Determination 2007/47

Refusal of a code compliance certificate for four units with brick veneer and monolithic cladding systems at 1/131, 3/131, 4/131 and 5/131, Luke Street, Otahuhu, Auckland

1. The matter 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. The applicant is the owner of 4/131 ("Unit 4"), Mr Sharma ("the applicant"), and the other party is the Auckland City Council ("the territorial authority"). The owners of the other units are Mr and Mrs Steiner for 1/131 ("Unit 1"), Mr Singh for 3/131 ("Unit 3") and Mr West for 5/131 ("Unit 5"). The owners of Units 1, 3 and 5 are considered to be interested parties to the matter to be determined.

[1] The Building Code and the Building Act 2004 are available from the Department's website at www.dbh.govt.nz.

1.2 This determination arises from the decision of the territorial authority to refuse to issue a code compliance certificate, for reasons set out in several notices to fix, for a group of six 6 to 7-year old detached houses ("the units"), which were constructed under a single building consent. The territorial authority has refused to issue a code compliance certificate for four of the units because it is not satisfied that they comply with various clauses of the Building Code[2] (First Schedule, Building Regulations 1992). The matter to be determined is whether the territorial authority's decision not to issue a code compliance certificate is correct.

1.3 I am not aware of any outstanding matters relating to the other two units in this group of buildings, and the determination is therefore limited to Unit 1, Unit 3, Unit 4 and Unit 5 (refer paragraph 3.2).

1.4 The matters for determination are whether:

Matter 1: The cladding

the cladding as installed on the units ("the cladding") complies with clause E2 "External Moisture" 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 plaster and/or the coatings) as well as the way the components have been installed and work together

Matter 2: The other compliance considerations

the building work complies with clauses F2 "Hazardous Building Materials", F7 "Warning Systems" and G13 "Foul Water" of the Building Code

Matter 3: The durability considerations

the elements that make up the building work comply with clause B2 "Durability" of the Building Code, taking into account the age of the building work.

1.5 In its submission made in response to the draft determination, (refer paragraph 4.7) the territorial authority proposed that its decision to issue one consent for the six units be reversed and the single consent replaced with six consents, one for each of the 6 units concerned. I have considered this matter in paragraphs 10.1 to 10.4.

1.6 I note that the notices to fix (refer paragraph 3.6) each refer to a corresponding Site Inspection Notice. I have received limited information relating to these items and no advice that the items in the Site Inspection Notice are in dispute, apart from the items that fall under Matters 1 and 2 above. I therefore consider that these matters are best left to the individual owners to resolve with the territorial authority.

1.7 In making my decision 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. As regards the cladding, I have evaluated this information using a framework that I describe more fully in paragraph 6.1.

[2] The Building Code is available from the Department's website at www.dbh.govt.nz.

1.8 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 buildings

2.1 The buildings consist of four 2-storey detached houses situated on flat site in a high wind zone for the purposes of NZS 3604[3]. Units 1, 3 and 4 have identical designs and layouts, while Unit 5 incorporates several additional features.

2.2 All units

2.2.1 Each house is two storeys high, except for single-storey ground floor projections above part of the garage. Construction is conventional light timber frame, with concrete slab and foundations, aluminium windows, brick veneer to the lower walls and monolithic wall cladding to the upper walls. The house shape is fairly simple in plan, with 25^{o} pitch pressed metal tile hip roofs over upper and lower roofs and a gable that projects to the east to form an entrance canopy. Eaves projections are 500mm wide above all upper and lower walls, with the lower eaves continuing around the two-storey walls as planted projections at the interstorey level. A large curved-top feature window is installed above the main entry on the upper east wall.

2.3 Unit 5 only

2.3.1 The gabled entry canopy of Unit 5 extends from the upper roof, and is supported by two-storey high timber posts.

2.3.2 A cantilevered deck, with a tiled floor and monolithic-clad balustrades, extends from the north wall of an upper floor bedroom. A timber-framed pergola, covered with a clear corrugated plastic roof, extends from the north wall of the ground floor living area to form a porch above a timber-slatted deck area.

2.4 The expert was unable to sight the wall framing. I have received no other evidence as to the treatment, if any, of the external wall framing timber. Given the lack of evidence and the date of construction of the houses, I consider that the external wall framing 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 cladding system to the upper walls of the houses is what is described as monolithic cladding, and is a flush-finished fibre-cement system with 7.5 mm thick fibre-cement sheets fixed through the building wrap to the framing, and finished with an applied textured coating system. The lower wall cladding is brick veneer, with painted fibre-cement infill panels above the windows.

2.6 I have seen no evidence of producer statements or warranties for the monolithic cladding system.

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

3. Sequence of events

3.1 The territorial authority issued a building consent (No 98/02354) on 8 April 1998, based on a building certificate (No 98-0699) issued by A1 Building Certifiers Ltd ("the building certifier") on 21 March 1998. The building certifier carried out various inspections of the units during construction.

3.2 The building consent initially included 7 detached houses, with one of the houses subsequently excluded from the consent as it was not constructed. Of the six remaining buildings, Units 7 and 8 are single-storey brick veneer houses that are apparently not the subject of any dispute as to code compliance. These units are therefore not considered further within this determination (refer paragraph 1.3).

3.3 Construction of the units

3.3.1 Construction of Unit 5 commenced in June 1999, and the building certifier carried out a pre-line inspection on 18 August 1999, inspection of brick veneer on 10 September 1999 and the final inspection on 7 March 2000.

3.3.2 Construction of Unit 4 commenced in August 1999, and the building certifier carried out a pre-line inspection on 22 October 1999, inspection of brick veneer on 29 November 1999 and the final inspection on 7 March 2000.

3.3.3 Construction of Unit 1 commenced in September 1999, and the building certifier carried out a pre-line inspection on 2 December 1999, inspection of brick veneer on 18 January 2000 and the final inspection on 7 March 2000.

3.3.4 Construction of Unit 3 commenced in March 2000, and the building certifier carried out a pre-line inspection on 14 April 2000, inspection of brick veneer on 15 May 2000 and the final inspection on 16 May 2001.

3.4 The building certifier issued interim code compliance certificates dated 7 March 2000 for Units 1, 4 and 5, and an interim code compliance certificate dated 23 May 2001 for Unit 3 and there are no records of any further inspections.

3.5 In a letter dated 3 December 2002 to the previous owners of Unit 1, the territorial authority explained that the building certifier was unable to complete inspections and to issue code compliance certificates for the units. I note that the owners of Units 3, 4, and 5 have stated that they have not received copies of this letter. (I also note that, although the territorial authority stated that only some inspections had been completed, the inspection records indicate that all necessary inspections were completed as outlined in section 3.3 above.) No further inspections were undertaken until the territorial authority carried out final inspections of the units on 11 September 2006.

3.6 The notices to fix

3.6.1 In letters dated 18 September 2006 to the individual owners of the units, the territorial authority attached separate notices to fix dated 22 September 2006 (with

photographs of defects), and concluded that it could not be satisfied that the building work complied with the building code. The territorial authority also noted that it could not issue a code compliance certificate until all six units were code compliant as:

> the units numbers 1,3,4,5,7 and 8 are all still under the one Building Consent, therefore, the consent can only be considered finalised when all remaining units are code compliant.

3.6.2 Each notice to fix listed non-compliant items and contained matters common to all units and matters specific to individual units, as follows:

3.7 All units

3.7.1 The notice to fix for each unit listed the following matters that were not in accordance with manufacturers' instructions or the acceptable solutions of the building code:

- The lack of vertical control joints in the monolithic cladding.
- Cracks and penetrations through the monolithic cladding.
- The junction of head flashings with the monolithic cladding.
- The lack of sill flashings and sill drainage gaps in the monolithic cladding.
- Poorly sealed penetrations through the monolithic and brick claddings.
- Inadequate gully traps.
- Lack of smoke detectors.

3.7.2 Each notice to fix referred to a "Site Inspection Notice" that detailed additional items specific to the unit concerned. The parties supplied Site Inspection Notices for all units except Unit 3.

3.7.3 The notice to fix also outlined durability requirements for all of the building elements, noting that the required periods were timed from the date of issue of the Code Compliance Certificate and not from the date of construction.

3.8 Unit 1

The notice to fix for Unit 1 also included matters relating to:

- an inadequately protected extractor fan grille
- penetrations from a TV dish and coaxial cable
- the installation of a large curved top window not included in the consent.

3.9 Unit 3

The notice to fix for Unit 3 also included matters relating to:

- vegetation in gutters
- the debris accumulation in and lack of grate to the driveway sump

- the installation of a large window with a curved head not included in the consent.

3.10 Unit 4

The notice to fix for Unit 4 also included matters relating to:

- areas of uncoated cladding
- inadequately installed coaxial cable
- the installation of a large curved top window not included in the consent.

3.11 Unit 5

The notice to fix for Unit 5 also included matters relating to:

- an inadequate extractor fan grille
- uncoated edges of infill panels above lower windows
- inadequately installed coaxial cable
- the change from the building consent for:
  - the tiled upper deck floor and monolithic clad balustrades
  - the roofed pergola porch
  - the water tank and associated plumbing.

3.12 An application for a determination was received by the Department on 24 October 2006 from the owner of Unit 4. Subsequent correspondence resulted in the owners of Units 1, 3 and 5 joining the determination as related parties.

4. The submissions

4.1 In a letter dated 9 October 2006, which accompanied the application, the applicant outlined the history of Unit 4 and explained that a code compliance certificate should have been issued when all of the units were completed, inspected and reported as satisfactory by the building certifier, but the matter had not been followed up at the time by the territorial authority or the previous owner. The applicant noted that he wanted to work with the territorial authority to resolve the issues but felt that some items in the notice to fix were unreasonable, too expensive and/or resulted from changes in building requirements since the time of construction of the house.

4.2 The applicant forwarded copies of:

- the building certifier's inspection records
- the interim code compliance certificate dated 17 April 2000
- the territorial authority's final inspection records dated 11 September 2006

- the notice to fix dated 22 September 2006.

4.3 The owners of Units 1 and 5 also made submissions along similar lines to that made by the applicant (refer paragraph 4.1) and forwarded copies of some documentation relating to their respective houses.

4.4 In a letter to the Department dated 31 August 2006, the territorial authority said that it drew to the Department's attention that:

> [the applicant's dwelling] is in fact only one of six constructed under the same building consent. Assuming it is the applicant's intention that at the end of the determination process they will obtain a Code Compliance Certificate, this will not be possible until all the units are compliant.

4.5 The territorial authority forwarded copies of:

- the consent documentation
- the drawings
- the building certifier's records
- the records of the territorial authority's final inspections
- the letter to the Unit owners dated 18 September 2006
- the notices to fix dated 22 September 2006
- various other producer statements, information and other statements.

4.6 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.

4.7 A copy of the draft determination was issued to the parties on 30 January 2007. The draft was issued for comment and for the parties to agree a date when the units complied with the Building Code Clause B2 Durability.

4.8 The parties accepted the draft. The applicant (the owner of Unit 4) submitted that 23 May 2001 was the appropriate date when Unit 4 complied with B2. The owners of Units 1, 3 and 5 submitted that 16 May 2001 was the appropriate date when those units complied with B2.

4.9 In a letter to the Department dated 12 March 2007, the territorial authority submitted that the appropriate date when the building elements complied with clause B2 was 7 March 2000 for Units 1, 4, and 5, and 23 May 2001 for Unit 3.

4.10 As there is a single building consent, the date for compliance for all the building work is the latest date at which all units became compliant. This date was 23 May 2001, which I therefore accept as the date when all the units complied with B2.

5. The expert's report

5.1 The expert inspected the claddings of the units on 7, 8 and 13 December 2006, and furnished a report that was completed on 15 December 2006. The expert noted that the brick veneer cladding, ground clearances and roof flashings generally appeared satisfactory. The expert noted that the fibre-cement backing sheets of the monolithic cladding appeared "generally straight and fair" with the coating "generally uniform and well-adhered", although the coating was thin or missing in some areas.

5.2 The expert noted that the construction of Units 1, 3 and 4 appeared to generally conform to the consent drawings, except for the large curved-top window above the entry areas. Unit 5 varied from the consent drawings with regard to:

- the solid paved floor to the upper deck
- the monolithic-clad balustrades to the upper deck
- the lean-to porch area to the north wall of the living area.

5.3 Windows

5.3.1 The expert noted that the windows in the monolithic cladding were face-fixed with metal head flashings and no sill flashings – and with the coating applied after the window installation. The expert inserted a feeler gauge behind the window jamb flanges to investigate jamb seals, and noted that the windows in Unit 3 had sealant behind the jamb flanges while those in the other units had no seals.

5.3.2 The expert noted that the windows in the brick veneer were recessed into the brick, without seals and with sloping brick sills. Small panels of fibre-cement sheet overlapped the head window flanges – with the 500mm eaves sheltering the window heads. The expert noted that the window installation appeared satisfactory in the circumstances.

5.4 The expert took non-invasive moisture readings through internal linings of exterior walls throughout the house, and no elevated readings or signs of moisture ingress were noted. The expert took invasive moisture readings through the monolithic cladding at various risky areas in each unit, and the following results were recorded:

Unit 1

- the highest reading was 17%

Unit 3

- the highest reading was 15%

Unit 4

- 20% under the sill of bedroom 2 (at a joint crack)

Unit 5

- 28% in the bottom plate beside the doors to the upper deck
- more than 30% in the top plate of the monolithic-clad balustrade

Moisture levels above 18% recorded after cladding is in place generally indicate that external moisture is entering the structure.

5.5 The expert made the following specific comments on the buildings:

5.5.1 All units

- There are no vertical control joints in the 9.7m upper north walls, where the length of monolithic cladding exceeds the 5.4m limit between control joints that is recommended by manufacturers of flush-finished fibre-cement cladding systems.
- There are joint cracks in the monolithic cladding in some areas.
- The fibre-cement sheet below the windowsills is uncoated or thinly coated in some areas, and in some areas the coating has blocked the drainage gap at the sill flange.
- Except for Unit 3, there are no seals behind the window jamb flanges.
- The fixings of the downpipe brackets are inadequately sealed.
- The meter boxes are not sealed against the brick veneer, with gaps apparent.

5.5.2 Units 1 and 4

- The TV aerial penetrations through the cladding are inadequately sealed.
- The gully traps are inadequately protected from ground water entry.

5.5.3 Unit 3

- The soil at the northwest corner covers the bottom of the brick veneer, resulting in inadequate clearance to the brick veneer.

5.5.4 The upper deck to Unit 5

- There is no clearance from the tiled deck floor to the wall cladding, and moisture has penetrated into the adjacent bottom plate.
- The uncapped balustrade top is flat, and there are cracks in the cladding that have allowed water to penetrate into the balustrade framing.
- There is no overflow outlet and the deck floor feels “spongy” – indicating moisture entry into the substrate.

5.6 The expert made the following additional comments:

- Units 1, 3 and 4 have too few or no smoke alarms for the bedrooms.
- Although clearances from some areas of concrete paving to the brick veneer is less than specified in E2/AS1, the areas are well drained and sheltered by eaves and there is no indication of associated water penetration into the framing.

5.7 The notices to fix

The expert commented on the notices to fix, and this paragraph outlines those items that are not applicable or are considered to be adequate in the circumstances.

5.7.1 All units

- Item 2.1c): The window head flashings in the monolithic cladding appear satisfactory and are well sheltered beneath 500mm eaves.
- Item 2.1d): Sill flashings in monolithic cladding were not a manufacturer's requirement at the time of construction.
- Item 2.1e): There are no plumbing penetrations through the monolithic cladding, so the use of pipe flanges is not applicable.
- Item 2.2a): Except for the electrical meter boxes, the penetrations through the brick veneer cladding are adequately sealed in the circumstances.
- Item 2.2c): Except for one location at Unit 3, clearances of the brick veneer above the ground and paving is adequate in the circumstances (refer paragraph 5.6).
- Item 3: The brick veneer cladding generally appears to be adequate. (Refer to paragraph 5.5 1 for defects identified in the monolithic cladding).
- Item 5.0b): The shower glass in each unit is marked as "ASNZ 2208: 1996", indicating safety glass is installed as required.

5.7.2 Unit 1

- Item 2.2b): The extractor fan grille is adequately protected with mesh.

5.7.3 Unit 3

- Item 2.1d): The windows in the monolithic cladding appear to incorporate adequate sealant behind the jamb flanges.
- Item 2.2b): The fibre-cement infill panels above the windows in the brick veneer are painted and well protected by the 500mm eaves directly above and are adequate in the circumstances.
- Item 2.3a): Raised gully trap surrounds have been installed since the notice to fix was issued – and these appear to be satisfactory.
- Item 2.4a): There is no TV dish and cable penetration through the cladding.

5.7.4 Unit 5

- Item 2.2b): A new "fin-type" extractor fan grille has been installed.
- Item 2.3a): Raised gully trap surrounds have been installed since the notice to fix was issued – and these appear to be satisfactory.
- Item 2.4a): There is no TV dish and cable penetration through the cladding.
- Item 5.0: The smoke alarms appear to meet current code requirements.

5.8 A copy of the expert's report was provided to each of the parties on 20 December 2006.

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[4], 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 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.

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[5] (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.

[4] 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.
[5] 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 all of the units:

- are built in a high wind zone
- are a maximum of two storeys high
- are fairly simple in plan and form, with two types of wall cladding
- have attached timber slat decks
- have eaves projections of 500mm over all walls at each level
- have monolithic cladding on upper walls, which is fixed directly to the framing
- have external wall framing that is not likely to be treated to a level that will provide resistance to the onset of decay if the framing absorbs and retains moisture.

6.2.2 In addition to the items outlined in paragraph 6.2.1, Unit 5 also has a cantilevered deck from the upper floor, with a solid floor and monolithic-clad balustrades.

6.2.3 When evaluated using the E2/AS1 risk matrix, all elevations of Units 1, 3 and 4 demonstrate a moderate weathertightness risk rating. For Unit 5, 3 elevations demonstrate a moderate weathertightness risk rating and one a high 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.

6.3 Weathertightness performance and other compliance matters

6.3.1 Generally the claddings appear to have been installed in accordance with good trade practice. However, some junctions, edges and penetrations are not well constructed, and these areas are described in paragraph 5.5 and in the expert's report (together with other areas of non-compliance). Taking account of the expert's opinion I consider that work is necessary to fix the following:

All units

- The lack of vertical control joints in the 9.7m upper north walls.
- The joint cracks in the monolithic cladding.
- The inadequate coating to the fibre cement below the windowsills, and the blocked drainage gap at the sill flange in some areas.
- Except for Unit 3, the lack of seals behind the window jamb flanges.

- The inadequately sealed fixings of the downpipe brackets.
- The inadequately sealing of the meter boxes to the brick veneer.

Units 1 and 4

- The inadequately sealed TV aerial penetrations through the cladding.
- The inadequate protection from ground water entry of the gully traps.

Unit 3

- The inadequate clearance to the brick veneer at the northwest corner.

Unit 5 (the upper deck)

- The lack of clearance from the tiled deck floor to the wall cladding.
- The flat uncapped top and cracks in the monolithic-clad balustrades.
- The lack of overflow outlet and moisture entry into the deck substrate.

Work associated with the above

- Any other building elements associated with the above that are consequently discovered to be in need of rectification.

6.3.2 I note the expert's additional comments in the second bullet-point in paragraph 5.6, and accept that these features are adequate in the circumstances.

6.3.3 I also note the expert's comments in paragraph 5.7 on certain items included in the notices to fix, and accept that these items are now not applicable or are acceptable in the circumstances.

6.3.4 I also note that the territorial authority identified the lack of adequate smoke alarms, (which the expert has confirmed for Units 1, 3, and 4 in paragraph 5.6) and, although these were not required by the Building Code at the time of construction, I recommend that these be installed. However, the installation of smoke detectors should not be included in any new notice to fix.

6.3.5 Notwithstanding the fact that the cladding is fixed directly to the timber framing, thus limiting drainage and ventilation behind the cladding, I have noted certain compensating factors that assist the performance of the cladding in these particular cases:

- Apart from the noted exceptions the cladding is installed to good trade practice.
- The houses have eaves projections over all upper and lower walls, which provide good protection to the cladding below them.
- The monolithic cladding is limited to the upper walls, most of which are directly above brick veneer that incorporates a 40mm cavity.

With respect to the half height eaves projections, I note that the E2/AS1 risk matrix

methodology (refer paragraph 6.2.3) does not take account of the reduction in risk arising from weathershielding features of this type. A rational re-assessment incorporating this risk reduction would classify this dwelling as low risk. I note that E2/AS1 would permit the use of face-fixed fibre-cement cladding on a low risk dwelling without the need for a drained and vented cavity.

6.3.6 I consider that these factors help compensate for the lack of a drained cavity to the upper walls, and can assist the units to comply with the weathertightness and durability provisions of the Building Code.

Matter 1: The cladding

7. Discussion

7.1 Taking into account the expert's report, I am satisfied that there is no evidence of external moisture entering Unit 1 and Unit 3, and accordingly, that the claddings of Unit 1 and Unit 3 do currently comply with clause E2. However, I consider the expert's report establishes that the current performance of the cladding of Unit 4 and Unit 5 is not adequate because it is allowing some water penetration into the buildings at present. Consequently, I am satisfied that Unit 4 and Unit 5 do not comply with clause E2 of the Building Code.

7.2 The units 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 the building to remain weathertight. Because the cladding faults are likely to allow the ingress of moisture in the future, the units (Units 1, 3, 4 and 5) do not comply with the durability requirements of clause B2.

7.3 Because the faults identified with the cladding systems occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 6.3.1 will result in the units remaining or becoming weathertight and in compliance with clause B2. I have given further consideration to the question of B2 compliance under Matter 3 of this determination.

7.4 I emphasise that each determination is conducted on a case-by-case basis. Accordingly, the fact that a particular cladding system has been established as being code compliant in relation to a particular building does not necessarily mean that the same cladding system will be code compliant in another situation.

7.5 Effective maintenance of claddings (in particular of monolithic claddings) 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.

7.6 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 should 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.

7.7 As the external wall framing of the units is unlikely to be treated to a level that will resist the onset of decay if it gets wet, periodic checking of its moisture content should also be carried out as part of normal maintenance.

Matter 2: The other compliance considerations

8. Discussion

8.1 Taking into account the expert's report, I am satisfied that:

- the showers incorporate safety glass, and accordingly that the units comply with the requirements of clause F2
- the units complied with the requirements of clause F7 at the time of construction
- improvements to gully traps have been carried out to Unit 3 and Unit 5 since the issuing of the notices to fix, and accordingly that these units do currently comply with clause G13.

8.2 However, I consider the expert's report establishes that the gully traps of Unit 1 and Unit 4 are not adequate and I am consequently satisfied that Unit 1 and Unit 4 do not comply with clause G13 of the Building Code.

8.3 Although they were not required at the time of construction, I recommend that smoke alarms be installed in accordance with the current requirements of the building code (refer paragraph 6.3.4). The installation of smoke detectors is not to appear on a new notice to fix.

Matter 3: The durability considerations

9. Discussion

9.1 The territorial authority has concerns about the durability, and hence the compliance with the building code, of certain elements of the units, taking into consideration the completion of all of the units by May 2001. I also note that the building certifier's records indicate compliance with clause B2 at the time of those inspections.

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 I am satisfied that all the building elements installed in the units, apart from items that have to be rectified as described in paragraph 6.3, complied with clause B2 on 23 May 2001. How this date has been arrived at is discussed in paragraph 4.10.

9.5 In order to address these durability issues, I sought some clarification of general legal advice about waivers and modifications. I have now received that clarification and the legal framework and procedures based on this clarification are described in previous determinations (for example, Determination 2006/85) and are used to evaluate the durability issues raised in this determination.

9.6 I continue to hold that view, and therefore conclude that:

(a) the territorial authority has the power to grant an appropriate modification of clause B2 in respect of the building elements

(b) it is reasonable to grant such a modification, with appropriate notification, because in practical terms the units are no different from what they would have been if a code compliance certificate for all the units had been issued in 2001.

9.7 I strongly recommend that the territorial authority record this determination, and any modifications resulting from it, on the property file and also on any LIM issued concerning these properties.

10. Splitting of the original building consent

10.1 The territorial authority considered that it was inappropriate for the building certifier to have included the construction of all 6 units, each of which was built on a separate allotment, on a single consent. (I note that the territorial authority issued the building consent based on a single building certificate issued by the building certifier).

10.2 The territorial authority proposed that the Chief Executive make a determination under section 181 to the effect that the territorial authority's decision to issue a single building consent be reversed and replaced with a decision to issue six separate consents for the building work contained on each of the six allotments.

10.3 As this appeared to be a change of view by the territorial authority I wrote to it seeking clarification of the proposal. The territorial authority responded on the 17 April 2007 and clarified its position on this and another determination currently before me.

10.4 I have carefully considered the territorial authority's proposal. While I consider the proposal has merit, I do not accept that a determination initiated by the Chief Executive, pursuant to section 181, is appropriate in this case. However, should any of the parties initiate an application for determination about the proposed amendment to the original consent, then the Chief Executive could consider the matter pursuant to section 177.

11. The decision

11.1 In accordance with section 188 of the Building Act 2004, I determine that all the units comply with clause F2 of the Building Code, but that none of the units comply with all of clauses B2, E2 and G13 of the Building Code. Accordingly I confirm the territorial authority's decision to refuse to issue a code compliance certificate for the building work carried out under the building consent.

11.2 I also determine that:

(a) all the building elements installed in the units, apart from the items that are to be rectified, complied with clause B2 on 23 May 2001.

(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 23 May 2001 instead of from the time of issue of the code compliance certificate for all building elements except those elements set out in paragraph 6.3.1 of Determination 2007/47.

(c) once the defects set out in paragraph 6.3.1 of this determination have been fixed to its satisfaction, and following the modification set out in (b) above, the territorial authority is to issue a code compliance certificate in respect of the building consent as amended.

11.3 With regard to the date of 23 May 2001 set out in paragraph 11.2, I note that if separate building consents are established for each individual unit, then this date would be amended as appropriate for each unit.

11.4 I note that the territorial authority has issued notices to fix for each of the units. The territorial authority should now issue new, modified, notices to fix that require the owners to bring the buildings up to compliance with the Building Code incorporating only those items outlined in paragraph 6.3.1. The notice to fix should not specify how those defects are to be fixed. That is a matter for the applicant to propose and for the territorial authority to accept or reject. It is important to note that the Building Code allows for more than one method of achieving compliance.

11.5 I would suggest that the parties adopt the following process to meet the requirements of paragraph 11.4. Initially, the territorial authority should issue the new notices to fix. The owners 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 items. 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 May 2007.

John Gardiner
Manager Determinations