

## Determination 2008/70

### Refusal to issue a code compliance certificate for a 10-year-old townhouse at 7A Emmett Street, Ponsonby, Auckland



#### 1. The matters 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, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicants are the owners of 7A Emmett Street, CL Kells & Kingie Trustee Services acting through an agent (“the applicants”) and the other party is the Auckland City Council (“the authority”) carrying out its duties as a territorial authority or building consent authority. The owners of 7B Emmett Street (J Martley and P Weadon, acting through a solicitor) (“the Unit 2 owners”) are also considered parties to this determination.
- 1.2 This determination arises from the decision of the authority to refuse to issue a code compliance certificate for a 10-year-old house because it was not satisfied that it complied with the Building Code<sup>2</sup> (Schedule 1, Building Regulations 1992).

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<sup>1</sup> The Building Act 2004 is available from the Department’s website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

<sup>2</sup> The Building Code is available from the Department’s website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

1.3 The matters for determination are:

**Matter 1: The cladding**

Whether the cladding as installed to the walls of the building complies with Clauses B2 and E2 of the Building Code. By “the cladding as installed” I mean the components of the system (such as the backing materials, the flashings, the joints and the coatings) as well as the way the components have been installed and work together.

**Matter 2: The durability considerations**

Whether the building elements comply with Clause B2 “Durability” of the Building Code, taking into account the age of the building work.

**Matter 3: Splitting the building consent**

Whether the single building consent, which was issued in respect of both 7A Emmett Street (“Unit 1”) and 7B Emmett Street (“Unit 2”), can be split into two separate consents so that there is a building consent for each individual building. That would make it possible for the authority to issue a code compliance certificate in respect of the applicants’ building.

**1.4 The remaining Building Code matters (other than the cladding)**

1.4.1 The notice to fix (refer paragraph 3.4) also listed items, other than the cladding, that the authority considered were not code-compliant. These were listed in the notice to fix under the heading of “Other Building Related Issues”.

1.4.2 I understand that while these matters have been, or will be dealt with, to the satisfaction of the authority, I have received no confirmation of this from either the authority or the applicants. I have treated the remaining Building Code matters as being outside the scope of this determination.

1.5 In making my decision, I have considered the submissions of the parties, the report of the expert commissioned by the Department to advise on this dispute (“the expert”), and the other evidence in this matter. With regard to the cladding, I have evaluated this information using a framework that I describe more fully in paragraph 6.1.

1.6 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.

**2. The building work**

2.1 Unit 1 is a part two-storey, part three-storey townhouse with ground floor access at levels 1 and 2. It is situated on an excavated sloping site in a medium wind zone for the purposes of NZS 3604<sup>3</sup>. It is relatively simple in shape and form but with some complex features. Level 1 has a concrete slab and some concrete block walls. The remainder of the building is of timber framed construction built on timber-framed floors. The steeply pitched mansard roof has wall-to-roof junctions and minimal eaves and verge projections. There are six dormer windows and three skylights set into the roof. A small pitched roof is constructed over the lean-to projection on the west elevation and this roof has wall-to-roof junctions.

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<sup>3</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

- 2.2 A timber-framed deck is constructed at the ground floor level at the north elevation and a timber-framed balcony is built over the deck at the upper floor level. The deck and balcony are supported on timber posts and beams and are complete with balustrades formed from timber newels, balusters and handrails. The balcony has three glazed panels set into its deck. A timber-framed pergola extends from the upper balcony deck level. A recessed balcony is situated at the south elevation and this is constructed over the garage. This balcony has a curved timber-framed balustrade lined on its outer face with timber shingles.
- 2.3 A timber-framed monolithic-clad chimney is constructed on one external wall face and this is set into, and extends above, the main roof.
- 2.4 According to the expert, the external wall framing timber is likely to be boron treated.
- 2.5 Two types of wall cladding have been applied to the timber-framed external walls of the buildings. These are:
- solid stucco plaster applied over a rigid fibre-cement substrate to the main walls and chimney of the building. Integral plaster bands are formed around the exterior joinery units that are installed in this cladding.
  - timber shingles fixed around the three west elevation roof window projections and the circular balustrade to the south elevation balcony.

Both claddings are fixed over a building membrane directly to the framing.

- 2.6 Unit 2 is a two-storey townhouse, of similar construction to Unit 1, but it is clad predominantly in cedar weatherboards, with some areas of stucco plaster. There is a pergola and open deck to levels 1 and 2 respectively.

### **3. Sequence of events**

- 3.1 In 1997, the authority issued a single building consent for two detached town houses, (Unit 1 and Unit 2), under the Building Act 1991 (“the former Act”).
- 3.2 The authority carried out various inspections during the construction of the building work and issued an interim code compliance certificate for Unit 2 in June 1998.
- 3.3 On 7 August 2007, the authority wrote to the applicants, noting that it had undertaken a further inspection of the property on 15 July 2007. The authority stated that, as it was not satisfied that the house complied with the Building Code, it was unable to issue a code compliance certificate.
- 3.4 The authority attached an undated notice to fix to that letter. This notice was principally in respect of Unit 1. The “particulars of contravention or non-compliance” attached to the notice listed requirements under the following headings:
- 2.0 Issues relating to cladding  
(Cladding defects and the lack of drained and ventilated cavity)
  - 3.0 Other building related issues
    - b &c) Laundry tub to be secured and laundry ventilated
    - d) Restrictor stays to opening windows
    - e) Smoke detectors
    - f) As-built information

#### 4.0 Durability issues

The notice also set out the actions that the applicants were to undertake to remedy the items of non-compliance.

3.5 The notice to fix (at heading 3.0 a)) also required a final inspection to be called for by the owners of Unit 2.

3.6 According to the applicants, a copy of the notice to fix was also forwarded to the owners of Unit 2, who returned it to the authority noting that Unit 2 already had an interim code compliance certificate.

3.7 The Department received the application for a determination on 1 October 2007 and, on receipt of the appropriate payment, I was able to commence determining the matters on 19 October 2007.

## 4. The submissions

4.1 In a covering letter to the Department dated 28 September 2007, the applicants noted that the determination application addressed the following matters:

- The authority's refusal to issue a code compliance certificate.
- The splitting of the original consent into two separate consents.
- The issue of a waiver for Clause B2.

4.2 The applicant forwarded copies of:

- the plans
- some of the authority's inspection records relating to Unit 1
- the letter from the authority to the applicant dated 7 August 2007
- the undated notice to fix.

4.3 The authority forwarded a CD-Rom that was entitled "Property File" but which contained little relevant information.

4.4 Copies of the documents from the applicants and other evidence were provided to the other parties. Neither party made any submissions in response to the information that was provided.

4.5 A draft determination was sent to the parties for comment on 16 January 2008. The draft was forwarded for comment and for the parties to agree a date when Unit 1 complied with Building Code Clause B2 "Durability".

4.6 The Unit 2 owners responded to the draft in a letter to the Department dated 1 February 2008. The Unit 2 owners advised that:

while unit 2 was built at approximately the same time, it has very few similar features to unit 1, nor is it of a similar construction, being 2 storied not 3. The cladding of unit 2 is primarily weatherboard (not monolithic cladding) and the Unit has been well maintained by the same owner-occupiers for the past 9½ years without giving them reasons for any concerns.

In addition, the Unit 2 owners submitted that the decision should be amended so that they were not included in any agreement reached about the modification of the durability period for Unit 1, and that they should not be included as parties with respect to Matter 2.

I have amended the determination as appropriate.

- 4.7 The authority responded to the draft determination on 5 March 2008. The authority accepted the draft and nominated 28 August 1998 as the date when Unit 1 complied with Clause B2 Durability.
- 4.8 The applicants responded to the draft determination on 26 June 2008. The applicants did not accept the draft determination but agreed that compliance with Clause B2 was achieved on 28 August 1998.
- 4.9 The applicants submitted that

As far as we understand the property was built as per the building consent, plans and specifications as submitted to [the authority]. We understood the . . . building inspectors certified this process and there were only minor items outstanding in terms of Code of Compliance when we purchased the property.

The applicants advised they would seek further expert advice with regard to the authority's "obligations during the building process".

## **5. The expert's report**

- 5.1 As mentioned in paragraph 1.4, I engaged an expert, who is member of the New Zealand Institute of Building Surveyors, to provide an assessment of the condition of those building elements subject to the determination.
- 5.2 The expert inspected the property on 19 November 2007 and furnished a report that was completed on 27 November 2007. The expert removed sections of the stucco cladding at the junctions of the jamb of one window with its sill to expose the installed details. I am prepared to accept that the details revealed at this location would apply to similar situations throughout the building.
- 5.3 The expert took non-invasive moisture readings internally within the house, and some elevated readings were recorded. Subsequently, invasive moisture readings were taken at various locations, the majority of which recorded relatively elevated readings. The elevated unadjusted readings were as follows:
- 19%, 22%, 32% (at 2 locations), 38%, and 40+% at the south elevation.
  - 22% (at 2 locations), 24%, and 40+% (at several locations) at the north elevation.
  - 19%, 20% (at 2 locations), 32% (at 4 locations) 38% (at 2 locations), and 40+% (at 6 locations) at the west elevation.
  - 34% and 40% at the east elevation.

Moisture levels that vary significantly from the average base level (in this case 14% to 16%) in the installed cladding generally indicate that external moisture is entering the structure.

- 5.4 The expert also observed obvious signs of water ingress and fungi growth at some of the interior floor perimeters and also noted that there were some decayed timber ceiling linings under the upper north elevation balcony. Some wet and decayed timber was also found where the expert had drilled the external wall timbers in order to take the invasive moisture inspections.
- 5.5 Commenting specifically on the stucco cladding, the expert noted that:

- the stucco plaster is untidy and incomplete in parts
- there are areas of damaged plaster adjoining the deck joinery openings
- there is no evidence that vertical or horizontal control joints have been installed in the cladding
- the required 50mm minimum overlap of the cladding over the foundation wall has not been achieved in some areas
- the base of the cladding is too close to, or is in contact with, the finished ground and paving levels at some locations and there are also limited clearances at some deck thresholds
- there is some minor cracking in the cladding at some locations
- the retaining walls at two separate locations are pulling away from the cladding
- there is no evidence that head or jamb flashings have been installed to the exterior joinery units
- the sill flashings to the exterior joinery units are buried in the plaster and are formed from non-continuous lengths in some instances, do not extend to the exterior face of the cladding, and there is a lack of properly formed ends to these flashings
- the plaster bands above the heads of the exterior joinery units lack drip moulds and at some locations these bands allow reverse drainage towards the wall cladding
- the cladding has been butted into and finished flush with the fascia boards of the family room roofing
- the ends of some of the north elevation balcony beams are inadequately secured, and the cladding to the top of one support post does not have a drainage fall and the mitre joint between this cladding and the post top has opened up
- the ends of the balustrade cappings are not flashed and sealed where they adjoin the wall cladding
- the north balcony overflow outlet is not flashed and the plaster is poorly finished around the outlet
- some penetrations through the cladding are inadequately sealed and lack flashings
- the cedar shingles to the south balcony balustrade have been fitted subsequent to the stucco plaster and paint finish.

5.6 The expert also noted that :

- the roof junctions with the chimney have been inadequately formed
- the lead flashing above the family room roof fails to direct moisture to the outer face of the cladding
- there are unsealed gaps between the roof tiles and the gable end fascias

- the lead apron flashing below the master bedroom projecting window needs securing
  - the glass panels set into the north elevation balcony deck are inadequately sealed or flashed
  - the drainage and sealant behind the masonry foundation walls appears to be inadequate, as there is moisture damage evident in adjoining living spaces.
- 5.7 The expert also noted some differences between the as-built construction and the consented plans. The main changes being to the roof window layouts, additional wall joinery, and the addition of glazed panels set into the north elevation balcony deck.
- 5.8 A copy of the expert's report was provided to the applicants and to the authority on 29 November 2007. It was decided that the owners of Unit 2 should also be considered parties to the determination, and copy of the application and the expert's report was provided to the owners of Unit 2 on 12 December 2007.

## **Matter 1: The cladding**

### **6. Evaluation for code compliance**

#### **6.1 Evaluation framework**

- 6.1.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solution<sup>4</sup>, in this case E2/AS1, which will assist in determining whether the features of this house are code compliant. However, in making this comparison, the following general observations are valid:
- Some Acceptable Solutions are conservatively written to cover the worst case, so that they may be modified in less extreme cases and the resulting alternative solution will still comply with the Building Code.
  - Usually, when there is non-compliance with one provision of an Acceptable Solution, it will be necessary to add one or more other provisions to compensate for that in order to comply with the Building Code.
- 6.1.2 The approach in determining whether building work is weathertight and durable and is likely to remain so, is to apply the principles of weathertightness. This involves the examination of the design of the building, the surrounding environment, the design features that are intended to prevent the penetration of water, the cladding system, its installation, and the moisture tolerance of the external framing. The Department and its antecedent, the Building Industry Authority, have also described weathertightness risk factors in previous determinations<sup>5</sup> (for example, Determination 2004/1) relating to cladding and these factors are also used in the evaluation process.
- 6.1.3 The consequences of a building demonstrating a high weathertightness risk is that building solutions that comply with the Building Code will need to be more robust. Conversely, where there is a low weathertightness risk, the solutions may be less robust. In any event, there is a need for both the design of the cladding system and its installation to be carefully carried out.

<sup>4</sup> An Acceptable Solution is a prescriptive design solution approved by the Department that provides one way, but not the only way, of complying with the Building Code. The Acceptable Solutions are available from The Department's Website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

<sup>5</sup> Copies of all determinations issued by the Department can be obtained from the Department's website.

## 6.2 Weathertightness risk

6.2.1 In relation to these characteristics I find that the house:

- is two storeys increasing to three storeys at the rear
- is in a medium wind zone
- generally lacks eaves or verge projections that could protect the claddings below them
- has a ground floor timber deck and two upper floor balconies
- has external wall framing that is likely to be treated to a level that provides some resistance to the onset of decay if the framing absorbs and retains moisture. However, there is evidence that some timbers are already in a state of decay.

6.2.2 The house has been evaluated using the E2/AS1 risk matrix. The risk matrix allows the summing of a range of design and location factors applying to a specific building design. The resulting risk rating can range from 'low' to 'very high'. The risk rating is applied to determine what claddings can be used on a building in order to comply with E2/AS1. A higher risk rating will necessitate more rigorous weatherproof detailing; for example, a high risk rating is likely to necessitate particular types of cladding being installed over a drained cavity.

6.2.3 When evaluated using the E2/AS1 risk matrix, the weathertightness features outlined in paragraph 6.2.1, all elevation of the house demonstrate a high weathertightness risk. I also note that in order to comply with E2/AS1, the monolithic cladding of this building would require a drained cavity.

## 6.3 Discussion

6.3.1 Taking into account the expert's report, I am satisfied that the current performance of the cladding is inadequate because it has not been installed according to good trade practice. The cladding is at present allowing water penetration into the walls through defects in the cladding, which in turn has led to the decay of some framing and finishing timbers at some locations. In particular, the building demonstrates the key defects listed in paragraphs 5.5 and 5.6.

6.3.2 I have also identified the presence of a range of known weathertightness risk factors in this house. The presence of the risk factors on their own is not necessarily a concern, but they have to be considered in combination with the significant faults identified in the cladding system. It is that combination of risk factors and faults that indicate that the structure does not have sufficient provisions that would compensate for the lack of a drained and ventilated cavity. Consequently, I am not satisfied that the cladding system as installed complies with either Clause B2 or Clause E2.

6.3.3 I find that, because of the extent and complexity of the faults that have been identified with the cladding, I am unable to conclude how the faults are to be fixed and brought into compliance with Clauses B2 or E2. I consider that final decisions on whether code compliance can be achieved by either repair or re-cladding, or a combination of both, can only be made after a more thorough investigation of the cladding. This will require a careful analysis by an appropriately qualified expert. Once that decision is made, the chosen option should be submitted to the authority for its comment and approval. If the authority chooses to reject the proposal, then



the applicants are entitled to seek a further determination on whether the proposed remedial work will led to compliance with the requirements of Clauses B2 and E2.

- 6.3.4 Of more immediate concern are the observations of the expert regarding the decaying timbers and the inadequate deck fixings. I recommend that, as a matter of urgency, the authority inspect these areas to check on their current condition, and take steps to ensure that, if any faults are discovered, they are rectified immediately by the applicants.

## **Matter 2: The durability considerations**

### **7. Discussion**

- 7.1 The authority has concerns about the durability, and hence the compliance with the building code, of the building elements listed in the notice to fix, taking into consideration the completion of Unit 1 in 1998. I note that a final inspection did not take place until 2007.
- 7.2 The relevant provision of Clause B2 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).
- 7.3 These durability periods are:
- 5 years if the building elements are easy to access and replace, and failure of those elements would be easily detected during the normal use of the building
  - 15 years if building elements are moderately difficult to access or replace, or failure of those elements would go undetected during normal use of the building, but would be easily detected during normal maintenance
  - the life of the building, being not less than 50 years, if the building elements provide structural stability to the building, or are difficult to access or replace, or failure of those elements would go undetected during both normal use and maintenance.
- 7.4 In this case, the 9-year delay between the commencement of Unit 1 and the applicant’s request for a code compliance certificate raised the concern with the authority that various elements of the building are now well through or past 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.
- 7.5 It is not disputed, and I am therefore satisfied, that all the building elements complied with Clause B2 on 28 August 1998. This date has been agreed between the parties, refer paragraphs 4.7 and 4.8.
- 7.6 In order to address these durability issues when they were raised in previous determinations, I sought and received clarification of general legal advice about waivers and modifications. That clarification, and the legal framework and procedures based on the clarification, is described in previous determinations<sup>6</sup> (for example, Determination 2006/85). I have used that advice to evaluate the durability issues raised in this determination.

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<sup>6</sup> Copies of all determinations issued by the Department can be obtained from the Department’s website.

- 7.7 I continue to hold the views expressed in the previous relevant determinations, and therefore conclude that:
- (a) the authority has the power to grant an appropriate modification of Clause B2 in respect of all of the elements of Unit 1
  - (b) it is reasonable to grant such a modification, with appropriate notification, because in practical terms Unit 1 is no different from what it would have been if a code compliance certificate had been issued in 1998.
- 7.8 I strongly recommend that the authority record this determination, and any modification resulting from it, on the property file and also on any LIM issued concerning this property.

### **Matter 3: Splitting the building consent**

#### **8. Discussion**

- 8.1 Units 1 and 2 are completely separate buildings that have been constructed under a single building consent. This means that only a single code compliance certificate is able to be issued in respect of all the work under the building consent. The owners of Unit 2 have an interim code compliance certificate for their building and do not wish to obtain a final code compliance certificate.
- 8.2 The owners of Unit 1 have sought this determination so that a code compliance certificate can be issued for their building. The applicants have therefore requested that the building consent be split into two separate consents, so that the code compliance of Unit 1 and Unit 2 may be dealt with separately.
- 8.3 In regard to the 1997 consent, I take the view that, as Unit 1 and Unit 2 are now separately owned and stand-alone buildings, each building should be able to be assessed separately for compliance with the building code.
- 8.4 I therefore consider that, on receipt of a written request from the applicants, the authority should modify the original 1997 building consent to create two separate building consents, one for Unit 1 and one for Unit 2. The owners of either building can then apply for a final code compliance certificate in respect of that building, without requiring the cooperation of the other owners.
- 8.5 Units 1 and 2 have similar features, are of a similar construction and were built at approximately the same time. It seems likely, therefore, that some of the defects observed in Unit 1 may also be evident in Unit 2. It is recommended that the authority take the necessary action to ensure that Unit 2 does not contain any defects that could affect the health and safety of its occupants.

#### **9. What is to be done now?**

- 9.1 I note that the authority has issued a notice to fix. A new notice to fix should be issued that requires the owners of Unit 1 to bring the building into compliance with the Building Code, without specifying how this is to be achieved. It is not for me to decide directly how the defects are to be remedied and the cladding brought to compliance with the Building Code. That is a matter for the applicant to propose and for the authority to accept or reject.

- 9.2 I suggest that the applicant and the authority adopt the following process to meet the requirements of paragraph 9.1. Initially, the authority should issue the notice to fix. The applicant should then produce a response to this in the form of a technically robust 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.

## **10. The decision**

10.1 In accordance with section 188 of the Building Act 2004, I determine that:

- (a) the building work in Unit 1 does not comply with Clauses B2 and E2 of the Building Code, and accordingly confirm the authority's decision to refuse to issue a code compliance certificate.
- (b) if so requested by the applicants, the authority is to split the original consent for Unit 1 and Unit 2 into two consents as detailed in section 8 above. The consent for Unit 1 is to include the modification required in (d) below.
- (c) the building elements installed in Unit 1, complied with Clause B2 on 28 August 1998.
- (d) the building consent for Unit 1 is hereby modified as follows:

The building consent is subject to a modification to the Building Code to the effect that, Clause B2.3.1 applies from 28 August 1998 instead of from the time of issue of the code compliance certificate for all the building elements except those items that are to be rectified as described in paragraphs 5.5 and 5.6 of Determination 2008/70.
- (e) the authority is to issue a code compliance certificate in respect of the building consent for Unit 1, as amended following the modification set out in (d) above, when all remedial work has been completed to the authority's satisfaction.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 28 July 2008.

John Gardiner  
**Manager Determinations**