

Determination 2005/51

Refusal of a code compliance certificate for a building with a “monolithic” cladding system: House 43

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 2 year-old alterations to a 35 to 40-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 timber-framed external walls and columns 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 large detached house situated on a gently sloping site in a moderate wind zone in terms of NZS 3604 :1999. The house is on two levels, with ground floor bedrooms, games room and garage, and first floor living, dining, kitchen/family, and bedroom areas. Construction of the first floor is conventional light timber frame, while the ground floor has the original walls in concrete block up to window sill level with timber framing above and new walls of timber framing, with a concrete slab and foundations. The recent building alterations include an extension that provides a new kitchen and family area on the first floor and a games room on the ground floor, substantial alterations to interior walls, a new staircase and entrance canopy, three new first floor decks, new aluminium windows and doors and new cladding to all exterior walls.
- The original house shape was simple in plan with a 20° hipped roof clad in metal tiles. The new extension extends as a wing from the original house, with the roof pitch and material matching that of the original. The resulting house shape remains reasonably simple in plan and in form, with the roof made up of simple hips and valleys, and with eave projections of 400 mm including gutters.
- 2.2 Two of the three new timber-framed enclosed decks are supported on timber framed columns, while the third deck is cantilevered. The decks have tiled floor surfaces over liquid applied waterproofing membranes, and the timber-framed balustrades to two of the decks have monolithic cladding on both sides and tops, while the small rear deck has open metal balustrades mounted on to a monolithic clad upstand.
- 2.3 The framing timber used in the new additions is H1 boric treated and the posts in the deck columns are H4 treated, as evidenced by invoices supplied by the owner. Although I have no evidence as to the timber used in the original exterior walls, the owner confirms that it is a native timber, and I consider it likely to have been rimu as this timber was still in common use for framing at the time that the original house was built.
- 2.4 The cladding system is what is described as monolithic cladding (EIFS). As specified in the manufacturer's data sheets ("the manufacturer's instructions"), the cladding to the walls of the house incorporates 60 mm thick, groove-backed expanded polystyrene backing sheets fixed through the building wrap directly to the wall framing and finished with a mesh reinforced plaster system. The system has been

subject to an independent appraisal (“the appraisal”). The manufacturer’s instructions include details for flashings at various junctions and require purpose-made uPVC flashings to the heads, jambs and sills of exterior joinery units. The jointing, sealing, sponge finished coating and painting system used in this instance is one of those systems referred to in the appraisal. In the case of this house, the owner was also the builder and the installer of the cladding.

- 2.5 The manufacturer issued a “Workmanship Guarantee” and a “Materials Components Guarantee”, both dated 10 April 2003, the latter of which contains the qualification that the proprietor will not accept responsibility for damage resulting from the use of untreated timber. The owner, as the cladding installer, supplied a “Producer Statement” dated 18 April 2003, covering the entire cladding system, and noting that the cladding installation has been carried out in accordance with the manufacturer’s specifications, installation instructions and the current “Appraisal Certificate”. The statement also notes that, if installed in accordance with the appraisal, the cladding will meet the relevant requirements of the building code. The manufacturer and installer note the date of completion as April 2003.

Sequence of events

- 2.6 The territorial authority issued a building consent on 20 October 1997. No conditions relating to the cladding were attached to this consent.

- 2.7 The territorial authority made various inspections during the course of construction, including prior to lining installation and following lining installation, with a final inspection on 1 September 2004 which noted:

All details correct – [exterior] cladding to be checked by “weathertightness” inspector.

- 2.8 The territorial authority carried out a cladding inspection on 1 October 2004, as confirmed by the “Weathertightness report for monolithic dwellings without a Cavity”, which included the comment:

No cladding ‘defects’ if we accept ground contact issues, but there are risks...

The report also noted:

[Existing] house had 900 high concrete foundation perimeter wall, and where polystyrene is clad over this wall it (the polystyrene) has been taken below concrete/ground.

- 2.9 The territorial authority wrote to the owner on 13 May 2004, stating:

We have received your request for a code compliance certificate (CCC) for building works at the above address.

Before the council can issue a code compliance certificate, we must ensure that all building work meets the NZ Building Code requirements. In particular, the Building Code specifies that building work must remain durable for specific periods of time after the code compliance certificate is issued.

You will be aware of the current weathertightness issues often reported in the media. These issues have highlighted the care that must be taken to establish that all building elements will remain durable for the required time before any CCC can be issued.

At the time your building consent was processed, it was not known to the extent it is now, that face fixed monolithic cladding systems particularly, were

not performing. The allowance of moisture ingress, together with the use of untreated timber framing, has now become a major problem to the structural integrity of buildings.

Weathertightness risk factors identified with your building include:

- 1 No drainage/ventilation cavity behind monolithic cladding, although horizontal battens at approx. 300 crs fixed on original house have been left in place and new building paper fixed over.
- 2 2 storey high building
- 3 Roof/wall intersection design
- 4 Eaves width
- 5 Building envelope complexity
- 6 Deck design
- 7 Timber framing to clad balustrades is only H1 treated.
- 8 No previous cladding inspections by Council.
- 9 Top fixing of steel balustrade and deck balustrade rail and wall penetration.
Note: top fixing is shown in [named system] data as late as August 2001, albeit with a "rubber gasket" between.
- 10 Sealing of steel baluster through membrane on top of membrane is unknown.
- 11 No flashing to top of meter box.
- 12 Solid balustrade waterproofing not inspected and framing is only H1 according to owner.
- 13 Cladding ground contact is not normally acceptable, but Council notes the comments made by [the coating system supplier] in their letter of 5 March 2004.

A visual inspection recently carried out by council has revealed the following defects, which need remedying,

Defects to be remedied and a further recheck inspection called for

- 1 Provide as built details for change of cladding and deletion of stairs from back deck.
- 2 There must be no horizontal toeholds between the heights of 150 and 760 above deck level, for steel deck balustrade.

However even with the listed defects remedied, Council cannot be satisfied on reasonable grounds that the cladding system installed on this building will meet the functional requirements of Clause E2 External Moisture and B2 Durability, of the New Zealand Building Code and is therefore unable to issue a code compliance certificate.

If you still wish to seek a code compliance certificate, you may request a determination from the Building Industry Authority as per section 17 of the Building Act 1991.

- 2.10 The territorial authority did not issue a Notice to Rectify as required under section 43(6) of the Act.
- 2.11 The owner applied for a determination on 5 November 2004.

3 THE SUBMISSIONS

3.1 The owner, in a covering letter, dated 2 November 2004, to the application for a determination noted that:

I am a trade certified builder with 30 years of experience and I have done all the building work on this property myself. I have also done the exterior cladding as I am a registered [named system] contractor. I am currently running an exterior [named system and company] which has been in business for 20 years.

The house originally was clad in [asbestos cement] weatherboards which were fixed to 50x25 horizontal timber battens. I removed the [asbestos cement] weatherboards and left the existing battens on the walls, then repapered the house and fixed 60mm [named system], which was then plastered as per manual and painted. The council saw the battens and took photos of them.

The base of the house has a 900 x 150mm concrete plinth around the perimeter, which was existing.

I will install a plastered polystyrene flashing above the exterior meter box.

I will remove the top fixed handrails and install a waterproof membrane over fixing blocks on the top of the handrail as per enclosed drawings. Before plastering this I will get council to inspect it, ([name of inspector]) and also photograph it. Handrails will then be side mounted.

Horizontal toeholds on steel deck balustrade will be removed...

3.2 The owner also forwarded copies of;

- The plans and specifications;
- The cladding manufacturer's specifications;
- The detail proposed for balustrade fixings;
- The correspondence with the territorial authority; and
- Various guarantees, producer statements and other statements.

3.3 In a covering letter to the Authority dated 28 October 2004, the territorial authority noted:

After assessment of the above consent for a "Code Compliance Certificate" (CCC) Council are unable to ascertain within reasonable grounds that some building work including cladding comply with relevant clauses of the building code.

A short summary of events is as follows.

- [The territorial authority] issued building consent [consent number] for a new dwelling at the above address in October 1997.
- Standard council inspections such as footings, preline, postline except the final inspection were undertaken during the period January 1998 to June 2001. Final inspection was undertaken in September 2004.
- No specific inspection was recorded for external cladding.
- Face fixed cladding systems without cavities were under scrutiny by council at the time when the CCC was requested.
- A specific weathertightness visual inspection was undertaken on 1 October 2004 and a copy is included under "Inspection Records".

The territorial authority then noted the risk factors and issues as outlined in its letter to the owner on 5 October 2004, and went on to say:

It is noted that monolithic cladding systems are being continuously tested, improved and detailing revised. New knowledge indicates that monolithic systems should have a drainage cavity to perform its function meeting durability requirements of the Building Code. The issues such as high risk design, installation by licensed installers, selection of approved coating system, coating application by licensed applicators, quality control systems of suppliers, installers and applicators, specific independent inspections during installation have further complicated compliance verification process. New E2 document confirms the importance of the above issues.

In regard to this application for a determination, specifically in this case the matters of doubt are:

- Whether the installed cladding system complies with clauses B2.3.1 and E2.3.2 of the Building Code.
- Whether building elements, which have 5 and 15-year durability requirements comply with clause B2 of the Building Code, considering the age of construction.

3.4 The territorial authority also forwarded copies of:

- The building consent documentation;
- The building inspection records; and
- The correspondence with the owner.

3.5 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 submission of the other party.

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 and E2 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 22 March 2005. The expert noted that the cladding appeared to have been installed in accordance with the manufacturer’s instructions at the time of construction, and that the quality of the coating was generally good, with the finish smooth, uniform, well adhered and with no evidence of cracking or discolouration. The sealing of services and plumbing penetrations appeared weathertight, and the cladding was observed to form a continuous weathertight surface behind all obstructions. There are no control joints in the cladding, as the manufacturer’s instructions did not require these for walls of the dimensions used in this house. The expert could see no evidence of any stress in the cladding arising from the absence of control joints.

The expert removed a small section of the textured finish at the jamb to sill and jamb to head junctions of one window to examine the flashings, and noted that purpose made uPVC jamb and sill flashings, with sealant at the junction, have been used in accordance with the manufacturer’s instructions and with the appraisal. While no uPVC head flashings have been installed, the expert noted that they were not a requirement in the manufacturer's instructions at the time of consent, as the cladding

performs the flashing function via a rebate and 10 mm cover over the flange at the window or door head.

The expert took non-invasive moisture readings at interior linings of exterior walls throughout the house. All readings were found to be at an acceptable level. Further moisture readings were taken through holes drilled through the exterior cladding at four sample locations; the first floor family room deck balustrade top plate and wall batten, a corner stud to the family room wall framing and a window sill plate to the ground floor games room. No readings indicated high moisture content in the timbers tested, with the readings ranging from 12.2% to 14.6%. Moisture levels above 18% recorded after cladding is in place generally indicate that external moisture is entering the structure.

The expert made the following specific comments on the cladding:

- There is a junction between an EIFS clad beam and the original barge board outside the family room which has the flashing upstand over and sealed to the barge board;
- While the thickness of the polystyrene backing sheets is generally 60 mm, this has been reduced where the cladding passes over the existing concrete block ground floor walls. While the manufacturer's instructions specify an angle to be used at the bottom of the cladding, this is missing from a section of wall outside bedroom 3. However, although this will make the surface vulnerable to damage, the cladding is over concrete block and wall framing would not be affected by any damage or subsequent moisture penetration;
- The cladding over the new timber walls finishes about 100 mm above paving level, and 40 to 45 mm above deck floor levels. Where the cladding passes over the existing concrete block ground floor walls, it has been carried below ground level. No moisture penetration is expected through the polystyrene and concrete block, and no raised moisture levels were noted in adjacent wall linings;
- The cladding of the deck columns has been carried below ground level. The H4 timber posts in the columns are set into concrete below ground level;
- The small rear deck on the first floor has a steel balustrade fixed to an EIFS clad upstand. The larger decks to the family room and lounge have handrail supports that penetrate the tops of the EIFS clad balustrades and are sealed with sealant. However there is no current evidence of moisture penetration into the top plate of the balustrade framing; and
- While the two larger decks have little or no fall, there are steps down from the adjacent floor levels of 40 to 70 mm, drainage outlets and no evidence of ponding or moisture penetration into the deck framing. The timber soffits beneath the decks have a stain finish that shows no visual evidence of leaks. However the overflow outlet in the step riser outside the dining room has the waterproofing membrane sealed directly against a uPVC pipe, which may not provide a durable bond.

5.2 Copies of the expert's report were provided to each of the parties. The territorial authority made no comment, but the owner responded to several points in the expert's report and noted that, in reference to timber treatment:

I have supplied invoices to confirm the use of boric treated timber in the construction of the house. The columns are H4 posts...

With reference to the reduced thickness of cladding over concrete block walls, the owner also noted:

Due to the 900mm high concrete base of the existing house, which had an undulated finish, the polystyrene had to be surformed to get a straight line vertically and horizontally. That is why in some of that area the thickness of the polystyrene could be slightly reduced.

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 and E2, 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 eave projections to all walls that are greater than 400 mm, which provide moderate protection to the cladding beneath them;
- Is built in a moderate wind zone;
- Is a maximum of two storeys high;
- Has an overall envelope that is reasonably simple in plan and form;
- Has three enclosed decks at the first-floor level, one of which is cantilevered, that are constructed over open space. Two of the decks have framed and clad balustrades with monolithic cladding to both sides and top, and have handrails fixed to the sloping tops. The third deck has a monolithic clad upstand with a metal balustrade fixed to the top of the upstand;
- Has external windows and doors that are protected by the cladding at the head, and by purpose made flashings at jambs and sills;
- Has monolithic cladding which is fixed directly to the framing with no drainage cavity;
- Has timber to the clad columns supporting the entrance canopy and two of the decks, which has been treated to H4 and this would have good resistance to decay if it gets wet and cannot dry out; and
- Has H1 boric treated external wall framing to the new walls and decks, and is likely to have rimu framing to the original walls, which would provide a limited degree of decay resistance if the timber gets wet and cannot dry out.

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 paragraph 5.1 and in the expert's report as being:

- The penetration of the handrail fixings through the tops of the enclosed balustrades of the decks; and
- The questionable seal of the waterproofing membrane against an outlet pipe to the dining room deck.

In addition, I note the lack of a top flashing to the meter box as noted by the territorial authority.

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;
- The house has a relatively simple shape and a hipped roof with 405 mm overall eaves projections that will give some protection to the walls;
- The external windows and doors are protected by the cladding at the head, and have purpose made flashings to jambs and sills; and
- There is no moisture evident at this time in the external wall cavities.

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.

6.10 I accept that control joints are not required to the walls of this house.

6.11 I note the expert's comments in regard to the lack of a base angle to the bottom of one section of wall, and accept that this omission will not affect the weathertightness of that wall.

6.12 I also note the expert's comments in regard to the cladding over the original concrete block walls, which finishes below ground level, and accept this will not affect the weathertightness of those walls.

6.13 I also note the expert's comments in regard to the cladding of the timber support columns, which finishes below ground level, and accept that, as the H4 posts also extend below ground level, the ground contact of the cladding is unlikely to affect the durability of the timber posts.

6.14 I acknowledge the territorial authority's comments in regard to the lack of ground clearance at the main entry, but accept that this area is at the top of steps, is well-drained, has a waterproof upstand behind the cladding and is sheltered by the entrance canopy, all of which circumstances combine to protect against moisture penetration into the wall framing.

6.15 I note the owner's proposal to make alterations to the handrails to the decks.

- 6.16 I note that all elevations of the house demonstrate a moderate to 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 constructed is assessed for the purposes of issuing a code compliance certificate.

7 CONCLUSION

- 7.1 I find the expert's report establishes that there is no evidence of external moisture entering the building. Accordingly, I find that the cladding on this building at this time does comply with clause E2.
- 7.2 However, 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 this building are likely to allow the ingress of moisture in the future, the house does not comply with the durability requirements of clause B2.
- 7.3 I consider that, because the faults that have been identified with the cladding system occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 6.8 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 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.

8 THE DECISION

- 8.1 In accordance with section 20 of the Act, I determine that the house is weathertight now and, therefore, the cladding complies with clause E2. However, as there are

several items to be remedied to ensure it remains weathertight and thus meet the durability requirements of the code, I find that the house does not comply with clause B2. Accordingly, I confirm the territorial authority's decision to refuse to issue the code compliance certificate.

- 8.2 I also find that rectification of the items outlined in paragraph 6.8, to the approval of the territorial authority, along with any other faults that may become apparent in the course of that work, will consequently 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 not issued a Notice to Rectify. The territorial authority should do so and the owner is then obliged to bring the house up to compliance with the building code. It is not for me to decide directly how the defects are to be remedied and the cladding brought to compliance with the building code. That is a matter for the owner to propose and for the territorial authority to accept or reject, 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 22 April 2005.

John Gardiner
Determinations Manager