fixings to plasterboard bracing on 1 November 2004, which passed.
- Half-height brick veneer cavity and ties on 6 December 2004, which passed subject to some items yet to be completed..

3.4 The final inspection

3.4.1 It appears that the house was substantially completed and occupied during 2005, although some finishing work was incomplete and a final inspection was not requested until 2007. The authority carried out a final inspection on 26 March 2007, which identified various minor items and outstanding documentation.

3.4.2 The inspection record repeated the requirement for producer statements from the engineer and plumber as identified in the pre-line inspection (see paragraph 3.3.2) and listed other documentation required. The need for dimensions to the as-built drainage plan was noted, with the record noting 'doesn't appear to have drainage inspection'. (I take this to refer to the inspection of 'sewer, drainage and effluent disposal' as required by the consent conditions – see paragraph 3.2.3.)

- 3.4.3 The applicant attended to items identified in the final inspection and sought the required documentation; however he failed to obtain the engineer's and plumber's producer statements.
- 3.4.4 The applicant also found that drains had been backfilled without inspections carried out and discovered the drainlayer was no longer in business. He therefore engaged a different company to inspect the sewer and stormwater disposal system and the drainlayer provided a statement dated 27 March 2012, which stated:

The sewer drain and septic tank checked out OK. The sewer according to the laser was laid at 1:80. The tank is a 5000L with 3 chambers; 1 primary, 1 with zabel filter & last chamber gravity outlet.

The stormwater soakage was OK grade unknown.

3.5 The authority's refusal

- 3.5.1 The applicant applied for a code compliance certificate on 19 March 2013 and the authority responded on 3 April 2013, noting the '8½ years' between the building consent and the application for a code compliance certificate.
- 3.5.2 The authority refused to issue a code compliance certificate because (in summary, with the related Building Code clauses shown in brackets):
- the concrete slab and foundations were completed prior to the building consent
 - the producer statement required from the engineer was not provided (B1) (I note that this was subsequently provided, see paragraph 3.3.1)
 - the producer statement required from the plumber for under-slab pipework was not provided (G12, G13)
 - the underground foul water system to the effluent tank was not inspected (G13)
 - compliance of the water supply has not been demonstrated (G12)
 - the bracing design had changed without provision of amended drawings (B1).
- 3.5.3 The authority also stated that its site visit and photographs taken on 19 February 2013 had identified:
- incorrectly/poorly installed roof flashings (E2)
 - a blocked valley gutter (E2)
 - inadequate cladding to roof clearances (E2)
 - unprotected openings through claddings (E2)
 - inadequate window flashings (E2)
 - height of flue above roof (C1)
 - lack of spreaders onto lower roofs (E2)
 - insufficient downpipe supports (B1, E2).
- 3.6 The Ministry received an application for a determination on 31 May 2013 and sought further information and records from the parties. The required information was received by 17 July 2013 and an expert was commissioned in August 2013.

4. The submissions

4.1 The applicant's submissions

4.1.1 The applicant briefly outlined the background to the situation, explaining that all work required after the final inspection in 2007 had been attended to and describing his attempts to obtain the engineer's producer statement. The applicant did not realise that the underground drains had not been inspected until the final inspection, and was then unable to contact the original drainlayer.

4.1.2 The applicant initially provided copies of:

- the building consent, with handwritten notes added
- the authority's letter dated 3 April 2013, with handwritten notes added
- two inspection records, with handwritten notes and highlights added
- the bracing plan stamped as 'amended' and dated 19 April 2004
- a drainlayer's statement dated 27 March 2112
- the Producer Statement – PS4 – Construction Review dated 4 April 2012.

4.1.3 The applicant subsequently provided copies of:

- the consent drawings and specification
- the building consent and project information memorandum
- all of the inspection records
- various other producer statements, certificates and other information.

4.2 The authority's submission

4.2.1 The authority made a submission dated 17 July 2013, which responded in detail to the applicant's comments, expanded on some of the points made in its refusal to issue a code compliance certificate, and stated that its opinion remained as expressed in its letter of 3 April 2013.

4.2.2 In regard to the unresolved items identified in its refusal to issue a code compliance certificate, the authority added:

- due to the elapsed time, incorrectly installed elements may have compromised the durability of some building elements
- the requirement for producer statements from the engineer and plumber were clearly specified in the consent conditions but were not received
- the engineer's recent producer statement is not supported by inspection records and does not cover Clauses G12 and G13 for the under-slab pipework
- there is no record that the authority approved construction commencing prior to the issue of the building consent
- the provision of test certificates for the quality of the water supply could demonstrate compliance with Clause G12
- defects relating to Clauses B1, B2, C1 and E2 were identified during the authority's recent site visit.

4.2.3 The authority provided copies of:

- the consent drawings and specification
- the building consent and project information memorandum
- the inspection records
- the bracing calculations
- flue installation instructions.

4.3 A draft determination was issued to the parties for comment on 10 December 2013.

4.4 The authority accepted the draft without further comment in a response received on 15 January 2014.

4.5 In a response received on 28 January 2014, the applicant accepted the draft subject to the following comments:

- Inspections at the time included and passed all of the components to form the envelope, the installation of the solid fuel burner including flue clearances and flue height, the downpipes, and the roof pitch
- There are no weatherboard ends hard down on any roof surfaces that would allow capillary attraction, and the mould observed by the expert is pine pollen (refer paragraph 6.2.8).
- The way the change in roof pitch was completed was typical for the time and that work, including flashings, was undertaken by the roofing company.
- There is no exposed framing at corner facings above the roof (refer paragraph 6.2.8); the building paper goes around all corners and there are galvanised right angle vertical corner flashings.
- Discolouration at the top of the outside of the flue and deposits on the roof are from the approved fireplace being difficult to damp down and not because the flue is short or is not working correctly.
- The weatherboards, wall framing, and finishing timber was all 'H4 treated'.
- There was no evidence of water penetration through the cladding or the roof.

4.6 I acknowledge the applicant's submission. However I consider the defects noted by the expert are clearly illustrated in his report; I also do not accept that the green discolouration to the weatherboards (typically to the South elevation) is caused by pollen and not mould as noted by the expert as pollen is not evident in other nearby junctions as would be expected if that was the case.

5. Grounds for the establishment of code compliance

5.1 In order for me to form a view as to the compliance of the building work, I established what evidence was available and what could be obtained considering that some elements are not able to be cost-effectively inspected.

5.2 The applicant maintains that the engineer's oversight during the premature start to construction ensured that the concrete slab and foundations accorded with the consented design. However, the authority does not accept that the engineer's review provides sufficient verification of structural compliance and also maintains that other concealed elements within or under the slab were not properly inspected.

- 5.3 In the case of the foundations and concrete slab to this house, I observe that:
- despite the authority not accepting the producer statement for construction review, the engineer's submission of that statement indicates a belief that the work was code-compliant
 - the inspection records (see paragraph 3.3.3) generally indicate that the authority:
 - inspected all above-ground stages of construction that involved structural bracing, fixings, plumbing and drainage
 - made no mention of concerns about the slab and associated elements
 - identified only minor outstanding items during its final inspection in 2007, with no mention of outstanding structural inspections
 - since the final inspection, the house has experienced severe earthquake movement, which is expected to have tested its structural performance.
- 5.4 Taking account of the above and in the absence of any evidence to the contrary, I take the view that I am entitled to rely on the applicant's statements that structural elements and the under-slab pipework accord with the consented documents, and also that the authority carried out sufficient satisfactory inspections during construction of bracing elements that are now hidden.
- 5.5 A condition for this reliance is that there should be corroboration of the impression given by the evidence. A visual inspection of accessible components can provide this and provide reasonable grounds to form a view on whether this house as a whole complies with the Building Code.

6. The expert's report

6.1 General

- 6.1.1 As mentioned in paragraph 0, I engaged an independent expert to assist me. The expert is a member of the New Zealand Institute of Building Surveyors and inspected the house on 30 August 2013, providing a report completed on 27 September 2013. The parties were provided with a copy of the report on 18 October 2013.
- 6.1.2 The expert described the overall construction quality as a 'generally to a good tradesman like finish', except for the items identified below. The expert also noted that the rusticated weatherboards to the upper walls have 'shown significant signs of movement with various attempts by the homeowner to manage this.'
- 6.1.3 There was no significant cracking to interior plasterboard linings, which the expert considered 'in good condition considering the seismic activity in the region'. In the expert's view, the provision of as-built bracing drawings is not normal practice.

6.2 Compliance of the building work

- 6.2.1 The expert noted that the scope of his assessment included reviewing the correspondence and records. The expert visually assessed the building work against the authority's concerns and made the following comments.

6.2.2 Clause B1 Structure

- there is no evidence of any significant settlement or cracking, with no signs of cracked brickwork
- there are no adverse structural affects from the last three years of earthquakes in the Canterbury region
- the good condition of plasterboard linings after significant seismic activity indicates that the installed bracing is satisfactory
- the engineer has provided a producer statement and has also confirmed he inspected and was satisfied with the slab and foundation construction.

6.2.3 Clause B2 Durability

- the treated pine weatherboards are stain-finished and now showing considerable cupping and shrinkage on elevations other than the south
- the owner has attempted to secure the boards with additional fixings and flashings over gaps
- the issue of a code compliance certificate should take into account the age of the weatherboards.

6.2.4 Clause C Fire Safety

- the flue from the solid fuel burner terminates below the height of the roof at a horizontal distance of 3m from the flue
- the flue as installed does not comply with the manufacturer's instructions or with AS/NZS 2918:2001
- the affect on the durability of the adjoining roof is included in paragraph 6.2.8.

6.2.5 Clause E2 Weathertightness

- the expert inspected the interior and noted no signs of moisture ingress
- non-invasive moisture readings were assessed against a control reading on an interior wall, with only minor variances and no elevated readings
- weathertightness defects affecting durability were identified and are outlined in paragraph 6.2.8.

6.2.6 Clauses G12: Water supplies

- services appear operational and effective
- the authority carried out pre-line plumbing inspections
- potable water is supplied from a well and a laboratory tested water samples taken in April, May and June 2013 and found the samples within acceptable quality limits.

6.2.7 Clauses G13: Foul Water

- the authority carried out pre-line plumbing inspections but did not inspect exterior drains prior to their backfilling
- services appear operational and effective and the owner reports that the septic tank system has worked well since it was installed
- drains have been functioning well since installation, with no signs of blockages or overflowing

- under-slab waste pipes were inspected by the engineer, who confirmed their accordance with the consent documents and was satisfied that they complied with Clauses B1 and B2
- a registered drainlayer has provided a statement confirming that the drain falls, septic tank and stormwater soakage appear to be satisfactory.

6.2.8 Clause B2 Durability (insofar as it applies to Clauses E2)

- due to the flue's lack of height, there is a build-up of ash and contaminates on the adjoining roof which will compromise the roof's durability
- there is grout missing to a brick sill/jamb junction
- some roof flashings have insufficient overlaps or are incorrectly lapped
- the bottom of some apron flashings are not weathertight, with no kick-out flashing and gutters butted against the weatherboards
- upper weatherboards and facings lack clearance above the apron flashings, with signs of water penetration and mould growth at the ends of boards
- there are gaps apparent at the timber facings to the southwest and northwest corners above the lower roof, with framing visible
- the change in roof pitch to the lower roof on the north elevation is not durably weathertight
- there are insufficient downpipes for the catchment area of the upper roof
- downpipes discharging from the upper roof over wall to roof junctions lack spreaders and risk future leaks into the junctions.

6.3 The expert made the following additional comments:

- Although the pine weatherboards are moving and cupping, there is no sign of associated moisture penetration and the boards are likely to be acceptable given continuing maintenance and an amendment of the durability provisions to reflect their current age.
- Despite the lack of inspections of external drains, continuing in-service performance of the systems over the past nine years indicate that the sewer and stormwater systems are likely to be satisfactory.

7. The compliance of the unconsented work

7.1 General

7.1.1 The authority has questioned whether the work completed before the consent was issued (and which is now concealed) proceeded with its knowledge and approval, and also whether the engineer actually supervised that work, given the lack of inspection records.

7.1.2 I make the following observations with regard to the work completed before the consent was issued:

- Despite the conventional nature of the work, consent conditions specifically confirm discussions with the applicant regarding engineering inspections. The authority's first inspection after the consent was issued records the requirement for producer statements, with no mention of illegal building work.

- The work to the concealed elements was undertaken prior to the issue of a building consent that included the specific condition requiring an engineer to supervise the foundations and floor slab; the inclusion of that condition in the circumstances appears to regularise the premature construction.
 - In commencing inspections on an obviously partly-completed building, the authority appeared to have accepted the premature construction start. The question of illegal building work was not raised until the authority refused to issue a code compliance certificate in 2013 and subsequently questioned the engineer's producer statement for construction review.
- 7.1.3 Notwithstanding the circumstances and that the applicant was of the understanding that the building work was commencing with the authority's approval, the consequences of undertaking construction prior to the issue of the building consent now fall on the applicant.
- 7.1.4 Section 437(1)(a) of the Act provides for the issue of a certificate of acceptance where building work has been carried out for which a building consent was required under the former Act but where consent was not obtained.
- 7.1.5 In such a situation a territorial authority may, on application, issue a certificate of acceptance but 'only if it is satisfied, to the best of its knowledge and belief and on reasonable grounds, that, insofar as it could ascertain, the building work complies with the building code'⁶. In this instance it is the concealed elements and foundations (refer paragraph 1.4.1) that were constructed without building consent having been obtained: a certificate of acceptance is the appropriate regulatory mechanism for regularising that work.
- 7.1.6 An application for a certificate of acceptance requires an authority to consider all the available evidence, such as plans and specifications, producer statements, the builder's records, the owner's records, any expert reports, and the authority's own experience and knowledge of the builders and designers involved in the work in order to ascertain whether the building work complies with the Building Code.
- 7.1.7 In a previous determination (2011/043⁷) I discussed the provisions for a certificate of acceptance where there is building work that cannot be inspected and for which there is no evidence available to determine whether it complies with the Building Code. However, in this instance I am of the view that there is sufficient evidence available to form a view on reasonable grounds as to compliance of the concealed elements and foundations.
- 7.1.8 Under section 97, with respect to an application for a certificate of acceptance, it is the applicant who must provide sufficient information to the authority to establish the level of compliance achieved. I note that the applicant still needs to follow the authority's process and apply for a certificate of acceptance for the building work. This determination may be used to support the application along with any further documentation and specifications required by the authority⁸ for it to consider issuing the certificate of acceptance. I note also that the building consent No. 040716 will require amendment to exclude those building elements covered by the certificate of acceptance.

⁶ Section 96(2)

⁷ Determination 2011/043: The refusal to issue a certificate of acceptance for a retaining wall to a driveway

⁸ Under section 97

7.2 The engineering inspections

- 7.2.1 The construction of this house is conventional light timber frame, which is not generally necessary to be reviewed by a structural engineer. I would therefore not expect to see conditions to be attached to a building consent which require an engineer to inspect elements such as conventional excavations, damp proof course and reinforcing mesh.
- 7.2.2 Despite its conventional construction the consent conditions for this house required the engineer to inspect the concrete slab and foundations and to provide a producer statement confirming compliance. The engineer did not provide a producer statement until nine years after the work was completed.
- 7.2.3 In discussions with the expert, the engineer confirmed that he inspected the excavations, reinforcing and wastepipes prior to the concrete pour, and that he was satisfied that work complied with the Building Code and the building consent.
- 7.2.4 The above circumstances, including the issuing of the consent with the conditions regarding engineering inspections, give me reasonable grounds to conclude that the engineer carried out the inspections required by the consent conditions.

7.3 The compliance of the concealed elements

- 7.3.1 In reaching my conclusions as to the compliance of the concrete slab and associated concealed elements with relevant clauses of the Building Code I have taken the following into account:
- the consent documents
 - the building consent issued under the Building Act 1991, and the requirement for the work to comply with the Building Code that was in force at the time the consent was issued
 - the circumstances leading to the start of construction
 - the conventional nature of the concrete slab and foundations
 - the engineer's satisfactory inspections and producer statement for construction review of the slab and foundations
 - the authority's records of satisfactory inspections after the consent was issued
 - the expert's inspection for this determination, which identified:
 - acceptable standard of visible elements of the structure
 - lack of visible damage following recent earthquake events
 - lack of any apparent problems associated with under-slab damp proof membrane and plumbing pipes.
- 7.3.2 Taking the above into account, I am able to conclude that there are reasonable grounds to come to the view that:
- the concrete slab and foundations comply with Clause B1
 - the under-slab vapour barrier complies with Clause E2
 - the concealed waste pipes comply with Clause G13.

7.4 Conclusion

7.4.1 I consider that the expert's report, the circumstances leading to the premature start to construction, the engineer's review of the work, the authority's subsequent inspection records and the other evidence, allow me to conclude that the concealed elements comply with the Building Code. A certificate of acceptance for that work is the appropriate certificate to be sought.

8. The exterior envelope

8.1 Weathertightness performance

8.1.1 Although most of the cladding and roofing appears to have been installed in accordance with average trade practice at the time, there are some areas where that is not the case. Taking account of the expert's report, I conclude that the following areas require further investigation and remedial work:

- the missing grout to a brick veneer sill
- the roof cladding, in respect of:
 - inadequate laps and junctions to some of the flashings
 - the lack of weathertightness to the change in roof pitch
 - the lack of kick-out flashings to the bottom of the apron flashings
 - inadequate clearances to the bottom of the upper weatherboards
 - gaps and exposed timber at some corner facings above the roof
 - insufficient downpipes from the upper roof
 - the lack of spreaders to downpipes from the upper roof.

8.1.2 I note the expert's comments on the deterioration of the pine weatherboards and, given ongoing maintenance, I accept that the boards are likely to remain weathertight for a further six years minimum assuming that the required 15-year durability period commences from the date of substantial completion in late 2005, or early 2006.

8.2 Conclusion

8.2.1 I consider the expert's report establishes that the current performance of the exterior building envelope is adequate because there is no evidence of moisture penetration into the treated timber framing.

8.2.2 However, the building envelope 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 are likely to allow the ingress of moisture in the future, the building work will not continue to comply with Clause E2 for the required the durability period set out in Clause B2.

8.2.3 Because the identified cladding faults occur in discrete areas, I am able to conclude that satisfactory investigation and rectification of the areas outlined in paragraph 8.1.1 will result in the building envelope being brought into compliance with Clause B2 of the Building Code insofar as it relates to Clause E2.

8.2.4 The expert has observed the deteriorating pine weatherboards, which require ongoing maintenance to meet durability requirements. 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 Ministry has previously described these maintenance requirements (for example, Determination 2007/60).

9. Other Building Code requirements

9.1 I have assessed the remaining concerns of the authority in regard to compliance of those elements with relevant clauses of the Building Code. The following takes into account the expert's report, which identified:

- acceptable standard and maintenance of visible elements of the construction
- lack of damage following earthquake movement over the past three years
- the satisfactory operation and lack of problems in respect of the plumbing.

9.2 The wall bracing

9.2.1 I note that the authority inspected and passed the wall bracing during construction (refer paragraph 3.3.3), with no comment made on any significant changes and no instructions issued to reverse any changes. I also concur with the expert's observation that handwritten notes added to the bracing plan appear to have been made by the same official who inspected bracing on 28 October 2004.

9.2.2 In regard to its effectiveness, the installed bracing has been in place for nine years, during which it has been subject to severe earthquake movement. The expert was able to assess the bracing's in-service performance; observing no damage to plasterboard linings, no doors or windows sticking and no other signs of undue movement of the house structure.

9.2.3 Taking account of the expert's report, any changes made during construction, and the other evidence, I am satisfied that the structural bracing installed in the house complies with Clause B1 Structure of the Building Code.

9.3 The flue

9.3.1 Taking account of the expert's report, I consider that the flue height to the solid fuel burner does not comply with the manufacturer's instruction or with AS/NZS 2918:2001. I conclude that the flue does not comply with Building Code Clause C.

9.4 The underground drains

9.4.1 Taking account of the expert's report, I am satisfied that the foul water and stormwater disposal systems have been operating effectively for the past nine years and I accept the registered drainlayer's statement that the drain falls, septic tank and stormwater soakage appear satisfactory.

9.4.2 I concur with the expert's opinion that the continuing in-service performance of the sewer and stormwater systems over the past nine years indicate that these systems are adequate. I also note that laboratory water test reports indicate that there is no cross-contamination from the drains into the potable water supply from the well.

9.4.3 I consider that the available evidence provides me with reasonable grounds to conclude that the foul water and stormwater systems comply with Clause G13 of the Building Code.

10. Durability

- 10.1 Subject to the building consent being amended to exclude those building elements that will be covered by the certificate of acceptance, I consider that a code compliance certificate is the appropriate certificate to be issued for the building work undertaken after the consent was issued. The issue of the code compliance certificate then raises the matter of the durability of the building work taking into account it was substantially completed in 2005.
- 10.2 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).
- 10.3 In this case delays since the substantial completion of the building in late 2005 raise concerns that many 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.
- 10.4 I have considered this issue in many previous determinations and I maintain the view 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 at the time of substantial completion.

I therefore leave the matter of amending the building consent to modify Clause B2.3.1 for the parties to resolve in due course.

11. What is to be done now?

- 11.1 The applicant should apply for an amendment to the building consent to exclude the work carried out before the consent was issued and apply for a certificate of acceptance for that work. A certificate of acceptance can then be issued by the authority in respect of the work completed before the consent was issued.
- 11.2 The building consent is also to be modified in respect of Clause B2.3.1 (refer paragraph 10). Once the defects identified in paragraph 8.1.1 and paragraph 9.3.1 have been brought into compliance with the Building Code, a code compliance certificate can then be issued by the authority in respect of the amended and modified consent.

12. The decision

- 12.1 In accordance with section 188 of the Building Act 2004, I hereby determine that:
- the concealed structural elements comply with Building Code Clause B1
 - the slab vapour barrier complies Building Code Clause E2
 - the under-slab pipes comply with Building Code Clauses G12 and G13
 - the bracing complies with Building Code Clause B1

- the underground drains, the effluent tank and the stormwater drains comply with Building Code Clause G13.

12.2 However, I also determine that:

- the building envelope does not comply with Building Code Clauses E2 and B2
- the flue does not comply with Building Code Clause C

and accordingly, I confirm the authority's decision to refuse to issue a code compliance certificate.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 3 February 2013.

John Gardiner
Manager Determinations and Assurance