

Determination 2005/83

Refusal of a code compliance certificate for a building with a “monolithic” cladding system: House 73

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 applicant is the building 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 2-year old house unless changes are made to its monolithic cladding systems.
- 1.2 The question to be determined is whether on reasonable grounds the monolithic wall cladding as installed to the majority of the timber-framed external walls of the house (“the cladding”), complies with the building code (see sections 18 and 20 of the Act). By “the monolithic wall cladding as installed” I 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 2.4, and paragraph 8 sets out my decision.

2 PROCEDURE

The building

- 2.1 The building is a two-storey detached house, with floors set at varying levels, situated on a sloping site in a medium wind zone in terms of NZS 3604: 1999 “Timber framed buildings”. The external walls of the house are of conventional light timber frame construction built on piled concrete foundation beams. The majority of the external walls are sheathed with monolithic cladding and the remainder are clad with panels of Cedar rusticated weatherboards. The house is of a relatively simple shape, with the metal-clad roofs set at various levels having perimeter parapet walls and butyl rubber internal gutters. There is also a monolithic-clad sloping roof over part of the family room and another small butyl rubber clad low pitch roof. The faces and tops of the parapet walls are monolithic clad and the backs also have steel upstand flashings. The external windows and doors are recessed into the monolithic cladding, or are face fixed over the weatherboards. There are no eaves or verge projections, but the roof overhangs the first-floor balcony.
- 2.2 Timber-framed balconies are constructed at the first floor level adjacent to the family and dining rooms, and at the second floor level outside the office. The balcony decks have liquid applied membranes and the lower deck is also tiled. The balconies have timber-framed balustrades that are monolithic clad on both faces and the top. A timber handrail runs along the balustrade of the lower balcony and this is supported on metal brackets fixed through the balustrade top. The main entry and ground floor bathroom recesses have tiled concrete landings. A monolithic clad chimney is constructed at a wall junction, and this penetrates through an upper level roof.
- 2.3 I have not received any written evidence as to the treatment, if any, of the timber framing used to construct the external walls.
- 2.4 With the exception of the weatherboard-clad panels, the walls of the building are clad with what is described as monolithic cladding. The cladding is a particular

proprietary product, installed in accordance with the manufacturer's instructions, which include flashings to heads, jambs, sills, trims and corners. As detailed in that manufacturer's instructions ("the instructions"), it incorporates 55mm thick expanded polystyrene (EPS) backing sheets to the main walls, or 7.5 mm fibre cement backing sheets to the backs and some tops of the balcony balustrades and the roof parapet walls, some small return walls, the chimney and the sloping roof. Both types of backing sheet are fixed through building wrap directly to framing timbers, and are finished with a proprietary mesh reinforced polymer-modified cement plaster system. The systems have been subject to an appraisal by an independent testing organisation. I note that the specification calls for 40mm polystyrene backing sheets to the monolithic cladding.

Sequence of events

- 2.5 The territorial authority issued a building consent on 7 May 2002.
- 2.6 The territorial authority carried out inspections during the course of construction, and passed the preline inspection on 21 August 2002. The territorial authority undertook final inspections on 16 and 17 January 2004 and on 12 February 2004, all of which "failed" the building. The territorial authority noted on one "Final Check List" "Monolithic cladding – No details on plans indicating cavity system" and on another such list "Monolithic cladding – Council will contact owner.
- 2.7 The owner wrote to the territorial authority On 1 February 2004, noting that the territorial authority's requests for additional information had already been met.
- 2.8 In a letter to the territorial authority dated 5 March 2004, the owner requested written confirmation as to how the owner could assist the territorial authority in assessing the house for a code compliance certificate.
- 2.9 The territorial authority wrote to the owner on 16 March 2004 describing the inspections that had taken place and listing some documentation that had yet to be supplied by the owner. The territorial authority also noted that, following the receipt of data from the Weathertight Homes Resolution Service, changes had been made to its inspection regime in respect of monolithic claddings. Accordingly an independent team of experts would be required to further inspect the cladding.
- 2.10 On 29 April 2004, the territorial authority informed the owner that as the house was monolithic clad and lacked a ventilated cavity, the territorial authority would review the consent plans and would arrange a follow-up site inspection.
- 2.11 The territorial authority carried out a site inspection on 9 July 2004 and in a letter to the owner dated 19 July 2004, regretted that the building may not comply with the building code in a number of respects. The territorial authority attached a Notice to Rectify dated 19 July 2004 to this letter, together with a set of photographs illustrating items of non-compliance. The "Particulars of Contravention" attached to the Notice to Rectify noted:

A site inspection of [the] property carried out on the 9 July 2004 revealed that the exterior cladding is a monolithic cladding system, unknown polystyrene backed plaster system, with no provision for ventilation of the wall space. Furthermore the exterior claddings have been installed otherwise than in accordance with, the acceptable solutions of the building code and accepted trade practices as detailed below. Other non-complying miscellaneous items were also noted.

1. The following items have not been installed per the acceptable solutions of the building code, (no alternative solutions have been applied for)
 - Buildings shall have claddings that are waterproof, there is cracking to the underside of the roof overhang on the north facing deck, to a number of windowsills around the property and parapet barrier.
 - To prevent children from falling or becoming held fast, the space between the stair treads shall not permit the passage of a 100mm sphere. The distance between the treads exceeds this minimum clearance on the northern timber stairs.
 - Where people could fall, 1 (one) meter (*sic*) or more from an opening or floor of a building or from a sudden change of level within or associated with a building, a barrier shall be provided, to a minimum height of 1.0 metre. No barrier has been installed along the southern boundary retaining wall.
 - 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.
2. The following items have not been installed per accepted trade practice
 - The junction between the window head flashing and bottom edge of the cladding is to remain open. The window heads have been sealed.
 - The junction between the bottom edge of the window joinery and the wall cladding is to remain open. The junction has been sealed.
 - Penetrations through the cladding system shall be as waterproof as the cladding itself. There are a number of penetrations through the cladding that should be protected with rubber flanges and silicon, and in the case of the meter box, flashings have not been installed. Furthermore all electrical wires shall be sleeved and in the case of the overflows to the decks and parapet roofs, no sealant has been applied to junction between the PVC pipe and waterproof membrane.
 - Horizontal surfaces are to be formed with sufficient falls to prevent water from ponding on them. The parapet barriers have flat horizontal surfaces.
 - The bottom edge of the cladding system is to finish 50 – 100mm above ground. The cladding has been taken closer than these measurements.
 - Handrail penetrations and the like are not to penetrate top of barrier. Handrail penetrations into horizontal surface of barrier have been installed.
 - Controls (*sic*) joints at a maximum of 20.0 [M] centres vertically and at floor joist level horizontally are required. Confirmation is required that horizontal control joints have been installed.

- Confirmation is required that a vertical flashing has been installed at the junction between the polystyrene cladding and weatherboards and the polystyrene cladding and solid plaster on the blockwork wall.

3 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 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 the 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. Investigate the cause of bulging in the cladding system to the window reveal on the eastern elevation and report back to Council on the findings of the investigation and any remedial measures required.
5. Install a complying barrier to the southern boundary wall where a fall of over 1.0M is possible.
6. Close the openings in stairs that are greater than 100mm.

2.12 The owner applied for a determination in August 2004.

3 THE SUBMISSIONS

3.1 The owner in a letter to the Authority dated 9 September 2004, responded to the "Particulars of Contravention" detailed in the Notice to Rectify, and the salient points in the response are:

- The house did not require control joints as it was not 3 storeys high;

- The polystyrene backing is 60mm thick and not 40mm thick as stated by the territorial authority;
- The gaps in the steps could easily be rectified;
- The garden has been lowered to give sufficient ground cover;
- The balcony outlet pipes require marine sealant or flanges
- Based on an independent report, the 4 degree slope on the balustrade top is adequate;
- The balustrade railing is sealed with marine glue and this is certified as being watertight; and
- There are flashings installed between the monolithic cladding and the weatherboards.

3.2 The owner pointed out that there was no evidence of water leaking into the house and that it complied with the consented documentation. Nor was any notice given during the inspection process to stop building due to the cladding. An independent building arbitrator who had prepared a written report had inspected the house.

3.3 The owner also provided copies of:

- The building plans and part specification;
- The consent documentation;
- The Notice to Rectify;
- The inspection records from the territorial authority;
- The correspondence with the territorial authority; and
- Various producer statements, letters and guarantees.

3.4 In a covering letter to the Authority dated 18 November 2004, the territorial authority noted:

Particulars of Contravention

As detailed in the NTR the areas of contravention relate to six clauses of the Building Code, namely:

- B1 structure,
- B2 durability,
- E2 external moisture,
- H3 internal moisture,

- G3 ventilation, and
- H1 energy efficiency.

Specific construction defects may be grouped into the following areas:

- Ground clearances
- Control joints
- Flashings
- Stair treads
- Barriers
- Waterproofing
- Horizontal surfaces
- Penetrations
- Handrails
- Insufficient means for dissipation of water where the water passes through the exterior cladding.

3.5 The territorial authority also forwarded copies of:

- Some plans and specifications;
- The consent documentation;
- The Notice to Rectify;
- The inspection check lists; and
- The correspondence with the owner;

3.6 Copies of the submissions and other evidence were provided to each of the parties.

3.7 In a letter to the Department dated 28 April 2005, the territorial authority commented on aspects of the draft determination. In particular, the territorial authority is concerned that paragraphs 5.1 to 5.3 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 clauses B2.3.1 and E2.3.2 of the building code (First Schedule,

Building Regulations 1992) is correct. The relevant provisions of the building code say:

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, 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 Department commissioned an independent expert ("the expert") to inspect and report on the cladding. The expert inspected the building and furnished a report that was completed on 14 February 2005. The expert noted that the quality of finish was generally good and the plaster finish itself was smooth. The coating was uniform and well adhered and the expert did not see any evidence of discolouring. The expert removed a small section of the plaster around one window to examine the flashings, and found that appropriate flashings and sealants are present. I accept that this exposed detail is likely to be representative of the remaining window and door flashings. The expert's report made the following specific comments on the cladding.

- Vertical joints, as required by the manufacturer's recommendations, are not installed in cladding to the master bedroom east wall and the bedroom/kitchen south wall;
- There are failed joints in the cladding to one of the balcony balustrades, adjacent to the entrance, and below the stair window;
- There are cracks in the cladding to the parapet walls and tops;
- There are cracks in the cladding to the pitched roof, which have been repaired with a silicone type sealant;
- There are cracks in the cladding to the wall under the pitched roof and to the chimney, and there is cement salt staining on the wall cladding at these locations;
- There are cracks visible in the reveal cladding at several window sills that had been repaired with a silicone type sealant;
- There is inadequate sealing at the junctions of the balcony balustrade and wall claddings, and also to the cladding at the tops of the balustrades and some parapets;
- There is no significant overlap between the sills of the living room external doors and windows and the concrete under them, and in some instances there are open gaps;
- The membrane upstand to the lower balcony has failed;
- The junctions of the second floor balcony drainage outlet and the overflow outlet with the deck membrane are inadequate; and
- Some penetrations through the cladding lack collar seals and adequate sealing.

5.2 The expert noted that there are neither weather seals nor flashings to the jambs and sills of the face-fixed windows at the weatherboard linings. The head flashing over the bathroom window is incorrectly fitted in front of the building wrap. However, as

the window head is well protected by a deep recess, the expert was of the opinion that this detail was unlikely to leak.

- 5.3 The expert also referred to the inadequate end closures to the garage roofing and to the poorly jointed main roof gutter outlet.
- 5.4 The expert carried out a series of non-invasive moisture tests of the internal linings of the external walls, and obtained several readings in the “borderline” range. Further invasive readings were made and the following corrected higher moisture readings were recorded:

18.3% at the lower balcony balustrade bottom plate;

24% at an upper roof parapet stud;

26.9% at a garage roof joist; and

66.9% at the lower balcony balustrade top plate.

Moisture levels above 18% recorded after cladding is in place generally indicate that external moisture is entering the structure. The expert also noted evidence of prior leakage in the internal areas below the monolithic-clad pitched roof, and also in the garage roof and ceiling framing.

- 5.5 Copies of the expert’s report were provided to each of the parties and both accepted the report.

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 internationally and locally, 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 I consider that the 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, it is believed 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 suggest 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 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. It is believed 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 consider 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 the house:

- Has no eaves and verge projections that could provide some protection to the lower cladding;
- Is built in a medium wind zone;

- Is two storeys high;
- Is relatively simple on plan, but with a complex roofing system;
- Has balconies at the first and second floor levels that are constructed over living spaces;
- Has generally fully flashed or sealed external windows and doors; and
- Has external wall framing that is constructed with timbers that are unlikely to resist the onset of decay if they absorb and retain moisture.

Weathertightness performance

- 6.8 Generally the cladding appears to have been installed according to good trade practice, but some junctions, edges, and penetrations are not well constructed. These areas are all as described in paragraphs 5.1 to 5.3, and in the expert's report.
- 6.9 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
 - The windows and external doors are generally fully flashed or sealed;
- 6.10 I consider that these factors compensate for the lack of a full drainage and ventilation cavity and can allow the house to comply with the weathertightness and durability provisions of the building code.
- 6.11 I also note experts comment regarding the evidence of prior leakage and believe that this needs to be investigated further when the rectification work is undertaken to establish the cause and if necessary make further rectification.
- 6.12 I accept the expert's opinion that, as a deep recess protects the head of the bathroom window, the incorrectly fixed head flashing is not likely to cause moisture ingress.
- 6.13 While they are not subject to this determination, I also recommend that the issues relating to the space between the stair treads and the lack of a barrier to the southern boundary retaining wall be remedied to the satisfaction of the territorial authority.
- 6.14 I note that all elevations of the apartments demonstrate a high weathertightness risk rating using the E2/AS1 risk matrix. The matrix is an assessment tool that is intended to be used at the time of application for consent, before the building work has begun and, consequently, before any assessment of the quality of the building work can be made. Poorly executed building work introduces a risk that cannot be taken into account in the consent stage, but must be taken into account when the building as actually built is assessed for the purposes of issuing a code compliance certificate.

7 CONCLUSION

- 7.1 I am satisfied that the current performance of the cladding is not adequate because it is allowing water penetration into the wall framing at several locations at present. Consequently, I am not satisfied that the cladding systems as installed comply 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 allows the ingress of moisture, it does not comply with the durability requirements of clause B2.3.1 of the building code.
- 7.3 I consider that, because the faults that have been identified with the cladding systems occur in discrete areas, I am able to conclude that rectification of the items outlined in paragraph 5.1 and 5.3 is likely to result in the building being weathertight and in compliance with clauses B2.3.1 and E2.3.1, notwithstanding the lack of a ventilated cavity. In addition I consider clarification that the signs of prior leakage do not create the need for additional rectification is essential.
- 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 It is emphasised 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 this determination.
- 7.7 In response to the territorial authority’s letter to the Department of 28 April 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 described in a “Final Checklist” dated 17 January 2003 passed the following items in respect of the exterior of the building:
- Floor clearance from ground level
 - Cladding clearance from ground level

- Secondary flow path
- Cladding Painted
- Window scribes
- Flashings
- Control joints

7.8 In addition, none of the items that required attention after this final inspection related to the exterior cladding.

7.9 The Notice to Rectify issued on 19 July 2003 listed Particulars of Contravention that included:

- Floor clearances
- Ground clearances
- Control joints
- Flashings

7.10 I am disturbed to note that these obvious building defects were not discovered during the January 2003 final inspection. 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 inadequate balcony outlets and overflows and the failed balcony deck membrane, which are not covered by the Notice to Rectify. It can also 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 hereby determine that the cladding systems as installed do not comply with clause E2 of the building code. There are also a number of items to be remedied to ensure that the house remains weathertight and thus meet the durability requirements 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 also find that rectification of the items outlined in paragraph 5.1, together with the rectification of the jambs and sills of the windows fixed to the weatherboard linings and the roof defects outlined in paragraph 5.3, 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 house 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 paragraphs 5.1 to 5.3 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 Finally, I consider that the cladding will require on-going maintenance to ensure its continuing code compliance.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 31 May 2005.

John Gardiner
Determinations Manager