

## Determination 2006/70

### Refusal of a code compliance certificate for a group of four houses at 1 The Crescent, Roseneath, Wellington



#### 1 The dispute 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, Determinations Manager, Department of Building and Housing, for and on behalf of the Chief Executive of that Department. The applicant is one of the joint-owners, Hsu Lai-Chih Lee acting through an accountant as an “attorney” and an engineer as an agent (“the applicant”), and the other party is the Wellington City Council (“the territorial authority”). Another joint-owner Ms Christine Lee is considered to be a person with an interest in this determination.
- 1.2 The dispute for determination is whether I am satisfied on reasonable grounds that the territorial authority’s decision to decline to issue a code compliance certificate for

---

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

a complex of four 2 to 3-year old detached houses (described in this Determination as “Units A, B, C, and D”), is correct.

- 1.3 The territorial authority has declined to issue a code compliance certificate as it considers that it has insufficient grounds to be satisfied that the building work is code compliant. In order to determine the dispute, I must determine whether I am able to form a view on the code compliance of the houses, based on the information available to me.
- 1.4 In making my decisions, I have considered the submissions of the parties, the report of the independent expert commissioned by the Department to advise on this dispute (“the expert”), and the other evidence in this matter. I have evaluated the information using a framework that I describe more fully in paragraph 7. I have considered those aspects of the Act or the building code that apply to a group of buildings of this configuration.

## **2 The buildings**

- 2.1 The buildings consist of four 4-storey detached houses situated on an excavated steeply sloping stepped site in a very high wind zone for the purposes of NZS 3604<sup>2</sup>. The site has a high excavated cut that is protected by a concrete block retaining wall. The houses have varying designs and layouts, but include common construction methods and features. Each house contains 4 bedrooms.
- 2.2 The houses are each, in part, reinforced concrete and reinforced concrete block structures with concrete foundations (in part supported on concrete encased steel soldier piles), proprietary concrete intermediate floor slabs and concrete block walls, some of which act as retaining walls. The upper level of each house has timber framed walls faced with timber weatherboards. There are also various features and infill panels that are timber-framed with weatherboard or monolithic cladding. The houses have flat membrane roofs at varying levels with eaves projections that vary from 400mm to 600mm wide. In Unit A, B, and C, timber framed box structures (with monolithic clad walls and flat tops) project out from an external wall.

### **2.3 The individual houses**

#### **2.3.1 Unit A**

- 2.3.1.1 The third and fourth levels of Unit A have concrete–block walls to part height surmounted by timber framed walls clad with timber weatherboards, with a study on the top level. There are also infill panels of weatherboards between windows above the main north entry. The projecting box-shaped feature to the east elevation has windows to the sides and decorative ceramic tiles over the monolithic finish on the street face.
- 2.3.1.2 A deck, situated over a living space, opens from the second floor master bedroom. The lower concrete block walls continue up to form the deck balustrades.

---

<sup>2</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

### **2.3.2 Unit B**

- 2.3.2.1 The top level of Unit B has timber framed walls largely clad in timber weatherboards, but also partly clad with sections of monolithic cladding. There are also infill panels of weatherboards between windows above the main south entry and other infills of monolithic cladding. The projecting box-shaped feature contains timber louvres. The edge of the floor slabs project beyond the wall line in two locations.
- 2.3.2.2 Two steel and timber framed decks, with stainless steel balustrades, project from the north wall at the first and second floors.

### **2.3.3 Unit C**

- 2.3.3.1 The top level of Unit C has timber framed walls largely clad in timber weatherboards, but also partly clad with sections of monolithic cladding. There are also infill panels of weatherboards and monolithic cladding between windows above the main south entry. The projecting box-shaped feature to the south elevation has windows to the sides.
- 2.3.3.2 A steel and timber framed deck, with stainless steel balustrades and an open timber slat floor, projects from the east wall at the first floor.

### **2.3.4 Unit D**

- 2.3.4.1 The third and fourth floors of Unit A have part-timber framed walls largely clad with timber weatherboards. There are also infill panels of monolithic cladding between windows above the main east entry.
- 2.3.4.2 A study is situated on the top level and opens onto a roof deck with metal and glass balustrades. Another deck, which is situated over a living space, opens from the second floor master bedroom. The lower concrete block walls continue up to form the deck balustrades. A steel and timber framed deck, with stainless steel balustrades and an open timber slat floor, projects from the east wall at the first floor.

- 2.4 The applicant has submitted copies of invoices from the timber supplier, which indicate that the external wall framing supplied for the timber framed walls in this complex was H1 treated. However, given the date of construction of the buildings, I am unable to determine the particular level and type of treatment that is described as "H1" in the invoices from the timber supplier. I therefore consider that the wall framing of the complex is unlikely to be treated to a level that will provide resistance to fungal decay if the timber becomes wet and cannot dry out.
- 2.5 The monolithic cladding system appears to be a form of plaster over a solid backing, where the same plaster coating as applied to the concrete block walls appears to be used over fibre cement backing sheets. In this instance the plaster appears to be a multi-coat mesh reinforced solid "Sto" plaster system with a flexible paint coating.
- 2.6 I have seen no evidence of specific producer statements or warranties for the monolithic cladding, although the applicator has supplied a 15-year and 5-year

warranty for the Sto plaster materials and application respectively – to cover the plaster system used over the concrete block walls.

### 3 Sequence of events

3.1 The territorial authority issued approvals for building consents based on certificates provided by Nationwide Building Certifiers Ltd (“the building certifier”) on the following dates:

- 19 February 2003 for Units A and B, supported by the building certifier’s building certificate dated 7 February 2003
- 28 April 2003 for Units C and D, supported by the building certifier’s building certificate dated 8 April 2003

The approvals noted that the building certifier would be undertaking all inspections and that the building certifier would also issue the code compliance certificate. However, I note that at the date the consents were granted, the exterior cladding of the buildings was outside the building certifier’s scope of approval both in terms of processing and inspections.

3.2 The building certifier carried out various inspections during the construction of the houses, with the last recorded inspections (pre-line) recorded and approved in April 2004. As most of the construction was concrete masonry, the design engineer also undertook inspections and supplied site visit reports.

3.3 It appears that the building certifier went into receivership in November 2004 without supplying building certificates for the units, although some inspection records were supplied. However, the design engineer completed structural inspections and supplied a producer statement construction review for the structural components of the complex.

3.4 The applicant wrote to the territorial authority on 11 July 2005, noting that as the building certifier had gone into liquidation, the applicant required the territorial authority to complete a final inspection of the units and issue a code compliance certificate for the project.

3.5 The territorial authority responded by letter on 13 July 2005, stating that the territorial authority would carry out a preliminary site visit “to identify the state of any building work carried out and what, if any further steps are required to be undertaken.” This was not a full compliance inspection and the territorial authority would discuss the regulatory options available for “signing off” the work.

3.6 The territorial authority inspected the project on 15 July 2005 and subsequently wrote to the applicant on 20 July 2005. The territorial authority noted that the building certifier had carried out some inspections but the copies of these that were sent to the territorial authority were not provided in the prescribed form. I observe that the inspection reports are not invalidated simply by not being written in the prescribed form. Accordingly, the territorial authority considered that it did not have

sufficient information to be satisfied on reasonable grounds that the units complied with the requirements of the building code. It could not therefore issue a code compliance certificate. The territorial authority described the process for the applicant to apply for a certificate of acceptance, when the latter is proposed as an alternative to the code compliance process.

- 3.7 The territorial authority wrote to the applicant on 5 August 2005, noting that it was seeking clarification and approval of the applied water proofing membrane, the membrane protection and the positioning of the subsoil drainage coil. The territorial authority stated that it required certain producer statements in order for the territorial authority to consider the applicant's request for a code compliance certificate.
- 3.8 An inspector previously employed by the building certifier wrote to the territorial authority on 5 August 2005, stating that he and another employee had carried out various inspections on all the units. The blockwork tanking, which included both "Mulseal" and "Mulseal Plus", had been inspected at all levels as the blockwork and associated backfilling proceeded. The "Mulseal" was protected by a vertical full-height drainage mat and the drainage metal was placed over many days by means of a conveyor belt system.
- 3.9 The territorial authority wrote to one of the owners on 14 November 2005, advising that after reviewing the building certifier's inspection records and the producer statements provided at a meeting with the owner, it had insufficient grounds for issuing a code compliance certificate. Alternatively, the owner could either apply for a certificate of acceptance or apply to the Department for a determination.
- 3.10 The applicant made an application for a determination dated 6 December 2005.

## **4 The submissions**

- 4.1 The applicant provided the Department with reasons for requesting a determination. The applicant described the units, identified the building designer and engineers, and gave some of the background to the dispute. The applicant described three major points of interest as being the:

- blockwork retaining wall on the west side of the project
- blockwork for the three other sides of each unit
- third floor timber construction.

The applicant also referred to the decks and provided a condensed timeline. A set of photographs was also attached to this submission.

- 4.2 The applicant also forwarded copies of:

- the plans and specification
- the building consent approvals for Units A and B and for Units C and D

- the building certifier's inspection notices
- various producer statements and product warranties
- the correspondence with the territorial authority and the building certifier
- a list of subcontractors and material suppliers
- invoices for various building products.

- 4.3 The territorial authority wrote to the Department on 30 January 2006, setting out the background to the dispute. The territorial authority considered that it did not have sufficient grounds on which to be satisfied that the work complies, as it had not received any building certificates for the completed work, as required under section 56 of the Building Act 1991, before the building certifier before it went into receivership. The territorial authority also stated that the applicant had not applied for a certificate of acceptance.
- 4.4 Copies of the submissions and other evidence were provided to each of the parties. Neither party made any further submissions in response to the submission of the other party.
- 4.5 The draft determination was issued to the parties for comment on 15 June 2006. The applicant accepted the draft.
- 4.6 The territorial authority, through its legal advisors, responded to the draft determination in a submission to the Department dated 3 July 2006. A firm of consulting engineers, acting on behalf of the applicant, responded to the territorial authority's submissions in a letter to the Department dated 25 July 2006. I have taken the submissions into account and amended the determination as appropriate.

## **5 The establishment of code compliance**

- 5.1 I note that the building certifier supplied inspection records which appear to cover the construction up to the pre-line stage, and that the design engineer has supplied site visit reports and a producer statement for the structural design and construction of the units.
- 5.2 I consider the substance and timing of the inspections undertaken to be of more importance than the form in which the inspection records were presented. I therefore consider I am entitled to rely on the building certifier's and the engineer's inspection reports for these buildings, despite the form in which they were presented.
- 5.3 In the absence of any evidence to the contrary, including consideration of the knowledge the Department has of the general practices of the certifier in this particular job, I take the view that I am entitled to rely on the inspections reported by the building certifier, and by the structural engineer, with regard to inaccessible building components.

- 5.4 I therefore consider that the available records (together with additional inspections as noted in paragraph 6.1) have allowed me to identify any areas of non-compliance and therefore have provided reasonable grounds to form a view on whether each house, as a whole, complies with the building code.

## 6 The expert's report

- 6.1 The expert inspected the interior and exterior of the buildings with the associated siteworks on 10 April 2006 and 11 April 2006, and furnished a report that was completed on 15 May 2006. The expert noted that conclusions reached were based on assumptions made after consideration of available information, building certifier's and engineer's records, investigations carried out and overall impressions of the houses.

- 6.2 The expert noted that the houses as built reflected a number of changes from the consent drawings; most being minor internal and window layout amendments. The more significant changes were noted as:

- Unit B – the external corner of the first floor dining room has been changed from masonry to monolithic cladding on timber and steel framing
- Unit D – the roof structure has been amended to form a roof deck, with balustrades added at the perimeter
- Unit D – the timber deck has been increased in size.

### 6.3 Exterior claddings

- 6.3.1 The expert inspected the claddings and noted that penetrations appeared well-sealed, the window installation within the masonry walls appeared satisfactory and that clearances from the ground were generally not a relevant issue as the basement walls were of masonry construction.

- 6.3.2 The expert noted that windows installed within monolithic claddings were face-fixed and sealed behind the window flanges, with head flashings but no jamb or sill flashings.

- 6.3.3 The expert made the following specific comments on the claddings:

#### **Window and door joinery:**

- the windows in the monolithic claddings rely on sealants at the jambs for weatherproofing, which will be extremely difficult to access for inspections and maintenance in many areas around the buildings
- the timber jamb scribes to the windows in weatherboard walls are unsealed
- Units C and D – the profile and thickness of the timber scribes to the windows in weatherboard walls provides inadequate weatherproofing at the jambs
- the windows in the monolithic cladding have head flashings that are embedded within, or sealed to, the plaster coating in some locations

**Inter-cladding junctions:**

- the horizontal and vertical junctions between the three different types of cladding lack control joints and are inadequately weatherproofed in most locations. This applies to the:
  - weatherboards above or beside masonry walls
  - monolithic cladding above or beside masonry walls
  - junctions of weatherboards with monolithic cladding
- there are locations where the concrete floor slabs project beyond the wall line and the monolithic cladding butts against the concrete with no capillary breaks or flashings at the junctions
- moisture levels of more than 30% were recorded in the weatherboard cladding of Unit D, which has similar inadequately weatherproofed junctions to those in the other units. (I accept that the moisture levels noted in these locations are typical of similar locations in the other three houses.)

**Roofs and decks:**

- the roof parapets are capped with stainless steel flashings, which have poorly weatherproofed joints that are heavily reliant on sealants
- Unit D – the fixings of the balustrades to the roof deck penetrate the membrane
- the masonry balustrades to the decks over living areas butt against the weatherboard claddings, with inadequate weatherproofing of the junction
- clearances to the bottom of the wall claddings are inadequate in some places

**Projecting box structures:**

- the junctions with the masonry walls lack provision for movement and are poorly weatherproofed
- Unit C – the top to the box appears to be monolithic clad
- Unit A – the junction of the decorative tile face to the box roof is poorly weatherproofed

**Other issues:**

- there are no horizontal control joints in some areas of monolithic cladding (for example the box structures), where wall dimensions exceed the length limits recommended in NZS 4251, the Code of Practice for solid plastering.
- there are cracks in the monolithic cladding in several locations, although no evidence of associated moisture penetration
- Unit B – the column in the northwest corner (at the dining room) is framed and clad with plastered fibre cement that is buried in the ground at the base. The plaster is wet and peeling – and moisture was recorded at 22% within the framing
- Unit B – the timber fascia to the west elevation is unsealed and unpainted.

## **6.4 Other relevant code clauses**

6.4.1 The expert inspected the interior and exterior of the buildings (together with the available documentation) with regard to compliance with the other provisions of the building code that were relevant to these particular buildings.

6.4.2 The expert noted that compliance with clause B1 Structure is supported by the engineer's inspections and producer statement, and that certificates of compliance had been provided to cover compliance with clauses G9 and G11. The expert also noted that no issues of non-compliance were observed with respect to clauses G1, G2, G4, G5, G6, G7 and G8.

### **6.4.3 The remaining code clauses**

6.4.3.1 The expert inspected and reported on issues noted with regard to compliance with the remaining code clauses, and commented specifically as noted below. (Where individual units are not identified, the comment applies to all units.)

#### **6.4.3.2 C1 to C4 Fire**

- the lengths of the exterior open pathways need to be verified as not exceeding 24 metres in length
- Units C and D – sections of wall and eaves appear to be 1m or less apart without the required fire rating for this proximity

#### **6.4.3.3 D1 Access routes**

- the polyurethane finish to the timber treads of the internal stairs lack the required slip resistance
- three out of the four interior stair flights within each house have open risers with the openings greater than 100mm
- the external stair flights have open risers greater than 100mm

#### **6.4.3.4 E1 Surface water**

- Unit B – the ground level is below the road level, with the driveways of units C and D sloping towards a strip drain. Calculations should be provided to demonstrate the compliance of the stormwater drainage system provided
- Unit A – internal downpipes are housed within the framed box structure, and testing results should be provided to verify compliance of the system provided

#### **6.4.3.5 E3 Internal moisture**

- Documented verification of the installation of the wet area membranes should be provided by the installer of the membranes

#### **6.4.3.6 F4 Safety from falling**

- the heights of sills to opening windows that are sited above permanent fixtures should be checked to ensure compliance

- the lower panes of glass at the internal stair flights should be verified as meeting the required strength

#### **6.4.3.7 F7 Warning systems**

- there is a lack of, or poor positioning of smoke alarms in the buildings

#### **6.4.3.8 G13 Foul water**

- individual as-built plans are required for each house

#### **6.4.3.9 H1 Energy efficiency**

- the presence of ceiling insulation was checked by removing some light fittings, and no insulation could be seen.

6.4.4 The expert also made the following additional comments:

- the pitches of the internal stair flights are several degrees steeper than that called for in the acceptable solution to D1, but the stairs as constructed appear to be adequate in the circumstances
- the head height at the bottom of the internal stair flights is slightly less than that called for in the acceptable solution to D1, but the height provided appears to be adequate in the circumstances
- While the stainless plates to the balustrades have holes, these have sharp edges that will not provide toe holds and so are considered to comply with clause F4.

### **6.5 Incidental matters**

6.5.1 The expert also noted the following incidental issues:

- Unit A – the eaves appear to encroach over the road boundary to the north
- Unit B – the eaves appear to encroach over the west boundary
- Unit D – the addition of the roof deck and balustrade appears not to have a consent.

6.5.2 Copies of the expert's report were provided to each of the parties on 17 May 2006. The applicant responded that the report was accepted, noting that:

- there were three types of welds, some more critical to the structure than others but that welding certificates would be obtained
- there are membranes between the timber and masonry on the 100mm nib upstands
- a plumbing leak has been fixed.

## 7 Evaluation for code compliance

### 7.1 Evaluation framework: exterior cladding

7.1.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solutions<sup>3</sup>, which will assist in determining whether the features of these houses are code compliant. However, in making this comparison, the following general observations are valid:

- Some Acceptable Solutions 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 some other provision to compensate for that in order to comply with the Building Code.

7.1.2 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 (refer to Determination 2004/1 et al)<sup>4</sup> relating to cladding and these factors are also used in the evaluation process.

7.1.3 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 the quality of its installation to be carefully carried out.

### 7.2 Weathertightness risk

7.2.1 In relation to these characteristics I find that the houses:

- are built in a very high wind zone
- are a maximum of four storeys high
- have enclosed decks, with masonry floors and balustrades, which are situated over living areas
- have decks that are open beneath
- have flat roofs at varying levels

<sup>3</sup> An Acceptable Solution is a prescriptive design solution approved by the Department that provides one 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>4</sup> Copies of all determinations issued by the Department can be obtained from the Department's website.

- are complex in plan and in form, with a variety of different claddings
- have areas of monolithic and weatherboard claddings that are fixed directly to the framing or to horizontal battens
- have eaves projections that vary from 400mm to 600mm
- have external wall framing to some walls that is unlikely to be treated to a level that is effective in helping resist decay if it absorbs and retains moisture.

7.2.2 When evaluated using the E2/AS1 risk matrix, these weathertightness features show that the elevations of each of the buildings demonstrate a high weathertightness risk rating. The matrix is an assessment tool that is intended to be used at the time of application for consent, before the building work has begun and, consequently, before any assessment of the quality of the building work can be made. Poorly executed building work introduces a risk that cannot be taken into account in the consent stage but must be taken into account when the building as actually built is assessed for the purposes of issuing a code compliance certificate.

### **7.3 Weathertightness performance: exterior cladding**

7.3.1 Generally the claddings appear to have been installed in accordance with reasonable trade practice, but some junctions, penetrations and edges are not well constructed. These areas are described in paragraph 6.3.3 and in the expert's report as being the:

- installation of the windows within the weatherboard and monolithic claddings
- lack of control joints within areas of monolithic cladding and at junctions with other materials
- inadequate weatherproofing of vertical and horizontal inter-cladding junctions
- inadequate weatherproofing of the monolithic cladding against the projecting concrete floor slabs
- poorly weatherproofed joints to the stainless steel parapet cappings
- penetration of the balustrade fixings through the roof deck membrane in Unit D
- inadequate weatherproofing of the junctions of the masonry deck balustrades with the weatherboard cladding
- the clearance at the bottom of the wall claddings to the decks in some locations
- inadequate weatherproofing of the junctions of the projecting box structures with the masonry walls
- inadequate weatherproofing of the tops of the projecting box structures in Units A and C
- cracks to the monolithic cladding in several locations
- inadequate clearance at the bottom of the monolithic clad column to Unit B
- unsealed timber fascia to Unit B.

7.3.2 Notwithstanding the fact that the monolithic and weatherboard claddings are fixed directly to the timber framing (or to horizontal timber battens), thus inhibiting drainage and ventilation behind the cladding, I have noted certain compensating factors that assist the performance of the cladding in this particular case:

- the claddings appear to have been installed to reasonable trade practice
- have eaves projections that provide reasonable protection to the cladding areas below them
- most of the walls and floor slabs are of block masonry or reinforced/composite concrete construction.

7.3.3 I consider that these factors help compensate for the lack of a ventilated cavity and can assist the building to comply with the weathertightness and durability provisions of the Building Code.

#### **7.4 Other relevant code clauses**

7.4.1 Generally, the remaining areas of the buildings appear to have been constructed in accordance with good trade practice and with the building code. However, there are some areas to be remedied or checked as complying with acceptable solutions or the code, and these are as described in paragraph 6.4.3 as being the:

- length of the open pathways
- inadequate fire rating of walls and eaves in Units C and D that are 1 metre or less apart
- inadequate slip resistance to the interior stairs
- height of the open risers to the interior and exterior open stairs
- documented verification of adequate drainage at the strip drain to Unit B
- documented verification of compliance of the internal downpipes of Unit B
- documented verification of installation of the wet area membrane
- verification of sill heights of opening windows above permanent fixtures
- documented verification of the adequacy of glass adjacent to stair flights
- inadequate numbers and positioning of smoke alarms
- provision of individual as-built plans for sewerage
- verification of installation of adequate ceiling insulation

7.4.2 I note the expert's comments in paragraph 6.4.4 on the pitches of and the ceiling heights above the internal stair flights, and accept that these are less than shown the

Acceptable Solution to clause D1 Access Routes. Notwithstanding this, the stairs in these houses appear to provide effective access for the occupants, and I therefore consider that the pitches and ceiling heights provided are adequate in these cases.

- 7.4.3 I also note the expert's comment in paragraph 6.4.4 on the holes in the stainless steel plates to the balustrades and accept that, as the sharp edges do not provide toe holds, the balustrades comply with clause F4 Safety from Falling.

## **8 Conclusions**

### **8.1 Exterior claddings**

- 8.1.1 I am satisfied that the current performance of the monolithic and weatherboard claddings is not adequate because they are allowing water penetration into the buildings at a number of locations at present. Consequently, I am satisfied that these cladding systems as installed on the units do not comply with clause E2 of the Building Code.
- 8.1.2 In addition, the houses are 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 a building to remain weathertight. Because the cladding faults on the buildings are likely to allow the ingress of moisture in the future, the units do not comply with the durability requirements of clause B2.
- 8.1.3 Subject to further investigations that may identify other faults, I consider that, because the faults that have been identified with the cladding systems occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 7.3.1 should be expected to result in the building becoming and remaining weathertight and in compliance with clauses B2 and E2.
- 8.1.4 Effective maintenance of claddings (in particular of monolithic cladding) is important to ensure ongoing compliance with clauses B2 and E2 of the Building Code and is the responsibility of the building owner. Clause B2.3.1 of the Building Code requires that the cladding be subject to "normal maintenance", however, that term is not defined in the Act.
- 8.1.5 I take the view that normal maintenance is that work generally recognised as necessary to achieve the expected durability for a given building element. With respect to the cladding, the extent and nature of the maintenance will depend on the material, or system, its geographical location and level of exposure. Following regular inspection, normal maintenance tasks shall include but not be limited to:
- where applicable, following manufacturers' maintenance recommendations
  - washing down surfaces, particularly those subject to wind-driven salt spray
  - re-coating protective finishes
  - replacing sealant, seals and gaskets in joints.

- 8.1.6 As the external wall framing of this building is untreated, periodic checking of its moisture content should also be carried out as part of normal maintenance.

## **8.2 Other code clauses**

- 8.2.1 Subject to further investigations that may identify other faults, I consider that satisfactory rectification of the non-compliant items and completion of the outstanding items outlined in paragraph 7.4.1 should be expected to result in the building being in compliance with other relevant clauses of the building code.
- 8.2.2 I note that several other matters have been identified in paragraph 6.5.1, and I draw these to the attention of the territorial authority.

## **8.3 General**

- 8.3.1 It is emphasised that each determination is conducted on a case-by-case basis. Accordingly, the fact that a particular component has been established as being code compliant in relation to a particular building does not necessarily mean that the same component will be code compliant in another situation.
- 8.3.2 In the circumstances, I decline to incorporate any waiver or modification of the Building Code in this determination.

## **9 Discussion**

- 9.1 As outlined in paragraph 5, I consider that the available documentation, together with further investigation, have allowed me to form a view as to the code compliance of these buildings. I consider that the investigations into these units have provided evidence that the units do not comply with all relevant clauses of the building code.

## **10 The decision**

- 10.1 In accordance with section 188 of the Act, I hereby determine that these units do not comply with clause E2 of the Building Code. There are a number of items to be remedied to ensure that the units become and remain weathertight and thus meet the durability requirements of the code. Consequently, I find that the houses do not comply with clause B2.
- 10.2 In accordance with section 188 of the Act, I hereby also determine that these houses do not comply with several other relevant clauses of the Building Code. There are a number of items to be remedied, or documentation provided, to ensure that the houses meet the other requirements of the code. Consequently, I find that the houses do not comply with clauses C1 to C4, D1, E1, E3, F4, F7, G13 and H1.
- 10.3 Accordingly, I confirm the territorial authority's decision to refuse to issue a code compliance certificate.

- 10.4 I also find that rectification of the items outlined in paragraph 7.3.1 will consequently result in the units being weathertight and in compliance with clauses B2 and E2, and that rectification or verification of the items outlined in paragraph 7.4.1 will consequently result in the units being in compliance with the other relevant clauses in the building code. Work to correct these items may expose additional associated defects that are not yet apparent. All rectification work is to be completed to the approval of the territorial authority.
- 10.5 I note that the territorial authority has not issued a notice to fix. A notice to fix should be issued that requires the owners to bring the buildings into compliance with the building code, without specifying the features that are required to be incorporated. 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 owner to propose and for the territorial authority to accept or reject.
- 10.6 I would suggest that the parties adopt the following process to meet the requirements of paragraph 10.5. Initially, the territorial authority should issue a notice to fix, listing all the items that the territorial authority considers to be non-compliant. The owner 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 issues. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 8 August 2006.

John Gardiner  
**Determinations Manager**