

Determination 2005/27

Refusal of code compliance certificates for a block of apartments with a “monolithic” cladding system

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 builder on behalf of the owner of the building and is referred to throughout this determination as “the owner”. The other party is the private building certifier employed by the owner (“the certifier”). The application arises from the refusal of the certifier to issue a code compliance certificate because there is doubt whether, at some locations on the first floor (level 2) of the building, the monolithic cladding system used to construct the building complies with the building code.

1.2 My task in this determination is to consider whether I am satisfied on reasonable grounds that the external wall cladding system as installed (“the cladding”) on this building complies with the building code (see sections 18 and 20 of the Act). By “external 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 The building itself is described in paragraphs 2.1 to 2.3, and paragraph 8 sets out my decision.

2 PROCEDURE

The building

- 2.1 The building is a four storey apartment complex with a basement car park. The building is U-shaped in plan. According to the consent application there are 68 apartments. The building has concrete foundations and poured concrete slabs with concrete columns supporting pre-stressed concrete intermediate floors. Wall construction is generally 100 mm x 50 mm timber framed with concrete block or steel-framed party walls. The window and door joinery is aluminium and the roofs are clad in asphalt shingles. The site is in a high wind zone in terms of NZS 3604: 1999 “Timber framed buildings.”
- 2.2 The subject of this determination is a number of walls and their junctions with a tiled concrete floor slab, laid to fall away from the walls and surrounding a swimming pool on the first floor (level 2) of the building. Below the slab is located a gymnasium also forming part of the facilities of the building provided for the use of owners and residents. Some of the apartments enjoy weather protection of their walls because of soffit overhangs. Outside each apartment is a planter-box formed by three low walls and the exterior wall of the apartment below a window. There is a combination of pitched and flat roof areas covered with asphalt shingles and asphalt sheeting respectively.
- 2.3 The wall cladding is what is described as monolithic cladding. As specified in an appraisal document published by an independent appraiser (and subsequently withdrawn at the request of the manufacturer), the cladding system consists of 4.5 mm thick fibre-cement backing sheets fixed through building wrap to timber or steel framing and coated with a 10 mm thick layer of lightweight plaster which is in turn finished with a layer of fibreglass mesh reinforced proprietary finishing plaster. The manufacturer’s instructions include details for flashings at various junctions, for movement joints, and require flashings at the heads, jambs, and sills of exterior joinery units such as windows.
- 2.4 The designer’s specification for the cladding system included the following instruction:

FLASHING AND DETAILING

Adhere to the systems manufacturer's penetration flashing guidelines. Carry out to the required standard of execution to ensure water does not penetrate.

And later in the specification:

FIT FLASHING AND ACCESSORIES

Fit flashings to jambs and sill on recessed joinery using the system manufacturer's proprietary flashings. Reinforce external corners and bottom edges of polystyrene sheets with uPVC angles and channel extrusions. Fit joinery heads with a head flashing (if not protected by boxed eaves or other protection).

- 2.5 The manufacturer of the plaster system provided a producer statement dated 20 November 2002 in respect of the cladding system, but the statement was not accepted by the certifier because it did not refer to compliance with any particular building code clauses.
- 2.6 On 13 April 2003 the applicator wrote to the certifier withdrawing the guarantee it had previously issued.
- 2.7 On 29 October 2003 the builder provided the architect with a "joint [builder]/ [cladding system manufacturer] Guarantee" for the wall cladding system. The builder noted that the Guarantee, which was in the form of the cladding manufacturer's usual guarantee had been "modified to include workmanship". I note that the Guarantee was signed by the manufacturer of the cladding system "For and on behalf of" the system manufacturer, and by the builder "For and on behalf of Applicator", with the applicator shown on the form as being the builder. The guarantee stated that neither the manufacturer nor the members of its Licensed Contractors network would accept responsibility of any kind for consequential damage to any building component that occurred as a result of the use of untreated framing.
- 2.8 The cladding of the floor slab is relevant to the subject of this determination. The slab is constructed of concrete, finished to provide the designed falls to the deck drains. Over the topping layer has been applied a proprietary liquid waterproofing compound described as "a single component, bitumen modified, polyurethane based waterproof membrane that cures by reaction with the atmosphere". The manufacturer of the membrane system has published technical advice as to the appropriate use of the system, and instructions as to its application, including its use over joints in the substrate, and the need for care and protection of the membrane during placement of concrete and tiling operations. Hard floor tiles have been laid over the membrane to form the durable surface on which foot traffic can travel.
- 2.9 The exterior joinery is aluminium.
- 2.10 No written evidence has been submitted to establish the extent of treatment, if any, of the timber framing in the walls that are central to this determination.

Sequence of events

- 2.11 On the basis of a certificate from a building certifier the territorial authority issued a building consent in late 2001.
- 2.12 The certifier's inspections record shows that inspections were made by the certifier from 10 January 2002 onwards.

- 2.13 The certifier carried out a final inspection, relevant to cladding issues, on 15 July 2003. At that time the certifier noted the result of the inspection as a fail. In a fax to the architects on the same day the certifier said:

The outstanding issues are:

1. The cladding. We are not in a position to confirm compliance with NZBC E2. This issue will not go away and I believe that [head contractor] need to address it early. If we cannot assume that the cladding is doing its job then there is potential for long term damage to the underlying framing. This puts your clients interests at risk.....

- 2.14 On 11 November 2003 the architects responded:

We reply as follows and provide additional information as required:

- 1 [Proprietary name] Cladding

Attached is a joint [Head contractor]/[Manufacturer's name] Guarantee for the [Proprietary name] Cladding System covering materials and workmanship to meet the relevant provisions of the New Zealand Building code clauses B1 Structure; B2 Durability and E2 External Moisture.

This guarantee supersedes the previous guarantee provided by [named applicator] which was undermined by correspondence to yourselves by [named principal of named applicator].

- 2.15 On 27 November 2003 the certifier faxed a list of outstanding items to the architects and commented on the architect's response of 11 November:

Re your letter of 11 November 2003:

1. [Proprietary name] cladding:

I still have issues with this. I take it that the system has not been modified since my last visit. We cannot accept that a cladding system in contact with or below the paved surfaces is in accordance with the [name of independent appraisal organisation] appraised [proprietary name] system. [Manufacturer of system] have given no reason why they have accepted this. Neither [manufacturer of the system] nor [head contractor] were the applicator. [Head contractor] are identified as applicator on the Guarantee form provided. The applicator, [name of applicator] expressed, what appeared to be genuine concerns and identified specific problems. I received a response to this from [head contractor] which did not address even one of the applicators allegations. I believe that it would be reckless of us to rely on the guarantee that you have provided while these issues remain unaddressed.

- 2.16 In April 2004 the head contractor commissioned an independent building consultant ("the consultant") to inspect the cladding wall/floor detail as constructed.

- 2.17 On 3 May 2004 the head contractor sent a copy of the consultant's report (dated 19 April 2004) to the architects and reported that a copy had also been sent to the certifier. In the conclusion of the report the consultant wrote:

5 Conclusion

- 5.01 It is the writer's understanding that [proprietary waterproofing system] is a single component, bitumen modified, polyurethane based waterproof membrane that cures by reaction with the atmosphere.

[Proprietary system] is also purported to protect structures from water penetration while remaining flexible to handle the expansion and contraction of substrates.

[Proprietary system] is recommended for the following:

Waterproofing exterior concrete, masonry and incidental metal in balconies, planter boxes, below grade walls, concrete tanks, roof structures, sandwich construction, underwear (sic) courses and tiles laid on balconies, in internal wet areas including bathrooms and shower walls, floors, pools and fountains, sea walls, dams and reservoirs.

As previously indicated in section 3.03 the writer was advised by the applicator that in the majority of areas the wall/floor junction had been sealed twice, with the [proprietary waterproofing system] membrane.

[Proprietary waterproofing system] is suitable for all climates and has a number of features and benefits that permits nominal expansion and contraction which can bridge up to 5 mm, The product is also easy to apply.

Detailed drawings taken from [Manufacturer's published information document] (copy attached) clearly identifies where a wall/floor junction or concrete topping requires to be sealed and waterproofed the method used by the applicator meets the manufacturer's recommendations and guidelines. It is therefore the writer's opinion this method of application negates the need for a drip edge at the interconnecting point of both the wall and floor tiles.

It is also the writer's opinion that the method used at the junction is an acceptable method and as long as the membrane is protected against tear/puncture and other abuses, this membrane will be an integral part of the overall waterproofing membrane.

- 2.18 On 11 May 2004 the architect wrote to the certifier responding, inter alia, to the certifier's fax dated 27 November 2003. With respect to the cladding the architect wrote:

1 [Proprietary cladding system] Cladding

Notes:

- (a) [Head contractor] were prepared to cut the plaster cladding up to clear the decks and I met on site with them to discuss the methodology. I am strongly against attempting this work, as it is simply not practical to get into corners and execute a tidy finish, the chance of damaging the waterproof skin to the upstand is extremely high, the bottom p.v.c flashing gets cut off which exposes the insulating plaster. In short we could create more waterproofing problems than what is perceived to exist.
- (b) There have been no reported leaks or dampness adjacent to any of the tiled decks.
- (c) All framing is treated with the bottom plate treated H3.
- (d) The [Proprietary cladding system] System was installed prior to the requirement for cavity construction so any ingress of water above deck level is unlikely to drain out the bottom anyway.
- (e) The [Proprietary cladding system] Manual does not show a detail of [proprietary cladding system] to tiled deck and is silent on providing a recommended clearance.

Having made the above comments we can report that [Head contractor] have commissioned [Independent Building Surveyor] who are approved BIA approved inspectors/advisors (sic) to prepare a report on the cladding as installed to determine if weathertightness has been compromised. This report has been completed and we understand a copy has been forwarded directly to [named building certifier].

- 2.19 The building certifier did not issue a code compliance certificate.

- 2.20 The building certifier did not notify the territorial authority, under section 56 (4), that a Notice to Rectify should be issued by the territorial authority.
- 2.21 The owner applied to the Authority for a determination on 12 August 2004.

3 THE SUBMISSIONS

3.1 The owner supplied copies of:

- A plan showing the layout of floor tiles;
- A plan showing the area of concern;
- A sheet referring to plan notations;
- A sheet showing a relevant elevations;
- A sheet showing details of the tiles and membrane;
- A sheet of plan details;
- An independent appraisal of the cladding system;
- The cladding section of the specification;
- A report on the building from the consultant;
- Correspondence from the certifier; and
- Correspondence from the territorial authority.

3.2 The certifier made a submission by letter dated 22 October 2004 with which was enclosed copies of:

- Correspondence between the owner and the certifier;
- A summary of inspections carried out by the certifier; and
- A copy of the consultant's report as submitted to the certifier by the owner.

3.3 In its submission the certifier said:

The applicant has supplied us with a copy of the report from [the consultant] in response to our request for sufficient information to enable us to issue the Code Compliance Certificate for this project. Unfortunately we felt the report did not go far enough to enable us to issue the certificate for the following reasons:

1. Information from the applicator suggests that the [proprietary brand] cladding was not applied in accordance with the [proprietary brand] specification.
2. The [proprietary brand] specification calls for a gap between the cladding and the ground or decks. This situation occurs not only in the area inspected by the [consultant] inspector but on several apartment decks elsewhere in the building. The tanking method used at the base of the cladding will be called upon to perform a significant role, given that the difference between the outside deck levels in the pool

area and apartment floor levels is not very significant. Fortunately this situation does not exist elsewhere in the building, where deck levels are set at 70 mm below floor level.

3. The issue of saddle flashings at window box and deck balustrade to cladding junctions has not been resolved. (See item 1 of our fax of 17/12/02 to [the architects for the building]). We also commented in our fax of 3/12/02 that window head flashings did not appear to extend far enough past window heads.

Correspondence between [the consultant] and [the owner] submitted with the application suggests that [the certifier] should have brought these problems to the attention of [the owner] earlier. You will note from our Job Report that we were not called to carry out a cladding inspection. At the time it was not our policy to do this where the appraised cladding system was being installed by a registered installer. In this case the designer had arranged for written confirmation that [name of applicator] were recognised by [proprietary plaster system manufacturer] as being an applicator who met their competency requirements. It was also understood by us that [proprietary plaster system manufacturer] representatives would have input into the cladding process.

I believe that all the parties involved have genuinely attempted to ensure that the building has been adequately clad. I am disappointed that this could not have been resolved locally. In matters such as this we tend to err on the side of caution, however, I will not be disappointed if our reservations regarding the cladding system prove to be unfounded.....

- 3.4 The territorial authority made no submission but submitted a copy of the building consent application form date-stamped as received on 28 June 2001.
- 3.5 Copies of the submissions and other evidence were provided to each of the parties. Neither party made any further submissions in response to the submission of the other.

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 B 2.3.1 and E2.3.2 of the building code (First Schedule, Building Regulations 1992) is correct. Those 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, 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

General

- 5.1 The Authority commissioned an independent expert (“the expert”) to inspect and report on the cladding in the first floor of the building. The expert provided a report. In his report the expert said that visually the quality of the finishing was good, that the texture/paintwork to the cladding appears sound and evenly applied with no evidence of cracking, flaking or staining.
- 5.2 In the course of the inspection the expert observed that expansion joints at 3-4 metre intervals had been installed in the tiling surrounding the pool, but some tiles were loose and the grouting between the tiles had deteriorated in some places.
- 5.3 The expert commented that the asphalt shingle roof, as observed from the pool area, appeared to be well installed and in sound condition. However the expert noted that the butyl rubber “kick-out” flashing fitted to the roof of the apartment in which an elevated moisture reading was recorded (see 5.10 below) was reliant on silicone sealant for its weathertightness. No evidence of leakage from the roofs to the interior was seen.
- 5.4 The expert noted that the manufacturer’s recommendation for movement control joints, in the horizontal plane, was for such joints to be installed at maximum spacings of 20 metres. In the part of the building that is the subject of this

determination it appears from the plans supplied that none of the walls exceed 20 metres in length. The expert commented that there was no evidence of cracks in the cladding.

- 5.5 The expert reported that the clearance between the lower edge of the cladding and the finished tiled floor “ approximates the required clearances.
- 5.6 Service and fixing penetrations of the cladding were reported by the expert to be well sealed. The expert commented that where the wall cladding terminated clear of the tiled floor there was clear evidence that a water-proofing membrane had been applied beneath the tiles and painted to prevent premature breakdown due to UV radiation.
- 5.7 The expert noted that all balustrade tops were protected with a steel cap flashing, while the flashing/wall junctions were well silicone sealed. Removal of a small section of plaster confirmed the fitting of an under-flashing.

Moisture investigation

- 5.8 The expert selected 7 apartments and inspected them. Non-invasive moisture content checks were carried out on “ at risk” locations and showed no evidence of excessive moisture. The expert reported that the decks, all with overflow drainage, and waterproofed and tiled, appeared to have correct fall and were at a sufficient difference in level in relation to the internal floor level of the apartments.
- 5.9 The expert tested for the presence of moisture within the timber structure by using both non-invasive and invasive moisture reading meters. No internal elevated readings were obtained using the non-invasive meter, apart from one elevated reading at one wall of one apartment, and another at the front of a planter-box built on the front of another apartment. The expert reported that at the latter apartment some areas of the cladding extended to deck level.
- 5.10 The expert carried out further investigation at the locations identified by the non-invasive meter. The invasive meter was connected to probes inserted after drilling through the plaster cladding of the window box and also through the skirting and interior plasterboard from inside the apartments. The meter showed a moisture reading of 19.2 % at the location in the apartment and 14.1% at the planter-box location.
- 5.11 The expert carried out non-invasive moisture testing around randomly selected windows and doors and found no evidence of excessive moisture in the structure cavity. Sill and head flashings could be seen. Most window heads were fitted up to the soffit and thus were protected from weather.
- 5.12 Copies of the expert’s report were provided to each of the parties. The territorial authority made no comment but the owner did respond by letter dated 14 January 2005, saying:

We have studied the report in detail and submit the following comments referring to the reports nomenclature.

2.4 Loose Tiles in Pool Area

[Building company] and its tiling subcontractor will investigate the cause of the loose tiles and deteriorating grout. Depending on the cause [Building company] will

either carry out remedial work or make appropriate recommendation to the building owner.

- 3.3 It is the writers understanding that the certificate holder requested the withdrawal (sic) of [name of appraisal organisation] Appraised Certificate [number] due to its imminent expiry and the pending changes to the Building Code requiring ventilated wall cavity. The system used was specified by the Architects and approved for use by the Territorial Authority via the Building Consent.

3.7 Risk Factors Present

We confirm that at the time of construction it was the policy of [building company] that H3 (CAA) timber be used for all external framing. Its use on this project was the subject of audit via visual inspection by senior {building company} management which confirmed its use on this project.

4.3/4.5/6.1 Apartment [number]

The report notes that an invasive test reading of the Apartment [number] bottom plate recorded a "marginally elevated reading of 19.2% and that "decay in timber is not likely but leaks may be occurring". As previously noted, H3 timber was used in this area. However [building company] will review the Apartment for any evidence leaks and will carry out remedial work if leaks are evident.

4.9 Movement Control Joints

As noted by the report, the [plaster system] detail sheet indicates the finishing coat being applied over the expansion join. We also advise that the application was supervised by [building company] and regularly inspected by [the manufacturer of the system] and [name of building certifier]. The wall cladding/ deck clearance detail being the only area of non-compliance noted.

- 6.3 It is common industry practice that sealant work should be regularly inspected as part of a building maintenance schedule.....

6 DISCUSSION

- 6.1 I have considered the submissions of the parties, and the expert's report. My approach to 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 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 Experience suggests it is important to note that:

- Data shows 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 houses 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 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. Desirable characteristics of the wall system are that:

- 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 the apartments (on level 2 of the building), which are the subject of this determination:

- Generally have eaves that might shield the cladding;
- Are in a high wind zone;
- Have an overall envelope that is relatively simple in shape;
- Have planter-boxes formed against their entry walls;
- Are adjacent to external sloped tiled floors that fall away from the apartments;

- Have face-fixed cladding with no drainage cavity, and
- Has external walls that are constructed with what I accept, in the absence of any written evidence to the contrary, is timber that provides little resistance to decay if it gets wet and cannot dry out.

Weathertightness performance

- 6.8 I find that the cladding junctions, edges, intersections, and penetrations are generally well constructed.
- 6.9 There is evidence that moisture is entering the wall framing of one of the apartments, but that does not appear to be happening at the other apartments.

7 CONCLUSION

- 7.1 I accept the expert's report establishes that the wall cladding has generally been installed according to good trade practice.
- 7.2 I accept that if the membrane system installed under the tiling adjacent to the walls has been installed properly and extended up behind the walls so as to create a barrier to moisture passing through the wall into the framing, that will compensate for the lack of clearance between the lower edge of the wall cladding and the tiled floor. As there has been doubt raised by the cladding applicator as to whether the cladding was properly installed, I recommend that the owner investigates whether the cladding was properly applied and whether the membrane system, in combination with the wall cladding as installed, will exclude moisture from the wall cavity.
- 7.3 I accept that moisture is entering the apartment in which the elevated moisture reading was detected. Consequently the building does not comply with clause E2.3.2 of the building code.
- 7.4 I recommend that further investigation be carried out to ascertain the source of the moisture at the location where the reading of 19.2% was obtained.
- 7.5 The buildings will also have to comply with clause B2 of the building code. B2 requires that a building continue to satisfy all the objectives of the code throughout its life and that includes the requirement for the building to remain weathertight for its prescribed life. Because the unidentified cladding fault in this building that is currently allowing moisture to enter is likely to allow the ingress of moisture in the future, I find that the building will also not achieve the durability requirements of B2.3.1 until the fault is rectified.
- 7.6 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.
- 7.7 I decline to incorporate any waiver or modification of the building code in this determination.
- 7.8 It is not for me to prescribe how the building work on the building is to be brought to compliance with the building code. That is a matter for the owners to propose and for

the territorial authority to accept or reject, with either of the parties entitled to submit doubts or disputes to the Department for another determination. I recommend that the proposal for rectification should be consistent with the findings of this determination. In other words the proposal should encompass not only the faults identified so far, and noted in this determination, but should also include any other faults revealed by the completion of the further investigative work recommended in paragraph 7.4 (above). That further work might complement the limited investigation the expert was able to carry out.

- 7.9 I believe that, following rectification, the cladding on the building will require on-going maintenance to ensure its continuing code compliance. That maintenance is the responsibility of the 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 the Authority takes 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.

8 THE DECISION

- 8.1 In accordance with section 20 of the Building Act, I determine that the cladding as installed does not comply with either clause E2 or B2 of the building code. Accordingly, I confirm the building certifier’s decision not to issue the code compliance certificate.
- 8.2 The building certifier has not notified the territorial authority that a Notice to Rectify should be issued. Consequently the territorial authority has not issued a Notice to Rectify. The building certifier should now notify the territorial authority in accordance with section 56(4) that a Notice to Rectify should be issued by the territorial authority. Under the Building Act 1991, a Notice to Rectify should be issued that requires the owner to bring the building into compliance with the code without specifying the features that are required to be incorporated.
- 8.3 I believe the cladding system on the building will require ongoing maintenance to ensure its continuing compliance with the building code.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 4 March 2005.

John Gardiner

Determinations Manager