

Determination 2005/79

Refusal of a code compliance certificate for a building with a “monolithic” cladding system: House 69

1 THE DISPUTE TO BE DETERMINED

- 1.1 This is a determination of a dispute referred to the Chief Executive of the Department of Building and Housing (“the Chief Executive”) under section 17 of the Building Act 1991 (“the Act”) as amended by section 424 of the Building Act 2004. The applicants are the owners of the property (referred to throughout this document as “the owner”) and the other party is the territorial authority. The application arises from the refusal by the territorial authority to issue a code compliance certificate for a 3-year old house unless changes are made to its monolithic cladding system.
- 1.2 The question to be determined is whether on reasonable grounds the external monolithic wall cladding as installed (“the cladding”), to the majority of the walls of this house, complies with the building code (see sections 18 and 20 of the Act). By “external monolithic wall cladding as installed” we mean the components of the system (such as the backing sheets, the flashings, the joints and the plaster and/or the coatings) as well as the way the components have been installed and work together.
- 1.3 This determination is made under the Building Act 1991, subject to section 424 of the Building Act 2004. That section came into force (“commenced”) on 30 November 2004, and its relevant provisions are:
- “ . . . on and after the commencement of this section,—
- “(a) a reference to the Authority in the Building Act 1991 must be read as a reference to the chief executive; and
- “(b) the Building Act 1991 must be read with all necessary modifications to enable the chief executive to perform the functions and duties, and exercise the powers, of the Authority . . . ”

It should be noted that the new legislation does not amend the determination process set out under the 1991 Act, other than to transfer the power to make a determination from the Building Industry Authority (“the Authority”) to the Chief Executive.

- 1.4 This determination refers to the former Authority:
- (a) When quoting from documents received in the course of the determination, and
 - (b) When referring to determinations made by the Authority before section 424 came into force.
- 1.5 In making my decision, I have not considered any other aspects of the Act or the building code.
- 1.6 The house itself is described in paragraphs 2.1 to 2.3, and paragraph 8 sets out the decision.

2 PROCEDURE

The building

- 2.1 The building is a two-storey detached house with a single storey attached garage, situated on a slightly sloping excavated site in a medium wind zone as defined in terms of NZS 3604: 1999 “Timber framed buildings”. The house is of conventional light timber frame construction on a concrete block foundation wall. Some of the external walls are sheathed with cedar plywood beneath vertical battens but the majority of the walls are sheathed with the monolithic cladding that is the subject of this Determination. The house is of a relatively simple shape with roofs at two levels and two lengths of roof to wall junctions. A timber framed upper-level gap-boarded deck is attached to part of the length of one elevation of the house with the joists are supported on timber beams and 100 x 100 posts. All the timber framing to the deck is specified to be Tanalised. Where the deck is partially constructed over a living space it has a butyl-rubber membrane overlaid with timber boarding on battens. There are 100mm x 25mm polystyrene mouldings glued around all exterior joinery units over the sealed cladding. At one upper floor location there is a short timber framed balustrade faced on both sides with fibre-cement linings and capped with a metal flashing. Apart from some locations where the fascias are fixed directly to the cladding, the eaves have 400 mm wide projections, and the verges have 300 mm wide projections.
- 2.2 I note that while the consent plans show that the plywood and batten sheathing is applied to all walls of the house; this has for the most part been replaced with monolithic cladding. There is no record that an application has been made for an amendment to the consent. While the Notice to Rectify makes reference to this change, it was not noted on the inspection documents that have been forwarded to the Authority. The owner has produced a plan showing the amended deck configuration but this does not show the change from the longrun roofing indicated on the plans to butyl-rubber membrane where the deck is constructed over a living space.

- 2.3 As no evidence has been produced regarding the treatment of the external wall framing, I accept that this timber is untreated. I note that all the deck framing and supports are specified on the plans to be Tanalised.
- 2.4 The external walls of the building are clad with what is described as monolithic cladding. In this instance it incorporates 7.5mm thick fibre-cement backing sheets fixed through the building wrap directly to the framing timbers and finished with a sprayed on textured coating finish and an acrylic paint system. The backing sheets have been subject to a test by an independent organisation. The expert engaged by the Authority identified the type of backing sheet used, but there was no verification as to which jointing, sealing, plaster and paint systems were applied on this house.

Sequence of events

- 2.5 The territorial authority issued a building consent on 25 October 2000.
- 2.6 The territorial authority carried out various inspections during the course of construction, and the pre-lining inspection was passed on 22 February 2001, and a final inspection was passed on 6 November 2003.
- 2.7 In a letter dated 13 February 2004, the territorial authority wrote to the building owner stating that an inspection of the house carried out on 20 January 2004 identified that a monolithic cavity had been installed without a ventilated cavity, and that the cladding would require further investigation.
- 2.8 In a further letter to the owner, dated 25 May 2004, the territorial authority stated that it had inspected the house, regretted that it may not comply with the building code in a number of respects and described the territorial authority's current concerns as regards weathertightness problems involving monolithic clad buildings. The territorial authority went on to say, that as a result of a recent decision of the WHRS, it had instituted a new inspection regime. To this letter the territorial authority attached a copy of a Notice to Rectify, dated 25 May 2004.

The "Particulars of Contravention" attached to the Notice to Rectify noted that in regard to the cladding:

1. The following items have not been installed per the manufactures [sic] specifications
 - Inseal strips are to be installed within the 6 mm gap between the back of the cladding and foundation wall. An inseal strip has not been installed.
 - The bottom edge of the cladding system is to finish a minimum of 100mm above paved surfaces and 175mm above unpaved surfaces. The cladding has been taken closer than these measurements.
 - The minimum finished floor level to finished ground level is 150mm to paved surfaces, and 225mm to unprotected ground. These clearances have not been achieved.
 - The exposed edges of the sheets must be painted to stop any moisture wicking. This has not been done

2. The following items have not been installed per the acceptable solutions of the building code, (no alternative solutions have been applied for)
 - The minimum finished floor level to finished ground level is 150mm to paved surfaces, and 225mm to unprotected ground. These clearances have not been achieved.
3. The following items have not been installed per accepted trade practice
 - All flashings are to be installed in such a way as to direct water away from the building, and prevent ingress of moisture. The head of the garage door has no flashing or drip edge installed.
 - At the junction between horizontal surfaces (i.e. top of barrier) and the vertical surface (i.e. house wall) flashings are required. The metal capping terminates with no upstand to house wall.
 - Decking and the like are to remain clear (horizontally) 10mm clear of the cladding. Decking ribbon board has been installed against the cladding.
4. Ventilated cavity system
 - The Council has recently received information which shows that monolithic cladding systems without a drainage plane/cavity, provision for adequate ventilation, drainage and vapour dissipation will, in the likelihood of leakage and/or the effects of residual moisture, cause irrevocable damage to the structural elements of the building.

The territorial authority also noted:

The Council cannot be satisfied that the above building meets the performance requirements of Clauses B1 Structure, B2 Durability, E2 External Moisture, E3 Internal Moisture, G4 Ventilation and H1 Energy Efficiency Provisions of the Building Code... This is in breach of Sections 7(1), of the Building Act 1991...

Also that the owner was required to:

1. Provide adequate ventilation to the monolithic cladding and into the wall frame space by means of either a ventilated cavity or alternative approved system, and ensuring all issues related to the above are resolved.
2. Lodge with council an application, within 28 days from the date of this notice, for an amended building consent, and provide all necessary information that may be requested to allow this consent application to be processed, alternatively.
3. Confirm to council, within 28 days from the date of this notice, your intention to apply to the Building Industry Authority for a determination in accordance with the Building Act 1991
4. Provide to Council "As built" plans to reflect the changes to the exterior wall cladding from vertical timber to [Named] plaster system.

The territorial authority also provided a set of photographs relating to the cladding.

2.9 The owner applied for a determination on 21 June 2004.

3 THE SUBMISSIONS

3.1 The owner in a submission dated 22 June 2004, briefly set out the background leading up to this determination. The owner stated that some of the items of concern raised by the territorial authority had been completed to requirement during the building process, and noted that the final inspection by the territorial authority reads “building work compliant”.

3.2 The owner also provided copies of:

- The building plans;
- The building consent documentation;
- The territorial authority’s inspection records;
- Correspondence with the territorial authority; and
- The Notice to Rectify.

3.3 The territorial authority forwarded a lengthy submission. The bulk of the submission was a general comment on monolithic cladding, although some of the material related to this particular house. In a summary, the territorial authority stated that

1. The principle design and current construction methods for the wall assembly do not provide for ventilation and a drainage plane. In the event of a failure of any claddings deflection methods moisture will enter and accumulate in the wall framing hereby breaching (*sic*) the Building Act.
2. Secondly the building materials in the wall assembly are inadequate to withstand moisture accumulation as there is no allowance or compensatory factors in the design to allow for the consequence of failure of the system components or the system as a whole. The inevitable failure to keep moisture out will wet the timber frame meaning conditions will exist in the wall likely to cause the timber and other materials in the wall to degrade and be incapable of lasting 50 years as required by the Building Act. This is part due to the design of the wall not having a drying mechanism other than the natural condition of drying by diffusion through paint coatings which experience shows is too slow to avoid mould growth. Where moisture ingress continues or is greater than the natural drying forces moisture accumulation occurs which affects the durability of the timber and plasterboard.
3. The third failure of the cladding system is that it is inadequately designed to allow for the expected movement associated with timber frame construction, and thereby cracks will form and sealants tear letting water in. Work in excess of normal maintenance will be required to keep the FIBRE-CEMENT (FC) system, its jointing system and sealants watertight such that moisture will enter and accumulate in the framing, fibreglass insulation and plasterboard such that mould will grow.
4. Fourthly the wall cladding is inadequately insulated and does not manage or control the climatic conditions expected this buildings location such that condensation can occur and breach (*sic*) the Code.

The [territorial authority] points out that there are already numerous defects in the cladding envelop meaning the building is already in contravention of the Building Act and that even if these items were rectified the building will remain in breach (*sic*) of the code due to the

above reasons. Attempts at rectification or directing responsibility to the homeowner under the title maintenance are in the Councils opinion unfair as these were not pointed out to Council when the permit issued.(sic)

- 3.4 The submission also included a copy of the Notice to Rectify and a set of photographs, illustrating some of the territorial authority's concerns.
- 3.5 The territorial authority felt that it must refuse to issue a code compliance certificate on the grounds that there was insufficient scientific evidence on the performance of these building elements.
- 3.6 The territorial authority in a letter to the Authority, dated 2 September 2004, elaborated on its original submission and stated that its areas of concern were those itemised in the Notice to Rectify and then listed them in detail. The territorial authority, using the risk matrix contained in the revised Acceptable Solution E2/AS1, calculated the weathertightness risk to the house to be moderate to high. The territorial authority also made further generalised comments on weathertightness issues.
- 3.7 The copies of the submissions and other evidence were provided to each of the parties. Neither the owner nor the territorial authority made any further submissions in response to the submissions of the other party.
- 3.8 In a letter to the Department dated 2 May 2005, the territorial authority commented on aspects of the Draft Determination. In particular, the territorial authority is concerned that paragraphs 6.10 and 8.2 indicate a scope of work required to make the house code compliant. The territorial authority claims that this is not part of the determination.

4 THE RELEVANT PROVISIONS OF THE BUILDING CODE

- 4.1 The dispute for determination is whether the territorial authority's decision to refuse to issue a code compliance certificate because it was not satisfied that the cladding complied with clause E2.3.2 of the building code (First Schedule, Building Regulations 1992) is correct. The relevant provisions of the building code provide:

Clause B2—DURABILITY

B2.3.1 Building elements must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the specified intended life of the building, if stated, or:

(a) The life of the building, being not less than 50 years, if:

(i) Those building elements (including floors, walls, and fixings) provide structural stability to the building, or

(ii) Those building elements are difficult to access or replace, or

(iii) Failure of those building elements to comply with the building code would go undetected during both normal use and maintenance of the building.

(b) 15 years if:

(i) Those building elements (including the building envelope, exposed plumbing in the subfloor space, and in-built chimneys and flues) are moderately difficult to access or replace, or

(ii) Failure of those building elements to comply with the building code would go undetected during normal use of the building, but would be easily detected during normal maintenance.

Clause E2—EXTERNAL MOISTURE

E2.1 The objective of this provision is to safeguard people from illness or injury, which could result from external moisture entering the building.

E2.2 Buildings shall be constructed to provide adequate resistance to penetration by, and the accumulation of, moisture from the outside.

E2.3.2 Roofs and exterior walls shall prevent the penetration of water that could cause undue dampness, or damage to building elements.

4.2 There are no Acceptable Solutions that have been approved under section 49 of the Act that cover this cladding. The cladding is not accredited under section 59 of the Act. I am, therefore, of the opinion that the cladding system as installed can be considered to be an alternative solution.

4.3 In several previous determinations, the Authority has made the following general observations, which in my view remain valid in this case, about acceptable solutions and alternative solutions:

- Some acceptable solutions cover the worst case, so that in less extreme cases they may be modified and the resulting alternative solution will still comply with the building code.
- Usually, however, 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 THE EXPERT'S REPORT

5.1 The Authority commissioned an independent expert ("the expert") to inspect and report on the cladding. The expert inspected the building and furnished a report. The report stated that, except where noted, the quality of the exterior finish itself is good and the plastering and painting is of a good standard. The expert removed a small section of the plaster to examine a sill/jamb intersection of one exterior joinery unit. I accept that these exposed details are likely to be representative of the remaining control joints and joinery unit flashings. The expert's report made the following specific comments on the cladding:

- The vertical relief joint to the rear elevation is not effective. There was no second line of defence should the sheet crack and the sealant be rendered ineffective by the effects of UV light;
- There is no vertical relief joint to the west wall above the garage as required by the manufacturer's instructions for a wall of such dimensions;
- Not all the exposed backing sheet edges are sealed;
- There are missing or inadequate back flashings where the cladding vertically abuts the plywood cladding at various locations;
- The metal capping to the short section of upper floor balustrade lacks end saddle flashings at the junctions with the wall claddings;
- A deflection flashing has not been installed to the end of one apron flashing;
- There was no evidence of a sealant or a compressible foam to the jambs and sills of the exterior joinery units, nor whether any sill flashings are installed;
- The polystyrene sill mouldings will hold water on the top edge and there is little to prevent the water entering the wall framing and wall cavities;
- The deck ribbon board is bolted hard against the cladding, when it should be spaced off the cladding to accommodate any water run-off from the deck membrane turn-down;
- There was sufficient clearance to the base of the cladding at the rear wall of the garage, but grass has grown up over the cladding; and
- The downpipe bracket fixing screws and a cable penetrating the cladding have not been sealed.

5.2 The expert carried out a series of moisture tests of the interior linings of the exterior walls throughout the building using a non-invasive meter and only two of these exceeded 18 %. These were in bedroom 1 where the reading was 18.2% and at the upper level balustrade where the reading was 33% at the top of the inner face adjacent to the capping/wall junction. Moisture levels above 18% recorded after cladding is in place generally indicate that external moisture is entering the structure.

5.3 The expert also commented on the Notice to Rectify “Particulars of Contravention”. The expert disagreed with the territorial authority on the following issues:

- A foam strip has been fitted to the gap between the cladding and the foundation wall;
- The ground clearances as formed are adequate; and
- The fascia board over the garage door is equivalent to a drip edge over the garage door.

The expert noted that the other issues were covered in the expert's report.

5.4 Copies of the expert's report were provided to each of the parties. The owner wrote to the Authority on 7 October. The comments can be summarised as:

- The territorial authority did not decline the code compliance certificate, they withheld it;
- The owner wanted to know what was an acceptable level of moisture in framing timber;
- The aluminium joinery used on the house has an inbuilt flashing system to enable moisture entering through joinery to drain away;
- The aluminium sill flange of the windows is well sealed with [a Named sealant] to the cladding, which is then protected from the elements by the polystyrene band;
- The owner will rectify the defective control joint. However, the west wall of the garage is only 600 mm over the maximum distance where a vertical relief joint is required;
- The internal vertical joints of the monolithic and weatherboard cladding are sealed with a [Named] foam tape, and this junction on the eastern wall, which has a 15mm overlap, also has this tape installed behind it;
- The owner intentionally installed butyl-rubber waterproof membrane behind the deck ribbon board in the belief it would provide adequate protection and prevent moisture transfer to the cladding and framing; and
- There was no evidence in the report to support the conclusion that there is moisture penetration or that the house is unlikely to remain waterproof.

5.5 The territorial authority also commented on the report in a letter dated 18 November 2004. The territorial authority:

- Assessed the building in terms of the E2 risk matrix as medium risk;
- Generally agreed with the findings of the expert, but identified some differences between the expert's report and the "Particulars of Contravention" set out in the Notice to Rectify.

6 DISCUSSION

General

6.1 I have considered the submissions of the parties, the expert's report and the other evidence in this matter. The approach in determining whether building work complies with clauses B2.3.1 and E2.3.2, is to examine 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.

Weathertightness risk

- 6.2 Recent research and experience, both international and local, indicates that the impact of weathertightness problems in monolithic-clad houses can be minimised if good and effective design and construction practices are followed.
- 6.3 The installation of exterior cladding to manufacturer's specifications and to accepted good trade practice is an important but not the only requirement to ensure good weathertightness performance.
- 6.4 The next priority is to reduce the ability of moisture to get through the cladding by using design measures that minimise the effects of the rain impacting on the walls.
- 6.5 Important matters for consideration are:
- Data show a strong relationship between the width of the eaves and the incidence of wall leaks. An effective deflection mechanism, such as eaves greater than 600 mm wide, has been shown by Canadian data to manage more than 90% of rain incidence;
 - While most reported leaks are substantially caused by defects in the cladding that require little or no wind pressure differential, I believe that buildings in high and very high wind zones (as defined by NZS 3604) are likely to experience wind pressure differentials and thus a higher risk of water ingress;
 - Taller buildings result in an effective increase in the catchment area of the wall. Available data suggests a clear correlation between higher number of storeys and an increased incidence of leaking;
 - Complex roofs and overall envelope shapes where the roofs frequently intersect with the walls on upper floors create opportunities for leaks to directly penetrate into the wall; and
 - Recent data also shows that decks and balconies that are exposed in plan and/or cantilevered from the external walls are the most frequent location for water leaks.
- 6.6 Any likely penetration of moisture through the cladding can then be countered by a combination of effective drainage, ventilation of the drainage cavity and moisture tolerance in the external wall framing timber. In particular:
- The structure should allow water that has penetrated the cladding to drain out as quickly as possible. I believe that generally a drainage cavity should be provided behind the outer cladding barrier in monolithic construction;

- The design of the outer walls should allow walls to dry to the outside once moisture penetrates the cladding and the moisture barrier. If walls do not dry, decay fungi can become established in as little as 3 months. Until scientific data on the optimum depth and configuration of the ventilation mechanism in New Zealand conditions is available, I believe that the drainage cavity should be not less than 20 mm deep; and
- The external walls should have some degree of decay resistance or moisture tolerance to allow for situations when moisture circumvents the cladding and moisture barriers and moisture levels in the timber rise to more than 18%.

6.7 In relation to these characteristics, I find that this house:

- Has some fascias fixed directly to the cladding and elsewhere 300mm or 400mm eaves and gable projections, none of which provide sufficient protection to the cladding;
- Is in a medium wind zone;
- Is two stories high;
- Has exterior joinery units with head flashings but without sill flashings or sealant to the jambs and sills;
- Has an overall envelope that is relatively simple in plan;
- Has an upper floor deck that is constructed partly over a living space; and
- Has, in the absence of any clear evidence to the contrary, external walls constructed with untreated timber that is likely to decay if it absorbs and retains moisture.

Weathertightness performance

6.8 I have carefully considered the principal points in the territorial authority's main submission (and outlined in paragraph 3.3).

6.9 The territorial authority's general submission effectively questions the technical basis of a number of the benchmarks for assessing the likely code compliant performance of timber-framed construction in New Zealand and proposes that an alternative (and more conservative) benchmark be used to assess likely building code compliance for monolithically-clad buildings within its jurisdiction. The Authority has considered and commented on these issues in Determination No 2004/41. In essence, the Authority determined that the performance of building elements as installed in a house should be based on code compliance benchmarks established in the new external moisture Acceptable Solution E2/AS1, together with observations of the current state of the building, and not on the higher performance levels suggested by the territorial authority. Accordingly, this is the approach I have followed in this determination.

- 6.10 I find that the cladding in general does appear to have been installed according to good trade practice, but some junctions, edges, and intersections are not well constructed. The areas of concern are set out in paragraph 5.1 and in general terms relate to:
- The absence of some vertical relief joints, and the construction of others;
 - The lack of sealing to the exposed backing sheet edges;
 - The vertical joints between the monolithic cladding and the cedar plywood cladding;
 - The lack of saddle flashings to the balustrade capping and the lack of deflection at the end of an apron flashing;
 - The lack of sill flashings and jamb and sill foam strip or under-flange silicone sealants;
 - The flat top of the polystyrene sill mouldings;
 - The deck ribbon plate fixed hard against the cladding, and
 - The lack of sealants to the downpipe fixing screws, and where a cable penetrates the cladding.
- 6.11 I have noted the owner's response to the expert's report. It notes that the destructive testing carried out by the expert did not reveal the presence of any compressible foam or sealant at the jambs and sills of the exterior joinery units. Accordingly, I accept that any moisture passing through the inbuilt flashings of the units is not prevented from entering the cladding and framing.
- 6.12 I note the owner's advice that foam tape had been used behind the plywood/monolithic cladding interface. I also note that the expert saw no evidence of such tape. I conclude that these junctions need to be effectively sealed and therefore request that the existing detail be investigated to confirm whether it exists, and if it does not, then a new sealing strip is to be installed.
- 6.13 Notwithstanding the fact that the backing sheets are fixed directly to the timber framing, thus inhibiting drainage and ventilation behind the cladding sheets, I find that there are compensating factors that assist the performance of the cladding in this particular case. These are:
- Generally, the cladding appears to have been installed according to good trade practice and to manufacturer's specifications; and
 - The house has an overall envelope that is relatively simple in plan.
- 6.14 I consider that these factors adequately compensate for the lack of a drainage and ventilation cavity and can allow the house to comply with the weathertightness and durability provisions of the building code.

- 6.15 I have considered the question of whether a horizontal control joint has been installed under the polystyrene mouldings between the differing floor levels. The expert did not investigate this detail, but as neither the expert nor the territorial authority has raised this as an issue, I am prepared to accept that an effective joint has been installed.
- 6.16 I note that when assessed against the risk matrix incorporated in the Acceptable Solution E2/AS1, this house presents a risk of weathertightness failure that is low on one elevation and moderate on the other three elevations. The matrix is an assessment tool that is intended to be used at the time of application for consent, but must be supplemented at the time of issuing a code compliance certificate by careful inspection of the building as actually built. I note that the risks set out above are lower than the moderate to high risk arrived at by the territorial authority using the same matrix.

7 CONCLUSION

- 7.1 I am satisfied that the performance of the cladding has been reduced because it is currently allowing water penetration into the wall framing at one location. Consequently, I am not satisfied that the cladding system as installed complies with clause E2.3.2 of the building code.
- 7.2 In addition, the building 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 in the house are allowing the ingress of moisture, the house does not comply with the durability requirements of clause B2.
- 7.3 I find that, because the faults that have been identified with this cladding occur in discrete areas, it is able to conclude that satisfactory rectification of the items outlined in paragraph 6.10 is likely to result in the building being weathertight and in compliance with clauses B2 and E2, notwithstanding the lack of a ventilated cavity
- 7.4 I note that effective maintenance of monolithic claddings is important to ensure ongoing compliance with clause B2 of the building code. That maintenance is the responsibility of the building owner. The code assumes that the normal maintenance necessary to ensure the durability of the cladding is carried out. For that reason clause B2.3.1 of the building code requires that the cladding be subject to “normal maintenance”. That term is not defined and I take the view that it must be given its ordinary and natural meaning in context. In other words, normal maintenance of the cladding means inspections and activities such as regular cleaning, re-painting, replacing sealants, and so on.
- 7.5 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.

- 7.6 I decline to incorporate any waiver or modification of the building code in its determination.
- 7.7 In response to the territorial authority's letter to the Department of 2 May 2005, I consider that I am entitled to determine whether proposed building work complies with the code, and in fact I have done so in this case. However, the question of whether the work has been properly completed and is code compliant requires careful inspection. I do not believe in this case that the territorial authority's inspections meet this standard. I note that the territorial authority's inspection records show that the cladding passed various inspections carried out by the territorial authority.
- 7.8 The Notice to Rectify issued on 25 May 2004 listed Particulars of Contravention that are set out in paragraph 2.8.
- 7.9 I am disturbed to note that these obvious building defects were not discovered during initial territorial authority inspections. They are also issues that are unrelated to the question of a cavity that the territorial authority has raised. Furthermore, the expert has noted other omissions, such as the ineffective or missing relief joints and the lack of flashings between the plywood and monolithic claddings, which are not covered by the Notice to Rectify. It can be seen that the expert's report provides the comprehensive description of the building's outstanding shortcomings that should have been detected before or at the final inspection process and incorporated in the Notice to Rectify.

8 THE DECISION

- 8.1 In accordance with section 20 of the Building Act 1991 I determine that the cladding system as installed does not comply with clause E2 of the building code. There are also a number of items to be remedied to ensure that the building becomes and remains weathertight and thus meet the durability requirement of the code. Consequently I find that the house does not comply with clause B2. Accordingly, I confirm the territorial authority's decision to refuse to issue a code compliance certificate.
- 8.2 I find that rectification of the items outlined in paragraph 6.10 to the approval of the territorial authority, along with any other faults that may become apparent in the course of that work, is likely to result in the building being weathertight and in compliance with clauses B2 and E2, notwithstanding the lack of a ventilated cavity.
- 8.3 I note that the territorial authority has issued a Notice to Rectify requiring provision for adequate ventilation, drainage and vapour dissipation. Under the Act, a Notice to Rectify can require the owner to bring the house into compliance with the building code. The Authority has already found in a previous determination (2000/1) that the Notice to Rectify cannot specify how that compliance can be achieved. A new Notice to Fix should be issued that requires the owner to bring the cladding into compliance with the building code, without specifying the features that are required to be incorporated. It is not for me to dictate how the defects described in paragraph 6.10

are to be remedied. How that is done is a matter for the owner to propose and for the territorial authority to accept or reject, with either of the parties entitled to submit doubts or disputes to the Chief Executive for another determination.

- 8.4 The cladding has now been in place for 3 years, and its 15-year durability performance requirement will start once the code compliance certificate is issued. Continuing maintenance of the cladding will therefore be required to ensure its continuing building code compliance.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 30 May 2005.

John Gardiner
Determinations Manager