



## Determination 2016/001

# The refusal to issue code compliance certificates for a 15-year-old extension to a house with weatherboard and brick veneer claddings at 1007 Moonshine Road, Porirua



### Summary

This determination considers the authority's decision to refuse to issue two code compliance certificates: the grounds for the refusal were the authority's concerns regarding the weather-tightness and durability of the exterior envelope, and the structural performance of the foundation wall. The determination reviewed the reasons given for the refusal and considered whether the items identified in the refusal comply with the Building Code.

## 1. The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004<sup>1</sup> ("the current Act") made under due authorisation by me, John Gardiner, Manager Determinations 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, K McGregor ("the current owner")
  - Porirua City Council ("the authority"), carrying out its duties as a territorial authority or building consent authority.
- 1.3 The previous owner of the house, C Anderson (herein "the applicant") applied for the determination, and acted through the builder of the house ("the builder"). The house was sold part way through the determination process to the current owner and the applicant no longer has a financial interest in the property. I consider the applicant to be a person with an interest in this determination.

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

- 1.4 This determination arises from the decision by the authority to refuse to issue code compliance certificates for a 15-year-old extension to a house because it was not satisfied that the building work complied with certain clauses<sup>2</sup> of the Building Code (First Schedule, Building Regulations 1992). The authority's concerns regarding compliance of the building work appear to relate to the age and weathertightness of the extension.
- 1.5 The matter to be determined<sup>3</sup> is therefore whether the authority was correct to refuse to issue the code compliance certificates. In deciding this matter, I must consider whether the external building envelope of the extension 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 consider this in paragraph 7.

## 1.6 The building consents

- 1.6.1 The building work considered in this determination involves includes work covered or partly covered under the following two building consents :
- Consent No. ABA 980560 (“Stage Two”) issued on 15 January 1999 for an addition to the existing cottage
  - Consent No. ABA 20000392 (“Stage Three”) issued on 11 November 1999 for Stage Three (“the bedroom wing”).
- 1.6.2 Various building consents were issued for the property as shown in Table 1; consents not considered in this determination are shown shaded.

**Table 1: Consents**

	Stage	Description	Consent (ABA)	Date issued	CCC status	Comments
The house	One	New single bedroom dwelling (“the cottage”)	96/4874	04/03/1996	CCC issued 07/02/2005	<i>Not considered in this determination</i>
	Two	Addition to existing dwelling, Stage 2 adds “Stage Two”	<b>98/0560</b>	15/01/1998	CCC refused	
	Three	Stage 3 and veranda “the bedroom wing”	<b>00/0392</b>	11/11/1999	CCC refused	<i>Veranda not built</i>
Second garage	Erect garage	99/0436	08/12/1998	n/a	<i>Second garage not built – application withdrawn</i>	
Barn	Barn	04/0499	14/01/2004	n/a	<i>Barn not built – application withdrawn</i>	

## 1.7 Matters outside this determination

- 1.7.1 Building consent no. ABA 990436 was issued on 8 December 1998 for a second garage. Although the first original garage remains, the second garage was not erected. Building consent no. ABA 40499 was issued on 8 December 1998 for a detached barn building, which was also not constructed. Both applications were withdrawn in 2004 and this determination does not consider these consents.

<sup>2</sup> In this determination, unless otherwise stated, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

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

- 1.7.2 The authority has stated that its concerns regarding compliance with Clause B1 of the Building Code are related to the possible structural implications of moisture penetration into timber framing, which is included with the matter outlined in paragraph 1.5. I have also included the authority's concerns about the foundation wall within that matter, with its structural performance addressed in paragraph 7.5.
- 1.7.3 I note that the owner will be able to apply to the authority for a modification of durability provisions to allow specified periods to commence from the date of substantial completion in 2000. Although I leave this matter to the parties to resolve in due course, I comment on the matter in paragraph 6.2 and paragraph 8.
- 1.8 In making my decision, I have considered the submissions of the parties including the report of the consulting engineer engaged by the applicant, the report of the expert commissioned by the Ministry to advise on this dispute ("the expert") and the other evidence in this matter.

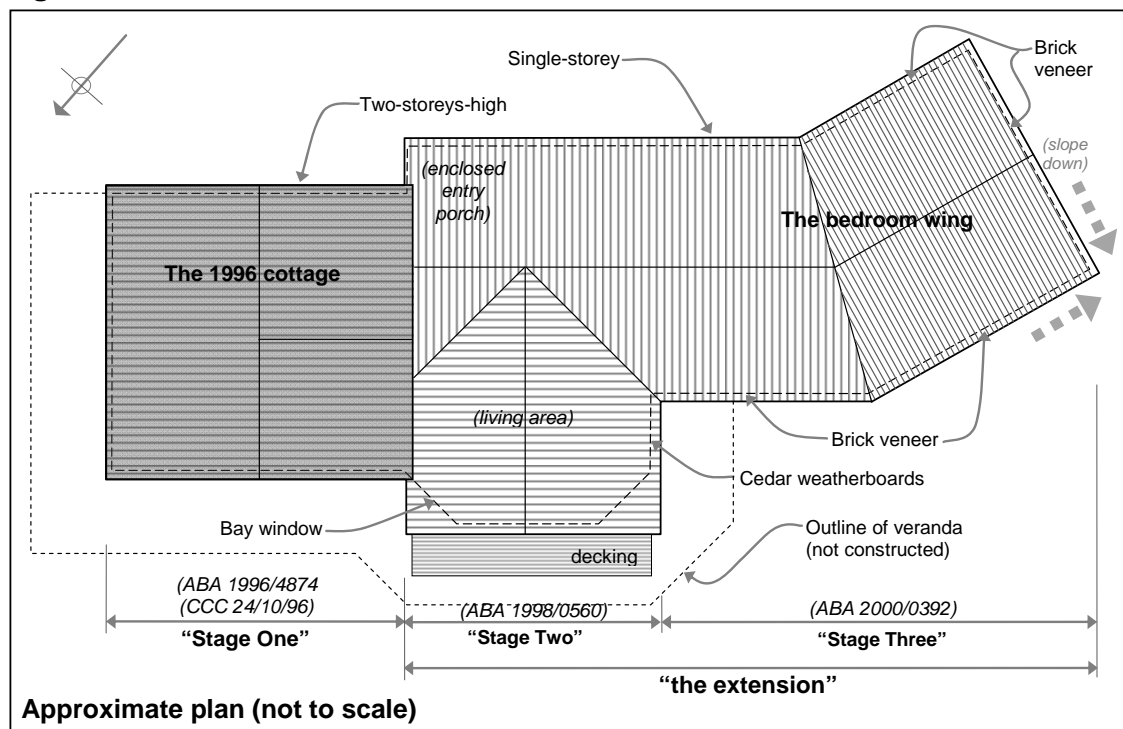
## 2. The building work

2.1 The building work considered in this determination is the extension to an existing cottage ("Stage Two and Stage Three") on a large sloping rural site in a high wind zone for the purposes of NZS 3604<sup>4</sup>. Construction took place from 1999 to 2000 as shown in Table 1.

2.2 The completed house is shown in Figure 1 and comprises:

- Stage 1 (the 1996 cottage): a simple rectangular two-storey building with an asymmetrical gable roof and a mezzanine level within the steep roof slope (not considered in this determination).
- Stages Two and Three: a single-storey extension to the southwest, providing three additional bedrooms, a bathroom and living areas.

**Figure 1:**



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

- 2.3 The extension is fairly simple in plan and form with some complex junctions and is assessed as having a low to moderate weathertightness risk (see paragraph 7.2). Construction is generally conventional light timber frame, with concrete block foundations, concrete floor slab, weatherboard and brick veneer wall claddings, profiled metal roofing and aluminium joinery. The 30° pitch gable roofs have eaves and verge overhangs of about 300mm.
- 2.4 The wall cladding to the northwest bay window, the south gable end, and above windows is rusticated cedar weatherboards fixed through the building wrap and finished with a stain finish. The remaining cladding is conventional brick veneer.
- 2.5 The builder advised the expert that ‘all framing was treated’ but was unable to confirm that. Given the lack of evidence and the likely date of framing installation in 2000, I am unable to determine whether wall framing is treated to a level that will provide resistance to fungal decay. The authority is of the view that the framing would not have been treated to a level that would provide resistance to decay should it become wet.

### 3. Background

3.1 The authority issued the following building consents for the extension, which I have not seen, under the Building Act 1991 (“the former Act”):

- No. ABA 980560 for Stage Two on 15 January 1999.
- No. ABA 20000392 for Stage Three on 11 November 1999.

3.2 According to the builder, it was decided that it ‘would be easier’ to complete the extension as one single project rather than two stages. Construction was therefore delayed until 2000, after the consent for Stage Three was issued.

### 3.3 Construction of the extension

3.3.1 Inspection records are not clear due to references to both consent numbers<sup>5</sup>, but it appears that the authority carried out two inspections during 2000 as follows:

- concrete floor slab inspection on 1 February 2000 (recorded under 20000392)
- preline building and plumbing inspection on 9 March 2000, which passed (recorded under 980560 and 20000392).

3.3.2 Although the extension appears to have been substantially completed and occupied by the end of 2000, it appears that no final inspection was carried out.

### 3.4 Omission of the veranda

3.5 Building consent drawings did not show the veranda referred to in the description noted in the Stage Three consent. However, I note that an outline plan showing its position was stamped as received by the authority’s ‘Environmental Regulatory Services’ on 2 November 1999, presumably as part of the information provided for resource consent.

3.5.1 When it was later decided that the veranda would not be constructed, the applicant requested the authority to withdraw the consent application. The authority apparently took this to apply to the building consent for ‘ABA20000392 – Stage 3

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<sup>5</sup> For example, the preline inspection on 9 March 2000 has the ‘checklist’ under ‘980560’, but is also noted in the ‘Project Check Sheet’ for ‘ABA 20000392’.

and veranda' and an internal memo dated 5 October 2004 recorded that 'this application was withdrawn by the owner'.

- 3.5.2 There appears to have been confusion as to what type of consent was intended to be withdrawn. The likelihood of that confusion is evidenced by the wording used by the applicant within a letter to the authority dated 17 June 2005 (regarding a barn not considered in this determination – see Table 1), which noted:

I came in a while ago and cancelled all outstanding **resource applications** [my emphasis] for 1007 Moonshine Road.

- 3.5.3 It appears that the building work was completed and no final inspection was called for, nor was an application made for a code compliance certificate made.

### 3.6 The final inspection

- 3.6.1 The authority did not carry out a final inspection until 3 December 2014, and the inspection record notes 'Extension Stages 2 – 3 to an existing dwelling'. The authority listed the following items requiring attention:

1. Achieve ground clearances
2. Repair downpipe & clear out guttering
3. Footing has been undermined on the south corner
4. Cedar cladding needs maintenance (split where dried out)
5. Need to check window & door flashings (could not see where facings used).
6. Fit smoke alarm to cover end bedroom to upper level.
7. Check beam bearing at lintel and connections.

### 3.7 The engineer's report

- 3.7.1 The builder carried out various repairs and a consulting engineer was engaged to advice on the footing and the lintel connections. The engineer inspected the house with the builder on 21 January 2015.

- 3.7.2 The builder subsequently carried out remedial work to the footing. The consulting engineer assessed photographs of work in progress and reported to the applicant on 15 July 2015, with a copy forwarded to the authority. The engineer attached photographs of the foundation and the living area beam and reported that (in summary):

- The blockwork perimeter foundation wall is rough and would normally be expected to be plastered. The foundation wall to the south corner slightly overhangs the side concrete footing adjacent to the corner. Although the foundation wall is considered structurally sound, it is recommended that the concrete footing be widened to eliminate the overhang.
- The builder has excavated alongside the footing and epoxy-grouted starters into the concrete, which appear satisfactory and will be structurally sound when completed.
- The ridge beam supporting the exposed rafters in the living area was designed to be supported by a laminated timber lintel. However, the design engineer's drawings provided no connection details within the consent documents.
- At the pre-line inspection on 9 March 2000, the lintel and connections would have been exposed. (I note that the inspection record ticks 'lintels/bms – size/fixing' as passed during the inspection).

### **3.8 The refusal to issue a code compliance certificate**

- 3.8.1 In a letter to the applicant dated 24 July 2015, the authority set out the details and status of the building consents issued for the property and noted the confusion regarding the consents and construction of Stages Two and Three.
- 3.8.2 The authority noted that its final inspection of the extension had failed due to ‘splitting of weatherboards, deferred maintenance and concerns regarding flashings’. For both of the consents for the extension, the authority noted:
- The observations made at the final inspection raise concerns regarding the condition of the external cladding system and the possibility that moisture may have penetrated the cladding and damaged the underlying timber substrates.
- 3.8.3 The authority requested a report on the extension from ‘a competent and preapproved weathertightness expert, such as a member of the New Zealand Institute of Building Surveyors’. Invasive investigation might be required and the report was expected to either confirm the compliance of the claddings with Clauses B2 and E2 or to propose remedial work.
- 3.8.4 The authority also noted that:
- Once we are satisfied that the building work complies with the provision of the New Zealand Building Code 1992 and the issues raised at the final inspection have been addressed we will then invite you to apply for a modification of Clause B2.3.1 in order for a code compliance certificate to be issued.
- 3.8.5 With regard to changes from the consent drawings, the authority stated:
- It is evident that the completed building work does not match the plans as consented, for example the weatherboard was replaced in areas with brick veneer and the veranda was never completed. As part of the cladding assessment the expert should identify all variations from the approved plans with a view to providing plans which represent the actual as built state of the building work.
- 3.8.6 The builder discussed the above letter with the authority and the authority wrote to the builder and the applicant on 5 August 2015 stating:
- As discussed on the telephone this morning Porirua City Council is not satisfied that the building work related to the above building consents comply with Clauses B1, B2 and E2 of the New Zealand Building Code 1992.
- 3.9 The Ministry received an application for a determination on 7 September 2015 and sought clarification and further information from the authority, which was received on 6 October 2015.
- 3.10 On 12 October 2015, the builder removed sections of weatherboards and ridge flashing and provided the Ministry with photographs showing:
- metal head flashings installed under weatherboard within brick veneer walls
  - tie down strap to lounge beam beneath ridge capping.

## **4. The submissions**

### **4.1 The applicant’s submission**

- 4.1.1 In a statement on behalf of the applicant, the builder outlined the background to the situation noting that he had attended to all items identified during the final inspection. However, the authority had then raised concerns about the cladding and required a weathertightness report, which the builder considered ‘unreasonable and a bit excessive as on inspection the house shows no sign of any leaking issues’, adding:

The documentation that the [authority] holds for this property is very limited ... and the onsite folder was lost in a fire in a shed where it was stored on the property.

4.1.2 The applicant provided copies of:

- limited plans stamped as received on 15 December 1997 and 8 January 1998
- engineer's design calculations for the bay window lintel
- a hand-completed inspection summary titled 'ABA20000392'
- a hand-completed pre-line inspection record for '980560'
- the consulting engineer's report dated 15 July 2015
- the authority's letter dated 24 July 2015.

## 4.2 The authority's submission

4.2.1 The authority's submission was in response to the Ministry's request for clarification as to the reasons for refusing to issue code compliance certificates for the extension. The authority stated that it was not satisfied that the building work complied with Clauses B1, B2 and E2 of the Building Code for the following reasons (in summary):

- The brick veneer was not included in the consent drawing and its installation was not assessed, leading to 'concerns regarding all cladding systems.'
- The timber framing is reliant on the performance of the claddings and junctions, which have not been 'well detailed or maintained'.
- The brick veneer lacks adequate ground clearance in some areas.
- The foundation wall has 'very rough block work and mortar joints that raise concerns regarding Clauses B1 and B2.'

4.2.2 In addition to information provided by the builder, the authority provided copies of other documents pertinent to this determination, including:

- an outline plan for the complete building, stamped as received by the authority's 'Environmental Regulatory Services' on 2 November 1999
- the applicant's letter dated 17 June 2005 regarding resource applications
- photographs taken during the final inspection on 3 December 2014
- the letter to the applicant and builder dated 5 August 2015.

## 4.3 The draft determination and responses received

4.3.1 A draft determination was issued to the parties for comment on 23 November 2015.

4.3.2 The authority provided a submission on 1 December 2015, noting the following:

- Given the consent application (ABA20000392) refers to 'veranda and stage 3' it is reasonable to conclude that the veranda formed part of the building consent.
- The authority is of the view that revised drawings are required in order to record the as-built work, particularly with respect to the changes to the cladding and the omission of the veranda.
- The request for an expert's report on the cladding was reasonable and in keeping with current practices.

- The maintenance required to the top of the brickwork at the porch junction should be rectified prior to the code compliance certificate being issued.
- The authority acknowledges that the building work to the cladding to the bay window area was undertaken during the determination process, and an assessment of the underlying timber should have been undertaken during the re-clad process.

4.3.3 In response to the authority's submission (third bullet point in the above paragraph) I make the following comment: where there is a significant delay in an owner seeking a code compliance certificate for a building after its completion, an authority may reasonably require the owner to provide sufficient information to satisfy the authority on reasonable grounds that the work is compliant. What constitutes 'sufficient information' will depend on individual circumstances and will not always warrant a request for a report from a suitably qualified expert, particularly for buildings of conventional construction and with low or negligible weathertightness risk.

4.3.4 In a response received on 14 January 2016, the new owner accepted the draft without further comment. The agent for the applicant also accepted the draft without comment in a response received on 18 January 2016.

## 5. The expert's report

5.1 As mentioned in paragraph 1.8, I engaged an independent expert to assist me. The expert is a member of the New Zealand Institute of Architects. The expert inspected the house on 30 October 2015, providing a report dated 13 November 2015 which was provided to the parties on 13 November 2015.

### 5.2 General

5.2.1 The expert noted that the scope of his inspection was to assess compliance of the relevant parts of the exterior building envelope with Clauses B1, B2 and E2 of the Building Code. The expert visually inspected the exterior walls and considered that 'despite the odd rough area, the general finish was generally of an acceptable standard.'

5.2.2 The expert noted that the lack of consent documents made it difficult to assess changes, however significant changes include:

- brick veneer in lieu of weatherboards to most of the exterior walls
- the veranda outlined in the resource plan not constructed

I also note that:

- a glazed screen has been added to the southeast entry porch
- the roof overhang above the bay window changed.

### 5.3 Brick veneer

5.3.1 The expert noted that the brick veneer generally appeared to be 'well laid, straight and true, in a running bond pattern' and window junctions appeared to follow 'standard veneer construction practice.' The bricks showed no signs of cracking at mortar joints and weatherboards appeared to be 'straight and true with no splitting or cupping noticeable'.



- 5.3.2 The top of the brickwork finished under the eaves, with sufficient ventilation gap. Ventilation at the bottom of the veneer was provided via raked mortar joints in the bottom course.

## 5.4 Cedar weatherboards

- 5.4.1 The expert noted that the cedar cladding to the bay window area had been completely replaced with new cedar weatherboards, facings and trim, with all timber coated with an oil stain. The new weatherboards were ‘installed to a high standard’ as a ‘like for like replacement of the original cladding’, with ‘tightly fitted’ plugs at facings.
- 5.4.2 I note that original weatherboards remain in place at the gable end above the brick veneer and also as panels above windows installed in the brick veneer of the bedroom wing.

## 5.5 Windows

- 5.5.1 The expert observed that the aluminium windows appeared to be ‘properly installed’ with correctly fitted metal head flashings. The expert pulled away a section of head facing above the bay window to investigate the underlying construction.
- 5.5.2 The expert observed the metal head flashings behind the facing, which overlapped the window frame. (I also note that the builder’s photographs showed metal head flashings installed to the other windows in brick veneer walls – see paragraph 3.10).

## 5.6 Moisture testing

- 5.6.1 The expert inspected the interior of the timber framed walls and undertook non-invasive moisture testing of exterior walls, with no elevated readings observed. The expert observed no ‘hint of dampness, mould or mustiness’, except for surface mould to some joinery reveals. However, low invasive moisture readings of framing confirmed that surface stains resulted from condensation on the single glazed joinery.
- 5.6.2 At areas with the highest readings and where surface mould was observed, the expert took invasive moisture readings using probes from the inside into framing and noted that the highest reading recorded was 12%.
- 5.6.3 At the junction of the enclosed entry porch with the 1996 cottage, the expert noted that the brick veneer overlaps the original weatherboards, with the original facing cut back to accommodate the brickwork. Although a gap at the top of the junction allows water to run down the face of the original weatherboard, invasive moisture readings into the corner framing of the cottage were only 18% and drillings appeared sound. The expert concluded that the junction had performed satisfactorily.
- 5.6.4 The expert made the following additional comments:
- Although the junction between the concrete block foundation wall and the brick veneer is rough, it is unlikely to influence weathertightness and there is no evidence of associated moisture entry over the past 15 years.
  - Although there is a gap the top of the brick/weatherboard junction (see paragraph 5.6.3), the brickwork overlaps the original weatherboards and there is no evidence of moisture entry into timber framing over the past 15 years

I note also that although the concrete paving at the southwest entry porch appears close to the interior floor level, the area appears well drained and there is no evidence of associated moisture entry over the past 15 years.

- 5.7 The expert also responded to the items identified by the authority during its final inspection (see paragraph 3.6.1) and his comments are summarised in Table 2 (with my additional comments shown in brackets):

**Table 2:**

	Authority's concerns	Expert's opinion	Relevant Clauses
1	Ground clearances	Soil level lowered to below bottom brick course (Concrete at southwest porch close to floor level)	E2
2	Downpipe repair, gutters	Damaged downpipe replaced and gutters cleaned	E2 maintenance
3	South corner foundation	Now repaired as recommended by engineer Foundation wall/brick junction 'tidied up'	B1
4	Weatherboards deteriorating	Weatherboards in bay window area replaced, which has removed all damaged boards.	E2 maintenance
5	Window flashings not confirmed	Head flashings to bay window confirmed (Also, flashings to other windows confirmed in builder's photographs)	E2
6	Smoke alarm to bedroom	Not part of inspection (Not required at time of construction, though I strongly suggest it be installed)	n/a
7	Beam/lintel connections	Authority would have observed during pre-line inspection (ticked in inspection record). No visible evidence of stress/failure of junctions	B1

## 5.8 Summary

- 5.8.1 The expert concluded that inadequate records and communication between the parties had resulted in the current confusion regarding what work was consented and what changes were made to the building work during construction.
- 5.8.2 In regard to the authority's structural concerns, the expert considered that his assessment and the consulting engineer's report had confirmed that these:
- ...were either of little consequence or easily fixed and there is nothing to suggest that the work does not meet the requirements of Clause B1 of the Code.
- 5.8.3 In regard to weathertightness, the expert considered that his assessment had found that the extension generally appeared to have been constructed to an adequate standard, with no evidence of water ingress or material damage found after 15 years. The expert concluded that:

This, together with the absence of any forensic evidence of moisture or decay in the wall cavities is sufficient to conclude that the building is meeting the performance requirements of Clauses B2 and E2 of the Building Code.

## 6. Compliance generally

- 6.1 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'.

- 6.2 An application can be made to the authority for a modification of durability requirements to allow durability periods to commence from the date of substantial completion of the extension in 2000. Although that matter is not part of this determination, I have taken the anticipated modifications into account when considering the weathertightness performance of the claddings.
- 6.3 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.

## 7. Discussion: the external envelope

- 7.1 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).

### 7.2 Weathertightness risk

- 7.2.1 This extension has the following environmental and design features, which influence its weathertightness risk profile:

#### Increasing risk

- the extension is in a high wind zone
- although fairly simple, the extension includes some complex junctions
- some walls have rusticated weatherboards fixed directly to the framing
- 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 single storey extension is fairly simple in form
- most walls have brick veneer installed over a cavity
- there are eaves to shelter most of the walls
- the only deck is at ground level.

- 7.2.2 Using the E2/AS1 risk matrix to evaluate these features, elevations are assessed as having a low to moderate weathertightness risk rating. If current E2/AS1 details were adopted to show code compliance, drained cavities would be required for the rusticated timber weatherboards to moderate risk elevations. However, this was not a requirement when the extension was constructed in 2000.

### 7.3 Weathertightness performance

- 7.3.1 I note that an application can be made to the authority for a modification of durability requirements to allow durability periods to commence from the date of substantial completion in 2000. I have taken that anticipated modification into account when considering the weathertightness performance of the claddings.
- 7.3.2 Taking account of the expert's report, the claddings appear to have generally been installed in accordance with reasonable trade practice at the time of construction, with no evidence of moisture penetration into the wall framing over 15 years.

- 7.3.3 I also note the expert's opinions as outlined in paragraph 5.6.4 and accept that those areas are adequate in the particular circumstances described. However, I recommend that the top of the brickwork at the porch junction be appropriately attended to as part of the maintenance work to ensure ongoing durability (see paragraph 7.6.2). In response to the authority's view that this should be attended to prior to the issuing of a code compliance certificate, I note that it is an issue of maintenance as opposed to non-compliant building work and while it is prudent that it be addressed it does not affect the issuing of a code compliance certificate.
- 7.3.4 I also note the expert's conclusions in regard to the items identified by the authority (see paragraph 3.6.1 and 5.7), and accept that these areas are adequate in these particular circumstances.

#### **7.4 Weathertightness conclusion**

- 7.4.1 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 extension 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.
- 7.4.2 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 date of substantial completion in 2000 will mean that wall claddings have already met the minimum life required by the Building Code for the cladding and thus comply with Clause B2 of the Building Code.
- 7.4.3 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.

#### **7.5 The foundation wall**

- 7.5.1 In its submission the authority noted that the concrete block foundation wall has 'very rough block work and mortar joints that raise concerns regarding Clauses B1 and B2.' The authority has not re-visited the site since its final inspection in 2014 to view the recent repairs and maintenance
- 7.5.2 I note that over the past 15 years the extension will have experienced severe wind and storm forces. In addition, the location has also experienced strong earthquake forces in recent years<sup>6</sup>. These events will have tested the building's weathertightness and structural performance.
- 7.5.3 I also note that the consulting engineer reported that he considered the foundation wall structurally sound, despite the roughness of the blockwork and the expert's assessment of the extension. Taking account of the engineer's and expert's reports together with the lack of evidence of any structural distress over the 15 years since construction, I am satisfied that the foundation wall is structurally sound.

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<sup>6</sup> During significant earthquakes of 20 July 2013, 16 August 2013 and 20 January 2014.

## **7.6 Maintenance of the building envelope**

- 7.6.1 In the case of this house, the expert has observed the recent repairs and maintenance carried out by the builder, which have reduced the risk of future moisture penetration. However, I note that this maintenance was overdue at the time it was undertaken in response to the authority's 2014 final inspection.
- 7.6.2 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 is therefore needed to ensure that the claddings continue to protect the underlying framing for its minimum required life of 50 years for the structure.
- 7.6.3 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).

## **8. Durability**

- 8.1 The relevant provision of Clause B2 of the Building Code requires that building elements must, with only normal maintenance, continue to satisfy the performance requirements of the Building Code for certain periods ("durability periods") "from the time of issue of the applicable code compliance certificate" (Clause B2.3.1).
- 8.2 In this case the 15-year delay since the completion of the extension in 2000 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.
- 8.3 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 extension 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 in 2000.
- 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.
- 8.4 I also recommend that the authority clarify its records for the two separate building consent numbers 98/0560 and 00/0392 by ensuring that all records pertaining to Stage Three are moved within one single consent number in order to avoid any future confusion as to the background to the building work.
- 8.5 In addition, I agree with the authority's request that as-built drawings be provided to record the significant changes made to the consented drawings (refer paragraph 5.2.2).

## **9. The decision**

- 9.1 In accordance with section 188 of the Building Act 2004 I hereby determine that the house complies with the Clauses B1, B2, and E2 of the Building Code and accordingly, I reverse the authority's decision to refuse to issue a code compliance certificate.
- 9.2 The issue of the code compliance certificate is subject to the modification of the original consent so that the durability provisions of the Building Code apply from the substantial completion of the work as described herein.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 26 January 2016.

John Gardiner  
**Manager Determinations and Assurance**