

Determination 2008/99

Determination regarding the refusal to issue a code compliance certificate for a 6-year-old semi-detached townhouse at 20 Paremata Drive, Paremata



1. The matters to be determined

1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004¹ (“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 Mr I Stuart (“the applicant”), and the other party is the Porirua City Council (“the authority”) carrying out its duties and functions as a territorial authority or building consent authority. I consider the owners of the other two other units in this building (22 and 24 Paremata Drive) to also be parties to this determination.

1.2 The matter for determination is whether the authority’s decision to decline to issue a code compliance certificate for a 6-year-old semi-detached townhouse is correct. The refusal arose because the authority is not satisfied that the building work

¹ The Building Act 2004 is available from the Department’s website at www.dbh.govt.nz.

complies with the requirements of the Building Code² (First Schedule, Building Regulations 1992).

1.3 I consider that the matters for determination are:

1.3.1 Matter 1: The cladding

Whether the cladding as installed complies with Clauses B2 Durability and E2 External Moisture. By “the cladding as installed” I mean the components of the system (such as the backing materials, the flashings, the joints and the coatings) as well as the way the components have been installed and work together. (I consider this matter in paragraph 8.4.)

1.3.2 Matter 2: The remaining Building Code clauses

Whether certain building elements in the townhouse, other than the claddings, comply with the other relevant clauses of the Building Code. (I consider this matter in paragraph 9.)

1.3.3 Matter 3: The durability considerations

Whether the building elements in the townhouse comply with Clause B2 Durability of the Building Code taking into account the age of the work. (I consider this matter in paragraph 11.)

1.3.4 Matter 4: Amending the building consent by splitting it into two

Whether the single building consent for the building (“Block C”), containing the applicant’s townhouse at 20 Paremata Drive (“Unit 1”), 22 Paremata Drive (“Unit 2”) and 24 Paremata Drive (“Unit 3”), can be amended 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 the applicant’s townhouse. (I consider this matter in paragraph 12.)

1.4 The construction records

1.4.1 I note that there are very few records available for Block C and the three Units it contains. Although the authority accepts that it carried out inspections of the building work during construction, the inspection records cannot now be located.

1.4.2 In order to determine the compliance of Unit 1, I must therefore address the following questions:

- (a) Is there sufficient evidence to establish that Unit 1 complies with the Building Code? (I consider this question in paragraph 6). If so, a code compliance certificate can be issued.
- (b) If Unit 1 does not comply with the Building Code, are there sufficient grounds to conclude that, once any outstanding items are satisfactorily repaired and inspected, Unit 1 will comply with the Building Code? (I consider this question in paragraph 10.2). If so, a code compliance certificate can be issued in due course.

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

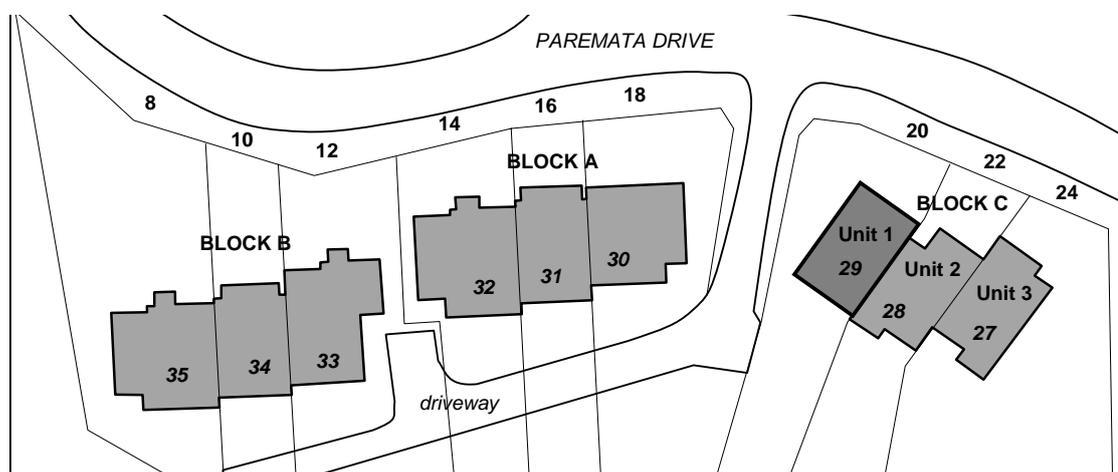
- 1.5 In making my decisions, I have considered the submissions of the parties, the authority records of other blocks in the original development that are able to be located, the report of the expert commissioned by the Department to advise on this dispute (“the expert”), and the other evidence in this matter. I have evaluated this information using a framework that I describe more fully in paragraph 8.1.
- 1.6 In this determination, unless otherwise stated, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

2. The original development

- 2.1 Unit 1 is part of a larger complex comprising 3 blocks, each containing 3 semi-detached townhouses. The original single building consent was issued for all three blocks, but was then split into separate consents (one for each block) in order to allow for staged completion of the development.
- 2.2 Each townhouse within each block has its own separate land and building title that clearly defines the legal boundaries to each property. The development under the original consent included the following units in Paremata Drive (with Unit 1 highlighted):

Street No.	Building title <i>(as used in this determination)</i>	Amended consent number	Original unit No. in consent drawings	Dwelling title <i>(as used in this determination)</i>
8	Block B <i>(The second block – completed 2001)</i>	2000 0986	35	
10			34	
12			33	
14	Block A <i>(The first block – completed 2000)</i>	2000 0985	32	
16			31	
18			30	
20	Block C <i>(The third block – completed 2002)</i>	2000 0987	29	Unit 1
22			28	Unit 2
24			27	Unit 3

- 2.3 The following site plan shows the development:



- 2.4 The townhouses are generally of similar construction and materials, and each block of townhouses was progressively constructed, sold and occupied, between 2000 and 2002.

3. The building work

- 3.1 Unit 1 is a 2-storey semi-detached townhouse that is at the southwest end of Block C, which is situated on an excavated sloping site in a very high wind zone in terms of NZS 3604³. The block sits parallel to the road, with Units 2 and 3 having main entries and garage access from the road. Unit 1's garage and main entry are to the rear, with access provided from a "right-of-way" driveway that also provides rear access to the units in Block A and Block B.
- 3.2 Construction of Unit 1 is conventional light timber frame, with concrete slabs and foundations, monolithic cladding and aluminium windows. The building is fairly complex in plan and form, with 18° pitch profiled metal tile hipped and monopitched roofs that have no eaves projections except above an upper deck. The roofs have monolithic-clad parapets at the verges, at the party wall to the adjoining unit, and between the two main roof sections.
- 3.3 The first floor of Unit 1 accommodates living, dining and kitchen areas on the front northwest and southwest sides, with the master bedroom and ensuite bathroom on the rear southeast side. The ground floor provides two further bedrooms on the front northwest side, with a garage and main entry on the rear southeast side.
- 3.4 An upper deck, with metal and glass balustrades, sits partly above a ground floor bedroom. The deck floor has tiles applied over membrane for about 600mm, where the deck floor sits above the bedroom. The remaining deck floor area is spaced timber slats.
- 3.5 The party wall to the adjacent unit is timber-framed, with fire-rated linings and monolithic claddings to the exterior. The party wall steps down in line with the recessed exterior wall between the dining area and the upper deck. The metal cappings stop at the upper level of the parapet, with a flat monolithic top to the lower level parapet.
- 3.6 The expert noted that the exposed timber in the joists above the garage were marked as "H1" and appeared to be boron-treated. The specification calls for the framing timber to be "TPA H1". However, given the date of construction in 2001, I am unable to determine the particular level of treatment that is described as "H1" and I therefore consider that the wall framing of this house may not be treated to a level that will provide adequate resistance to fungal decay, should the framing become wet and unable to dry out.
- 3.7 The cladding system is EIFS⁴ monolithic cladding. The expert has noted that the cladding details appear similar to those specified for "Rockcote" EIFS cladding, with purpose-made flashings to windows, edges and other junctions. The cladding is typical of most EIFS systems in use at the time of construction, with 40mm

³ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

⁴ External Insulation and Finish System

polystyrene backing sheets fixed directly to the framing, and finished with a mesh-reinforced plaster system and an acrylic paint coating system.

4. Background

- 4.1 In September 1999, the authority issued a single building consent for the development (No. 2000 0206) under the Building Act 1991 (“the former Act”). I have not seen a copy of the building consent.
- 4.2 The authority’s “Project inspection checklist”, issued at the time of the building consent, noted that the following inspections were required during construction of each of the three blocks in the development:
- foundations
 - concrete slabs
 - exterior cladding
 - building pre-line
 - plumbing pre-line
 - drainage
 - vehicle crossings
 - final inspection(s).
- 4.3 In a letter to the authority dated 15 September 1999, the developer advised that the construction would be staged, with Block A (the middle block) constructed first. The developer also noted that, while the new subdivided property titles were being finalised, only the show home unit would be fully completed. The authority’s records indicate that the original single consent was then amended to form three individual consents, with separate numbers, to allow for the staged completion of each of the three blocks.
- 4.4 Construction of Block A commenced in late 1999, with foundation, slab, plumbing, drainage and pre-line inspections recorded as passed. I note that there is some confusion regarding the unit numbers referred to in the inspection records. However, the inspections appear to have been of Block A as those units were sold in March 2000. The settlement dates in December 2000 indicate that the units in Block A were completed and occupied on or about that date. Although there is no final inspection record available, the authority’s computer summary records indicate that a code compliance certificate was issued for Block A on 6 December 2000. However, no copy of the certificate can be located.
- 4.5 Construction of Block B appears to have commenced about the middle of 2000, as a concrete slab inspection was recorded in June 2000. No other inspection records have been located for this block, but the units were sold in November 2000. The settlement dates in July 2001 indicate that the units in Block B were completed and occupied on or about that date.
- 4.6 The expert discussed the history of the development with the builder involved with the construction, and was advised that the authority had inspected each block as it was built, and the builder had submitted an “advice of completion” to the authority as

each block was finished. However, the builder also commented that the matter of code compliance certificates had not been followed up as the units had been sold and occupied by the new owners.

- 4.7 The expert was unable to locate any records for the construction of Block C. However, based on the staging of the first two blocks, construction is likely to have been started at the end of 2001 as these units were sold in May 2002. The settlement dates in October 2002 indicate that Units 1, 2 and 3 in Block C were completed and occupied on or about that date.
- 4.8 The applicant purchased Unit 1 in April 2006, unaware that a code compliance certificate might not have been issued for the unit. In the process of repairing a defective shower, the applicant discovered that the house differed from the consent drawings and sought advice from the authority on these differences and on the compliance status of the house.
- 4.9 In a letter dated 20 February 2007, the authority noted that it was not uncommon to for minor changes from consent drawings to occur during construction and assured the applicant that the house did have a code compliance certificate, noting:

Yes there is a Code Compliance Certificate for 20 Paremata Drive. A copy of the CCC cannot be reproduced as the computer programme that generated these certificates cannot now be accessed however I have included two printouts from our new system showing the CCC was granted and issued on Dec 6, 2000.

(I note that this letter mistakenly refers to the code compliance certificate issued for Block A as outlined in paragraph 4.4, as Block C was not constructed at that date and was not occupied until October 2002.)

- 4.10 Following advice from a specialist building inspection company on defective detailing of the original shower, the applicant continued to attempt to clarify the as-built differences from the consent drawings, the authority's responsibility for inspections related to the defective shower and the compliance status of the house.
- 4.11 In the letter to the applicant dated 22 March 2007, the authority outlined its responsibilities regarding inspection construction work and issuing code compliance certificates for building work, noting that, although the authority would have taken "all reasonable care" when inspected the construction of the unit, a specific inspection of the underlying waterproofing prior to tiling the shower was not required.
- 4.12 Following further discussions about the code compliance certificate and consent drawings for the house, the authority wrote to the applicant on 3 August 2007 noting that it was not uncommon for revisions to be made to buildings during construction without amended plans being submitted. In regard to the code compliance certificate, the authority noted that the records indicated that a certificate had been issued for part of the development but these records were incomplete and:

As such I am unable to confirm, with any certainty, that a CCC was issued for the above property specifically. I would add; that in the advent [sic] a CCC has not been issued, that it is unlikely that Council would issue one at this time due to the time delay between the granting of the consent and the issue of the CCC.

- 4.13 The applicant commissioned the architect for the original development (“the architect”) to prepare as-built floor plans and elevations of Unit 1. The architect completed the amended drawings of Block C in October 2007 (with separate floor plans of Unit 1 following in May 2008).
- 4.14 The applicant then commissioned a structural engineer (“the engineer”) to review whether the bracing of the unit had been affected by the changes from the consent drawings. The engineer reviewed the consent and as-built drawings and noted that changes made to the ground floor had “an insignificant affect on the ground floor bracing capacity provided”. However, the engineer advised that changing the roof construction to a skillion roof above the master bedroom and lounge had affected the bracing, and recommended that a bedroom wall be relined to increase the bracing capacity beyond the capacity required under the original consent.
- 4.15 In order to clarify the status of Unit 1, the applicant subsequently applied for a code compliance certificate on 27 March 2008. In its response to the applicant dated 23 April 2008, the authority stated that it appeared that no code compliance certificate for Block C (containing the applicant’s house) had ever been applied for and:
- Due to the time that has lapsed since the Townhouses were constructed; Council’s increased liabilities if a CCC were to be issued now; and the absence of any documents to indicate the outcome of any inspections carried out, we are unable to issue a CCC for 20 Paremata Drive without incurring an unacceptable risk of increased liability for the building.
- 4.16 The Department received an application for a determination from the applicant on 7 May 2008.

5. The submissions

- 5.1 In a letter dated 6 May 2008 that accompanied the application, the applicant outlined the problems experienced since purchasing Unit 1, noting that the defective shower area had been repaired, but the matter of the code compliance certificate for Unit 1 remained unresolved.
- 5.2 The applicant forwarded copies of:
- the consent drawings
 - the as-built drawings of Unit 1
 - the letter dated 12 March 2007 from the specialist inspection company
 - some of the correspondence with the authority.
- 5.3 The authority made a submission in the form of a letter dated 13 May 2008 to the Department. The authority noted that it would find it difficult to issue a code compliance certificate because the consent documents may not reflect the as-built building work and the time delay would put an “unreasonable onus of liability on the Council at this late juncture”, noting:
- The time delay from when the building consent was issued and the request for a CCC to be issued for us is also difficult and our refusal is tempered by the Building Act 2004 now requiring a more robust test against the approved building consent

documents particularly where the work on site varies from what was originally approved.

- 5.4 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.
- 5.5 The draft determination was issued to the parties on 6 August 2008. The draft was issued for comment and to agree a date when the unit complied with Building Code Clause B2 Durability.
- 5.6 On 22 August 2008 the Department received a response from the applicant in which he accepted the draft determination and agreed that the building elements of Unit 1 complied with Clause B2 on 1 November 2002. The authority agreed with this date in a submission to the Department dated 28 August 2008. In its response the authority also said it did not fully accept the draft determination and requested the exclusion of the cladding system from the modification of the commencement of the durability periods proposed in the determination.
- 5.7 The determination finds that some remedial work needs to be done to make Unit 1 code compliant, and that some of that remedial work involves the cladding. Once the remedial work has been completed to the satisfaction of the authority, all of the building work in Unit 1, including the cladding system, should be considered when assessing Unit 1 for a code compliance certificate. The amendment of the building consent for Unit 1 described in paragraph 14.2(c) already makes a sufficiently clear distinction between the work considered complete in November 2000 and that to be completed now as remedial work. Consequently, I have declined the authority's request to exclude the cladding from the modification of the durability periods.
- 5.8 The authority also sought additional guidance from the Department to be incorporated in the determination. It is not for me to direct the authority how it should carry out its functions and duties under the Act. I consider the suggested course of action outlined in paragraph 13 is sufficient.
- 5.9 On 3 October 2008 the Department received a written submission from the owner of Unit 3 that accepted the draft determination. The owner of Unit 2 also indicated agreement with the draft determination on 9 October 2008.

6. Grounds for the establishment of code compliance

- 6.1 In order for me to form a view as to the code compliance of Unit 1, I need to establish what evidence is available and what can be obtained considering that the building work is completed and some of the elements are not able to be cost-effectively inspected.
- 6.2 In this case the evidence provided by the applicant and the expert includes:
- the list of inspections required for each block (refer paragraph 4.2)
 - inspection records for Block A of the development (refer paragraph 4.4)

- the apparent issue of a code compliance certificate for Block A (refer paragraph 4.4)
- an inspection record for Block B of the development (refer paragraph 4.5)
- The discussions between the expert and the builder of the development (refer paragraph 4.6)
- The engineer's wall bracing assessment of the as built Unit 1 (refer paragraph 4.14).

6.3 Despite the lack of inspection records, the authority believes that the required inspections were carried out on Block C. In considering the inspections recorded for Block A, I have no reason to doubt that similar satisfactory inspections were carried out during the construction of Block C. However, no evidence of the outcome of any final inspection is now available.

6.4 Before deciding whether or not to rely on the authority having carried out satisfactory inspections during construction, I consider it important to look for evidence that corroborates those inspections. In this particular case, corroboration comes from the expert's inspection, which can be used to verify whether the authority's apparent inspections were properly conducted.

6.5 In summary, I find that the following evidence allows me to form a view as to the code compliance of the building work as a whole:

- The records of inspections on Block A of the development, which indicate satisfactory inspections of both the accessible and inaccessible components.
- The incomplete records of inspections on Block B of the development.
- The inspections apparently carried out on Block C, which are likely to be similar to those carried out for Block A, which is of similar construction and materials.
- The discussions between the expert and the builder of the development, which indicate that the authority carried out satisfactory inspections of Block C.
- The engineer's wall bracing assessment of Unit 1 as built.
- The expert's report as outlined below.

7. The expert's report

7.1 As mentioned in paragraph 1.5, I engaged an independent expert to assist me. In the absence of sufficient information from the authority, the expert was asked to research the background to the building development and the matter for determination, and to provide an assessment of the condition of the building elements concerned. The expert is a member of the New Zealand Institute of Building Surveyors.

7.2 The expert investigated the authority's records and provided a commentary on the background to the building work (including discussions with the builder), and I have used the information gathered as part of the background outlined in paragraph 4.

- 7.3 The expert inspected Unit 1 on 1 July 2008 and furnished a report that was completed on 8 July 2008. The expert noted that the inspection of the house was carried out following a “severe southerly storm”.
- 7.4 The expert noted that the changes from the consent drawings had been recorded in the recently completed as built-drawings of Unit 1. The expert also noted that control joints in the cladding were not necessary for the wall dimensions in Unit 1.
- 7.5 The expert noted that the overall standard of workmanship appeared to be generally high, except for the items outlined in paragraph 7.8. The expert also noted that, since construction, cappings had been installed to the tops of the original monolithic-topped parapets indicating that parapet leaks had occurred in the past.
- 7.6 The expert noted that the windows are recessed, with metal head flashings and decorative “lintels” planted at the heads. The expert also noted that the aluminium windows were rated at “VH”, indicating that they were suitable for use in this very high wind zone. The expert removed sections of coating at the sill and jamb of a window, and noted uPVC flashings that appeared typical for EIFS claddings. The expert saw no sign of moisture penetration or reveal cracks at any window or door openings. I accept that the exposed areas are typical of similar locations elsewhere in Unit 1.

7.7 Moisture

- 7.7.1 The expert inspected the interior of Unit 1, taking non-invasive moisture readings internally, and noted signs of past moisture penetration. However, moisture readings indicated that the past leaks had been repaired and there was no current penetration into the framing.
- 7.7.2 The expert inspected the cladding, and noted signs of current moisture penetration behind the cladding at:
- an old crack below a parapet capping
 - cracks at the junction of the vertical section of the party wall with the lower uncapped horizontal section to the northwest, resulting in moisture draining down the back of the cladding, and gaps at the overlap to the foundation wall
 - the end of the verge parapet above the lounge, resulting in cracks at the bottom of the cladding.
- 7.7.3 The expert did not consider it necessary to undertake invasive testing of areas where moisture penetration was visually obvious, so he limited invasive testing to less obvious at-risk situations, and recorded the following elevated readings:
- 24% at the soffit above the southeast garage door, below the junction of the southeast parapet with the party wall
 - 25% behind the cladding below the deck beam penetration.
- 7.7.4 The expert removed a section of cladding below the deck beam penetration and noted dirt deposits behind the backing sheet, which showed that moisture was draining

behind the cladding. However, he could see no sign of the moisture penetrating through the building wrap to the underlying framing.

7.8 Commenting specifically on the wall cladding, the expert noted that:

- the bottom of the cladding is buried below the paving beside the garage doors
- there is a significant crack below a capped parapet, allowing moisture penetration
- there are other significant cracks at the bottom of the cladding, resulting from moisture draining behind the cladding from defects further up the walls
- there are some minor hairline cracks in the coating that require maintenance
- the southwest parapet intersects with the party wall, with the capping butted against the cladding without a saddle flashing – and moisture is draining behind the cladding into the soffit above the garage door
- most of the apron flashings to parapet walls lack kickouts, and gutter ends are buried in the plaster, with failing sealant heavily applied in some areas to remedy past leaks
- the area of tiled membrane to the upper deck has been sealed to the bottom of the cladding to remedy a past leak into a ground floor wardrobe, which indicates defects in the weatherproofing of the underlying membrane at these junctions
- the timber slats of the open upper deck area are buried in the plaster coating, with no allowance for drainage at the deck to wall junctions
- the deck support beam penetrates the cladding with no saddle flashings, and water is penetrating behind the cladding.

7.9 Other relevant code clauses

7.9.1 The expert also assessed compliance with other relevant building code clauses, and made the following comments on those clauses relevant to this house:

- **B1 Structure**

The external visual inspection showed no signs of significant problems. However, the expert noted that the engineer's bracing assessment (refer paragraph 4.14) requires remedial work to a wall in the upper bedroom to make up for the bracing capacity lost by changing to skillion ceilings in the living and bedroom areas.

- **E1 Surface water**

No signs of problems related to surface water drainage were noted.

- **E3 Internal moisture**

The new upper bathroom appeared dry and satisfactory. No internal moisture problems were noted in the kitchen, laundry or lower bathroom areas.

- **F4 Safety from falling**

No problems were noted, and safety glass is used in the metal and glass deck balustrades and shower areas.

- **G1 Personal hygiene, G2 Laundering, and G3 Food preparation**

All surfaces, finishes and facilities appear to be to a high standard, with no apparent problems.

- **G4 Ventilation**

The house was well ventilated, from sufficient opening windows and fans vented to the outside provided to bathroom and kitchen areas.

- **G7 Natural light and G8 Artificial light**

Adequate natural light is provided where necessary, with the ground floor storage area the only room without windows (but with good artificial lighting provided).

- **G12 Water Supplies and G13 Foul Water**

The expert noted that all fixtures appear to be in good operating condition with no evidence of leaks or other problems.

- **H1 Energy Efficiency**

Ceiling insulation has been installed, and wall insulation is provided by the EIFS cladding.

7.10 A copy of the expert's report was provided to the parties on 22 July 2008.

Matter 1: the cladding

8. Evaluation for code compliance

8.1 Evaluation framework

8.1.1 I have evaluated the code compliance of this building by considering the following two broad categories of the building work:

- The weathertightness of the external building envelope (Clause E2) and durability (Clause B2 in so far as it relates to Clause E2).
- The remaining relevant code requirements.

In the case of Unit 1, weathertightness considerations are addressed first.

8.1.2 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solutions⁵, 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.

⁵ 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.

8.2 Evaluation of the building envelope

8.2.1 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 determinations⁶ (for example, Determination 2004/1) relating to cladding and these factors are also used in the evaluation process.

8.2.2 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.

8.3 Weathertightness risk

8.3.1 In relation to these characteristics I find that this Unit 1:

- is built in a very high wind zone
- is a fairly complex 2-storey semi-detached building
- has limited eaves projections to protect the cladding
- has parapets at verges, party walls and at other locations
- has an upper deck, with metal and glass balustrades, that is partly situated above bedroom areas
- has monolithic cladding fixed directly to the framing
- has external wall framing that is not treated to a level that provides resistance to the onset of decay if the framing absorbs and retains moisture.

8.3.2 Unit 1 has been evaluated using the E2/AS1 risk matrix. The risk matrix allows the summing of a range of design and location factors applying to a specific building design. The resulting level of risk can range from 'low' to 'very high'. The risk level is applied to determine what claddings can be used on a building in order to comply with E2/AS1. Higher levels of risk will require more rigorous weatherproof detailing; for example, a high risk level is likely to require a particular type of cladding to be installed over a drained cavity.

8.3.3 When evaluated using the E2/AS1 risk matrix, the weathertightness features outlined in paragraph 8.3.1 show that one elevation of Unit 1 demonstrates a moderate weathertightness risk rating and the remaining two elevations a high rating. I note that, if the details shown in the current E2/AS1 were adopted to show code compliance, the monolithic cladding on this house would require a drained cavity.

⁶ Copies of all determinations issued by the Department can be obtained from the Department's website.

However, I also note that a drained cavity was not a requirement of E2/AS1 at the time of construction.

8.4 Weathertightness performance: exterior cladding

8.4.1 Generally the cladding appears to have been installed in accordance with good trade practice. Taking account of the expert's comments in paragraph 7.8, I conclude that remedial work is necessary in respect of the following:

- the lack of clearance from the bottom of the cladding to the paving beside the garage doors
- the cracks in the cladding, which are resulting from or allowing moisture penetration in some areas
- the inadequate weatherproofing at the junction of the southwest parapet with the party wall
- the inadequate weatherproofing at the bottom of apron flashings and at the ends of gutters
- the inadequate weatherproofing of the junction of the tiled upper deck area with the wall
- the inadequate weatherproofing of the junction of the timber slat deck area with the wall, with no allowance for drainage at the deck to wall junctions
- the inadequate weatherproofing at the ends of the deck support beam.

8.5 Conclusion

8.5.1 I consider the expert's report establishes that the current performance of the cladding is not adequate because it is currently allowing water penetration through the cladding. Consequently, I am satisfied that Unit 1 does not comply with Clause E2 of the Building Code.

8.5.2 In addition, the building work is also required to comply with the durability requirements of Clause B2. Clause B2 requires that a building continues to satisfy all the objectives of the Building Code throughout its effective life, and that includes the requirement for the house to remain weathertight. Because the cladding faults on Unit 1 are likely to allow the ingress of moisture in the future, the building work does not comply with the durability requirements of Clause B2.

8.5.3 Because the faults identified with the cladding system occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 8.4.1 will result in Unit 1 being brought into compliance with Clauses B2 and E2.

8.5.4 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, including examples where the external wall framing of the building may not be treated to a level that will resist the onset of decay if it gets wet (for example, Determination 2007/60).

Matter 2: Compliance with the remaining code clauses

9. Evaluation for code compliance

9.1 Structure

9.1.1 Based on the expert's comments as outlined in paragraph 7.9, I conclude that remedial work is necessary in respect of the following:

- the inadequate bracing of the upper level of Unit 1.

9.1.2 Because the faults identified with the bracing occur in a discrete area, I am able to conclude that satisfactory rectification of the item outlined in paragraph 9.1.1 will result in Unit 1 being brought into compliance with Clause B1.

9.2 Other relevant code clauses

9.2.1 Taking account of the expert's assessment of visible components of the building together with the other evidence, I consider that Unit 1 is likely to comply with the provisions of the remaining relevant code clauses.

9.2.2 Accordingly, I consider that the building work complies with Clauses E1, E3, G1, G2, G3, G4, G7, G8, G12, G13 and H1 of the Building Code.

10. The code compliance certificate

10.1 Taking account of the expert's assessment of visible components of the building together with the other evidence, I have reasonable grounds to conclude the building work in Unit 1 can be brought into compliance with the Building Code.

10.2 Having found that Unit 1 can be brought into compliance with the Building Code, I conclude the authority can issue a code compliance certificate once the remedial work identified in this determination has been satisfactorily carried out.

Matter 3: The durability considerations

11. Discussion

11.1 The authority has concerns about the durability, and hence the compliance with the building code, of certain elements of Unit 1 taking into consideration the completion of the building work in 2002.

11.2 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).

11.3 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.
- 11.4 The 6-year delay between the substantial completion of the unit and the applicant's request for a code compliance certificate raises the issue of when all the elements of the building complied with Clause B2. I have not been provided with any evidence that the authority did not accept that those elements complied with Clause B2 when the building was completed in 2002.
- 11.5 The sequence of events outlined in paragraphs 4.4 to paragraph 4.7 does not give me a clear indication when the durability periods should commence, although the original owners took possession of the property in October 2002 so a date of about 1 November 2002 seems appropriate.
- 11.6 It is not disputed, and I am therefore satisfied, that all the building elements complied with Clause B2 on 1 November 2002 (refer paragraphs 5.6).
- 11.7 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.
- 11.8 I continue to hold that view, and therefore conclude that:
- (c) the authority has the power to grant an appropriate modification of Clause B2 in respect of the building elements
 - (d) it is reasonable to grant such a modification, with appropriate notification, because in practical terms the building is no different from what it would have been if a code compliance certificate for the building had been issued in 2002.
- 11.9 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 by splitting it into two

12. Discussion

- 12.1 Block C consists of Units 1, 2, and 3, which are semi-detached townhouses that have separate property titles with clearly defined land boundaries and shared party walls. The block of three townhouses has been constructed under a single building consent. This means only a single code compliance certificate can be issued for all three townhouses, unless the building consent is amended.

- The owner of Unit 1 has sought this determination so that a code compliance certificate can be issued for his townhouse (Unit 1). In order for that to happen, the existing building consent would need to be split, so that the code compliance of Unit 1 can be dealt with separately from the code compliance of Units 2 and 3.
- The respective owners of Unit 2 and Unit 3 may wish to have the existing consent split into three separate consents so that all three Units will have a separate consent.

12.2 I take the view that, as Units 1, 2, and 3 are now separately owned semi-detached buildings, each unit should be able to be assessed separately for compliance with the building code.

12.3 I therefore consider that, on receipt of a written request from the applicant, the authority should amend the original 2000 building consent to create two separate building consents, one for Unit 1, and one for Unit 2 and Unit 3. That will enable the owner of Unit 1 to apply for a code compliance certificate for his Unit without requiring the cooperation of the other owners in the block.

12.4 Should the respective owners of Units 2 and 3 join in the applicant's request, the authority should modify the 2000 building consent to create three separate building consents, one for each unit. The owners of each unit can then apply for a final code compliance certificate in respect of their own unit, without requiring the cooperation of the other owners in the block.

12.5 Units 1, 2, and 3 have similar features, are of a similar construction and were built at the same time. It seems likely, therefore, that some of the defects observed in Unit 1 may also be evident in Units 2 and 3. It is recommended that the authority take the necessary action to ensure that Units 2 and 3 do not contain any defects that could affect the health and safety of their occupants.

13. What is to be done now?

13.1 A notice to fix should be issued that requires the owner to bring Unit 1 into compliance with the Building Code, identifying the defects listed in paragraphs 8.4.1 and 9.1.1 and referring to any further defects that might be discovered in the course of investigation and rectification, 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 unit brought to compliance with the Building Code. That is a matter for the owner to propose and for the authority to accept or reject.

13.2 I suggest that the applicant and the authority adopt the following process to meet the requirements of paragraph 13.1. Initially, the authority should issue the notice to fix. The owner should then produce a response to this in the form of a detailed proposal, together with suitable amendments to the plans and specifications, 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.

14. The decision

14.1 In accordance with section 188 of the Building Act 2004, I hereby determine that Unit 1 does not comply with Clauses B1, B2 and E2 of the Building Code, and accordingly confirm the authority's decision to refuse to issue a code compliance certificate.

14.2 I also determine that:

- (a) if so requested by the applicant (and by the owners of Units 2 and 3), the authority is to amend the original consent by dividing it into two or three separate building consents as required and as detailed in paragraph 12 above. The building consent for Unit 1 is to include the modification required in (c) below.
- (b) all the building elements installed in Unit 1, apart from the items that are to be rectified, complied with Clause B2 on 1 November 2002.
- (c) the building consent for Unit 1 is 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 1 November 2002 instead of from the time of issue of the code compliance certificate for all building elements, provided that the modification does not apply to those elements of the building which have been altered or modified as set out in paragraphs 8.4.1 and 9.1.1 of Determination 2008/99.
- (d) following the modification set out in (c) above, the authority is to issue a code compliance certificate in respect of the building consent for Unit 1 as amended, once the defects described in paragraphs 8.4.1 and 9.1.1 have been fixed to its satisfaction.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 22 October 2008.

John Gardiner
Manager Determinations