



Determination 2012/071

Regarding the refusal to issue a code compliance certificate and the issuing of a notice to fix for 14-year-old alterations to a house at 31 Kowhai Road, Mairangi Bay, Auckland



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, 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:
- D and J Dobbie, the owners of the house (“the applicants”) acting through an agent (“the applicants’ agent”)
 - Auckland Council, including its previous capacity as North Shore City Council (“the authority”)², carrying out its duties as a territorial authority and a building consent authority.
- 1.3 This determination arises from the authority’s decision to refuse to issue a code compliance certificate and to issue a notice to fix because it was not satisfied that the completed building work complied with Clauses B1 - Structure, B2 – Durability, E2– External moisture, and H1 – Energy efficiency provisions of the Building Code³ (First Schedule, Building Regulations 1992).

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

² The area in which the building work is located was formerly under the jurisdiction of the North Shore City Council. The term “the authority” refers to both.

³ In this determination, unless otherwise stated, references are to sections of the current Act and references to clauses are references to the Building Code

1.4 The matters to be determined⁴ are, therefore, whether the authority correctly exercised its power when it:

- refused to issue a code compliance certificate for the alteration to an existing house
- issued a notice to fix for the alteration.

In making these decisions, I must also consider whether the building work as constructed complied with the Building Code that was current at the time the building consent was issued.

1.5 In making my decision, 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.

1.6 The relevant sections of the current Act are set out Appendix A.

2. The building work

2.1 The building work in question consists of an alteration to a two-storey house that is situated on a slightly sloping site in a low-to-medium wind zone and a Zone D high exposure sea-spray zone for the purposes of NZS 3604⁵.

2.2 The house is of timber-frame construction with timber-framed floors, pile foundations, and has a plastered brick veneer cladding.

2.3 The alteration consisted of substantial demolition work and some internal alterations to the existing house, extension of the dining room, and the construction of a large timber deck to the north elevation. Part of this deck forms the roof of a carport situated below it.

2.4 The dining room extension is timber-framed and has a flat roof connected to the existing metal tiled roof of the house, with butynol membrane over a plywood substrate on packers. The exterior walls are lined with fibre-cement sheets directly fixed to the framing and finished with a solid plaster overlay. The exterior joinery is of timber construction. The applicants have also advised that the wall plaster later received an additional thin coat of glass-mesh reinforced flexible plaster.

2.5 The timber-framed deck is supported on timber posts and is covered with 100 x 40mm gapped timber decking. Part of the deck has a butyl membrane under it that is secured to a packed plywood substrate and forms the carport roof. The timber-framed balustrade to the deck is lined on both sides with flush-jointed fibre cement fixed directly to the framing and finished with a solid plaster overlay. A metal pipe handrail is secured through the top of the balustrade. A timber access stair and landing are situated at one end of the deck and these have balustrades matching those to the deck.

2.6 A second alteration was carried out which consisted of the addition of a main entrance access stair and landing, and planter boxes. These alterations are not considered in this determination.

⁴ Under sections 177(1)(b), 177(2)(d), and 177(2)(f) of the current Act

⁵ New Zealand Standard NZS 3604:2011 Timber Framed Buildings

2.7 Based on an analysis of timber samples, the expert is of the opinion that the timber framing for the most part has been treated with H3 equivalent treatments. However, there is also a possibility that not all the timber framing is treated to this standard.

3. Background

3.1 The authority issued building consent No. E13006 for the alteration on 25 March 1998, under the Building Act 1991 (“the former Act”).

3.2 The authority carried out the following inspections during construction

- 13 October 1998 Footings
- 20 December 1998 Pre-line building
- 30 March 1999 Pre-plaster (no post line inspection had been called for)
- 22 November 2006 Plumbing and Drainage for E13006

3.3 A second building consent, No E14059, was issued early in 1999 for further alterations (refer paragraph 2.6).

3.4 On 5 June 2012, the authority carried out a final inspection that included both alterations, and subsequently wrote to the applicants on 28 June 2012. The authority advised the applicants that it had identified areas of contravention with the Building Code and the building consent and attached a notice to fix.

3.5 The notice to fix, which was dated 29 June 2012, listed the following areas of concern:

External envelope – including but not limited to flashing detail, junctions between dissimilar cladding system, penetrations, cladding to bottom plate clearance, evidence of moisture ingress.

Roof area – metal roof tiles in direct contact to the waterproof membrane and membrane lifting in some areas.

Deck waterproofing membrane – unable to assess condition, water staining to the under side substrate.

Subfloor construction varies to the approved building consent documents ... unable to confirm all structural metal connections.

Subfloor insulation.

3.6 The notice also stated that the construction methods used in the alterations did not allow for moisture entering the building envelope to drain away. In addition, the authority had not been able to satisfy itself that the durability requirements of the Building Code would be met.

3.7 The applicants engaged the services of an independent consultant to carry out a “thermography inspection” of the property. The consultant produced a report based on an inspection carried out on 4 July 2012. The report noted that it was based on an infrared non-invasive inspection. The thermal readings undertaken did not show any ‘anomaly of moisture pattern’. Of the non-invasive readings taken, three at the northwest corner of the dining room extension showed moisture contents exceeding 18%.

3.8 The Ministry received an application for a determination on 16 July 2012.

4. The submissions

- 4.1 To a covering letter forwarded with the application, the applicants' agent attached copies of the following:
- the plans relating to both alterations
 - the structural calculations for the second alteration
 - the building consent No E13006 for the first alteration
 - the authority's inspection reports
 - the notice to fix dated 29 June 2012
 - the gasfitting certificate of compliance
 - the consultant's 'thermography' inspection report
 - the correspondence with the authority.
- 4.2 The authority acknowledged the application for determination but made no formal submission in response.
- 4.3 A draft determination was issued to the parties for comment on 15 October 2012.
- 4.4 The applicant's agent responded by letter dated 15 November 2012, and requested that the second alteration, carried out under consent E14059, be removed from consideration in the Determination. The agent agreed with some of the findings in the draft determination and indicated that remedial work would be carried out in response to the modified notice to fix; however the agent disagreed with the conclusions reached regarding moisture ingress.
- 4.5 The agent considered that elevated moisture levels were the result of water being blown underneath doors that had subsequently been replaced and had the sill height raised. The agent noted that the timber framing tested in that location was H3 treated and has no signs of decay, and that the particle board floor also shows no sign of damage. The agent also considered that one of the elevated moisture readings could be explained by its location in a high indoor-outdoor flow area, and that signs of moisture on the soft edge carpet trim would be normal in a location adjacent to an opening door.
- 4.6 The authority accepted the draft determination without any further comment.
- 4.7 I note here in response to the agent that the expert's opinion took into account that the doors had been replaced and the sill height raised (refer paragraph 5.4.1). I have amended the determination as I consider appropriate.

5. The expert's report

- 5.1 As described in paragraph 1.5 I engaged the services of an expert, who is a registered architect⁶ and a member of the New Zealand Institute of Architects, to assist me. The expert examined the alterations on 4 September 2012 and produced a report completed on 26 September 2012. Copies of this report were forwarded to the parties on 9 October 2012.

⁶ Registered Architects are under the Registered Architects Act 2005 treated as if they were licensed in the building work licensing class Design 3 under the Building (Designation of Building Work Licensing Classes) Order 2010.

5.2 The report described the house in general terms and gave some of the background to the dispute. The expert also noted some differences between the alteration as constructed and the consented plans. I list these as follows:

- a) The pergola indicated on the plans was not built.
- b) A fibre-cement clad balustrade was built instead of the timber balustrade shown.
- c) Full-height awning windows were built instead of the middle set of doors to the deck indicated on the plans

The expert was also informed by the applicants that new deck door leaves had been installed and the adjacent sill door stops had been replaced with larger ones.

5.3 The expert stated that the plaster cladding was generally reasonably 'straight and fair'. The expert was also of the view that while the standard of workmanship was good in some areas, other areas had defects and did not comply with either good practice or the manufacturers' recommendations.

5.4 Moisture and timber testing

5.4.1 The expert carried out both invasive and non-invasive measurements of the moisture content of the framing at sample locations. Two higher moisture readings (of 18% and 19%) were obtained at the bottom plates adjoining the deck entry doors. The expert was of the opinion that despite the alterations carried out to the doors, there was still moisture leakage onto the bottom plate due to:

- the sills being only 10 to 12mm above the decking
- the inadequate sealing of the door jambs.

5.4.2 The expert also removed a sample from the bottom plate adjoining the deck doors and forwarded it to an independent biodeterioration consultant for testing. The consultant reported that the sample showed that the timber was H3 treated and that it contained early soft rot in the outer 1mm and dense fungal growths across the entire depth. The expert noted that there was a significant risk that damage to adjoining non-treated timber framing and non-durable fixings could occur due to the prolonged leakage at this location.

5.4.3 Two samples from the entrance step balustrade and a deck balustrade posts were also forwarded and tested. Both were found to be H3 treated and showed evidence of advanced soft rot and erosion bacteria decay in the outer areas, together with the presence of algae.

5.5 The code compliance of the building work

5.5.1 Commenting specifically on the alteration, the expert observed the following:

- cracks in two corners of the balustrade cladding
- the balustrade capping lacks a slope
- the handrail support posts are fixed through the balustrade capping

- galvanised coach bolts fixing the balustrade to the deck structure are not additionally powder coated, and did not meet the requirements of NZS 36047; consequently they are at risk of rusting and subsequent failure
- inadequate sealing at the base of the jambs of the deck access door frames, and the sills of these doors are only 10 to 20mm above the deck planks
- a risk of perforation of the membrane at the junction where the original metal tiled roofing met the newer membrane roofing could easily be remedied to ensure the remaining durability period of the membrane was met
- continuous deck/floor joists, making it likely that moisture could be transferred from the exterior deck to the interior of the building by means of capillary leaks and/or diffusion
- no sub-floor insulation was evident.

5.5.2 The expert also observed:

- no evidence of cracks in the cladding
- clearances between the base of the cladding and the deck or membrane are sufficient
- due to the age and condition of the existing roofing, there are rust stains where the original metal tiled roofing met the newer membrane roofing, however the expert did not consider this to be significant.
- no evidence that the deck membrane over the carport had leaked and the membrane will continue to perform up to the end of its durability time requirements.

5.6 The expert also commented on the content of the notice to fix and I have taken the expert's comments regarding code-compliance into account when considering the notice.

6. Discussion

6.1 Compliance with the Building Code

6.1.1 I consider that the moisture readings and the other evidence provided by the expert establishes that the current performance of the building envelope to the dining room extension and the deck and stair balustrades are not adequate because there is evidence of moisture penetration into some areas of the timber framing. Consequently, I am satisfied that the first alteration does not comply with Clause E2 of the Building Code.

6.1.2 In addition, the building envelope is also required to comply with the durability requirements of Clause B2. Clause B2 requires that a building continues to satisfy all the objectives of the Building Code throughout its effective life, and that includes the requirement for the house to remain weathertight. Because the cladding faults on the house will continue to allow the ingress of moisture in the future, the building work also does not comply with the durability requirements of Clause B2.

⁷ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

- 6.1.3 The expert has also expressed concern regarding the galvanised bolts securing the deck balustrades to the deck structure and their inability to meet their 50-year durability requirements. I agree with the expert's concern and am of the view that in this respect the deck balustrades do not meet the requirements of Clause B2. This decision is reinforced by the fact that the altered house is in a high exposure sea-spray zone.
- 6.1.4 Finally, as there is no evidence that the floor to the dining extension has been insulated, I am of the view that the requirements of Clause H1 have not been met in this respect.

Conclusion

- 6.1.5 In conclusion, in accordance with the observations set out above, I am of the view that alteration does not comply with the Building Code that was current at the time of the issue of the consents.

6.2 The code compliance certificates and the notice to fix

- 6.2.1 The transitional provision in section 436 of the current Act requires the authority to consider an application for a code compliance certificate under the former Act. Section 43(3) of the former Act (as modified by section 436(3) of the current Act) requires the authority to issue a code compliance certificate 'if it is satisfied on reasonable grounds that the building work to which the certificate relates complies with the building code that applied at the time the building consent was granted'
- 6.2.2 As I have found that the alteration did not meet the requirements of the Building Code that was current at the time the building consent was issued, I confirm the authority's decision to refuse to issue a code compliance certificate and its decision to issue a notice to fix.
- 6.2.3 I note however that in the notice to fix, the authority has stated that the applicants may apply for 'a waiver and modification under section 67 of the Building Act 2004, to [waive] the requirements of clause B2 (Durability) ...'.
- 6.2.4 Waivers and modifications⁸ allow authorities to exercise judgement when dealing with unusual building compliance situations. Waivers and modifications relate to specific performance requirements of the Building Code that an authority has considered and agreed do not need to be met for a specific building project.
- 6.2.5 I consider that in this instance there are no grounds on which a waiver of Clause B2 would be appropriate as there are no apparent reasons that the building work, once rectified, should not comply with those provisions of the Building Code, and that the reference to waiving the requirements of Clause B2 has been made in error. The form 'Notification of Waiver or Modification of the Building Code'⁹ required under section 68 of the Act includes a clarification of the terms "Waiver" and "Modification" (refer Appendix A).
- 6.2.6 However, I accept that the age of the building work raises concerns regarding the durability, and hence the compliance with the Building Code, of certain elements of the house, taking into consideration the age of the building work.

⁸ Under section 67 of the Act

⁹ <http://www.dbh.govt.nz/UserFiles/File/Publications/Building/Building-Act/notification-of-waiver-or-modification.pdf>

- 6.2.7 I continue to hold the views expressed in previous relevant determinations; that an authority, following the appropriate application from the owner, has the power to grant a modification to the Building Code requirements of an existing building consent without a determination (refer also to the article titled ‘Modification of durability periods’ in Codewords Issue 39, August 2009¹⁰). As such I leave this matter to the parties to resolve in due course.
- 6.2.8 I strongly suggest that the authority record this determination and any modifications resulting from it, on the property file and also on any LIM issued concerning this property.

7. What happens next?

- 7.1 The notice to fix should be modified and reissued; taking into account the findings of this determination and identifying the items requiring remedial work as listed by the expert in paragraph 5.5.1, and referring to any further defects that might be discovered in the course of investigation and rectification but not specifying how those defects are to be fixed. It is not for the notice to fix to stipulate directly how the defects are to be remedied and the alteration brought to compliance with the Building Code. That is a matter for the owner to propose and for the authority to accept or reject. It is important to note that the Building Code allows for more than one means of achieving code compliance.
- 7.2 The applicants should then produce a response to this in the form of a detailed proposal, produced in conjunction with a competent and suitably qualified person, as to the rectification or otherwise of the specified matters. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.
- 7.3 I also note that the expert has described some differences between the alteration as constructed and the consented plans. I recommend that the parties take the necessary steps to amend the consent to record the as-built construction.

8. The Decision

- 8.1 In accordance with section 188 of the Building Act 2004, I determine that the alteration does not comply with Clauses B2, E2, and H1 of the Building Code that was current at the time the building consent was issued, and accordingly
- the decision of the authority to refuse to issue a code compliance certificate for the alteration is confirmed
 - the decision of the authority to issue a notice to fix in respect of the alteration is confirmed.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 26 November 2012.

John Gardiner
Manager Determinations

¹⁰ Codewords articles are published by the Ministry and are available on the Ministry’s website at www.dbh.govt.nz/codewords-index

Appendix A: the Legislation

A.1 The Building Act 2004

436 Transitional provision for code compliance certificates in respect of building work carried out under building consent granted under former Act

- (1) This section applies to building work carried out under a building consent granted under section 34 of the former Act.
- (2) An application for a code compliance certificate in respect of building work to which this section applies must be considered and determined as if this Act had not been passed.
- (3) For the purposes of subsection (2), section 43 of the former Act—
 - (a) remains in force as if this Act had not been passed; but
 - (b) must be read as if—
 - (i) a code compliance certificate may be issued only if the territorial authority is satisfied that the building work concerned complies with the building code that applied at the time the building consent was granted; and
 - (ii) section 43(4) were omitted.

A.1 From the form 'Notification of Waiver or Modification of the Building Code' (published by the Ministry, dated 17 August 2011).

What is a Waiver?

A TA can waive the requirement for a particular application for a building consent, or part of an application, to comply with an aspect of the Building Code. In most cases waivers will relate to a particular performance requirement of a specific clause of the Building Code (eg C3.3.2 (d)). However, sometimes it may be appropriate to waive an entire Building Code clause.

What is a Modification?

In relation to an application for a building consent a TA can modify a performance requirement of the Building Code. This is usually done by modifying a performance requirement of the Building Code so that the functional requirement and objectives of the clause are still met. A common example is the modification of B2.3.1, which relates to the durability of a particular element and when the durability period applies from.