



Determination 2016/047

Regarding the refusal to issue code compliance certificates for an 18-year-old house with 14-year-old extensions at 86A Volga Street, Island Bay, Wellington



Summary

This determination is concerned with the compliance of the 18-year-old house and 14-year-old extension. The determination considers the authority's reasons for refusing the code compliance certificate, and whether the house complies with the requirements of the Building Code, particularly with respect to weathertightness and durability.

1. The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004¹ (“the current 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 current owners of the house, S and M Dugdale (“the applicants”), acting through their lawyer (“the lawyer”)
 - Wellington City Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.3 This determination arises from the decision by the authority to refuse to issue code compliance certificates for the house and extensions because it was not satisfied that the building work complied with certain clauses² of the Building Code (First Schedule, Building Regulations 1992). The authority's concerns regarding compliance of the building work relate mainly to the age and weathertightness of the completed house.

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.

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.

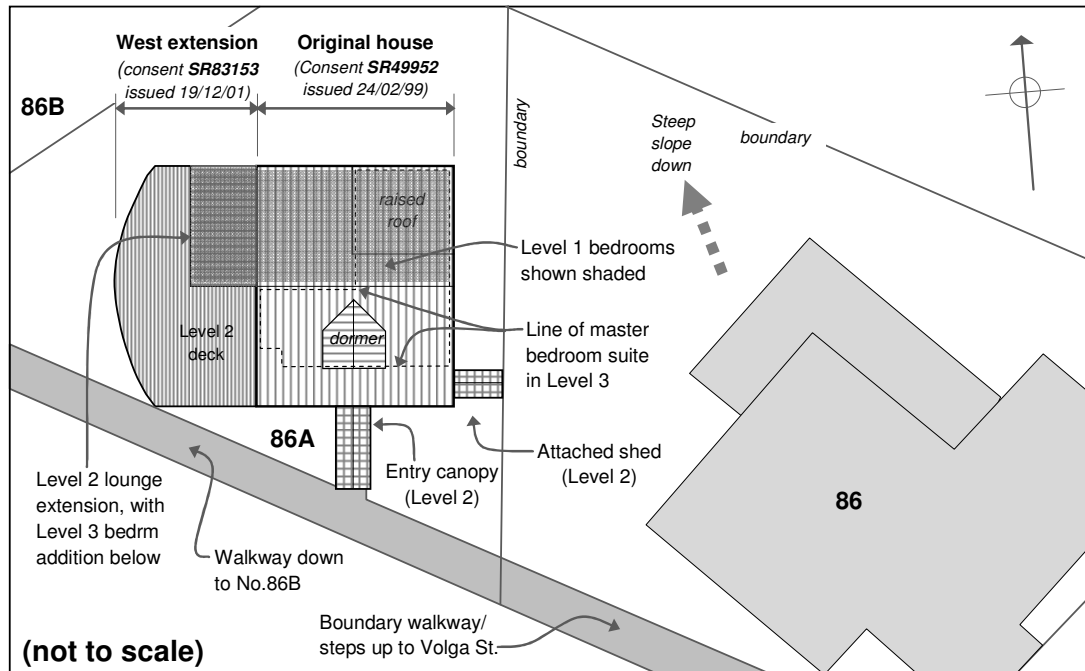
- 1.4 The matter to be determined³ is therefore the authority's exercise of its powers of decision in refusing to issue the code compliance certificates. In deciding this matter, I must consider whether the external building envelope of the completed house complies with the relevant clauses of the Building Code that was in force at the time the building consents were issued: namely Clauses B1 – Structure, B2 – Durability and E2 – External moisture. The building envelope includes the components of the systems (such as the wall claddings, the windows and the roof cladding) as well as the way components have been installed and work together. I have also considered the compliance of the house with Clause E3 – Internal Moisture in regard to the waterproofing of a shower.
- 1.5 The building work considered in this determination is limited to work covered or partly covered under the following two building consents:
- Consent No. 49952 (“Stage One”) issued on 24 February 1999 for the house
 - Consent No. 83153 (“Stage Two”) issued on 19 December 2001 for the deck and extensions (“the west extensions”).
- 1.6 In making my decisions, I have considered the submissions of 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.
- 1.7 Matters outside this determination**
- 1.7.1 I note that the authority has requested the applicants apply to for a modification of durability provisions to allow specified periods to commence from the date of substantial completion of Stage One in June 1999 and Stage Two in March 2002 (see paragraph 3.7.1).
- 1.7.2 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).
- 1.7.3 In this case the 18-year delay since completion of the original house in 1999 and the 14-year delay since completion of the extension in 2002 raises concerns that many elements of the building work are now beyond their required durability periods, and would consequently no longer comply with Clause B2 if code compliance certificates were to be issued effective from today's date.
- 1.7.4 I have considered this issue in previous determinations and 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 extension is no different from what it would have been if a code compliance certificates for the building work had been issued at the time of substantial completion of Stage One in 1999 and Stage Two in 2002.
- 1.7.5 I therefore leave the matter of amending the building consents to modify Clause B2.3.1 to the parties once any other outstanding matters are resolved. Although I leave this matter to the parties to resolve in due course, I have taken the anticipated modifications into account when considering the weathertightness performance of the claddings.

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

2. The building work

- 2.1 The building work considered in this determination consists of a three-storeys-high detached house on a steeply sloping subdivided site in a high wind zone for the purposes of NZS 3604⁴. Foot access to the rear two properties is provided by a shared walkway along the boundary as shown in Figure 1.

Figure 1: Approximate site plan



- 2.2 Stage One (the original house) comprises a rectangular three-storey building with a gable roof that includes a dormer window and raised roof section. Including changes made during construction, the original part of the house now provides:
- Level 1: Two bedrooms in the lower level.
 - Level 2: Living/dining, kitchen and bathroom in the mid-level, with an entry canopy to the south and an attached storage shed to the east.
 - Level 3: Master bedroom and ensuite⁵.
- 2.3 Stage two (the west extension) comprises a two-storey extension and a large deck to the west and provides:
- Level 1: One additional bedroom in the lower level
 - Level 2: An extension to the mid-level lounge.
 - Level 3: Master bedroom and ensuite in the upper level.
- 2.4 Although reasonably simple in plan and form, the completed house includes some complex junctions and is assessed as having a high weathertightness risk (see paragraph 6.2.3). Construction is generally conventional light timber frame, with specifically engineered pole foundations, timber floors, plywood wall claddings, profiled metal roofing and aluminium joinery. The roofs have no eaves or verge overhangs and the west deck has a timber slat floor.

⁴ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

⁵ Likely to have been added in about 2004

- 2.5 The wall cladding is rough sawn plywood fixed directly over the building wrap to the framing, with rough-sawn timber battens fixed over the joints and at intermediate positions to give the appearance of 'board and batten' cladding. Horizontal joints include a metal Z-flashing concealed beneath a horizontal batten, with slopes to the tops for drainage. The cladding is finished with an acrylic paint coating.
- 2.6 The specification for Stage One called for framing to be 'H1 treated' and the specification for Stage Two called for framing to be 'H1 boric treated'. Although the expert noted no evidence of treatment, due to its good condition he considered it likely that the framing had been treated. Given the lack of evidence and the likely dates of framing installation in 1999 and 2002, I am unable to determine whether wall framing is treated to a level that will provide resistance to fungal decay.

3. Background

3.1 Stage One (the original house)

- 3.1.1 The expert was advised that the original owner was a builder ("the original owner/builder").
- 3.1.2 The original owner/builder applied for the Stage One building consent on 28 January 1999 and the drawing stamped as received showed a dormer window and master bedroom in Level 3 (see also paragraph 3.3). That drawing was then revised to show undeveloped attic space with the dormer window and upper stairs deleted. The revision is dated 10 February 1999 and is noted as 'delete Level 3'.
- 3.1.3 The authority issued building consent No. 49952 to the original owner/builder for Stage One on 24 February 1999 under the Building Act 1991 ("the former Act"). The engineer's details noted that the specifically engineered foundations would be monitored during construction. The building consent conditions included the requirement for the 'engineer to supervise construction of specific design elements' and also requirements for plumbing, drainage, framing and pre-line inspections.
- 3.1.4 The first engineer apparently monitored the foundations, although a producer statement was not provided until 2006 (see paragraph 3.4.3). I have not seen individual inspection records, but according to a 'fee reconciliation' summary, the authority carried out the following inspections during construction of Stage One:
- pre-cladding inspection on 25 March 1999
 - pre-line plumbing inspection on 14 May 2001
 - pre-line building inspection on 18 June 2001
 - drainage inspection on 27 August 2001
 - site inspection on 14 November 2001
 - final plumbing inspection on 30 April 2003.
- 3.1.5 Based on the above, it appears likely that the house was substantially completed and occupied by the end of 2001⁶. However, the authority has given the completion of Stage One as June 1999 (see paragraph 1.7.1).

⁶ I also note that Quotable Value NZ notes that the first valuation of the 98m² floor area was in 2001

3.2 Stage Two (the west extension)

- 3.2.1 The authority issued building consent No. 83153 to the original owner/builder for Stage Two on 19 December 2001 under the former Act for ‘additions to existing house and new deck, extending living and bedrooms below’. A different engineer (“the second engineer”) designed the specifically engineered elements and the documents note that the foundations would be monitored during construction.
- 3.2.2 The building consent conditions included the requirement for the ‘engineer to supervise construction of specific design elements’ and also requirements for plumbing, drainage, framing and pre-line inspections.
- 3.2.3 The second engineer monitored the foundations, although a producer statement was not provided until 2006 (see paragraph 3.4.3). I have not seen individual inspection records, but according to a ‘fee reconciliation’ summary, the authority included the following inspections during construction of Stage Two:
- sub-floor and pre-cladding inspection on 5 February 2002
 - post-cladding inspection on 15 March 2002
 - pre-line building inspection on 18 June 2001
 - the first final building and plumbing inspections on 30 April 2003.
- 3.2.4 Based on the above, it appears likely that Stage Two was substantially completed and occupied during 2003. However, the authority has given the completion of Stage Two as March 2002 (see paragraph 1.7.1).

3.3 The 2004 attic development

- 3.3.1 A further pre-line inspection is noted on 27 October 2004 and, although I have seen no documentation, I have assumed this concerns the development of the Level 3 master bedroom and ensuite as all other spaces were lined by that date. The development of Level 3 reverted back to the layout originally shown in the original January 1999 drawing prior to its revision (see paragraph 3.1.2).
- 3.3.2 A single sheet of drawings prepared by the original owner/builder dated 12 March 2006 includes the reference number ‘SR 49952⁷’. The drawing is titled ‘Additions & shed’ and appears to be the as-built drawing submitted to cover the following changes:
- development of Level 3 attic space, including dormer window and raised roof
 - the floor layout and as-built plumbing for the master bedroom and ensuite
 - the exterior storage shed.

3.4 The 2006 final inspections

- 3.4.1 The original owner/builder planned to sell the house in 2006 and the authority inspected the completed house on 10 February 2006. Site notes were apparently issued, which I have not seen, but it appears that some items and documentation required attention and a notice to fix referring to the site notes was issued on 14 February 2006.

⁷ Consent number for Stage One the original house

- 3.4.2 The notice to fix appears to cover both Stage One and Stage Two building consents as it refers to Stage One lower bathroom and the Stage Two deck, and stated that the house did not comply with Clauses B1 and E3.
- 3.4.3 Over the next two months, the following items were resolved:
- On 22 February 2006 the second engineer noted that ‘remedial work to the deck has been carried out satisfactorily’ and attached the Producer Statement – PS4 – Construction Review for Stage Two, dated 22 February 2006.
 - The original owner/builder prepared the sheet of as-built amendments dated 12 March 2006 and submitted this to the authority (see paragraph 3.3.1).
 - The first engineer provided a Producer Statement – PS4 – Construction Review for Stage One on 4 April 2006.
 - The original owner/builder provided a statement dated 7 April 2006 confirming that waterproof membranes to the bath and shower areas had been ‘applied in accordance with the manufacturer’s specification’.
- 3.4.4 The authority carried out a final inspection of Stages One and Two on 7 April 2006. The inspection records both noted ‘all site work approved’ and application forms for the code compliance certificates were provided. The attached ‘Site Report’ (No. 17518) referred to the February site notes and noted (in summary):
- tiles above lower bath ‘stripped and replaced’, with tiling to both bathrooms appearing compliant
 - applicator’s statement for waterproof membrane and tapes provided
 - shower curtain fitted
 - electrical certificate provided
 - store room/house wall junction flashed
 - additional deck piles in place as required
 - revised drawings provided
 - all site work approved, documentation provided.

3.5 Requests for outstanding inspection fees

- 3.5.1 The authority received applications for code compliance certificates for Stage One and Stage Two on 7 April 2006 and wrote to the original owner/builder⁸ on 18 April 2006 noting the outstanding inspection fees that were required before the code compliance certificates could be issued. The applicants purchased the house in June 2006 based on the understanding that all matters had been resolved.
- 3.5.2 Identical letters dated 18 May 2010 attaching invoices were addressed to the original owner/builder at No.86 (the neighbouring house), which the applicants never received. In those letters, the authority noted that final inspections of the completed house had been carried out in 2006 and payments for outstanding fees had not yet been received despite requests sent in April 2006. Both letters concluded:

As payment has not been received we have been unable to issue the Code Compliance Certificate for this project and have set the status accordingly. This can

⁸ The initial letter attaching fee invoices was correctly addressed to No 86A

have on-going implications for you, which may include difficulty obtaining insurance or selling your property in the future.

To issue a Code Compliance Certificate for this project a re-inspection will be required and further fees will be incurred.

3.5.3 Two further letters (addressed as above) dated 18 June 2010 were sent to the original owner/builder and were headed 'final reminder'. The letters demanded payment by 9 July 2010 and noted that the 'outstanding amount may be passed for debt collection.'

3.5.4 Because they had not received any of the above letters, the applicants were not alerted to the lack of code compliance certificates for their house until they obtained a LIM report in May 2015. The LIM report recorded the outstanding building consents and the applicants approached the authority about resolving the situation.

3.6 The authority's initial response

3.6.1 In a letter to the applicants dated 3 June 2015, the authority attached a code compliance certificate application form and also invoices for the anticipated inspection fees, which were required as a deposit.

3.6.2 The authority explained that it is an owner's responsibility to request a code compliance certificate as soon as the work is complete and, if there is a delay, 'there is a risk the certificate may not be issued'. The authority also explained that, before issuing a code compliance certificate, it:

...needs to be satisfied, on reasonable grounds, that all work done under the consents meets the requirements of the Building Code 1992 at the time the consents were issued.

3.6.3 The authority noted that final inspections would be carried out if requested and any items identified would need to be addressed to the authority's satisfaction. The authority would also need to be satisfied as to the building work's compliance with the durability requirements, which:

...includes, but is not limited to, consideration of profiled roof claddings, roof and deck membranes, exterior wall claddings, external joinery elements, floor coverings in wet areas and maintenance requirements for the products used.

It is possible that due to the age of the building work and the length of time that has passed since the work was completed, the [authority] may not be able to be satisfied that the durability requirements of the Building Code can be met. This means a Code Compliance Certificate cannot be issued. Whether the building work at your property falls within this category can only be determined after an inspection by the [authority].

3.7 The refusal to issue code compliance certificates

3.7.1 The authority subsequently carried out an inspection on 29 July 2015 and wrote to the applicants on 10 August 2015, identifying that attention and/ or remediation was required for the following items and additional documentation needed before it could consider issuing a code compliance certificate (in summary):

- stormwater discharge
- incomplete joist hangers and subfloor insulation under lower stair landing
- deteriorating timber shingles to the entry canopy and shed
- weatherproofing to vent penetrations
- incomplete lining and sealing to laundry tub
- consent amendment to modify durability provisions to start from:

- June 1999 for SR 49952
 - March 2002 for SR 83153
 - as-built floor plans and joinery dimensions for the completed house.
- 3.7.2 The authority also required the applicants engage a building surveyor, whose suitability should be confirmed by the authority prior to engagement. That surveyor should undertake ‘adequate testing’ and provide a report ‘to confirm that the performance requirements of the relevant building code clauses are being met, as well as addressing’ areas identified in the final inspections (in summary):
- the external wall cladding, particularly sheet joints
 - the structural timber beneath the lounge door to the deck
 - the waterproofing membrane to Level 2 shower
 - the circular window
 - a ‘repair schedule for any proposed remedial work.’

3.8 The application for determination

- 3.8.1 Further correspondence followed without resolution, and the Ministry received an application for a determination from the applicants’ lawyer on 13 April 2016.
- 3.8.2 In a letter to the lawyer dated 18 April 2016, the Ministry requested the building consent documentation and advised that an expert may be engaged, attaching a consent form for approval of any invasive testing that could be required. The lawyer responded on 22 April 2016, noting that documentation could be obtained from the authority and stating ‘it is not necessary for an expert to inspect the property’ so the applicants did not consent to invasive testing because, as explained in the submission:
- ...it is clear that the [authority] was satisfied that the building work met the Building Code at the time of the final inspections. The [authority] was not entitled to re-inspect the property and require remedial works to be undertaken.
- 3.8.3 The Ministry responded on 28 April 2016, describing the process followed when establishing sufficient information for a determination to be made, and also the type and extent of required invasive testing depending on particular circumstances. The Ministry also explained that an authority’s decision to issue a code compliance certificate is based on assessing compliance of the building work and:
- [The authority] can take into account previous inspection records and in-service performance to assist in making its decision when making a contemporaneous decision, but it is not bound by its earlier decisions regard compliance.
- 3.8.4 On 3 May 2016, the lawyer stated that the applicants agreed to an expert inspecting the house and undertaking invasive testing with some conditions.

4. The submissions

4.1 The applicants’ submission

- 4.1.1 In a statement on behalf of the applicants, the lawyer outlined the background to the situation noting that the final inspection records made it clear that the authority was satisfied that the house complied in 2006 and that the ‘only matter holding up the issue of the code compliance certificates was non-payment of the inspection fees.’ The consents had not lapsed and once fees were paid the authority was not entitled to

require re-inspection and should have issued the certificates. In regard to requiring a building surveyor's report, many surveyors are unwilling to provide an assurance of compliance and:

It appears that the [authority] is more interested in risk avoidance than telling our clients exactly why the Code Compliance Certificates cannot be issued in terms of section 436 of the Building Act 2004...

4.1.2 The lawyer provided copies of:

- the engineers' 2006 producer statements (PS4) for construction review
- the 2006 final inspection records
- computer-generated fee reconciliations with inspection summaries
- the 2010 correspondence from the authority
- the 2015 correspondence with the authority
- various other certificates and statements.

4.2 The authority's submission

4.2.1 The authority made no submission but provided copies of other documents pertinent to this determination, including:

- the building consents for Stage One and Stage Two
- the consent drawings and specifications for Stage One and Stage Two
- the engineering calculations for Stage One and Stage Two
- correspondence from the second engineer
- the as-built drawing 'Additions and shed' dated 12 March 2006
- various other statements and information.

4.3 A draft determination was issued to the parties for comment on 6 September 2016.

4.4 The applicants accepted the draft determination in a response received on 19 September 2016, correcting some date errors noted in the expert's report.

4.5 The authority accepted the draft in a response received on 21 September 2016, though it disputed that the fee letters were incorrectly addressed as the address used (86A) was the address given on the application for the code compliance certificates.

5. The expert's report

5.1 As mentioned in paragraph 1.6, I engaged an independent expert to assist me. The expert is a member of the New Zealand Institute of Architects. The expert carried out an assessment at the house on 9 June and 5 July 2016, providing a report dated 31 July 2016 which was provided to the parties on 9 August 2016.

5.2 General

5.2.1 The expert noted that the scope of his assessment was compliance of the relevant parts of the completed house with Clauses B1, B2, E2 and E3 of the Building Code.

5.2.2 The expert observed that the house appeared to be generally well constructed and maintained. At the time of his first site visit, the owner was repainting the exterior of the house so the assessment was staged to avoid disruption. As part of the maintenance, the applicant had started to rectify some of the items identified by the authority and it was therefore agreed to allow time to complete those items before the second site visit was carried out.

5.2.3 The various drawings for Stage One (see paragraph 3.1.2) made it difficult to assess changes to the building consent and the expert noted that the drawings for Stage Two were 'quite basic' and lacked architectural detail. Significant changes from the original approved consent drawings appear to include:

- northeast corner of the roof raised and south dormer window added
- upper stairs, master bedroom and ensuite bathroom added to Level 3
- attached storage shed added to Level 1
- original Level 2 north deck not constructed
- floor structure to Stage Two turned 90°
- additional pole foundations added to Stage Two

I also note that:

- the south entrance canopy was added to Level 2
- the shape of Level 2 west deck changed
- the exterior of deck balustrades clad.

5.3 The plywood cladding

5.3.1 The expert inspected the plywood cladding, noting that this was rough-sawn with rough sawn battens with remaining original paintwork 'still in excellent condition considering the age.' The plywood sheets incorporated a tongue-in-groove vertical joint which was covered with battens. Although the latter did not incorporate weathergrooves and were not always centred on the vertical joints, battens were 'well fixed' and 'water has been kept out of the structure.'

5.3.2 The expert removed a section of a horizontal batten and observed the underlying Z-flashing, noting that the tops of the flashing and the batten were sloped to allow water to drain away from the wall junction.

5.3.3 The expert also noted that wall penetrations appeared well sealed and the small "porthole" window to the west gable end had been well installed, with a continuous circular perimeter trim that covered junctions and was sealed against the plywood.

5.3.4 The expert could not understand the relevance of the authority's reference to structural timber beneath the deck doors to the lounge extension. The timber had been concealed for some 14 years since the completion of Stage Two and there is no evidence of associated moisture penetration or damage over that period.

5.4 Moisture testing

5.4.1 The expert inspected the interior and noted no signs of moisture penetration, with the air quality throughout the dwelling presenting 'no hint of dampness, mould or mustiness.'

- 5.4.2 The expert carried out non-invasive internal and external moisture testing, concentrating on at-risk locations such as corners, wall/roof junctions, penetrations and window/door junctions. Where any readings appeared inconsistent, invasive investigation was undertaken and in each case irregular readings were confirmed as caused by interference from metal back flashings, straps or nail plates.
- 5.4.3 The expert noted that the moisture readings taken were ‘suggesting very low quantities of moisture in the framing’. Due to consistently low moisture levels and the lack of anomalies, the expert did not consider it necessary to undertake further invasive moisture testing. (I also note that the moisture readings were undertaken in mid-winter and therefore represent a likely peak in seasonal variation.)
- 5.4.4 The expert also carried out moisture testing of timber framing around and under the shower to Level 2 and no evidence of moisture was recorded.
- 5.5 The expert made the following additional comments:
- Although the small ‘porthole’ window lacks a conventional head flashing; it is well installed and sealed, with no evidence of associated moisture entry over the past 18 years.
 - Although the bathroom vent lacks a flashing; the top is protected by the fascia and the vent is well sealed against the cladding, with no evidence of associated moisture entry over the past 18 years.
 - Although timber shingles to the shed roof are now deteriorating and require maintenance; the wall/roof junction has remained weatherproof since the flashing installation in 2006 and there is no evidence of associated moisture entry into the house wall framing.
- 5.6 The expert responded to items identified by the authority during its final inspection (see paragraph 3.7.1) and his comments are summarised in Table 1:

Table 1: Responses to the authority’s concerns

Authority’s concerns	Expert’s comment	Clause	Paragraph
<i>General (see paragraph 3.7.2)</i>			
Wall cladding	Has performed satisfactorily – no evidence of past or current moisture penetration	E2	5.3, 5.4 5.5
Timber under lounge doors	No evidence of moisture penetration or deterioration over past 14 years	E2	5.3.4
Level 2 shower membrane	No evidence of moisture penetration	E3	5.4.4
Circular window	Appears satisfactory – no evidence of past or current moisture penetration	E2	5.3.3, 5.5
<i>Other items (see paragraph 3.7.2)</i>			
Stormwater discharge	Remedied – roof water now discharges satisfactorily into stormwater system	E1	
Stair landing joist hangers and insulation	Remedied – joist hangers and fibreglass insulation now satisfactorily installed	B1 H1	
Timber shingles to canopy and shed	Deterioration has had no effect on compliance of house, but maintenance is now required to prevent future problems	B2	5.5

Authority's concerns	Expert's comment	Clause	Paragraph
Vent penetrations	Satisfactory flashing now installed to kitchen vent. Remaining vents are satisfactory in circumstances	E2	5.3.3, 5.5
Lining and sealing to laundry tub	Remedied – lining and sealing now completed satisfactorily	E3	

5.7 Summary

5.7.1 In regard to the 2015 final inspections, although the authority has ‘every right to request confirmation that the property continues to meet the performance requirements of the building code’, the expert also considered that the authority’s refusals to issue code compliance certificates also attempted to mitigate deficiencies in the documentation provided during the consent process, because inadequate documentation should have been addressed at that time.

5.7.2 The expert considered that overall:

The building has been well constructed and finished and the applicant, a builder also, has maintained the house well and continues to do so. They have also made the effort to correct many of the construction defects that the [authority’s] inspection officers identified.

5.8 The expert’s conclusions

5.8.1 The expert concluded on the concerns raised by the authority in its refusal to issue code compliance certificates for the house, and included the following comments (in summary):

- With regard to Clause B1: the implication of ‘the status of the structure below the lounge doors’ is unclear – the work was passed as satisfactory during inspections and there is no evidence or deterioration so it is presumed to be still satisfactory.
- With regard to Clause B2: although maintenance is recommended, the deterioration of canopy and shed shingle roofing ‘has not negatively affected the weathertightness of the building and is unlikely to do so in the short term’.
- With regard to Clause E2: there is no evidence that weathertightness performance has been compromised.
- With regard to Clause E3: there is no evidence of moisture penetration as a result of any inadequate waterproofing of the Level 2 shower.

5.8.2 The expert concluded that his investigations had been:

...sufficient to conclude that the building is meeting the performance requirements of Clauses B1, B2, E2 and E3 of the Building Code.

6. Discussion

6.1 The legislation

6.1.1 These building consents were issued under the former Act, and accordingly the transitional provisions of the Act apply when considering the issue of a code compliance certificate for work completed under this consent. Section 436(3)(b)(i) of the transitional provisions of the current Act requires the authority to issue a code

compliance certificate if it 'is satisfied that the building work concerned complies with the building code that applied at the time the building consent was granted'.

- 6.1.2 The authority has requested an application to be made for a modification of durability requirements to allow durability periods to commence from the date of substantial completion of the original house in 1999 and the west extension in 2002. Although that matter is not part of this determination (see paragraph 1.7), I have taken the anticipated modifications into account when considering the weathertightness performance of the claddings.
- 6.1.3 In order to determine whether the authority correctly exercised its power in refusing to issue the code compliance certificates, I must consider whether the building work complies with the Building Code. The following paragraphs therefore consider the code compliance of the external building envelope of the completed house.

6.2 The external envelope

- 6.2.1 The evaluation of building work for compliance with the Building Code and the risk factors considered in regards to weathertightness have been described in numerous previous determinations (for example, Determination 2004/1).
- 6.2.2 The completed house has the following environmental and design features, which influence its weathertightness risk profile:

Increasing risk

- the house is three-storeys high in part
- the house is in a high wind zone
- although reasonably simple, the house includes some complex junctions
- walls have plywood cladding fixed directly to the framing
- there are no roof overhangs to shelter the cladding
- external wall framing may not be treated to a level that provides sufficient resistance to decay if it absorbs and retains moisture.

Decreasing risk

- the house is reasonably simple in form
- 6.2.3 Using the E2/AS1 risk matrix to evaluate these features, elevations are assessed as having a moderate to high weathertightness risk rating. If current E2/AS1 details were adopted to show code compliance, drained cavities would be required for all elevations. However, this was not a requirement when the house was constructed in 1999 and the extension in 2002.
- 6.2.4 Taking account of the expert's report, the cladding appears to have generally been installed in accordance with good trade practice at the time of construction, with no evidence of moisture penetration into the wall framing over the past 14 to 18 years.
- 6.2.5 I also note the expert's opinions as outlined in paragraph 5.5 and accept that those areas are adequate in the particular circumstances described. However, I recommend that the deteriorating timber shingles to the shed and entry canopy be appropriately attended to as part of maintenance work to ensure ongoing durability (see paragraph 6.3.2).

- 6.2.6 I also note the expert's conclusions in Table 1 in regard to items identified by the authority in its refusal to issue code compliance certificates for the house and accept that these areas are adequate in these particular circumstances.
- 6.2.7 The expert's report provides me with reasonable grounds to conclude that the current performance of the exterior building envelope is adequate because it is preventing water penetration at present, and I am consequently satisfied that the completed house currently complies with Clause E2 of the Building Code. I am also satisfied that there has been no significant penetration into the framing since its completion and I therefore conclude that the timber framed structure of this house has remained sound and in compliance with Clause B1 of the Building Code.
- 6.2.8 The durability requirements of Clause B2 include a requirement for wall claddings to remain weathertight for a minimum of 15 years. A modification of the durability provisions to commence from the dates of substantial completion in 1999 and 2002 will mean that the Stage One wall claddings have already met and the Stage Two claddings have almost met the minimum life required by the Building Code. I am therefore satisfied that the building envelope of the completed house complies with Clause B2 of the Building Code.
- 6.2.9 It is emphasised that each determination is conducted on a case-by-case basis. Accordingly, the fact that a particular cladding system has been established as being code compliant in relation to a particular building does not necessarily mean that the same cladding system will be code compliant in another situation.
- 6.2.10 I note the confusion in regard to inconsistent, unclear and incomplete drawings for the house (see paragraphs 3.1.1 and 5.2.3) and I recommend that drawings be professionally prepared to appropriately reflect as-built floor plans and elevations of the completed house. I leave this matter to the parties to resolve in due course.

6.3 Maintenance of the building envelope

- 6.3.1 In the case of this house, the expert has observed the ongoing repairs and maintenance carried out by the original owner/builder and also by the applicants, which has reduced the risks of moisture penetration in the past and, if continued, will reduce that risk in the future.
- 6.3.2 Although a modification of durability provisions will mean that wall claddings have already met the minimum life required by the Building Code, the expected life of the building as a whole is considerably longer. Careful maintenance will therefore need to continue to ensure that claddings continue to protect the underlying framing for its minimum required life of 50 years for the structure.
- 6.3.3 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, including examples where the external wall framing of the building may not be treated to a level that will resist the onset of decay if it gets wet (for example, Determination 2007/60).

7. The decision

- 7.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the completed house complies with Clauses B1, B2, E2 and E3 of the Building Code; accordingly I reverse the authority's decision to refuse to issue code compliance certificates for the building work completed under building consents No.48852 and No.83153 subject to the modification of the durability periods as noted herein.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 28 September 2016.

John Gardiner
Manager Determinations and Assurance