

## Determination 2006/08

# Refusal of a code compliance certificate for one of two monolithic-clad units at 40B Ellis Avenue, Mount Roskill, Auckland

## 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 owner of Unit B, Mr Brendon Verhoeff (“the owner”), and the other party is the Auckland City Council (“the territorial authority”). Mr Ashok Bhat, the owner of Unit A, is named as the owner of another property. The application arises from the refusal by the territorial authority to issue a code compliance certificate for a 3-year-old semi-detached Unit (“Unit B”) unless changes are made to its monolithic cladding system.
- 1.2 The question to be determined is whether on reasonable grounds the monolithic wall cladding as installed to the timber-framed external walls of Unit B (“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 . . . ”

- 1.4 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.
- 1.5 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.
- 1.6 In making my decision, I have not considered any other aspects of the Act or the Building Code.

## **2 Procedure**

### **2.1 The building**

- 2.1.1 The building work consists of a single-storey split-level Unit, which is connected to an adjoining Unit (Unit A), by a party wall that is common to the garage of each Unit, and is situated on a sloping site that is in a medium wind zone in terms of NZS 3604: 1999 “Timber framed buildings”. The Unit is of a relatively simple shape on plan with the pitched roofs at two levels having hip, valley, and wall-to-roof junctions. The eaves and verges generally have 300mm or 600mm wide projections, with the exception of the two kitchen windows. The entrance and adjoining lounge wall area have larger roof projections over them. The Unit is of conventional light timber frame construction on a timber-framed pole-supported ground floor. All the external walls are sheathed with monolithic cladding. A large raised timber-framed open deck is constructed around two elevations of the Unit and is supported on timber beams and posts and has an open balustrade consisting of timber handrails and balusters. A set of steps with a similar balustrade leads up to the deck.
- 2.1.2 I have not received any evidence regarding the treatment, if any, of the external wall framing, nor does the specification specifically refer to any such treatment. It is therefore likely that the external wall framing is not treated.
- 2.1.3 The timber-framed external walls of the Unit that is the subject of this determination are clad with a system that is described as monolithic cladding. In this instance it consists of 7.5mm “Harditex” fibre-cement backing sheets fixed directly to the framing over the building wrap, to which, according to the owner, a Plaster Systems Ltd textured plaster systems is applied. The plaster is finished with an electrometric textured paint system.

### **2.2 Sequence of events**

- 2.2.1 The territorial authority issued a building consent on 8 February 2002. This consent covered both Unit A (territorial authority’s reference Unit 2) and Unit B (territorial authority’s reference Unit 1).

2.2.2 The territorial authority carried out various inspections during the construction of both Units and passed the cladding for both Unit A and Unit B on 12 October 2002. The territorial authority issued an interim code compliance certificate dated 29 April 2003 for Unit A only. The territorial authority carried out further final site inspections of Unit B on 1 and 15 September 2004. The “Final Check List” relating to the last inspection noted:

All works complete from previously failed inspection now complete with exception of cladding system. Report being compiled by [officer] of Auckland City for cladding.

2.2.3 In a letter to the owner dated 21 September 2004, the territorial authority regretted that the Unit might not comply with the Building Code in a number of respects. The territorial authority attached a Notice to Rectify also dated 21 September 2004 to this letter, together with a set of photographs illustrating items of non-compliance. The “Particulars of Contravention” attached to the Notice to Rectify listed requirements under the following headings:

1. Items not installed per the manufacturer's specifications.
2. Items not installed per the Acceptable Solutions of the Building Code, (no alternative solutions had been applied for).
3. Items not installed per accepted trade practice.
4. Ventilated cavity system.

2.2.4 The Particulars of Contravention also said that the owner was required amongst other items to:

1. Provide adequate ventilation to the monolithic cladding and into the wall frame space by means of either a ventilated cavity or alternate approved system, and ensuring all issues relating to the above are resolved.

2.2.5 The owner made an application for a determination on 21 October 2004.

### **3 The submissions**

3.1 In a letter to the Authority dated 21 October 2004, the owner described the cladding and noted that the exterior of the Units was completed and signed off by the territorial authority on April 2003. An interim code compliance certificate had been issued for the adjacent Unit A. The owner had lived in Unit B since the interim code compliance certificate was issued as the building work was completed some 18 months ago. The owner was refused a code compliance certificate apparently on the basis that a cavity had not been installed and to install a cavity would be impossible as the two Units are adjoined.

3.2 The owner forwarded copies of:

- the plans

- the building consent
  - the interim code compliance certificate for Unit A
  - the Notice to Rectify
  - correspondence with the territorial authority
  - some inspection documentation.
- 3.3 In a covering letter to the Authority dated 18 November 2004, the territorial authority described the Particulars of Contravention and the specific construction defects.
- 3.4 The territorial authority also forwarded copies of:
- plans and outline specifications
  - the building consent and inspection documentation
  - the interim code compliance certificate for Unit A
  - the Notice to Rectify
  - correspondence with the owner.
- 3.5 Copies of the submissions and other evidence were provided to each of the parties.
- 3.6 In a letter to the Department dated 18 October 2005, the territorial authority commented on aspects of the draft determination.
- “Over the last year the Department has issued a number of determinations relating to the code compliance of cladding as installed. In Council's experience, the matter in dispute has been inaccurately documented. In practice the matter in dispute is whether the scope of work necessary to achieve code compliance is that documented in Council's Notice to Fix or as identified by the department's assessor. Council's view is that to provide clarity and certainty for the applicant, the matter in dispute should be amended to reflect this. This change would need to be approved by the applicant as well as Council.”
- 3.7 In particular, the territorial authority is concerned that paragraphs 8.2 and 8.3 (of the first draft determination) indicate a scope of work required to make the house code compliant. The territorial authority claims that this is not part of the determination.
- 3.8 The territorial authority forwarded a second letter dated 9 January 2006, which repeated the content of their letter of 18 October 2005, with the exception of the paragraph references of 10.2 and 10.3 that are those of the second draft determination forwarded to the parties subsequent to the hearing.
- 3.9 The owner wrote to the Department on 24 October 2004, commenting on certain aspects of the draft determination. In particular, the owner objected to the:
- inclusion of the risk matrix

- reference to a cavity behind the cladding
  - instruction to the territorial authority to withdraw the interim code compliance certificate
  - addressing of the territorial authority's concerns other than the cladding
  - extent of items that the territorial authority consider to be non-compliant in any notice to fix that it might issue
- 3.10 The owner also requested that the determination include the scope of work required to achieve code compliance so that a code compliance certificate could be issued. Alternatively, the Department should direct the territorial authority to issue a final code compliance certificate covering both of the Units once the items of rectification set out in paragraphs 5.1 and 5.3 have been attended to. The owner also referred to the duty of care that the territorial authority had to ensure that the building reasonably complied with the requirements of the building code.
- 3.11 Subsequent to receiving the draft determination following the hearing, the owner wrote to the Department on 18 January 2006. The owner accepted the draft but subject to the reiterated comments set out in his letter of 24 October 2005, stating that these were also relevant to the revised draft. In addition, the owner submitted that the territorial authority was going beyond its scope in withdrawing the interim code compliance certificate. The territorial authority could not withdraw the certificate as reliance had been placed upon it. The owner also called on the territorial authority to carry out an inspection of the house with a view to issue the code compliance certificate.

## **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 for Unit B 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.
- 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 must now be evaluated as an alternative solution.
- 4.3 In several previous determinations, the Department has made the following general observations, which remain valid in this case in my view, about Acceptable Solutions and alternative solutions.
- 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; and

- 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 I appointed an expert to assist me in the assessment of code compliance for both Units A and B. The expert inspected the buildings on 26 April 2005 and 6 August 2005 respectively, and furnished a report that was completed in August 2005. The report considered that the texture coating system and paint finishes are inadequate and deficient. The expert also made the following comments regarding the cladding:

- There are rough, protruding, and expressed joints visible in the cladding, the corners are poorly formed, and there is inadequate texture cover at some locations
- The control joints that are recommended by the cladding supplier for walls over 5.4 metres in length have not been installed to the relevant walls. (I note here that, notwithstanding the owners' explanation (see paragraph 5.6) that the joints were installed but were concealed by flush stopping, the expert was unable to find them on a return visit to the site)
- The base of the cladding is too close to the paving, or the ground, or the decks at some locations
- The installation of the external joinery Units is sub-standard, there are no sill or jamb flashings installed, the perimeter sealing is uneven, there are gaps at the jambs, a loss of coating at the heads, and an uneven finish of the cladding onto the head flashing
- There are untidy gutter and wall terminations with incompletely formed and loose kick outs, the fascias are in close contact with the roof, and the hip terminations are poorly formed
- The decks are connected to the main wall frames above the floor level at the floor set-downs and moisture transfer is occurring between the deck frame, the cladding and the external wall framing
- The clothes line frame and the deck end balusters are not sealed.

5.2 The expert took non-invasive readings at the interior linings of the exterior walls to both Units and no abnormal or adverse readings were encountered. Subsequent readings taken on 16 September using invasive techniques confirmed that result.

5.3 The expert also noted that there was unsecured and displaced wall insulation to some of the internal walls. No vents are provided in the wall face below the bathroom of the Unit.

5.4 Copies of the expert's report were provided to each of the parties. The owners of both Units A and B wrote a joint letter dated 8 September 2005 in which they said they wished "to respond and summarise our position as the applicant". The owners made the following assertions:

- The determination process is subject to the 1991 Building Act.
- The actions of the territorial authority in issuing a notice to rectify against Unit A was "unreasonable" when earlier the territorial authority was satisfied the Unit complied with the Building Code and issued an interim code compliance certificate.

5.5 The owners of the two Units also made a number of submissions in response to the issues raised in both the territorial authority's submissions and in the expert's report.

5.6 With regard to the expert's report the owners said they were generally in agreement but made the following comments:

- The bathroom area referred to was the subject of an amendment to the building consent and the deck mentioned was not dimensioned on the consent drawings
- The finished exterior has now been in place since September 2002
- Jamb flashings are not indicated in Fig 115 of E2/AS1 and sill flashings were not mentioned in BIA publications
- The control joints were flush stopped over the silicone sealant and thus invisible
- Providing additional texture coating will not promote durability. The coating system used was not as textured as some and did not conceal visual imperfections so well.

## 6 The hearing

6.1 The owner requested a hearing. This was held on 19 December 2005 before a tribunal consisting of the Determinations Manager and one Referee acting for and on behalf of the Chief Executive by delegated authority under section 187(2) of the Building Act 2004. This hearing was a combined one that involved both the house in question and the adjoining connected Unit that is subject to a separate determination. At the hearing the owner, Mr Verhoeff, appeared on his own behalf and the owner of the adjoining Unit, Mr Bhat, also appeared. The territorial authority was represented by one of its officers. Three staff members of the Department were in attendance. The owner and the territorial authority spoke and called evidence at the hearing, and evidence from those present enabled me to amplify various matters of fact that were identified in the draft.

- 6.2 The owner referred to the letter that he had forwarded to the Department on 24 October 2005, and which is described in paragraph 3.9. The owner was of the opinion that the draft determination had not addressed the scope of works and the processes required to make the property code compliant. As the territorial authority wanted to re-inspect the property, no progress had been made to date. The owner considered that the territorial authority had a duty of care in relation to its initial inspections. It was clear that there is no agreement with the territorial authority as to rectification. It was unreasonable for it to require either a cavity or moisture detection probes. Maintenance was the real issue. In response to a Department query, the owner agreed that correct maintenance should include the moisture content of the house. However, invasive readings are not always required. The owner will proceed to obtain a technical report.
- 6.3 The territorial authority stated that the draft determination had shown that the building was not code compliant. However, the territorial authority would take into account what the Department had said relating to remedial work. The territorial authority noted that the last inspection of the property took place in 2004. Accordingly, as the territorial authority must be satisfied as to compliance at the time that a code compliance certificate is to be issued, a further inspection was required. The territorial authority's knowledge and understanding can change over time. The owner should obtain a scope of work that can be mutually agreed to. Once the agreed remedial work had been carried out, the territorial authority would inspect it and if satisfied would issue a code compliance schedule.
- 6.4 The Department put forward suggestions with regard to the rectification process. It also noted that as the territorial authority is the local regulator, it should issue a notice to fix. A further determination could be sought as regards items still in dispute at the rectification stage.

## **7 Discussion**

### **7.1 General**

- 7.1.1 I have considered the submissions of the parties, the expert's report and the other evidence, including that submitted at the hearing 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. The Authority and the Department have described the weathertightness risk factors in previous determinations (Refer to Determination 2004/01 *et al*) relating to monolithic cladding, and I have taken these comments into account in this determination.

### **7.2 Weathertightness risk**

- 7.2.1 In relation to the weathertightness characteristics, I find that the Unit B:
- is in a low wind zone

- has 300mm or 600 mm wide eaves and verge projections to most locations, which together with the additional roof overhangs at and adjacent to the entries, help to protect the cladding
- is single-storey
- is of a fairly simple shape on plan, with roofs having hip, valley, and roof-to-wall junctions
- has a suspended deck attached to two elevations
- has external wall framing that is unlikely to be treated to a level that would help to prevent decay if it absorbs and retains moisture.

### **7.3 Weathertightness performance**

- 7.3.1 I find that the monolithic cladding to the Unit in general does not appear to have been installed according to good trade practice or in accordance with the manufacturer's instructions. I am of this opinion, despite the fact that the territorial authority has previously issued an interim code compliance certificate for Unit A. As a result, there are a number of identified defects, set out in paragraphs 5.1 and 5.3, and in the expert's report, which I consider likely to contribute to future moisture penetration in both Units, but particularly in the subject Unit B.
- 7.3.2 I note that 3 elevations of the Unit demonstrate a low weathertightness risk rating and one demonstrated a moderate 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.

## **8 My response to the parties submissions on the draft determination**

### **8.1 The territorial authority's submissions**

- 8.1.1 In response to the territorial authority's letters to the Department of 18 October 2005 and 9 January 2006, I consider that I am entitled to determine whether proposed building work complies with the Building Code, and in fact I have done so in this case. However, as noted in paragraph 8.2.4, my concern in this case is also that the work described in paragraph 5.1 may not turn out to be sufficient to achieve compliance, and in any event whether the work has been properly completed and is code compliant is a matter that can only be determined after careful inspection. I note that the territorial authority's inspection described in a "Plastering Check List" dated 12 October 2002 passed the following items in respect of the exterior of the building:

- fixing
- jointing
- flashings to openings
- cladding ground clearance

8.1.2 The Notice to Rectify issued on 21 September 2004 listed issues related to cladding that included:

- control joints
- floor clearances
- ground clearances
- flashings.

8.1.3 It can be seen that the expert's report provides the comprehensive description of the building's outstanding shortcomings that should have been detected during the territorial authority's original inspection process.

## **8.2 The owner's submissions**

8.2.1 I consider that the risk matrix is an important reference in the overall assessment of the Unit in question. In my opinion, the clause is appropriately worded to put the reference in the context of the completed building.

8.2.2 As the cladding is directly fixed to the framing, I consider that the reference to there being no cavity behind the cladding is a matter of fact and appropriate.

8.2.3 I have noted the concerns of the owner regarding the reliance on the code compliance certificate issued by the territorial authority. However, I am of the opinion that, as the building has been shown to be non-compliant I have no option but to request that the territorial authority withdraw the code compliance certificate that it has issued.

8.2.4 The owner has requested that the Department defines the extent of work required to address the defects listed in the expert's report and in the territorial authority's notice to fix. The territorial authority has also raised this issue. I note that the Building Industry Authority in Determination 1997/4 took the view that it was not for it to decide how a building was to be brought into compliance with the Building Code. I concur with that view if only for the reasons set out in paragraph 8.1.1 above, and this is reflected in my decision. Likewise, I am unable to determine the issue of the territorial authority's duty of care towards the owner. I also urge the territorial authority to inspect the house as requested by the owner in his letter of 18 January 2006.

## 9 Conclusion

- 9.1 I consider that the expert's report establishes there is no evidence of external moisture entering the Unit, and that the cladding complies with clause E2 of the Building Code.
- 9.2 In addition, the building is also required to comply with the durability requirements of clause B2. Clause B2 requires that a building continues to satisfy all the objectives of the Building Code throughout its effective life, and that includes the requirement for the Unit to remain weathertight. I am satisfied that the cladding has not been installed according to good trade practice and will almost certainly allow water penetration into the walls in the future. In particular it demonstrates the key defects listed in paragraph 5.1. Because the cladding faults in this building are liable to allow the ingress of moisture in the future, and there is no effective cavity behind the cladding, the Unit does not comply with the durability requirements of clause B2.
- 9.3 I find that, because the faults in the cladding of this building are discrete and readily identifiable, I am able to conclude, with the information available to me, that remediation of the identified faults will result in compliance with clause B2.
- 9.4 I note that, once the building has been made compliant with the Building Code, 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, repainting, replacing sealants, and so on. As it is likely that the external wall framing is not treated, periodic checking of its moisture content should be carried out as part of normal maintenance.
- 9.5 In the circumstances, I decline to incorporate any waiver or modification of the Building Code in this determination.

## 10 The decision

- 10.1 In accordance with section 20 of the Building Act 1991, I hereby determine that the monolithic cladding system as installed to the Unit does not comply with clause B2 of the Building Code, and accordingly confirm the territorial authority's decision to refuse to issue a code compliance certificate for the Unit.
- 10.2 I note that the territorial authority has issued a Notice to Rectify. Under the Act, a notice to fix can require the owner to bring the Unit into compliance with the Building Code. The Building Industry Authority had already found in a previous determination (2000/1) that a Notice to Rectify cannot specify how that compliance can be achieved. I concur with that view. A new notice to fix should be issued that

requires the owner to bring the cladding into compliance with the Building Code, without specifying the features that are required to be incorporated. It is not for me to dictate how the defects described in paragraphs 5.1 and 5.3 are to be remedied. That is for the owner to propose and the territorial authority to accept or reject. In addition the Notice should also address the concerns regarding spacing between some stair treads that exceeds the maximum requirements of 100 mm.

- 10.3 I would suggest that the parties adopt the following process to meet the requirements of paragraph 10.2. Initially, the territorial authority should issue the notice to fix, listing all the items that the territorial authority considers to be non-compliant. The owner should then produce a response to this in the form of a technically robust 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.
- 10.4 Finally, I consider that the cladding will require ongoing maintenance to ensure its continuing code compliance.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 14 February 2006.

John Gardiner  
**Determinations Manager**