Department of Building and Housing
Te Tari Kaupapa Whare

Determination 2011/051

Regarding the refusal to issue a code compliance certificate for one of a complex of six 16-year-old townhouses at 8 Moturoa Street, Thorndon, Wellington

1. The matters to be determined

1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004[1] ("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.

1.2 The parties are:

- the J W F and R M Watters Trust, the owner of a townhouse ("Unit 1") at 8F Moturoa Street ("the applicant")
- the Wellington City Council, carrying out its duties as a territorial authority or building consent authority ("the authority").

I consider that the owners of the other five townhouses in the development are persons with an interest in this determination.

1.3 This determination arises from the decision of the authority to refuse to issue a code compliance certificate for a 16-year-old townhouse because:

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

- it is not satisfied that the building work in Unit 1 complies with certain clauses[2] of the Building Code (First Schedule, Building Regulations 1992). The authority's concerns about the compliance of the building work primarily relate to its age and weathertightness
- the six townhouses ("the units") at 8A to 8F Moturoa Street ("Unit 1 to Unit 6") in the development were constructed under a single building consent.

1.4 The matter to be determined[3] is therefore whether the authority was correct to refuse to issue a code compliance certificate for Unit 1. In deciding this matter, I must consider:

1.4.1 Matter 1: The external envelope

Whether the external claddings to Unit 1 ("the claddings") comply with Clause B2 Durability and Clause E2 External Moisture of the Building Code. The claddings include the components of the systems (such as the weatherboards and facings, the brick veneer, the windows, the tiled deck, the roof claddings and the flashings), as well as the way the components have been installed and work together. (I consider this in paragraph 7.)

1.4.2 Matter 2: Other clause requirements

Whether Unit 1 complies with the remaining relevant clauses of the Building Code, in particular with Clause E3 Internal Moisture. (I consider this in paragraph 8)

1.4.3 Matter 3: The durability considerations

Whether the building elements in Unit 1 comply with Clause B2 Durability of the Building Code, taking into account the age of the building work. (I consider this in paragraph 9.)

1.4.4 Matter 4: Amending the building consent

Whether the authority, in response to an application from the owner, is required to amend the building consent for the development, which includes Unit 1, so that Unit 1 has its own separate building consent. That would make it possible for the authority to issue a code compliance certificate in respect of Unit 1. (I consider this in paragraph 10)

1.5 The evidence

1.5.1 In making my decision, I have considered the submission of the applicant, the report of the expert commissioned by the Department to advise on this dispute ("the expert") and the other evidence in this matter. I have evaluated this information using a framework that I describe more fully in paragraph 7.1.

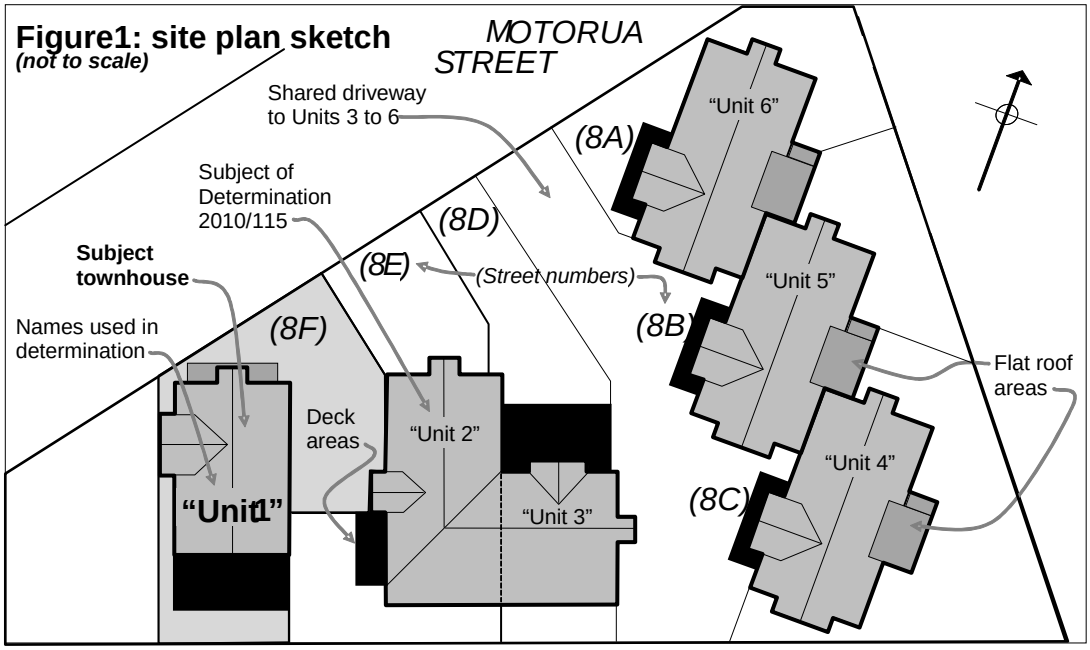
1.5.2 Another townhouse in the development ("Unit 2") was the subject of Determination 2010/115. I have therefore included information collected for that determination as part of the evidence in this matter. I have received no information about the construction of the remaining four townhouses in the development.

[2] 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.
[3] Under sections 177(1)(b) and 177(2)(d) of the Act

2. The townhouse complex

2.1 The site is in a very high wind zone in terms of NZS 3604[4] and gently slopes to the west, apart from a steep bank at the western end of the south boundary. The site has been subdivided to provide six properties with separate titles.

2.2 The three-storey-high units were constructed under one building consent and are similar in materials and design, with some variety in planning. As shown in the site plan sketch in Figure 1, the development consists of a detached unit at the west, three semi-detached units to the east and a two-unit building in-between:



2.3 Construction of the units is generally conventional light timber frame, with concrete slabs, weatherboard wall claddings, corrugated steel roof cladding and aluminium windows. The development is within a 'historic precinct' and cladding materials and details were therefore designed to accord with other buildings within the neighbourhood.

3. The building work

3.1 Unit 1 is a detached building that is fairly simple in plan. The steep-pitched corrugated steel gable and hipped roof has no eaves or verge projections, apart from some limited verge projections at gable ends. The building incorporates some complex junctions and is assessed as having a high weathertightness risk.

3.2 Unit 1's foundations include specifically engineered piles to accommodate a steep bank at the south west corner of the site. The ground floor has a single garage and entry lobby, with a bedroom, bathroom and laundry cupboard under the stairs. The first floor provides the kitchen and a large open plan living/dining area, with two bedrooms, a second bathroom and a roof deck on the third floor level.

[4] New Zealand Standard NZS 3604:1999 Timber Framed Buildings

3.3 Brick veneer cladding is installed to the north wall of the ground floor, extending along the west wall of the garage. All of the remaining exterior walls are clad in traditional rusticated timber weatherboards, with timber facings at corners and around windows and doors.

3.4 The specification calls for all framing timbers to be 'Rad P.B.T', but does not specify treatment levels. Given the date of construction in 1994, I accept that the external wall framing to Unit 1 is likely to be boron treated, but I have no evidence as to the level of treatment in the framing.

3.5 The decks

3.5.1 A large tiled deck occupies the southern end of the second floor; above the first floor kitchen and dining area. The balustrade corners are clad in weatherboards on the outside, with decorative panels of open timber trellis between. On the deck side, the entire balustrade is clad in fibre-cement sheet.

3.5.2 A second deck extends from the south ground floor bedroom above the steep bank. The deck floor is spaced timber decking, with open timber trellis balustrades clad on the inside with fibre-cement sheet that extends between the top and bottom rails.

4. Background

4.1 The authority issued a building consent to the developer for the townhouse complex (No. SR4060) on 18 March 1994, under the Building Act 1991 ("the former Act").

4.2 The construction of Units 1, 2 and 3 commenced in April 1994, with a separate inspection summary maintained by the authority for that group. It appears that the initial inspection dates were crossed out and replaced with new dates when re-inspections were completed, with notes on individual units added below.

4.3 The authority's inspections of Unit 1 include:

- foundations on 13 April 1994
- under-slab plumbing drainage and foul water on 15 April 1994
- cladding/roofing on 23 May and 30 August 1994
- foul water and surface water drains on 9 and 10 June 1994
- preline/insulation and linings/bracing on 22 June and 30 August 1994
- waste and soil piping on 29 June 1994.

4.4 The structural engineer also inspected the specifically engineered piles of Unit 1 on 11 April 1994 and the steel portal frame on the northern side, confirming this in a letter to the authority dated 15 July 1994. In a further statement dated 5 September 1994 covering all of the units, the engineer also confirmed that:

> ...on 5 September 1994 we inspected the beams and other aspects structural parts [sic] which we designed and are satisfied that they are in accordance with our requirements.

4.5 The subdivision was approved in August 1994 and the units were issued with individual certificates of title in November 1994. Units 1, 3 and 6 passed final inspections on 5 December 1994 and interim code compliance certificates were issued for those units on 15 December 1994.

4.6 The developer retained ownership of Unit 2 and the remaining units were sold during 1995. It is likely there was an understanding that the developer would obtain a final code compliance certificate for the complex when all siteworks and landscaping under the building consent were completed and inspected.

4.7 The applicant purchased Unit 1 in November 2002 and subsequently sought a code compliance certificate, which was apparently refused due to the age of the building. The Department received an application for a determination on 13 October 2010.

5. The submissions

5.1 In a letter to the Department dated 13 October 2010, the applicants noted that they had:

> ...spoken at length and subsequently visited with key persons in the Building Inspections group at [the authority]. The message that came firmly across is that the Building Inspections group will not issue a CCC at 8 Moturoa St as all the buildings are more than 15 years since completion (Dec 1994). It is this [authority's] policy, written or unwritten that makes this Application for a Determination necessary.

5.2 The applicant forwarded copies of:

- some consent drawings and specifications
- the authority's inspection summary
- the engineer's letter to the authority dated 14 July 1994
- the interim code compliance certificate for Unit 1 dated 15 December 1994
- various other drawings, statements and information.

5.3 In a letter to the Department dated 28 October 2010, the authority noted that it had previously submitted a full copy of the records for the development, which included material relevant to Unit 1, in relation to Determination 2010/115. The authority stated that it believed the determination for Unit 1:

> ... should be on all Code Clauses with particular focus on B2, E2 and E3. We also note that the building consent is for six townhouses in total, but the application for determination is for one unit only. The Council believes that as this unit is a standalone house it may be possible to amend the consent and separate this unit from the original consent.

5.4 A draft determination was issued to the parties for comment on 31 January 2011. The draft was issued for comment and for the parties to agree a date when the house complied with Building Code Clause B2 Durability.

5.5 Both parties accepted the draft with non-contentious comments noting that there was no requirement for a floor drain to the second floor bathroom. The authority proposed that compliance with Clause B2 was achieved on December 1994.

5.6 In response to the draft determination received on 1 March 2011 the applicant disputed any reference to a lack of maintenance and noted that records of this could be provided. The applicant also commented on details in the expert's report.

5.7 I have amended the determination accordingly.

5.8 In an email received by the Department on 22 May 2011, the applicant agreed that compliance with Clause B2 was achieved on 15 December 1994.

6. The expert's report

6.1 As mentioned in paragraph 1.5.1, I engaged an independent expert to assist me. The expert is a member of the New Zealand Institute of Building Surveyors and inspected Unit 1 on 2 December 2010; providing a report on 24 December 2010. In response to a query, the expert also commented on the second floor deck in an email to the Department dated 25 January 2011; and I have included those comments below.

6.2 General

6.2.1 The expert noted that the overall construction quality appeared to be good, with the weatherboard junctions 'straight and tight'. However, he also observed that, although the current owner had carried out some maintenance, the paintwork varied in condition, the timber facings were deteriorating, the deck tiles needed cleaning and the gutters needed clearing.

6.2.2 The expert noted that the windows and doors had been face-fixed over the weatherboards, with metal head flashings installed prior to the facings. The facing boards butt against the edges of the aluminium window frame, with timber plugs used at the junction of the jamb facings with the weatherboards and no flashing over the top of the head facing board.

6.3 Moisture levels

6.3.1 The expert inspected the interior of Unit 1, noting signs of current or past moisture penetration indicated by:

- swollen skirtings and elevated moisture levels in:
  - the garage – beside the door and along the west wall
  - the ground floor south bedroom – at the deck door
  - the first floor dining area – under the south window
- damaged paintwork to the second floor south ceiling under the false chimney
- ceiling nails popping second floor north ceiling under the bay window roof

6.3.2 The expert investigated the above signs of moisture by taking invasive moisture readings and noted no elevated readings in the second floor ceilings. However, the expert recorded:

- 16% to 18% in the bottom plate of the garage
- 18% and 26% in the bottom plate to the ground floor bedroom deck door

- 20% in the bottom plate under the first floor dining area south window.

6.3.3 The expert also observed signs of deterioration within exterior timber facings and trim, and recorded moisture levels within the cladding timber of:

- 32% in the trim at the junction of the timber deck to the weatherboards
- 40% and soft timber in the sill facing to the west bay window
- 24% and rusting nails in the sill facing to a first floor east window
- 40% and soft timber in the sill facing to the ground floor bathroom window.

6.4 Commenting specifically on the external envelope, the expert noted that:

Clearances

- on the west and east elevations, the weatherboards either butt against adjoining ground or paving, are buried under garden soil or have insufficient clearance, with decay to the bottom of some weatherboards
- the ground floor timber deck's ribbon plate is fixed directly against the weatherboards, with decking butting against the cladding and no allowance for drainage – resulting in high moisture levels in the bottom plate at the junction
- the inner cladding to the second floor deck balustrade butts against the deck tiles and is allowing moisture to be absorbed into the fibre-cement sheet

Windows and doors

- junctions of the timber facings with aluminium joinery frames are unsealed
- there are gaps at the top of the head facings which allow moisture to penetrate behind the boards – resulting in deterioration of paintwork, corroding nails and soft timber in some areas
- there is a gap at the head of the garage west window
- there is no head flashing above the garage door

The brick veneer

- the high moisture levels in the bottom plate to the brick veneer walls require further investigation, taking into account:
  - the lack of ground clearance and weep holes in the bottom brick course
  - the lack of visible flashings to the junction with the upper weatherboards

General

- tiles to the second floor deck need to have their surfaces cleaned
- some tiles are loose at the edge of the internal gutter exposing the deck membrane
- for the second floor, further investigation is needed into cause(s) of:
  - damaged paintwork to south ceiling, under the false chimney
  - nails popping in the north ceiling, under the bay window membrane roof.

6.5 Commenting on internal moisture (Clause E3), the expert noted that:

- the low sill to the window bath shower in the ground floor bathroom is subject to shower spray and lacks an impervious surface
- the sealant to the bath shower in the ground floor has deteriorated; pulling away from the wall tiles and risking water entering the framing behind.

6.6 Commenting on the other relevant code clauses, the expert also noted that the bathroom window sills are low, with no safety glass (Clause F2).

6.7 A copy of the expert's report was provided to the parties on 14 January 2011.

Matter 1: The external envelope

7. Weathertightness

7.1 The evaluation of building work for compliance with the Building Code and the risk factors considered in regards to weathertightness have been described in numerous previous determinations (for example, Determination 2004/1).

7.2 Weathertightness risk

7.2.1 Unit 1 has the following environmental and design features which influence its weathertightness risk profile:

Increasing risk

- Unit 1 is three-storeys high and sited in a very high wind zone
- although fairly simple in plan, the building includes some complex junctions
- there are generally no eaves to shelter the cladding
- there is a second floor tiled deck, with clad balustrades, above the dining area
- there is a timber-framed deck attached to the ground floor level
- although external wall framing is likely to be treated, the treatment level may be insufficient to resist decay if the timber absorbs and retains moisture.

7.2.2 When evaluated using the E2/AS1 risk matrix, these features show that all elevations of the building demonstrate a high weathertightness risk rating. I note that, if the details shown in the current E2/AS1 were adopted to show code compliance, the horizontal rusticated weatherboards would require a drained cavity. However, this was not a requirement at the time of construction in 1994.

7.3 Weathertightness performance

7.3.1 Generally the claddings appear to have been installed in accordance with good trade practice at the time. However, taking account of the expert's comments and the evidence of moisture penetration, I conclude that further investigation and remedial work is necessary in respect of the following:

- investigation of high moisture levels and/or evidence of damage at:
  - the north and west garage walls
  - beside the south deck door to the ground floor bedroom
  - under the first floor dining area south window
  - the second floor south ceiling under the false chimney
  - the second floor ceiling under the north bay window
- cladding clearances between:
  - the weatherboards and the adjacent ground or paving
  - the brick veneer and the adjacent ground or paving
  - the fibre-cement balustrade cladding and the deck tiles
  - the ground floor decking and ribbon plate and the weatherboards
- for the windows and doors:
  - unsealed junctions of the facings with the window frames
  - the gaps at the tops of the unflashed head facings
  - deteriorating fixings and decay to some timber facings
  - the gap at the head of the garage west window
  - the lack of a head flashing to the garage door
- for the brick veneer:
  - the lack of weepholes in the bottom course
  - the junction with the upper weatherboards
- the loose tiles to the second floor deck.

7.3.2 Notwithstanding the fact that the weatherboards are fixed directly to the framing, thus inhibiting free drainage and ventilation behind the cladding, I have noted that the weatherboards are generally installed according to good trade practice, in accordance with traditional practices common at the time of construction. This assists the performance of the cladding in this particular case and can help the building to comply with the weathertightness and durability provisions of the Building Code.

7.4 Weathertightness conclusion

7.4.1 I consider the expert's report establishes that the current performance of the external envelope is not adequate because there is evidence of moisture penetration into the cladding and the timber framing. Consequently, I am satisfied that Unit 1 does not comply with Clause E2 of the Building Code.

7.4.2 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 building work to remain weathertight.

7.4.3 I note that the cladding materials in Unit 1 are already more than 15-years-old, which is beyond the minimum effective life required for these elements. In the case of the

roofing, I am satisfied that the cladding has remained weathertight for that period and has therefore complied with the durability requirements of Clause B2.

7.4.4 However, in the case of the wall claddings, it is apparent that the cladding faults on the building have been allowing moisture into the framing and are likely to continue to do so in the future. I am therefore satisfied that the wall claddings, including the windows, do not comply with the durability requirements of Clause B2.

7.4.5 Because the faults identified with the claddings occur in discrete areas, I am able to conclude that satisfactory investigation and rectification of the items outlined in paragraph 7.3.1 will result in the external envelope being brought into compliance with Clauses B2 and E2 of the Building Code.

7.5 Maintenance

7.5.1 I also note the expert's comments on the lack of maintenance and the loose tiles to the second floor deck. Although the expert did not observe any evidence of moisture penetration relating to the second floor tiled deck, ongoing maintenance of the tiled finish is particularly important to ensure the durability of the underlying deck membrane and compliance with Clauses B2 and E2 of the Building Code. This will require regular inspection of the tiles and joints, with prompt repair or replacement when any signs of deterioration or movement are noted.

7.5.2 I also note the expert's comments on the lack of maintenance to the timber weatherboards and facings to Unit 1, which is likely to have contributed to some moisture penetration into and damage of these elements. 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 Department has previously described these maintenance requirements (for example, Determination 2007/60).

Matter 2: Other clause requirements

8. Discussion

8.1 Taking account of the expert's report, I conclude that further investigation and remedial work is necessary in respect of the following items (relevant code clauses are shown in brackets):

- in regard to internal moisture (Clause E3):
  - the sill surface to the window in the ground floor bath shower
  - the deteriorated sealant to the ground floor bath shower
- the lack of safety glass in the bathroom windows (Clause F2)

8.2 Taking account of the expert's report, the authority's inspections during construction, the engineer's statements and the interim code compliance certificate, I have reasonable grounds to conclude that Unit 1 complies with the remaining relevant clauses of the Building Code.

Matter 3: The durability considerations

9. Discussion

9.1 The authority has concerns regarding the durability, and hence the compliance with the building code, of certain elements of the building taking into consideration the age of the building work completed in 1994.

9.2 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).

9.3 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.

9.4 In this case the delay between the completion of the building work in 1994 and the applicant's request for a code compliance certificate has raised concerns that various elements of the building are now 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.

9.5 It is not disputed, and I am therefore satisfied that all the building elements installed in the house, apart from the items to be rectified, complied with clause B2 on 15 December 1994. This date has been agreed between the parties, refer paragraphs 5.5 and 5.8.

9.6 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 (for example, Determination 2006/85). I have used that advice to evaluate the durability issues raised in this determination.

9.7 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 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 in 1994.

9.8 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.

Matter 4: Amending the building consent

10. Discussion

10.1 Unit 1 is part of a larger complex of six residential units made up of three free-standing buildings comprising a single detached townhouse, two semi-detached townhouses and three semi-detached townhouses. One building consent was issued to cover all three buildings, which means that only a single code compliance certificate can be issued for all six units unless the building consent is amended.

10.2 The owners of Unit 1, the single detached townhouse, have sought this determination so that a code compliance certificate can be issued for their particular unit. In order for that to happen, the existing building consent would need to be amended, so that the code compliance of Unit 1 can be dealt with separately from the code compliance of the remaining five units.

10.3 In previous determinations (for example Determination 2009/56) I have taken the view that the authority has the power under the Act to deal with an administrative issue such as amending a consent that deals with two or more buildings, where an owner requests the consent be 'split' to deal with one or more buildings separately.

10.4 During the building process there will often be changes in circumstance produced by design changes, changes to the scope of work proposed, the number of buildings proposed or the timing of completion. Such changes may require alterations to the scope of a building consent and the number of buildings covered by a consent. A building consent authority has the power under the Act to deal with such changes in circumstances by way of amendment to a consent to split-off particular buildings.

10.5 I consider the basis for the decision reached in Determination 2009/56 also applies in this instance, and that the authority can amend the building consent to create a separate building consent for Unit 1, in response to a request to do so by the owner. The amendment of the original consent will enable the owner to apply for a code compliance certificate for Unit 1 without requiring the cooperation of the owners of the remaining five units within the development.

11. What is to be done now?

11.1 A notice to fix should be issued that requires the applicant to bring Unit 1 into compliance with the Building Code, including the investigations and defects identified in paragraph 7.3.1 and paragraph 8.1, but not specifying how those defects are to be fixed. 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 owner to propose and for the authority to accept or reject.

11.2 I suggest that the parties adopt the following process to meet the requirements of paragraph 11.1. Initially, the authority should issue the notice to fix. The applicant

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.

11.3 Once the matters set out in paragraph 7.3.1 and paragraph 8.1, including any further defects discovered during investigations, have been rectified to its satisfaction, the authority may issue a code compliance certificate in respect of the building consent amended as outlined in paragraph 10.

12. The decision

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

- the external building envelope does not comply with Clauses E2 and B2 of the Building Code
- certain building elements do not comply with Clauses E3 and F2 of the Building Code,

and accordingly I confirm the decision of the authority not to issue a code compliance certificate for Unit 1.

12.2 I also determine that, if so requested by the owner of Unit 1 (at 8F Moturoa Street), the authority is to amend the original consent to create a separate building consent as required and as detailed in paragraph 10 above.

12.3 I also determine that:

(a) all the building elements installed in Unit 1 complied with Clause B2 on 15 December 1994.

(b) the building consent 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 15 December 1994 instead of from the time of issue of the code compliance certificate for all the building elements, except the items to be rectified as set out in paragraphs 7.3.1 and paragraph 8.1 of Determination 2011/051.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 30 May 2011.

John Gardiner
Manager Determinations