MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HIKINA WHAKATUTUKI

# Determination 2017/056

# The refusal to issue a code compliance certificate for a repaired 14-year-old house with masonry veneer cladding at 12 Walnut Grove, Whakatane


### Summary

This determination is concerned with the compliance of a 14-year-old house that had been subject to repair works. The determination considers the authority's reasons for refusing to issue the code compliance certificate for the construction of the house and whether the house complies with the requirements of 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[1] ("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 building, B and B Whelan ("the applicants")
- Whakatane District Council ("the authority"), carrying out its duties as a territorial authority or building consent authority.

1.3 The application for this determination arises from the following:

- The house was constructed under a building consent issued in 2003 ("the original consent") and was substantially completed during 2003 but final inspections were not carried out until 2011.
- When preparing to sell the house in 2011, the original owners sought a code compliance certificate and the authority inspected the house in July 2011 and identified various defects. A new building consent was issued in October 2011 ("the repair consent") to repair the defects. The repairs were completed and the

[1] The Building Act, Building Code, Acceptable Solutions, 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.

authority issued a code compliance certificate for the repair consent in December 2011.

- The applicants purchased the property December 2011 and sought a code compliance certificate for the original consent. The authority refused this because it was not satisfied that the original building work complied with certain clauses[2] of the Building Code (First Schedule, Building Regulations 1992).

1.4 The matter to be determined[3] is therefore the authority's exercise of its powers of decision in refusing to issue a code compliance certificate for the original building consent for the reasons given in its letter dated 20 December 2011 (see paragraph 3.6.1). The refusal related to the buildings compliance with Clauses B1, B2, E1 and G12, and arises from the authority's concern about the effects of non-compliant work that it contends existed between 2003 until the completion of the repair consent in 2011.

### 1.5 The evidence

1.5.1 Based on the information and records supplied and the evidence gathered, I must consider whether the original components of this house comply with the Building Code.

1.5.2 In making my decision, I have considered the reports of the two experts commissioned by the Ministry to advise on this dispute ("the first expert" and "the second expert"), the submissions of the parties, and the other evidence in this matter.

### 1.6 Matters outside this determination

1.6.1 The repair consent was issued in September 2011 and the code compliance certificate for this work was issued in December 2011 (refer paragraph 3.5). The compliance of this work is not in dispute and the determination does not consider this work further other than to describe what this work included.

1.6.2 I note that the applicants may apply to the authority for a modification of the durability provisions for the 14-year-old house to allow the specified periods to commence from the date of substantial completion in 2003. I leave this to the parties to resolve, but the matter is discussed in outline in paragraph 7.

## 2. The building work

2.1 The building work consists of a detached house situated on a near level site in a medium wind zone for the purposes of NZS 3604[4]. The rear of the site borders onto the Whakatane River, with driveway access via a right-of-way from Walnut Grove. The garage door and main entry face northeast, but the consent drawings show that elevation as north and this determination follows that convention. The single-storey house is fairly simple in plan and form and is assessed as having a low weathertightness risk.

[2] In this determination, references to sections are to sections of the current Act and references to clauses are to clauses of the Building Code.
[3] Under sections 177(1)(b) and 177(2)(d) of the current Act
[4] New Zealand Standard NZS 3604:1999 Timber Framed Buildings

2.2 The house has concrete pile footings, with a proprietary reinforced concrete incorporating a grid of polystyrene formers that incorporates 100mm internal ribs, with 300mm wide beams at the perimeter and beneath load bearing walls ("the proprietary foundation").

2.3 The remaining construction is conventional light timber frame, with prefabricated timber roof trusses, brick veneer cladding, profiled metal roofing and aluminium windows. The 30° pitched hipped and gabled roof has eaves of about 600mm overall, except for verge overhangs of about 400mm to the gables above the kitchen and the dining area.

2.4 The first expert observed no evidence of treatment and no markings are visible in photographs of roof framing within ceiling cavities. The original consent drawings do not specify framing treatment and, given the date of construction in 2003, I consider that the external wall framing is unlikely to be treated.

2.5 The primary wall cladding is conventional brick veneer, which extends up to soffit height and incorporates a 40mm drained and ventilated cavity between the brickwork and the building wrap. Fibre-cement sheet is installed above aluminium joinery units, which extends from the soffit to overlap the head flanges.

2.6 The gable ends are clad in weatherboards fixed horizontally to overlap the top of the brick veneer. Small areas of direct-fixed weatherboards are also installed within the recessed main entry.

# 3. Background

## 3.1 The original consent documentation

3.1.1 The application for the original building consent records the designer and builder of the house as having the same name as the original owner, residing at the same address and acting on her behalf. This determination therefore uses the term "owner/builder".

3.1.2 The owner/builder applied for a building consent on 5 February 2003 using the proprietary foundation. In a letter dated 14 February 2003, the authority requested further information, which including a design certificate from the manufacturer of the proprietary foundation.

3.1.3 The additional information was provided, including a producer statement design which said that providing certain conditions were met:

> ...shear [keys] … are not required for compliance with the relevant provisions of the building code. Sufficient shear resistance is provided by base friction to satisfactorily resist seismic and wind loads.

3.1.4 At the authority's request, additional site and building specific information was provided in a facsimile from the manufacturer's engineer dated 3 March 2003. The engineer attached site specific calculations for the proprietary foundation that showed that the shear keys were not required. This was not accepted by the authority which, according to an authority memorandum dated 19 March 2003, treated the deletion of the shear keys as a variation of the foundation system that required "specified engineering design". The engineer sent a facsimile to the authority on 10 March 2003, which attached a floor slab plan showing locations of shear keys and stated:

> [The owner/builder] has come to the point where he is no longer able to wait, hence he now wishes to include the shear piles.

> Attached is a layout showing the position of the required shear keys. Note also I have attached my workings for your information.

3.1.5 The set of consent details and information were stamped and signed as 'approved for construction' on 18 March 2003, which included the provision of the shear keys. A note was also added to the section sketch which stated 'minimum distance between the ground level and finished floor level is 225mm'.

## 3.2 The original construction in 2003

3.2.1 The authority issued a building consent (No. 10993) to the owner/builder on 24 March 2003 under the Building Act 1991. The consent listed five conditions, including the following:

> [Condition 3] The floor level for this building is to be established at a minimum height of 103.75m Moturiki Datum as per the attached documentation.

3.2.2 The authority carried out various inspections during construction. The inspection summary is difficult to read, but appears to include notes as shown in Table 1:

**Table 1: The 2003 inspection summary notes**

| Date | Type of inspection | Inspector's notes in inspection summary |
|---|---|---|
| 14 Feb 2003 | Drainage | Sewer from connection to along side boundary.<br>All OK. Part tested |
| 26 March 2003 | Pile footings [Shear keys] | Looked at 13 holes, all OK to pour,<br>Hole 1, 2, 17 & 16 to be done when concrete truck has poured all other holes.<br>OK to continue |
| 2 April 2003 | Foundation | Footing and floor inspection for [foundation].<br>Only half ready, will call in morning |
| 17 July 2003 | Brick veneer | All appears to be OK |
| 1 August 2003 | Pre-line | All braces in. All plates bolted and nailed well.<br>All straps in. All Z nails in.<br>Moisture 14-16% OK. |
| 10 Sept 2003 | Post-line | All OK to complete |

3.2.3 No further inspections were recorded in 2003 and the house was likely to have been completed by the end of that year. During the following eight years, various alterations were apparently carried by the owner/builder without oversight by the authority. A code compliance certificate was not sought until 2011 when the original owner engaged a consultant to act on its behalf ("the consultant").

## 3.3 The 2011 final inspection

3.3.1 The authority carried out a final inspection of the house on 18 July 2011. The record identifies a number of elements as 'failed', including (in summary):

- weathertightness of exterior envelope
- floor clearances
- mechanical ventilation
- plumbing and drainage.

3.3.2 On the following day, the authority emailed the consultant and listed items that would need to be addressed before a code compliance certificate could be issued. At a site meeting on 27 July 2011, the authority identified and photographed further defects as follows (in summary):

**Clause B1**

- timber trusses significantly modified
- lack of roof plane bracing

**Clause C**

- down lights covered by thermal insulation

**Clause E1**

- finished floor level below required datum
- downpipes and storage tank

**Clause E2**

- finished ground/paving levels too high
- fibre-cement window head boards not sealed, no head flashings, minimal laps etc
- alteration to roof cladding, missing roof fixings
- building paper to roof not properly installed
- gaps, cracking, and moisture damage to soffits
- weep holes to brick veneer blocked by paving

**Clause E3**

- unsealed junctions to sinks in bathrooms
- toilet not sealed to floor, mould growth apparent

**Clause G4**

- bathroom fans venting into roof space

**Clause G12, 13**

- noted plumbing defects.

## 3.4 The surveyed floor level

3.4.1 The consultant and the authority corresponded about benchmarks for the minimum required floor level of '103.75m Moturiki Datum' (Item 8 in the above list). On 14 September 2011, the authority attached a map and confirmed that the sewer manhole:

> ... at the Y of the road is recorded to have a Lid RL of 103.37. The sewer manhole outside 13 and 14 Walnut Grove is recorded to have a Lid RL of 103.73.

3.4.2 The consultant surveyed the floor level of the house and on 19 September 2011 informed the authority:

> Using the nominated sewer M.H lid levels, that is S.S M.H lid at ROW intersection (RL 103.370) and S.S M.H lid at 14 Walnut Grove (RL 103.730) … I found the floor level at 12 Walnut Grove to be 103.930 by survey. I therefore certify that the floor level at 12 Walnut Grove has a reduced level of 103.930 Moturiki Datum, + or – 0.010.

## 3.5 The 2011 repair consent

3.5.1 An application for a building consent to remediate the items listed in the 2011 final inspection was lodged on 29 September 2011, and the authority issued the repair consent (No. 20661) under the current Act on 17 October 2011. The repair consent

did not address some items, such as the floor level datum and the missed inspection to the foundation system.

3.5.2 The authority carried out a pre-cladding inspection of the repairs on 10 November 2011, which passed. A file note dated 8 December 2011 stated that the code compliance certificate the repair consent was able to be issued, but that:

> … the Code Compliance Certificate for building consent 10993 [the original consent] be formally declined due to the fact that full compliance with Code Clauses B1, B2 and E1 cannot be demonstrate[d] to a sufficient level.

3.5.3 Following a final inspection on 20 December 2011 the authority issued a code compliance certificate for the repair consent on 21 December 2011.

### 3.6 The refusal to issue a code compliance certificate for the original consent

3.6.1 The applicants purchased the repaired house in early December 2011. As noted in paragraph 3.5.2, the authority's file note had recommended that a code compliance certificate not be issued for the original consent, and in a letter to the consultant dated 20 December 2011 the authority noted that a code compliance certificate would be issued for the repair consent but stated that:

> … [the authority] must, in this instance, formally decline to issue said Code Compliance Certificate. The reasons for this are that [the authority] is not satisfied on reasonable grounds the building complies with the New Zealand Building Code in respect to chapters (*sic*) B1 Structure; B2 Durability and E1 Surface Water.

3.6.2 I have seen no correspondence between the parties until the applicants offered the house for sale in 2017 and found that the code compliance certificate being only in relation to the repair consent 'caused confusion in the minds of prospective purchasers'.

3.6.3 The Ministry accepted an application for a determination on 10 April 2017 and sought additional information, which was received from the authority on 27 April 2017.

3.6.4 In response to clarification sought by the first expert why the code compliance certificate was being refused, the authority said:

> [The repair consent] could not negate the consequences of the works not being adequately completed in the first place. Such non-compliance had existed for a considerable number of years from late 2003 until 2011.
>
> … no framing inspection has been carried out nor has any plumbing inspection been requested.

## 4. The submissions

### 4.1 The applicants' submission

4.1.1 The applicants set out their understanding of the situation. The applicants included the following comments about the matters raised by the authority (in summary):

- The foundations show no sign of subsidence, settlement or structural cracking after 14 years, which indicates that the foundation is sound.
- During floods in July 2004, parts of street were under water, which reached the driveway but no further towards the house – indicating that the floor level as constructed is adequate.

- Drainage channels were installed as part of the repair consent in 2011, the house and garden have never suffered from dampness issues over the past 14 years.

4.1.2 With and following the application, the applicants provided copies of:

- excerpts from the authority's property file relating to the proprietary foundation
- emails between the consultant and the authority regarding as-built drainage and the house floor level
- the code compliance certificate for the repair consent
- the builder's report dated 14 December 2011 for the repair work
- photographs of paving and channel after flooding in April 2017.

## 4.2 The authority's submission

4.2.1 The authority initially made no submission, but in response to the expert's queries provided further detail regarding its reasons for refusing to issue a code compliance certificate for the original consent. The authority included the following comments (in summary):

- Although the adequacy of the completed remedial work was demonstrated via the inspections, this did not 'negate the consequences of the works not being adequately completed in the first place.'
- Some defects had existed for 'a considerable number of years from late in 2003 until mid-2011' and there may have been consequential damage over the intervening time from defects such as the lack of floor clearances.
- Only part of the proprietary foundation was inspected and there was no framing or plumbing inspections; so providing a code compliance certificate would have 'effectively inferred that such uninspected work was held to be compliant', with the authority 'then being legally liable if this was found at a later date not to be the case.'

4.2.2 The authority provided copies of:

- the original consent documents
- the original building consent dated 24 March 2003
- the inspection summary for the original construction and the final inspection record dated 18 July 2011
- the lists of outstanding items identified from 18 July 2011 to 27 July 2011
- correspondence with the consultant and the builder
- the repair consent dated 17 October 2011 and code compliance certificate for the repair consent dated 21 December 2011
- the refusal to issue a code compliance certificate for the original consent dated 20 December 2011
- various file notes statements, certificates and other information.

4.3 A draft determination was issued to the parties for comment on 12 July 2017.

4.4 The applicants accepted the draft by email on 13 July, noting that they intended to address the durability issues identified in the draft determination with the expectation that the code compliance certificate for the original consent would then be issued.

4.5 The authority accepted the draft without comment on 20 July 2017.

# 5. The experts' reports

## 5.1 General

5.1.1 As mentioned in paragraph 1.5.2, I engaged two independent experts to assist me.

## 5.2 The first expert

5.2.1 The first expert is a member of the New Zealand Institute of Architects and inspected the house on 16 May 2017, providing a report that was completed on 29 May 2017. The first expert noted that the scope of his inspection was to assess and provide an opinion about the compliance of the house with Clauses B1, B2 and E1 of the Building Code in regard to the authority's refusal to issue a code compliance certificate.

5.2.2 The first expert considered maintenance to be adequate; and noted that external and internal claddings and finishes were generally 'of a moderate standard', as was the observable overall quality of workmanship. The first expert observed that roof overhangs lowered the weathertightness risk and despite 'multiple valley gutters, some very narrow', there were no visible signs of water entry through the roof.

### *Clause B1 Structure*

5.2.3 In regard to structural items in the authority's list (refer paragraph 3.3.2), the first expert noted that (in summary):

- the roof structure had been modified and the new timber framing was visible next to the original damaged trusses, with the repaired structure confirmed as compliant by the authority
- the limited visible parts of the concrete slab were roughly formed, but showed no signs of cracking or other indicators of structural non-performance
- there were no internal signs of sticking doors or cracked linings that would indicate significant structural movement.

### *Clause E2 External moisture, and B2 Durability*

5.2.4 In regard to items in the authority's list relating to durability (refer paragraph 3.3.2), the first expert noted that the following required maintenance (in summary):

- barge boards are deteriorating, but do not affect the compliance of the building
- vegetation is reaching the bottom brick course and if left unattended could potentially reduce ventilation of the brick veneer
- some concrete debris remaining after the drainage channel was installed has allowed water and soil to build up – resulting in limited plant growth in one location.

5.2.5 In regard to items relating to weathertightness (refer paragraph 3.3.2), the first expert noted that (in summary):

- floor clearances have been addressed by the installation of the drainage channel, which appears to be performing satisfactorily
- no signs of moisture penetration were observed, with no evidence of damage to carpet, smooth edge fixings and skirting boards
- roof overhangs shelter wall areas and limit the risk of water entry.

#### *Clause E1 Surface Water*

5.2.6 In regard to items in the authority's list relating to surface water (refer paragraph 3.3.2), the first expert noted that correspondence between the authority and the consultant confirmed that the floor level of the house is 'above the minimum floor level for this catchment and is therefore compliant.' The expert noted a downpipe junction was leaking and should be repaired.

### 5.3 The second expert's addendum report

5.3.1 Under cover of an email to the parties dated 14 June 20171, the Ministry provided copies of the first expert's report and explained that the assessment had been 'based on what was believed to be the matters at issue'. Based on the explanations provided by the authority in response to the first expert's queries (see paragraph 4.2.1), which clarified the reasons for the refusal to issue a code compliance certificate for the original consent, I considered that the potential effects of past defects on the original timber framing should be investigated by invasive testing and I engaged a second independent expert to undertake such an investigation.

5.3.2 The second expert is a member of the New Zealand Institute of Building Surveyors and inspected the house on 21 June 2017, providing a report that was completed on 22 June 2017 that was forwarded to the parties on 23 June 2017.

5.3.3 The purpose of the second expert's inspection was to assess the building work and provide an opinion in regard to Clauses B1, E2 and G12, taking into account the first expert's report, the 14-year-old age of the house and the 2011 repairs.

#### *Clause B1 Structure*

5.3.4 The second expert observed no evidence of:

- cracking in the clay brick veneer
- cracking in the internal linings
- structural stress or excessive movement.

5.3.5 In regard to the proprietary foundation, the second expert noted that it appeared 'the structural components of the dwelling are performing well and under normal circumstances will likely to continue to do so'.

#### *Clause E2 – External Moisture investigations*

5.3.6 The second expert inspected the interior, taking non-invasive moisture readings with 'particular emphasis in high risk locations' with 'readings in the vicinity of cladding penetrations, below window openings and at perimeter bottom plates'. All readings were 'within the normal range', with no evidence of excessive moisture levels.

5.3.7 The second expert also took 11 invasive moisture readings using long probes inserted through skirtings into bottom plates. The following readings were taken below windows, beside doors and in areas associated with any high risk features:

- three readings below dining room windows on the north and west
- beside the west sliding door to bedroom 1
- below the living room and bedroom 2 south windows
- three readings below bedroom 3 south and east windows
- below the toilet east window and beside the laundry east door.

5.3.8 Readings ranged from 12% to 16%, which were 'within the low range', with 'no evidence to suggest that moisture inside the structural cavities may be excessive'.

5.3.9 In a subsequent email dated 10 July 2017, the second expert confirmed that 'the drillings showed no evidence of damage or discolouring and resistance when inserting the drill bit was normal'.

#### *Clause G12 Water Supplies*

5.3.10 The second expert observed 'no evidence to suggest that the water supply is not performing as intended' and noted:

- both hot and cold water piping appears to be in copper
- potable water is supplied from the mains water, with no cross-connection risk from potentially contaminated water
- hot water is supplied from a 180L mains pressure storage cylinder, which seismically restrained and is connected to a solar hot water system[5]
- water pressure to all water outlets is satisfactory.

# 6. Compliance of the house

## 6.1 Generally

6.1.1 The original building consent was issued under the former Act, and accordingly the transitional provisions of the current Act apply when considering the issue of a code compliance certificate for work completed under that consent. Section 436(3)(b)(i) of the transitional provisions of the current Act requires the authority issue a code compliance certificate only 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 In order to determine whether the authority correctly exercised its power in refusing to issue a code compliance certificate for the original consent, I must therefore consider whether the building work complies with the provisions of the Building Code that applied when the consent was issued in 2003.

6.1.3 In the absence of any evidence to the contrary, I take the view that I am entitled to rely on the authority's inspection summary. Because the summary is very limited in detail it is important to look for corroborating evidence, which is provided by the experts' assessment of accessible components.

[5] This is shown in the recent advertisement for sale of the property, but not in the 2010 street view photographs

6.1.4 In summary, I find that the following evidence relating to the original building consent and the repair consent will allow me to form a view as to the code compliance of the building work as a whole:

- The drawings and other technical information.
- The records of inspections undertaken by the authority.
- Photographs taken prior to and during the repair work
- The two experts' reports on certain parts of the house.

## 6.2 Clause B1 Structure

6.2.1 In regard to the authority's concerns about the lack of inspections of the proprietary foundation I note the following:

- The structural calculations by the proprietary foundation supplier prior to issue of the building consent had confirmed that the foundation for this house did not require shear keys (see paragraph 3.1.4). The proprietary foundation required shear keys only in particular circumstances and their use, or otherwise, is determined by the seismic zone. The fact that they were not required in this instance was not a departure from the appraised foundation design.
- The authority's foundation inspection 26 March 2003 noted that 13 shear key holes (of the 17 required) were inspected and passed as ready to pour. The authority's inspection noted that only half of the floor was ready, but the authority raised no concerns about any problems or lack of inspections when inspecting brick veneer on 17 July 2003.
- The proprietary foundation is an established and commonly-used system. It is often used in situations where 'good ground'[6] may not be able to be achieved using nonspecific foundation designs.
- Neither of the experts found any evidence of any structural movement or settlement after 14 years in-service performance. It is noted that the brick cladding is not one that would readily accept movement in the foundation without exhibiting some form of distress, and no such stress was observed.

6.2.2 In view of the above, and taking into the account the lack of any evidence to the contrary, I have reasonable grounds to be satisfied that the proprietary foundation complies with Clause B1.

6.2.3 The authority has said that no framing inspection was carried out, but this inspection was completed (refer paragraph 3.2.2). There is no evidence to show that the framing is not compliant. The experts' reports also satisfy me that there has been no significant penetration into the framing prior to the 2011 repairs and I therefore conclude that the timber framed structure of this house has remained sound and in compliance with Clause B1.

## 6.3 Clause E1 Surface Water

6.3.1 Clause E1 is concerned with the effects of surface water on people and other property: it has the following functional requirement:

> **E1.2** Buildings and sitework shall be constructed in a way that protects people and other property from the adverse effects of surface water.

[6] Good ground as defined in NZS 3604:2011 Timber-framed buildings

The performance requirements of Clause E1 include:

> **E1.3.2** Surface water, resulting from an event having a 2% probability of occurring annually, shall not enter buildings

6.3.2 Compliance with Clause E1.3.2 arises from the effects of surface water on the site (i.e. flood water) and height of the floor slab in relation to that eventuality to prevent water entering the building. The likelihood that surface water will enter the building is not usually dependent on the clearance of the cladding above the surrounding ground levels, and similar: the adverse effects of external moisture on the lower extremities of an external cladding are more likely to raise issues relating to the requirements of Clause E2 rather than Clause E1.

6.3.3 In regard to the authority's concerns about the floor level to the house, I note the following:

- Condition 3 of the original building consent required the floor level to be a minimum height of '103.75m Moturiki Datum'.
- Correspondence between the authority and the consultant confirmed the established levels of the nearby manhole covers (see paragraph 3.4)
- Using the manhole covers as the origin of levels, the floor level was surveyed and found to be 103.93m (180mm above the minimum required level).
- There appears to be no history of the property flooding during the July 2004[7] floods. The applicants have also provided photographs taken in early April 2017[8] during Cyclone Debbie which also showed no evidence of ponding or flooding.

6.3.4 Taking account of the above, I have reasonable grounds to be satisfied that the house and site complies with Clause E1 of the Building Code.

## 6.4 Clauses E2 External moisture and B2 Durability

6.4.1 The relevant performance requirement is Clause E2.3.2 which states:

> Roofs and exterior walls must prevent the penetration of water that could cause undue dampness, damage to building elements, or both.

6.4.2 The authority's concerns arise from the close proximity of the bottom of the brick veneer cladding to the paved and unpaved ground. Work to address the proximity of the ground to the cladding was addressed as part of the repair consent. The repair consent has included the provision of drainage channel located close to parts of the building – this will have the effect of limiting water splash from the ground into the cladding – and the exposing of weep holes to the base of the cladding.

6.4.3 This remedial work has not satisfied the authority's concern about the possible adverse effects of the lack of clearance between 2003 and 2011. In my view this aspect of the matter would have been better addressed as part of the 2011 repair consent, along with the remaining outstanding matters considered herein.

6.4.4 The second expert took 11 invasive moisture readings from the bottom plate around the building: the readings ranged from 12% to 16% and the drillings showed no evidence of damage or discolouring to suggest damage to the timber. The second expert's investigation has concluded that there is no evidence of moisture ingress

[7] Heavy rain from 15 to 18 July 2004 resulted in extensive flooding the Whakatane District. Whakatane recorded 249 mm of rain in two days (return period of 100 years).
[8] Heavy rain leading to extensive flooding caused by Cyclone Debbie was experienced in the Whakatane District over 4 and 5 April 2017.

into the timber framing, and moisture content readings were within low levels that will not support timber decay.

6.4.5 This provides me with reasonable grounds to conclude that the current performance of the building envelope is adequate because it is preventing water penetration at present, and there is no evidence of past failure. Consequently, I am satisfied that the building currently complies with Clause E2.

6.4.6 However, the house is required to comply with the durability requirements of Clause B2, which requires a building to satisfy all the objectives of the Building Code throughout its effective life. The durability requirements of Clause B2 include a requirement for wall claddings to remain weathertight for a minimum of 15 years and for timber framing to remain structurally adequate for a minimum of 50 years. The cladding is now 14 years old.

6.4.7 The first expert noted planting close to the cladding and some areas that should be lowered or removed, and noted a deteriorating barge board (refer paragraph 5.2.4). While the first expert considered these items of maintenance, I consider they should be addressed before the issue of the code compliance certificate.

### 6.5 Clause G12 Water supplies

6.5.1 The authority also expressed concerns that it had not witnessed any pressure testing of plumbing pipework. However, the second expert reported that the water pressure delivered to all outlets appeared satisfactory and also observed no evidence that the water supply is not operating adequately. It would be expected that any evidence of noncompliance would be apparent after 14 years of in-service use.

### 6.6 Conclusion

6.6.1 Taking into account the available evidence, with the exception of the issues relating to durability as noted in paragraph 6.4.7 and taking into account a modification of Clause B2.3.1 (see paragraph 7 below), I have reasonable grounds to conclude that the remained of the repaired house as a whole complies with the Building Code and a code compliance certificate can be issued in due course.

## 7. The durability considerations

7.1 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).

7.2 In this case the 14-year delay since substantial completion of the house in 2003 raises 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.

7.3 I have considered this 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 house had been issued in 2003.

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

## 8. The decision

8.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the house complies with Building Code Clauses B1 Structure, E1 External moisture, and G12 Water supplies.

8.2 I also determine that the house complies with Clause E2 External moisture, but does not comply with Clause B2 Durability for the reasons set out in paragraph 6.4.7, and accordingly I confirm the authority's decision to refuse to issue code compliance certificate for the building consent No. 10993.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 24 July 2017.

John Gardiner
**Manager Determinations and Assurance**