

## Determination 2007/88

### Determination regarding a code compliance certificate for a house with monolithic cladding at 1/12 Richards Avenue, Milford



#### 1 The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004<sup>1</sup> (“the Act”) made under due authorisation by me, John Gardiner, Manager Determinations, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicants are the owners, K and S Butler (“the applicants”), and the other party is the North Shore City Council (“the territorial authority”).
- 1.2 This determination arises from the decision of the territorial authority to refuse to issue a code compliance certificate for 11-year-old alterations and additions to a

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<sup>1</sup> The Building Act 2004 is available from the Department’s website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

house because it is not satisfied that the building work complies with clauses B2 and E2 of the Building Code<sup>2</sup> (First Schedule, Building Regulations 1992).

1.3 The matters for determination are whether:

**1.3.1 Matter 1: The cladding**

The cladding as installed on the house (“the cladding”) complies with clause E2 “External Moisture” of the Building Code. By “the cladding as installed” I mean the components of the system (such as the backing materials, the flashings, the joints and the plaster and/or the coatings) as well as the way the components have been installed and work together.

**1.3.2 Matter 2: The durability considerations**

The elements that make up the alterations and additions comply with Building Code clause B2 “Durability”, taking into account the age of the building work.

1.4 In making my decision, I have considered the submissions of the parties, the report of the independent expert commissioned by the Department to advise on this matter (“the expert”), and the other evidence in this matter. I have evaluated this information using a framework that I describe more fully in paragraph 6.1.

1.5 In this determination, unless otherwise stated, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

## **2 The building**

2.1 The building work consists of major alterations and extensions to an existing house situated on a gently sloping site, which is in a low wind zone for the purposes of NZS 3604<sup>3</sup>. The building work involved the addition of an upper level and extensions to lower levels; and included new exterior wall and roof cladding and new aluminium joinery. The resulting house is two storeys high over three levels, with most of the upper level accommodated within the roofline. The construction of the house is conventional light timber frame, with a concrete slab to the garage, suspended timber floors to other areas, concrete foundation walls and monolithic cladding. The house is complex in plan and form, with 35° pitch concrete tile hipped roofs that have eaves projections of about 600mm overall. The boundary wall to the south garage is concrete block, which extends up as a deck balustrade.

2.2 The house has two decks, with membrane floors and monolithic-clad balustrades. The south deck sits above an enclosed garage area below, while the north deck is recessed beneath the roof with columns supporting the deck and roof overhang.

2.3 The applicant has submitted copies of invoices from the timber supplier, which indicate that the external wall framing supplied for the house was “Rad No1 H1 PG”, and the deck framing was “Rad No1 H3 PG”. The expert took a timber sample from exterior wall framing and forwarded it to a testing laboratory for analysis. The

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<sup>2</sup> The Building Code is available from the Department’s website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

<sup>3</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

analysis confirmed the sample as equivalent to H1.2. Given the age of the original house, I consider that the original timber framing is likely to be boric treated. I therefore consider that the wall and deck framing of this house is likely to be treated to a level that will provide resistance to fungal decay.

- 2.4 The cladding is a monolithic cladding system described as solid plaster over a solid backing. In this instance it is an “Omega Diamond Wall PM” system by Omega Products International Inc (“the manufacturer”), which incorporates 4.5mm thick “Hardibacker” fibre-cement backing sheets fixed through the building wrap directly to the framing timbers. A layer of fibreglass-reinforced insulating plaster is applied over metal lath, followed by a second plaster layer and a high-build paint coating. The manufacturer’s evaluation report dated July 2004<sup>4</sup> noted that control joints should be “installed as specified by the architect, designer, builder or exterior coating manufacturer”.
- 2.5 The plaster supplier provided a statement dated 29 March 2007 for the Omega plaster, which noted that the material met “the relevant ASTM standards for these products in the USA”. The plasterer provided a statement stating that the plaster was applied in accordance with the product instructions.

### 3 Background

- 3.1 The territorial authority issued a building consent (No. T4698) on 8 November 1995, and carried out various inspections during construction, including pre-line inspections on 15 and 22 August 1996. It appears that the building work was completed during 1996, although a final inspection was not undertaken at that time.
- 3.2 According to the applicants, a code compliance certificate was sought early in 2005, and the territorial authority carried out a final inspection on 2 March 2005. The inspection report identified some defects, noted that there was no record of any post-line inspection carried out in 1996 and that the building work included recladding the existing house and:
- As the external weathering includes rigid backed solid plaster which is face-fixed to the frame, a weathertightness inspection is required.
- 3.3 The territorial authority carried out a visual weathertightness inspection of the building work on 10 March 2005.
- 3.4 In a letter to the applicants dated 29 March 2005, the territorial authority stated that the Building Code required that building work must remain durable for specific periods of time after the code compliance certificate is issued and noted that the inspection process for monolithic claddings had changed since the time that the building consent for the house was processed. The territorial authority listed certain risk factors identified with the building, together with a list of defects and outstanding items, and stated that, due to the risk factors, defects and other compliance requirements, it could not be satisfied on reasonable grounds that the cladding system complied with clauses E2 and B2 of the Building Code. The territorial authority concluded that:

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<sup>4</sup> ESR-1194 issued July 1 2004 by ICC Evaluation Service Inc.

Council is unable to issue a Code Compliance Certificate for this dwelling, as we are not satisfied on reasonable grounds that the following compliance requirements have been achieved.

1. Compliance of the installed cladding system with the relevant clauses of the New Zealand Building Code.
2. Due to lapse of 9 years since construction, compliance of different building elements/systems, which have 5 and 15 year durability requirements as per clause B2 of the Building Code.

3.5 The territorial authority did not issue a Notice to Rectify under the Building Act 1991 (“the former Act”) or a notice to fix as required under section 164(2) of the Act.

3.6 It appears that a “re-check” inspection was carried out on 17 February 2006, and the inspection summary notes:

Advised owner Mr Butler – no CCC could be issued as B/consent too old (1995).  
Items on F/memo still to be attended to – owner advised on site.

3.7 In March 2007, it appears that the applicants met with the territorial authority and the builder and agreed on a plan of action to remedy the identified defects specified in the territorial authority’s letter of 29 March 2005. According to the applicants, the agreed remedial work has now been completed and a further inspection has been requested from the territorial authority. However, I have received no record of an inspection during 2007.

3.8 The Department received an application for a determination on 23 April 2007 and sought additional information that was received on 8 May 2007.

## **4 The submissions**

4.1 In a statement accompanying the application, the applicants set out the history of the project and noted that the plaster system had been submitted to, and approved by BRANZ. The applicants noted:

We have lived in this house for the last 10 years since completion. No instances of dampness, mould or any issues with moisture have been experienced in any areas of the house. Many tradesmen from various trades who have visited the house, been involved in inspecting or contracted to do the remedial work specified by the NSCC have commented favourably regarding the quality of the finishing of the building and the excellent condition of the plaster work with no cracking, also that no sign of dampness or moisture is evident.

4.2 The applicant forwarded copies of:

- the letter from the territorial authority dated 29 March 2005
- various invoices, technical data and other statements.

4.3 The territorial authority made a submission in the form of a letter to the Department dated 6 July 2007 which noted that the matters for determination were:

1. Whether the installed cladding system complies with clauses B2 and E2 of the New Zealand Building Code.

2. Whether any cladding not remediated complies with clause B2 of the New Zealand Building Code, considering the age of construction.
3. Whether all other building elements incorporated in this building comply with clause B2 of the Building Code, considering the age of construction.

4.4 The territorial authority forwarded copies of:

- the building consent
- the inspection records.

4.5 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 party.

4.6 The draft determination was sent to the parties on 11 July 2007. The draft was issued for comment and for the parties to agree a date when the building elements complied with Building Code Clause B2 Durability.

4.7 The territorial authority accepted the draft but noted that defects noted by the expert to the north deck had been omitted from paragraph 6.3.1. I have amended the determination accordingly.

4.8 Both parties nominated 1 January 1997 as the date when compliance with clause B2 was achieved.

## **5 The expert's report**

5.1 As discussed in paragraph 1.4, I engaged an independent expert to provide an assessment of the condition of those building elements subject to the determination. The expert is a member of the New Zealand Institute of Building Surveyors.

5.2 The expert inspected the house on 14 June 2007, and furnished a report that was completed on 22 June 2007. The expert noted that remedial work had been carried out, with recent silicone-filled cuts "executed neatly". The house had been recently repainted, and the finish coat appeared to be to a "uniform high standard". The expert noted that the building work generally conformed to the consent drawings, except for some changes to the exterior joinery.

5.3 The expert noted that the original timber caps to the deck balustrades had been replaced with plywood cappings with sloping tops and a reinforced epoxy coating, which is turned up against the walls to weatherproof the balustrade to wall junctions.

5.4 The expert noted that, apart from a single recessed window to an original wall on the west side, all of the windows were face-fixed, with satisfactory metal head flashings. The expert removed a small section of plaster at the jamb to sill junction of a west window and noted that no jamb or sill flashings were visible.

5.5 The expert inspected the interior of the house and no evidence of moisture was observed. The expert took non-invasive moisture readings internally around the house and some elevated readings were noted.

- 5.5.1 The expert arranged for the installation of 57 proprietary moisture probes to provide moisture readings at risky locations (and “indicative strength” test results) – and a number of elevated moisture readings were noted. The indicative strength tests at the probe locations resulted in scores of between 4 and 7 on a scale from 0 to 10 with 7 locations reported as “warning” or “danger” levels.
- 5.5.2 The expert carried out further investigation by taking 30 invasive moisture readings through the stucco at areas recording elevated probe readings and at other high risk locations, and the following elevated readings were noted:
- 40% below the apron flashing above the kitchen
  - 19% at the bottom plate below the apron flashing above the kitchen
  - 24% below the apron flashing above the front entry to the east
  - 19% and 21% in the bottom plates beside the front entry on the east wall
  - 21% and 24% in the corner of the balustrade framing to the upper north deck
  - 2 at 22% in the corner of the balustrade framing to the upper south deck
  - 18% in the corner framing of the storage area below the upper south deck
  - 24% and 32% in the bottom plate at the northeast corner at the garden wall
  - 20% in the bottom plate at the northwest corner beside the garden wall
  - 18% under the jamb to sill junction of the single recessed window to the west
  - 18% below the electrical meterbox.
- 5.5.3 The expert noted that the probe and invasive readings indicated that the equilibrium moisture content (“EMC”) ranged from 12% to 15% at the time of inspection. Moisture levels that vary significantly from the EMC range generally indicate that external moisture is entering the structure and further investigation is required.
- 5.5.4 Given the 40% moisture reading, the expert removed a small section of plaster below the apron flashing above the kitchen, and noted that the building wrap was degraded, with corrosion in the metal lathe. The expert removed and forwarded a timber sample from the cut-out to a testing laboratory for analysis. The sample tested positive for boron, and the wood was found to be sound with “no detectable decay”.
- 5.6 Commenting specifically on the cladding, the expert noted that:
- The bottom of the apron flashings lack effective kick-outs and are heavily reliant on sealant for weatherproofing, with the gutter ends buried in the plaster and moisture penetrating into the timber framing.
  - The gutters and fascias appear to be fixed directly against the Hardibacker backing sheets, with plaster apparently applied after installation.
  - Clearances from stucco to roof apron flashings are inadequate in some areas.
  - There is no (or insufficient) clearance from the bottom of the stucco to paving in a number of areas, including the east driveway concrete, entry tiles and the tiled patio to the north wall.

- The timber slats of a walkway to the west wall butt against the plaster, with no allowance for drainage.
- The replacement window to the original wall of the basement storage area is recessed by the thickness of the new plaster layer, and there is a crack under the corner of the window with moisture penetrating into the framing.
- While the balustrade to wall junctions appear weathertight, the cappings to the balustrades of both the north and south upper decks are allowing moisture into the balustrade framing.
- In the north and south deck, the outlet and overflow are poorly weatherproofed, with evidence of moisture in the timber framing of the garage below the south deck.
- The electrical meterbox to the east wall is unsealed, with no head flashing.
- Plastered concrete block garden walls butt against the wall cladding with inadequately flashed junctions as moisture is penetrating into the wall framing.

5.7 The expert also observed no evidence that horizontal or vertical control joints had been installed in a number of walls that would usually require these in conventional stucco cladding. However, he could see no evidence of movement cracking resulting from the omission, and considered that the specialised fibreglass-reinforced plaster system used may have meant that control joints were not necessary in this case (refer paragraph 2.4).

5.8 The expert also noted that the concrete block wall at the south is adjacent to the boundary, but it appears that the fire-rating is not extended 1 metre back from the boundary corners. A door (that is not shown in the consent drawings) is next to one corner and the adjacent plasterboard lining is not fire-rated (refer paragraph 6.6.3).

5.9 A copy of the expert's report was provided to each of the parties on 13 June 2007. The applicant questioned whether all the photographs in the report were of this house. The expert subsequently verified that all photographs in the report were of the house at 1/12 Richards Avenue.

## **6 Evaluation for code compliance**

### **6.1 Evaluation framework: exterior cladding**

6.1.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solutions<sup>5</sup>, which will assist in determining whether the features of the building work are code compliant. However, in making this comparison, the following general observations are valid:

- Some Acceptable Solutions cover the worst case, so that they may be modified in less extreme cases and the resulting alternative solution will still comply with the Building Code.

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<sup>5</sup> An Acceptable Solution is a prescriptive design solution approved by the Department that provides one way (but not the only way) of complying with the Building Code. The Acceptable Solutions are available from The Department's Website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

- 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.

6.1.2 The approach in determining whether building work is weathertight and durable and is likely to remain so, is to apply the principles of weathertightness. This involves the examination of the design of the building, the surrounding environment, the design features that are intended to prevent the penetration of water, the cladding system, its installation, and the moisture tolerance of the external framing. The Department and its antecedent, the Building Industry Authority, have also described weathertightness risk factors in previous determinations<sup>6</sup> (for example, Determination 2004/1) relating to cladding and these factors are also used in the evaluation process.

6.1.3 The consequences of a building demonstrating a high weathertightness risk is that building solutions that comply with the Building Code will need to be more robust. Conversely, where there is a low weathertightness risk, the solutions may be less robust. In any event, there is a need for both the design of the cladding system and its installation to be carefully carried out.

## 6.2 Weathertightness risk

6.2.1 In relation to these characteristics I find that these alterations and additions:

- are built in a low wind zone
- are a maximum of two storeys high
- are complex in plan and form
- have monolithic cladding fixed directly to the framing
- have eaves projections of about 600mm above most walls
- have two upper level decks that have membrane floors and clad balustrades, with one deck situated above an enclosed garage area below
- have external wall and deck framing that is treated to a level that provides resistance to the onset of decay if the framing absorbs and retains moisture.

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

6.2.3 The weathertightness features outlined in paragraph 6.2.1 show that two elevations of this house demonstrate a high weathertightness risk rating and two elevations a moderate risk rating.

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

### 6.3 Weathertightness performance: exterior cladding

6.3.1 Generally the cladding appears to have been installed in accordance with good trade practice. However, I accept the expert's opinion that remedial work is necessary in respect of the following:

- inadequately formed and weatherproofed kickouts to apron flashings
- gutter ends and fascias that are embedded into the plaster
- inadequate cladding clearances above apron flashings to lower roofs
- inadequate cladding clearances above some paved areas
- lack of provision for drainage between the west cladding and timber decking
- inadequate installation of one recessed basement window, with a crack to the plaster at the corner of the window
- cappings to the upper decks, which are allowing moisture into the framing
- inadequate weatherproofing of drainage outlets to the north and upper south and decks
- inadequate weatherproofing of the electrical meterbox
- inadequate weatherproofing of the junction between the garden walls and the northeast and northwest corners of the house.

6.3.2 I note the expert's comment in paragraph 5.7 with regard to the apparent lack of control joints to the cladding. I also note that the control joint requirements for the Diamond Wall plaster system (as noted in paragraph 2.4) do not specify a minimum spacing requirement. With regard to the particular cladding to this house, I consider that the following factors compensate for the lack of control joints:

- Similar types of insulating fibreglass-reinforced plaster systems require control joints to be spaced at 20 metres horizontally and two storeys vertically (in contrast to the closer spacing required for conventional plaster systems)
- The stucco cladding has generally been installed according to good trade practice and has been in place for more than 10 years with little sign of cracking.
- During the period since construction, all drying shrinkage in the plaster and supporting framing will have likely occurred, and the cladding's future performance will be governed solely by response to environmental factors such as imposed temperature and moisture effects, wind, earthquake forces and seasonal foundation movements.

I therefore consider that, due to the particular characteristics of this cladding and this building, the Diamond Wall plaster system as installed is adequate, without the retrofitting of the omitted control joints that were required in the general case by NZS 4251<sup>7</sup>.

6.3.3 I note that the house uses several foundation systems (concrete piles, strip foundations walls and a concrete slab) which may lead to differential movement

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<sup>7</sup> New Zealand Standard NZS 4251: Solid plastering; Part 1: 1998 Cement plasters for walls, ceilings and soffits

between the different systems over time leading to possible cracking of the cladding. I therefore note the importance of monitoring the possible movement and the need for consequential maintenance of the cladding as noted on paragraph 7.8.

6.3.4 I note the expert's comment in paragraph 5.8 with regard to the apparently inadequate fire-rating of the south wall, and draw this matter to the attention of the territorial authority.

6.3.5 Notwithstanding the fact that the cladding is fixed directly to the timber framing, thus limiting drainage and ventilation behind the cladding, I have noted certain compensating factors that assist the performance of the cladding in this particular case:

- apart from the noted exceptions, the cladding is installed to good trade practice
- the house generally has 600mm eaves and some additional roof and floor projections that provide good protection to the cladding areas below them
- the external wall and deck framing is treated to a level that will help prevent decay if the framing absorbs and retains moisture.

6.3.6 I consider that these factors help compensate for the lack of a drained cavity to the walls, and can assist the building work to comply with the weathertightness and durability provisions of the Building Code.

## **Matter 1: The cladding**

### **7 Discussion**

7.1 I consider the expert's report establishes that the current performance of the cladding is not adequate because it is allowing water penetration into the building at present. Consequently, I am satisfied that the building work does not comply with clause E2 of the Building Code.

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

7.3 Because the faults identified with the cladding system occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 6.3.1 will result in the building becoming and remaining weathertight and in compliance with clauses B2 and E2.

7.4 I also note that investigation and consideration by the territorial authority is required with regard to the fire-rating of the south wall as outlined in paragraph 6.3.3.

7.5 I emphasise that each determination is conducted on a case-by-case basis. Accordingly, the fact that particular cladding systems have been established as being

code compliant in relation to a particular building does not necessarily mean that the same cladding systems will be code compliant in another situation.

- 7.6 Effective maintenance of claddings (in particular of monolithic claddings) is important to ensure ongoing compliance with clauses B2 and E2 of the Building Code and is the responsibility of the building owner. Clause B2.3.1 of the Building Code requires that the cladding be subject to "normal maintenance", however, that term is not defined in the Act.
- 7.7 I take the view that normal maintenance is that work generally recognised as necessary to achieve the expected durability for a given building element. With respect to the cladding, the extent and nature of the maintenance will depend on the material, or system, its geographical location and level of exposure. Following regular inspection, normal maintenance tasks should include but not be limited to:
- where applicable, following manufacturers' maintenance recommendations
  - washing down surfaces, particularly those subject to wind-driven salt spray
  - re-coating protective finishes
  - replacing sealant, seals and gaskets in joints.
- 7.8 In this instance normal maintenance should also include regular inspection of the foundations and plaster cladding to identify any signs of cracking.

## **Matter 2: The durability considerations**

### **8 Discussion**

- 8.1 The territorial authority has concerns about the durability, and hence the compliance with the building code, of certain elements of the building taking into consideration the completion date of the building in 1996. However I note that the territorial authority's inspection records indicate that no final inspection was undertaken in 1996 to verify compliance with clause B2 at that time (refer paragraph 3.1).
- 8.2 The relevant provision of clause B2 of the Building Code requires that building elements must, with only normal maintenance, continue to satisfy the performance requirements of the Building Code for certain periods ("durability periods") "from the time of issue of the applicable code compliance certificate" (clause B2.3.1).
- 8.3 These durability periods are:
- 5 years if the building elements are easy to access and replace, and failure of those elements would be easily detected during the normal use of the building
  - 15 years if building elements are moderately difficult to access or replace, or failure of those elements would go undetected during normal use of the building, but would be easily detected during normal maintenance
  - the life of the building, being not less than 50 years, if the building elements provide structural stability to the building, or are difficult to access or replace,

or failure of those elements would go undetected during both normal use and maintenance.

- 8.4 It is not disputed, and I am therefore satisfied that all the building elements installed in the house complied with clause B2 on 1 January 1997. This date has been confirmed by the applicant and the territorial authority, refer paragraph 4.8.
- 8.5 In order to address these durability issues when they were raised in previous determinations, I sought and received clarification of general legal advice about waivers and modifications. That clarification, and the legal framework and procedures based on the clarification, is described in previous determinations (for example, Determination 2006/85). I have used that advice to evaluate the durability issues raised in this determination.
- 8.6 I continue to hold that view, and therefore conclude that:
- the territorial authority has the power to grant an appropriate modification of clause B2 in respect of all the building elements.
  - it is reasonable to grant such a modification, with appropriate notification, because in practical terms the building is no different from what it would have been if a code compliance certificate for the house had been issued in late 1996.
- 8.7 I strongly recommend that the territorial authority record this determination and any modifications resulting from it, on the property file and also on any LIM issued concerning this property.

## 9 The decision

- 9.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the cladding does not comply with clauses E2 and B2 of the Building Code, and that the items listed in paragraph 6.3.1 are not code-compliant. Accordingly, I confirm the territorial authority's decision to refuse to issue a code compliance certificate.
- 9.2 I also determine that:
- (a) all the building elements installed in the building, apart from the items that are to be rectified as described in this determination, complied with clause B2 on 1 January 1997.
  - (b) the building consent is hereby modified as follows:

The building consent is subject to a modification to the Building Code to the effect that, clause B2.3.1 applies from 1 January 1997 instead of from the time of issue of the code compliance certificate for all building elements except the defects as described in paragraph 6.3.1 of Determination 2007/88.
  - (c) the territorial authority, once the matters set out in paragraph 6.3.1 have been rectified to its satisfaction, is to issue a code compliance certificate in respect of the building consent as amended.

- 9.3 I note that that the territorial authority has not issued a notice to fix. The territorial authority should now issue a notice to fix that requires the owners to bring the building up to compliance with the Building Code, identifying the defects listed in paragraph 6.3.1, and referring to any further defects that might be discovered in the course of rectification, but not specifying how those defects are to be fixed. 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.
- 9.4 I would suggest that the parties adopt the following process to meet the requirements of paragraph 9.3. Initially, the territorial authority should issue the notice to fix. The owner should then produce a response to this in the form of a detailed proposal, produced in conjunction with a competent and suitably qualified person, as to the rectification or otherwise of the specified issues. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 15 August 2007.

John Gardiner  
**Manager Determinations**