



## Determination 2013-021

### Regarding the issue of a notice to fix for a house at 18 Downing Place, Tauranga

(to be read in conjunction with Determination 2012/011)

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**Applicant:** R H Cao (“the applicant”)  
**The authority:** Tauranga City Council (“the authority”)

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#### 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 Act”) made under due authorisation by me, John Gardiner, Manager Determinations and Assurance, Ministry of Business, Innovation and Employment (“the Ministry”)<sup>2</sup>, for and on behalf of the Chief Executive of the Ministry.
- 1.2 I have previously described certain building matters regarding this house in Determination 2012/011 (“the first determination”). This second determination arises because the authority is not satisfied that the house complies with Clause E2 External moisture and Clause B2 Durability<sup>3</sup> of the Building Code and the cladding system is not that approved in the building consent.
- 1.3 The matter to be determined<sup>4</sup> is whether the authority was correct to issue the notice to fix. In deciding this I must consider whether the house complies with Clauses E2 External Moisture and B2 Durability of the Building Code in respect of the items listed on the notice to fix.
- 1.4 In making my decision, I have considered the applicant’s submission, the report of the independent expert commissioned by the Ministry to advise on this dispute (“the expert”), and the other evidence in this matter including the first determination.

#### 2. The building work

- 2.1 The building work consists of a part two-storey house on a steep sloping site in a low or medium wind zone for the purposes of NZS 3604<sup>5</sup>. Construction consists of light timber frame construction on concrete foundations floor slab, and concrete masonry retaining walls.

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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.dbh.govt.nz](http://www.dbh.govt.nz) or by contacting the Ministry on 0800 242 243.

<sup>2</sup> After the application was made, and before the determination was completed, the Department of Building and Housing was transitioned into the Ministry of Business, Innovation and Employment. The term “the Ministry” is used for both.

<sup>3</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>4</sup> Under sections 177(1)(b) and 177(2)(f) of the Act

<sup>5</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

- 2.2 The hipped roof is concrete overlapping tiles at a nominal pitch of 20° and has eaves to most elevations. (The wall cladding is described in paragraph 5.2.1.)
- 2.3 There are two open slat decks with fibre-cement clad balustrades at the upper level. A metal hand rail is fitted above the north deck wall, with side fixings.

### 3. Background

- 3.1 Building consent (No 98/1371) was issued by the authority for the building work sometime in May 1998 under the Building Act 1991 (“the former Act”). The consent was presumably based on a building certificate issued by a building certifier (“the certifier”); however I have not seen a copy of that certificate. The certifier carried out twelve inspections between 1998 and 1999.
- 3.2 In an email to the applicant dated 13 October 2011, presumably in response to the applicant seeking a code compliance certificate, the authority stated its refusal to issue a code compliance certificate or certificate of acceptance on the basis that inspections had not been carried out by the authority and the authority was ‘unable to establish that the cladding continues to comply with Clause E2 and B2...’. The authority recommended the applicant engage a registered building surveyor to undertake a full assessment of the cladding.
- 3.3 In a letter to the applicant dated 2 November 2011, the authority reiterated its refusal to issue a code compliance certificate, noting that it could not confirm compliance with Clauses B2 and E2 ‘as the cladding has been substituted from [fibre-cement sheets] with plaster system to [fibre-cement rigid sheathing] with wall tiles’.
- 3.4 On 17 November 2011 the Ministry received an application for the first determination on the authority’s refusal to issue a code compliance certificate.
- 3.5 On 18 January 2012 a draft of the first determination was issued to the parties. The draft concluded that the authority had incorrectly exercised its powers in refusing to issue a code compliance certificate without providing adequate reasons for the refusal in accordance with section 95A of the Act as the authority had not placed itself in a position where it could make an informed decision about the compliance of the house.
- 3.6 On 25 January 2012 the authority carried out a visual inspection of the building and issued a notice to fix dated 27 January 2012. The particulars of contravention or non-compliance on the notice to fix included non-compliance with Clauses E2 and B2; in particular
- inadequate ground clearance
  - flashings over curved windows do not extend past exterior mitre joints of the window extrusions
  - the authority was unable to establish whether windows face-fixed to the cladding were sealed
  - the authority could not establish the presence of saddle flashings at the solid handrail junction to wall connections.

3.7 The notice to fix stated that the cladding system had been substituted and that there was no detail in the consented plans for the embedded head flashings to the windows. The notice to fix concluded by recommending that the applicant:

obtain a fully (sic) building survey form (sic) a registered (sic) Building Surveyor to establish what is required to bring the dwelling into compliance with the NZ Building Code.

3.8 The first determination was issued on 21 February 2012. Paragraph 5 of the first determination provided some commentary to the parties on the issue of the notice to fix. Paragraph 5.4 stated

I also note that the authority has required the applicant to [supply] a report from a building surveyor. I believe this is a reasonable requirement in this instance. I note, however, that obtaining a report cannot in itself remedy a breach of the Act or its regulations.

3.9 The Ministry then received the application regarding the issue of the notice to fix on 29 February 2012.

#### **4. The submissions**

4.1 The applicant provided a copy of the notice to fix and accompanying letter from the authority dated 27 January 2012, and a copy of a letter dated 9 February 2012 that was submitted to the first determination. The applicant's letter noted

- the inspections undertaken by the certifier at the time of construction all passed except the final inspection; the one outstanding item has now been fixed
- the reasons for the authority refusing the code compliance certificate were not accepted
- the building 'is structurally sound and the cladding is performing'
- the authority has not done 'any testing' to verify that the building is not performing.

4.2 The authority did not acknowledge the application or make a submission in response.

4.3 A draft determination was issued to the parties for comment on 3 April 2012. The authority accepted the draft without comment.

4.4 The applicant provided a submission dated 1 May 2012 in response to the draft. The submission commented in detail on the expert's report and provided information as to the remedial work intended to bring the building into compliance with the Building Code.

4.5 The applicant's submission reiterated the view that as the final inspection by the certifier recorded only that the balcony balustrade did not comply then this should be the only matter that the authority should consider in its decision, and noted that many building elements would have passed or be near their durability requirements of 5 or 15 years from the date of substantial completion.

4.6 The applicant was also of the view that the authority was applying 'the new regulations to the house which [was] built and inspected 13 years ago'. In response

to this I note that the determination has considered the compliance of the building against the requirements of the Building Code that was in force at the time of the consent, which in most respects has not changed to any significant extent in the period since the work was consented.

4.7 Following discussions with the Ministry and the authority, the applicant engaged a building surveyor to provide a scope of works necessary to address the issues raised in the draft determination.

4.8 The applicant provided this report to the Ministry on 4 February 2013. The applicant noted that the building surveyor had met a representative of the authority to discuss the report and recommendations.

4.9 Although I have not considered the scope of the work required and the recommendations made by the building surveyor, as a matter of record, the recommendations listed in the building surveyor's report are:

Front (south) elevation

- Have all windows and tile cladding removed, retain in place the direct-fix [fibre cement] cladding as a rigid backing, re-treat any exposed framing, over lay with building wrap, install new and adequate joinery flashings, install cavity battens, re-fix overhauled windows, and re-clad in compliant sheet cladding system (as long as no decay is found).
- Lower the ground levels to conform to Code requirements, and install a drain channel in front of the garage.

Remaining elevations:

- Clean off all head flashings, repainting to ensure durability.
- Cut out joints around all joinery, and penetrations generally, and re-seal with [sealant].
- Repair cracks in stucco cladding by cutting out and re-sealing with suitable compounds.
- Remove balustrade handrails, having face-fix support brackets welded to it ready for re-installation, and later re-fix, painting to protect it.
- Remove flat top of balustrades, form 15 degree inward slope with H3.2 treated timber, wrap entire balustrade in suitable building wrap, batten with H3.2 cavity battens, and re-clad to match front of house, with new pre-formed sloping metal cap-flashing installed to top of balustrade.
- Install saddle flashings to both balustrade tops, and existing deck joints penetrating north elevation at first floor level.
- Provide structural support to west end of north deck.
- Replace all mild steel fixings to all decks with adequately painted or protected hot-dip galvanised fixings.
- Lower the ground levels to conform to Code requirements.

Generally

- Provide as-built drawings of all elements that appear to differ from consented plans.

- 4.10 The applicant subsequently made a further submission on 26 March 2013 (in response to a letter from the Ministry about issuing the determination). In this submission
- the applicant noted the authority had reviewed the report from the building surveyor and was ‘in agreement with the scope of the work to be carried out’
  - the applicant set out their understanding of the process, which is that ‘the [authority] will be in a position to issue the notice to fix, [the applicant] will work with a qualified builder and [the authority] and commence on the repair. The house will [receive] a [code compliance certificate] once [the work is completed] as per the notice to fix ...’
- 4.11 The authority did not make a submission in response.

## 5. The expert’s report

5.1 As mentioned in paragraph 1.4, I engaged an independent expert, who is a Registered Architect<sup>6</sup>, to assist me. The expert visited the house on 15 March 2012 and furnished a report dated 23 March 2012. A copy of the report was provided to the parties on 26 March 2012.

### 5.2 General

- 5.2.1 The expert commented that generally the cladding was reasonably straight and fair, but the finish at some of the plaster details was ‘rough’, and overall the standard of workmanship was variable. The exposed parts of the window flashings appeared generally tide and effective.
- 5.2.2 The expert observed the following differences between the consented plans and what was built:
- A second deck has been constructed on the east elevation.
  - A laundry has been installed at the lower floor where a WC and basin only are shown on the drawings.
  - Changes to the cladding, originally described as spray-textured fibre cement sheet, to:
    - solid stucco plaster over a flexible backing fixed to timber cavity battens, over the original direct fixed fibre-cement sheet (north, east and west elevations)
    - glazed ceramic tiles applied over direct fixed fibre-cement sheet cladding (south elevation)
    - direct fixed, flush finished fibre-cement sheet cladding (deck balustrades).
- 5.2.3 The expert also made a cut out below one of the windows on the north elevation to reveal the construction detail, noting

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<sup>6</sup> Registered Architects are under the Registered Architects Act 2005 are 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.

- sill flashings were correctly installed, with a stop end
- the jamb was sealed to a cavity batten with sealant
- the plaster was applied with 10-15mm lap to the window frame, but no sealant or flashing.

### 5.3 Moisture levels

5.3.1 The expert inspected the interior and found no visual evidence of moisture ingress. The expert took invasive moisture readings in some locations considered at risk of moisture ingress; elevated moisture content readings were found at the following locations:

- 21% to the bottom plate of the south elevation where ground clearance was minimal
- 21% to the bottom plate below one of the dining area windows
- readings of 18% to 24% to the balustrade on the north elevation.

5.3.2 I note that moisture readings above 18%, or which vary significantly, generally indicate that moisture is entering the structure and further investigation is needed. The readings were also taken during the summer and readings are likely to be higher during wetter months of the year.

### 5.4 Notice to fix

5.4.1 The expert provided comments in respect of the items listed in the notice to fix. These are summarised in the following table:

Notice to fix particular of contravention	Comment
Inadequate ground clearance.	Though some areas exceeded requirements, much of the south elevation was less than 100mm and in some areas only 15mm, with elevated moisture content readings.
Flashings over curved windows do not extend past exterior mitre joints of the window extrusions.	The curved head flashing terminates above the frame mitre without stop ends.
The authority was unable to establish whether windows face-fixed to the cladding were sealed.	There are no sill or jamb flashings on the south elevation.
The authority could not establish the presence of saddle flashings at the solid handrail junction to wall connections.	No saddle flashings at the junctions of the balustrade with the house walls; however moisture readings indicate adequate performance.
Head flashings are embedded in the additional layer of fibre-cement cladding.	Head flashings were buried in plaster (not buried in the fibre-cement); however moisture readings indicate adequate performance.
Change in cladding from that consented.	Cladding is different to that consented.

5.4.2 The expert provided further comments in respect of observations of items not included in the notice to fix as follows:

*Clause B2 insofar as it relates to Clause E2*

- The junction between tiles and flashing was sealed with grout, there were no jamb or sill flashings and grout had dropped out in places.
- Cracks were apparent at many sheet junctions and on the west and north elevations and the balustrade cladding where there were long sections of plaster or fibre-cement cladding without vertical control joints.
- Clearance between the deck and the plaster cladding in some areas.
- Lack of flashings to deck joist penetrations.
- Balustrade cladding was likely fixed directly to studs without building wrap.
- Base of the balustrade framework exposed to run off from the deck slats.
- Top of the north deck balustrade is finished with ceramic tiles with no slope.
- Open joints between the tiles where unfinished fibre-cement is visible.
- Slope to the west balustrade was less than the minimum recommended by the manufacturer.
- Cracks evident in the texture coating at the capping of the west deck balustrade, and the fibre-cement was not coated below the top of the older boundary fence.
- Inadequate seal to the garden tap penetration, and other penetrations require further investigation.

*Clause B1*

- No joist to the west end of north deck; the boards are unsupported for approximately 400mm and are 'springy' (B1)
- Use of galvanised stringer fixings and joist hangers at the east end of the open slat north deck. Nuts and washers were rusted. (B2 insofar as it relates to B1)

5.5 In regards the decks the expert noted that if the balustrade framing is CCA treated to at least H3 and the fixings are all stainless steel, then the balustrades could be considered adequate as the water reading the framing would not lead to a failure to comply with Clause B2.

5.6 The expert also noted that many building elements are well through or beyond the required durability periods, and that repairs to the ceramic tiles where they were de-bonded from the fibre-cement would be considered normal maintenance.

## **6. Discussion**

### **6.1 Compliance with the Building Code**

- 6.1.1 I consider the expert's report establishes that the performance of the external envelope of the house is not adequate because it is allowing water penetration through the cladding and there is evidence of moisture penetration in the framing (refer paragraph 5.3.1). Consequently, I am satisfied that the external envelope does not comply with Clause E2 of the Building Code. I also consider that further investigation is necessary to determine causes and the full extent of moisture penetration, timber damage and the repairs required.
- 6.1.2 The building work 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 will allow the ingress of moisture in the future, the building work does not comply with the durability requirements of Clause B2.
- 6.1.3 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).
- 6.1.4 I accept the expert's findings in respect of the lack of support to the west end of the north deck and the use of galvanised fixings and accordingly I consider those elements do not comply with Clause B1 and Clause B2 respectively.
- 6.1.5 I also accept the expert's opinion that compliance of the deck balustrade is unable to be established without further evidence as to the treatment of the balustrade framing.

### **6.2 The durability considerations**

- 6.2.1 The expert's report raises the matter of durability, and hence the compliance with the Building Code, of certain elements of the building work taking into consideration the age of the houses. 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).
- 6.2.2 In previous determinations (for example Determination 2006/85) I have taken the view that a modification of this requirement can be granted if I can be satisfied that the building complied with the durability requirements at a date earlier than the date of issue of the code compliance certificate, that is agreed to by the parties and that, if there are matters that are required to be fixed, they are discrete in nature.



- 6.2.3 I continue to hold that view, and therefore conclude that:
- (a) the authority has the power to grant an appropriate modification of Clause B2 in respect of all the building elements, excluding those that are to be remediated, if requested by an owner
  - (b) it is reasonable to grant such a modification, with appropriate notification, as in practical terms the building is no different from what it would have been if a code compliance certificate for the building work had been issued at the date of substantial completion.
- 6.2.4 As there is further investigation and remedial work required I leave this matter to be resolved by the parties in due course. I strongly recommend 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 authority should reissue the notice to fix requiring the owner to bring the house into compliance with the Building Code, identifying the defects as described in paragraphs 5.4.1, 5.4.2 and 6.1.4. The notice should also include the requirement for evidence as described in paragraph 6.1.5 and a full investigation of the condition of the framing, and refer to any further defects that might be discovered in the course of investigation and rectification. It is not for the notice to fix to specify how the defects are to be remedied and the building brought to compliance with the Building Code. That is a matter for the owners to propose and for the authority to accept or reject.
- 7.2 I suggest that the parties adopt the following process to meet the requirements of paragraph 7.1. The applicants should produce a response to the notice to fix in the form of a detailed proposal for the house as a whole, produced in conjunction with a competent and suitably qualified person, as to investigation, 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 note that the applicant has provided information about the scope of works to be provided. I have summarised the information provided in paragraphs 4.8 to 4.10. As this determination is about the decision of the authority to issue the notice to fix, I have not formed a view about any remedial works required, and I leave this to the applicant and the authority to resolve.

## **8. The decision**

- 8.1 In accordance with section 188 of the Building Act 2004, I hereby determine that
- the house does not comply with Clauses E2, B2, and B1 of the Building code, and accordingly I confirm the authority's decision to issue the notice to fix
  - the notice to fix is to be modified to take account of the findings of this determination.

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

John Gardiner  
**Manager Determinations and Assurance**