

Determination 2005/152

Refusal of a code compliance certificate for a house with a “monolithic” cladding at 13 Strathnaver Crescent, Lynfield, Auckland – House 126

1. The dispute to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004 (“the Act”) made under due authorisation by me, John Gardiner, Determinations Manager, Department of Building and Housing, for and on behalf of the Chief Executive of that Department. The applicant is the owner, Mr D E Heath (“the owner”), and the other party is the Auckland City Council (“the territorial authority”). The application arises from the refusal by the territorial authority to issue a code compliance certificate for a 10-year-old house unless changes are made to its monolithic cladding systems, to the fire rating of some walls, and unless a handrail is installed to a stairway.
- 1.2 The question to be determined is whether I am satisfied on reasonable grounds that:
- a) The monolithic wall cladding as installed to the external walls of the house (“the cladding”), complies with the Building Code (see sections 177 and 188 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;
 - b) The walls and doors separating three different occupancies within the building are fire rated in accordance with the provisions of the Building Code; and
 - c) A safety barrier, which complies with the Building Code, is required for a staircase to a deck.
- 1.3 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 is a single-storey house with a large sub-floor area, part of which has been developed into a habitable space. The main level includes a self-contained one-bedroom apartment and a bedsitting room, with separate access doors to the outside and each containing independent bathroom and cooking facilities. The remainder of the building contains two bedrooms, living and bathroom areas on the upper level, with a third bedroom and ensuite in the developed sub-floor area connected by staircase to the main living areas above. The house is situated on an excavated sloping site in a medium wind zone in terms of NZS 3604: 1999 “Timber framed buildings”. The external walls of the house are of conventional light timber frame construction built on a piled timber-framed ground floor. The external walls are sheathed with monolithic cladding. The house is of a moderately complex shape, with a fairly simple 20° hipped roof. The eaves have 580 mm projections.
- 2.1.2 A timber-framed deck supported on poles is constructed around three part-elevations of the building and this has a monolithic-clad timber-framed balustrade. A carport adjoins the house and this is constructed with a boarded timber-framed car deck supported on timber piles, posts and roof framing covered with translucent roofing sheets. A flight of timber steps leads up to the carport. The stairs and the car deck have trellised balustrades.
- 2.1.3 The building differs from the plans, and the territorial authority has commented on some of these differences. I also note that the plans supplied to me are not of a high standard and lack detail. I would be concerned if the territorial authority issued a building consent based on a set of drawings of this quality.
- 2.1.4 I have not received written evidence as to the type of treatment, if any, that was applied to the framing timber used in the external walls.
- 2.1.5 The timber-framed external walls of the house that are the subject of this determination are clad with a system that is shown on the plans to be a monolithic cladding. In this instance it incorporates 40mm thick polystyrene sheets, which the owner has stated are based on the “Insulclad” EIFS system, fixed through the building wrap directly to the framing timbers. A multi-coat, mesh-reinforced modified plaster system is applied over the sheets. According to the owner, the owner applied an additional coat of plaster a year or so after construction.

2.2 Sequence of events

- 2.2.1 The territorial authority issued a building consent in 1995.
- 2.2.2 The territorial authority carried out various inspections during the construction of the house. The pre-lining inspection was passed on 11 August 1995, and the post-line inspection was passed on 4 October 1995. The house passed a final inspection by the territorial authority on 23 August 2000.
- 2.2.3 The owner engaged a building consultant (“the consultant”) to provide a “safe and sanitary report’ regarding the house. The consultant produced such a report, which

was dated 6 February 2005. The report evaluated the house in terms of section 64 of the Building Act 1991 in relation to the basement development, the carport and the garage conversion. The report described the construction of these areas and considered that the basement development and the garage conversion did not present any planning implications. The report concluded that the unconsented work relating to the three areas could not be considered as dangerous or unsanitary. An engineer's report providing engineering calculations for the carport was attached to the consultant's report.

- 2.2.4 The territorial authority wrote to the owner on 2 March 2005, noting that it had received a copy of the consultant's report and the engineer's report accompanying it. The territorial authority stated that the report identified certain unauthorised building work, which had been undertaken some 6 or 7 years previously. The territorial authority noted that the works were not considered dangerous or unsanitary and that they did not require finishing or remedial attention. The territorial authority said it was prepared to permit the building work to remain in its present function, position and state, but the territorial authority would accordingly be absolved from all legal liability. Provided there was no change in the status of the building, the territorial authority would take no further action.
- 2.2.5 On 3 May 2005, a lawyer representing the owner wrote to the territorial authority stating that the territorial authority had negligently failed to issue the code compliance certificate following satisfactory final inspections of the property. The territorial authority was requested to urgently carry out an inspection preliminary to the issuing of a code compliance certificate.
- 2.2.6 The territorial authority carried out a site inspection on 5 May 2005. In a letter to the owner dated 17 May 2005, 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 fix also dated 17 May 2005 to this letter, together with a set of photographs illustrating items of non-compliance. The particulars of contravention attached to the notice to fix listed requirements under the following headings:
- a) Building work not in accordance with the building consent, the Building Code and the Building Act 2004
 - b) Items not installed per the manufacturer's specifications
 - c) Items not installed in accordance with the relevant acceptable/alternative solutions approved under building consent
 - d) Items not installed per accepted trade practice
 - e) Drainage and ventilation
 - f) Changes to the building consent
 - g) Meeting durability requirements
 - h) Planning requirements

- 2.2.7 The Particulars of Contravention also set out the process required to remedy the items of contravention or non-compliance.
- 2.2.8 The builder, in an undated statement, responded to the territorial authority's notice to fix. In general terms, the builder noted that some items could be attended to but reiterated that many of the requirements were "new bylaws issued since the house was built in 1995". The builder also noted that the house is 10 years old and has never leaked. In conclusion, the builder stated that the house had passed all the territorial authority's inspections, including the final inspection on 23 August 2000.
- 2.2.9 The owner applied for a determination on 26 April 2005.

3. The submissions

- 3.1 In a covering letter to the Department received on 28 April 2005, the owners noted that they purchased the house in 2003, without a code compliance certificate, but with the condition that the builder was to obtain such a certificate. The owner stated that the house had passed its final territorial authority inspection with the exception of a stair balustrade.
- 3.2 The owner also forwarded copies of:
- the plans
 - some of the consent documentation
 - some of the territorial authority's inspection records
 - the notice to fix
 - the correspondence with the territorial authority
 - the consultant's report and attachments.
- 3.3 In a covering letter to the Authority dated 19 July 2005, the territorial authority described the Particulars of Contravention.
- 3.4 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
 - the correspondence with the owner

- the consultant's report and attachments.

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 2 November 2005, the territorial authority commented on aspects of the draft determination. In particular, the territorial authority is concerned that paragraphs 8.2 and 8.3 indicate a scope of work required to make the house code compliant. The territorial authority claims that this is not part of the determination.

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), together with the other issues raised by the territorial authority, is correct.

4.2 There are no Acceptable Solutions that have been approved under section 22 of the Act or section 49 of the Building Act 1991 that cover the cladding. The cladding is not certified under section 269 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 Department 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 they may be modified in less extreme cases and the resulting alternative solution will still comply with the Building Code.
- Usually, when there is non-compliance with one provision of an Acceptable Solution, it will be necessary to add some other provision to compensate for that in order to comply with the Building Code.

5. The expert's report

5.1 The Department commissioned an independent expert ("the expert") to inspect the house. The expert inspected the cladding of the building on 27 July 2005 and furnished a report that was completed on 5 August 2005. The expert made various comments regarding the cladding and found areas of non-conformance, especially in regard to flashings, cladding base finishes and clearances, and sub-floor ventilation.

5.2 The expert also noted a number of locations in the exterior walls that had high moisture contents. These readings, when corrected, were 20.7%, 21.4%, 22.0%, 22.7%, 24.1%, 27.4%, 28.0%, and 32.0%. Moisture levels above 18% recorded after cladding is in place generally indicate that external moisture is entering the structure.

- 5.3 The expert also confirmed that the building was divided into three separately occupied units, with a one-bedroom apartment and a bed sitting room in addition to the main dwelling area. The expert noted that doors and walls between the different occupancies were not fire rated.
- 5.4 The expert also noted that the stair from the bedroom deck to the garden lacked any safety barrier.
- 5.5 Copies of the expert's report were provided to each of the parties.

6. Discussion

6.1 General

- 6.1.1 I have considered the submissions of the parties, and the other evidence in this matter. The approach in determining whether building work complies with clauses B2 and E2, is to examine the design of the building, the surrounding environment, the design features that are intended to prevent the penetration of water, the cladding system, its installation, and the moisture tolerance of the external framing. The Building Industry 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 considered these comments in this determination.
- 6.1.2 There are also the other issues raised by the territorial authority relating to fire-rating requirements and the missing handrail. The expert has commented in general terms on the fire rating issue and has noted the lack of a handrail.
- 6.1.3 I am of the opinion that the detailed information supplied in the notice to fix, together with the expert's report in this case, enables me to determine the issues in question.

6.2 Weathertightness risk

- 6.2.1 In relation to these characteristics I find that this house:
- has 580 mm eaves projections that provide good protection to the cladding areas below them
 - is in a medium wind zone
 - is single storey with a large sub-floor area
 - is fairly complex on plan with a simple hipped roof
 - has a large timber deck
 - has external wall framing that may not be treated to a level that would help prevent decay if it absorbs and retains moisture.

6.3 Weathertightness performance

- 6.3.1 The territorial authority's notice to fix and the expert's report describe items of non-compliance as regards the cladding, and the photographs provided by the territorial authority and the expert further illustrate these.
- 6.3.2 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.
- 6.3.3 I note that all elevations of the house demonstrate a low weathertightness risk 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.

6.4 Fire walls and doors

- 6.4.1 The expert's report confirms that the house is divided into three separately occupied units, with the doors and walls between the different occupancies not fire rated in compliance with the Building Code. This confirms the territorial authority's concern regarding fire rating in its notice to fix.

6.5 Safety barrier

- 6.5.1 The expert's report also confirms that the external stair access does not comply with the Building Code, as it lacks a handrail. This confirms the territorial authority's inclusion of this in its notice to fix.

7. Conclusion

- 7.1 I am satisfied that the current performance of the cladding is not adequate because of the areas of non-compliance described by the territorial authority and the expert. Consequently, as I have received no evidence to the contrary, 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 at present, or in the future, will allow 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 I emphasise that each determination is conducted on a case-by-case basis. 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.
- 7.5 In the circumstances, I decline to incorporate any waiver or modification of the Building Code in this determination.
- 7.6 In response to the territorial authority’s letter to the Department of 2 November 2005, 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, the question of whether the work has been properly completed and is code compliant requires careful inspection.
- 7.7 The Notice to Rectify issued on 17 May 2005 included Particulars of Contravention, which included numerous faults in relation to the cladding.
- 7.8 The cladding faults are issues unrelated to the question of a cavity that the territorial authority has raised. It can be seen that the expert’s report provides the comprehensive description of the building’s outstanding shortcomings.

8. The decision

- 8.1 In accordance with section 188 of the Act, I hereby determine that the cladding system as installed on the house does not comply with clauses B2 and E2 of the Building Code. In addition I find that the fire rating of the house between occupancies is inadequate and that the missing handrail should be installed. 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 fix that also required provision for adequate ventilation, drainage and vapour dissipation. Under the Act, a notice to fix can require the owner to bring the house into compliance with the Building Code. The Building Industry Authority has found in a previous Determination 2000/1 that a Notice to Rectify (the equivalent to a notice to fix under the Building Act 1991) 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 and the other elements at issue into compliance with the

Building Code, without specifying the features (in particular a cavity for the cladding, 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 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.
- 8.4 Finally, I consider that the cladding will require on-going maintenance to ensure its continuing code compliance, and that this maintenance programme should be undertaken after consultation with the territorial authority. This is particularly important, as the cladding has now been in place for some 8 years or so.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 22 November 2005.

John Gardiner
Determinations Manager