

Determination 2005/113

Refusal of a code compliance certificate for a building with a “monolithic” cladding system at 36 Walker Road, Pt Chevalier, Auckland – House 98

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 applicants are the two joint-owners, Mr and Mrs Pennycook (referred to throughout this determination as “the owner”), and the other party is the Auckland City Council (referred to throughout this determination as “the territorial authority”). The application arises from the refusal by the territorial authority to issue a code compliance certificate for 8-year old additions to an existing house unless changes are made to its monolithic cladding systems.
- 1.2 The question to be determined is whether on reasonable grounds the monolithic wall cladding as installed to the timber-framed external walls and columns of the house (“the cladding”), complies with the building code (see sections 18 and 20 of the Act). By “the monolithic wall cladding as installed” I mean the components of the system (such as the backing sheets, the flashings, the joints and the plaster and/or the coatings) as well as the way the components have been installed and work together.
- 1.3 This determination is made under the Building Act 1991, subject to section 424 of the Building Act 2004. That section came into force (“commenced”) on 30 November 2004, and its relevant provisions are:
- “ . . . on and after the commencement of this section,—
- “(a) a reference to the Authority in the Building Act 1991 must be read as a reference to the chief executive; and

- “(b) the Building Act 1991 must be read with all necessary modifications to enable the chief executive to perform the functions and duties, and exercise the powers, of the Authority . . .”

It should be noted that the new legislation does not amend the determination process set out under the 1991 Act, other than to transfer the power to make a determination from the Building Industry Authority (“the Authority”) to the Chief Executive.

- 1.4 This determination refers to the former Authority:
- (a) When quoting from documents received in the course of the determination, and
 - (b) When referring to determinations made by the Authority before section 424 came into force.
- 1.5 In making my decision, I have not considered any other aspects of the Act or the building code.

2 PROCEDURE

The building

- 2.1 The building work consists of extensive alterations to an existing single-storey house, situated on an slightly sloping site in a medium wind zone in terms of NZS 3604: 1999 “Timber framed buildings”. The resultant building (“the house”) is a maximum of 2 storeys high. The external walls of the house are of conventional light timber frame construction built on piled timber-framed floors. The new and existing timber-framed walls and the new timber-framed columns are sheathed with monolithic cladding. The house is of a fairly simple shape, with the pitched roofs set at two main levels and having wall to roof junctions. The eaves projections vary from 300mm to 450mm wide, with the spoutings providing an additional projection. The verges have 450mm to 600mm wide projections.
- 2.2 Two decks are situated at the upper floor level, each of which is surrounded by timber-framed balustrades. Both decks are constructed over habitable areas and the larger deck also provides protection to the main entrance, where it is supported by monolithic-clad timber framed columns.
- 2.3 The owner has produced an invoice and photographs that indicate that H1 treated timber was used on the house.
- 2.4 The new timber-framed external walls and columns of the house that are the subject of this determination are clad with a system that is described as monolithic cladding. In this instance it incorporates 7.5mm Harditex sheets fixed through the building wrap directly to the framing timbers. Over these sheets a “Fosroc” textured plaster is applied, which is then finished with a “Resene” exterior paint system. I note that the consented plans show the external walls to be clad in timber bevelled-back weatherboards, but there is no evidence provided to show that the territorial authority

approved this amendment. However, the territorial authority has not included any reference to the change on its Notice to Rectify.

Sequence of events

- 2.5 The territorial authority issued a building consent in late 1996.
- 2.6 The territorial authority carried out various inspections during the construction of the house, and passed the pre-line inspection on 29 July 1997. The territorial authority carried out a final inspection on 16 October 2001, but certain items did not pass this inspection. On 29 October 2003 after a further inspection, the territorial authority noted, "All items completed".
- 2.7 The territorial authority wrote to the owner on 28 January 2004, noting that as there was no cavity behind the monolithic cladding, the building required further investigation. The territorial authority also explained the rationale behind the approach that it was taking.
- 2.8 The territorial authority carried out an external cladding inspection on 2 March 2004. In a letter to the owner dated 8 March 2004, the territorial authority regretted that the building might not comply with the building code in a number of respects. The territorial authority attached a Notice to Rectify also dated 8 March 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; and
 4. Ventilated cavity system.

The owner was also 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 alternative approved system, and ensuring that all issues relating to the above are resolved...
- 2.9 The owner applied for a determination on 23 February 2005.

3 THE SUBMISSIONS

- 3.1 In a covering letter to the Department dated 23 February 2005, the owner noted that the house had been constructed some eight-and-a half years ago and was not leaking. The owner also described the personal stress that the dispute had caused.

3.2 In a letter to the Department dated 23 March 2005, the owner set out the sequence of events leading up to request for a determination, and identified and described the experience of the builder and the textured finish applicator. The owner also believed that it was not a requirement of the original consent to obtain warranties and other like documents.

3.3 The owner also forwarded copies of:

- The plans;
- Some of the territorial authority's inspection records;
- The Notice to Rectify;
- The correspondence with the territorial authority;
- Technical information from the cladding manufacturer;
- Photographs and invoices identifying the framing timber used on the project; and
- A report from Citywide Building Consultants ("the consultants") dated 20 November 2004, which gave an assessment of the cladding used on the house. The report noted that the building is well maintained, and the textured cladding surface is "clean". The report listed various defects that in the opinion of the consultant were not code compliant. According to the moisture readings resulting from both invasive and non-invasive tests undertaken by the consultants, there is a strong likelihood that moisture is entering the building.

3.4 I am of the opinion that moisture levels above 18% recorded after cladding is in place generally indicate that external moisture is entering the structure.

3.5 In a covering letter to the Authority dated 10 March 2004, the territorial authority described the Particulars of Contravention

3.6 The territorial authority also forwarded copies of:

- The plans;
- Some of the consent documentation;
- Some of the territorial authority's inspection records;
- The Notice to Rectify; and
- The correspondence with the owner.

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

4 THE RELEVANT PROVISIONS OF THE BUILDING CODE

- 4.1 The dispute for determination is whether the territorial authority's decision to refuse to issue a code compliance certificate because it was not satisfied that the cladding complied with clauses B2 and E2 of the building code (First Schedule, Building Regulations 1992) is correct.
- 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 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; 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 HEARING

- 5.1 The owner requested a hearing, which was held 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. At the hearing, Mr and Mrs Pennycook were present, together with a building expert. The territorial authority was represented by two of its officers. Three staff members of the Department were also in attendance. The territorial authority and the owner spoke and called evidence at the hearing, and evidence from those present enabled me to amplify or correct various matters of fact that were not adequately identified in the draft.
- 5.2 The owner told the hearing that construction started in 1996 and the exterior of the building was completed in 1997. After a delay, work recommenced on the house, and after the completion of outstanding items revealed by a territorial authority inspection, the house was finally passed by the territorial authority in October 2003. According to the owner, following a request for a code compliance certificate, the territorial authority stated that there would be a 2-week delay in processing this request. However, some time after the expiry of this 2-week period, a territorial authority officer informed the owner that the presence of a cavity had to be established. The owner did not get the impression that a Notice to Rectify was going to be issued.

- 5.3 The owner had engaged a firm of consultants to test and inspect the building and there was no indication of any moisture ingress. The owner hoped that the question of whether the house was code compliant could be made on an individual basis and that a framework could be established to ensure the granting of a code compliance certificate. The owner preference was for an independent expert to inspect the house, as all the guidelines and the consent requirements had been followed. In addition, the house had been inspected and passed by the territorial authority.
- 5.4 The territorial authority stated that the territorial authority had “empathy” with the owners, but as verified by the Department, the house does not comply with the building code. As such, the territorial authority required direction from the Department on the scope of work required to resolve the weathertightness problems. If the latter were not forthcoming, once a final determination has been issued by the Department, the territorial authority will issue a new notice to fix. This will give the reasons why any work has to be carried out but will not describe the scope of such work. The solution would be to either mitigate the weathertightness risks or to provide early detection. A cavity may not be required, as the territorial authority was prepared to consider the installation of moisture detection probes as an alternative to the installation of a cavity. If six months has elapsed since the last territorial authority inspection, the notice to fix might contain items additional to those raised in the original Notice to Rectify. The territorial authority would cooperate with the owners to work through the issues.
- 5.5 The tribunal also discussed with the parties on how best to resolve any issues raised in the notice to fix and these are described in detail in paragraph 8.3.

6 DISCUSSION

General

- 6.1 I have considered the submissions of the parties, and the other evidence in this matter, including the hearing submissions. 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.
- 6.2 I am of the opinion that the detailed information supplied in both the Notice to Rectify and the consultant’s report, in this case, enables me to determine the issue without the need to appoint an independent expert to further investigate the cladding.

Weathertightness risk

- 6.3 In relation to the weathertightness characteristics, I find that the house:

- Has eaves or verge projections that provide good protection to the cladding areas below them;
- Is in a medium wind zone;
- Is a maximum of 2 storeys high;
- Is of a fairly simple shape on plan, with roofs that have wall to roof junctions;
- Has two external decks that are constructed over habitable spaces; and
- Has external wall framing, which, as confirmed by photographs supplied by the owner, is likely to be treated to a level that would help prevent decay if it absorbs and retains moisture.

Weathertightness performance

- 6.4 Both the territorial authority's Notice to Rectify and the consultant's report describe items of non-compliance as regards the cladding. In addition, the consultant's moisture investigations provide readings, which in my opinion indicate the presence of moisture in the external wall cavities.
- 6.5 Notwithstanding the fact that the backing sheets are fixed directly to the timber framing, thus inhibiting drainage and ventilation behind the cladding sheets, I do not accept that the lack of a drainage and ventilation cavity in itself prevents the house from complying with the weathertightness and durability provisions of the building code. From the information provided, which indicates that the defects occur in discrete areas, I conclude that there is not an overall cladding failure.
- 6.6 I note that one elevation of the house demonstrates a high weathertightness risk rating and the remaining elevations a moderate rating as calculated using the E2/AS1 risk matrix. The matrix is an assessment tool that is intended to be used at the time of application for consent, before the building work has begun and, consequently, before any assessment of the quality of the building work can be made. Poorly executed building work introduces a risk that cannot be taken into account in the consent stage, but must be taken into account when the building as actually built is assessed for the purposes of issuing a code compliance certificate.

7 CONCLUSION

- 7.1 I am satisfied that the current performance of the cladding is not adequate because, as indicated by the limited testing that has been carried out, it is allowing water penetration into the wall framing at several locations. Consequently, I am not satisfied that the cladding system as installed on the house complies with clause E2 of the building code.
- 7.2 In addition, the house 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 house are allowing the ingress of moisture, the house does not comply with the durability requirements of clause B2 of the building code.

- 7.3 I note that effective maintenance of monolithic claddings is important to ensure ongoing compliance with clause B2 of the building code. That maintenance is the responsibility of the building owner. The code assumes that the normal maintenance necessary to ensure the durability of the cladding is carried out. For that reason clause B2.3.1 of the building code requires that the cladding be subject to "normal maintenance". That term is not defined and I take the view that it must be given its ordinary and natural meaning in context. In other words, normal maintenance of the cladding means inspections and activities such as regular cleaning, re-painting, replacing sealants, and so on.
- 7.4 In the circumstances, I decline to incorporate any waiver or modification of the building code in this determination.

8 THE DECISION

- 8.1 In accordance with section 20 of the Building Act 1991, I hereby determine that the cladding system as installed on the house does not comply with clauses B2 and E2 of the building code. Accordingly, I confirm the territorial authority's decision to refuse to issue a code compliance certificate.
- 8.2 I note that the territorial authority has issued a Notice to Rectify requiring provision for adequate ventilation, drainage and vapour dissipation. Under the Act, a Notice to Rectify can require the owner to bring the house into compliance with the building code. The Authority has already found in a previous determination (2000/1) that the Notice to Rectify cannot specify how that compliance can be achieved. I concur with that view. A new notice to fix should be issued that requires the owners to bring the cladding into compliance with the building code, without specifying the features (in particular a cavity, although the parties may conclude that this is the best system) that are required to be incorporated. It is not for me to dictate how the defects are to be remedied. How that is done is a matter for the owner to propose and for the territorial authority to accept or reject.
- 8.3 I would suggest that the parties adopt the following process to meet the requirements of clause 8.2. 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 an expert, 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. As indicated earlier in this determination, the Chief Executive might already have decided upon some of the issues that may be raised by the territorial authority in its notice to fix, including the territorial authority's requirement, if any, for a ventilated and drained cavity or equivalent.

8.4 Finally, I consider that the cladding will require on-going maintenance to ensure its continuing code compliance.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 29 July 2005.

John Gardiner
Determinations Manager