



Determination 2009/65

Refusal of a code compliance certificate for an 8-year-old house inspected by a building certifier at 127 Marine Parade, Mount Maunganui



1. The matters to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004¹ (“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, V and D Tuck (“the applicants”), acting through their lawyer (“the lawyer”), and the other party is the Tauranga City Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.2 This determination arises from the authority’s decision to decline to issue a code compliance certificate for an 8-year-old a house because it was not satisfied that the building work complies with certain clauses of the Building Code² (First Schedule, Building Regulations 1992), as the building work had been undertaken under the supervision of Bay Building Certifiers Limited (“the building certifier”). The building certifier was duly registered under the former Building Act 1991 but ceased

¹ The Building Act 2004 is available from the Department’s website at www.dbh.govt.nz.

² The Building Code is available from the Department’s website at www.dbh.govt.nz.

to operate as a building certifier before it had issued a code compliance certificate for the building work.

1.3 Based on the information available to me I consider that the matters for determination, in terms of sections 177(a) and 188 of the Act³ are:

1.3.1 Matter 1: The external envelope

Whether the external envelope of the house complies with Clause B2 Durability and Clause E2 External Moisture of the Building Code. The “external envelope” includes the monolithic cladding, the other wall and roof claddings, their configuration, components and junctions with other building elements. By “the monolithic cladding as installed” I mean the components of the systems (such as the backing materials, the plaster, the flashings and the coatings), as well as the way the components have been installed and work together. (I consider this matter in paragraph 8.)

1.3.2 Matter 2: The durability considerations

Whether the elements that make up the building work comply with Building Code Clause B2 Durability, taking into account the age of the building work. (I consider this matter in paragraph 10.)

1.4 In order to determine whether a building is code compliant I must address the following questions:

- (a) Is there sufficient evidence to establish that the building work as a whole complies with the Building Code? I address this question in paragraph 5.
- (b) If not, are there sufficient grounds to conclude that, once any outstanding items are repaired and inspected, the building work will comply with the Building Code? I address this question in paragraph 9.

1.5 In making my decision, I have considered the submission of the applicants and the report of the expert commissioned by the Department to advise on this dispute (“the expert”), and other evidence in this matter. I have evaluated this information using a framework that I describe in paragraph 7.

2. The building

2.1 The building is a 2-storey detached house situated on a flat coastal site in a high wind zone in terms of NZS 3604⁴. The lower level of the house is specifically engineered, with a concrete floor slab and foundations, concrete block walls, a suspended reinforced concrete first floor and a platform lift to the upper level. The upper level is generally conventional light-timber frame construction, with monolithic wall cladding, asphaltic shingle roof cladding and aluminium windows.

2.2 The 25° pitch hipped roof has eaves projections of more than 600mm overall. A small area of pitched membrane roof covers the south corner of the garage. In this

³ 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

⁴ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

instance, the concrete block walls continue up from the garage to form parapets around the membrane roof.

2.3 The decks and canopy

- 2.3.1 A large tiled deck (“the front deck”) extends across the north east of the upper floor, with a second, smaller deck (“the side deck”) above the entry area to the northwest. The concrete floor slab to both decks is stepped down and sloped at a fall of 1:40, with the surfaces finished with tiles.
- 2.3.2 The balustrade upstands to both decks are timber-framed and clad in monolithic cladding. Continuous structural glass panels are supported on aluminium channels and form the top section of the balustrades, with clear silicon joints at the external corners of the front deck.
- 2.3.3 The front deck is supported on 2-storey high reinforced concrete columns that support the corners of the main roof, where the walls are recessed back by about 1m. The central portion of the front wall is not recessed; instead forming a large bay window with a curved front.
- 2.3.4 The central section of the front deck projects forward by 1.3m, in line with the bay window. The concrete columns at the corners of the projection support a large steel and timber-framed canopy above that part of the deck. The flat membrane roof to the canopy accommodates a large opening louvre system, with timber-framed monolithic-clad parapets to the outer edges.
- 2.4 The expert noted that he was unable to confirm whether the timber framing was treated. Given the date of construction in 2001 and the lack of other evidence, I consider that the wall framing of this house is unlikely to be treated to a level that will provide resistance to fungal decay.

2.5 The wall claddings

- 2.5.1 The upper walls and balustrades are clad in EIFS⁵ monolithic cladding (“the EIFS”). The system includes 60mm polystyrene backing sheets fixed directly to the framing over the building wrap, that are finished with a mesh reinforced proprietary textured finish, followed by a flexible acrylic paint system. The cladding system includes purpose-made flashings to windows, edges and other junctions.
- 2.5.2 The concrete block walls to the exterior of the lower level are plastered and finished with the same coating system as applied to the EIFS. Rebated sloping blocks are used to provide projecting window sills. In the upper windows, sloping EIFS sills match the profiles used in the concrete block walls below.

3. Background

- 3.1 The authority issued building consent number 4335 on 27 November 2000, under the Building Act 1991. I have not seen a copy of the building consent.

⁵ External Insulation and Finish System

- 3.2 All inspections were undertaken by the building certifier. I have received a summary of all inspections that took place; however, the inspection reports themselves were not received. The building certifier carried out the following inspections:
- foundations on 25 and 26 January 2001, which passed
 - concrete slab pre-pour on 2 February 2001, which passed
 - concrete columns on 8 February 2001, which passed
 - concrete block walls on 23 February 2001, which passed
 - first floor concrete slab on 1 March 2001, which passed
 - plumbing pre-line on 10 April 2001, which passed
 - building pre-line on 12 April 2001, which passed
 - drainage on 25 May 2001, which passed
 - a final inspection on 5 September 2001, which noted that several minor items required completion and various producer statements were required.
- 3.3 The coating applicator issued a producer statement dated 5 September 2001 for the coating applied in June to July 2001, which confirmed that the EIFS complied with the manufacturer's instructions and stated that the coating system was applied over a substrate that 'had been suitably prepared for the application of that system and that the required flashings had been properly installed'.
- 3.4 I note that a producer statement for the lift installation, dated 2 August 2001, was provided prior to the final inspection. According to the lawyer, a code compliance certificate was not applied for when the building work was completed.
- 3.5 The building certifier ceased to operate as a building certifier on 30 June 2005 without having issued the code compliance certificate. I have seen no copies of correspondence from the building certifier, the contractor or the authority following completion of the house in 2001.
- 3.6 According to the lawyer, the applicants recently sought a code compliance certificate, but the authority has refused to issue one. The authority did not issue a notice to fix as required under section 164(2) of the Building Act 2004, and I have seen no correspondence to the applicant regarding the authority's reasons for its refusal.
- 3.7 I do not believe that this is acceptable. It is important that should an owner be declined a code compliance certificate, they be given clear reasons why, either through a letter or the issuing of a notice to fix. The owners can either then act on those reasons or apply for a determination if they dispute them.
- 3.8 The application for a determination was received by the Department on 21 May 2009.

4. The submissions

- 4.1 In an accompanying letter dated 19 May 2009, the lawyer explained that a sale of the house was dependent on a code compliance certificate being ‘issued or resolved’. The lawyer noted that a certificate had not been applied for when the house was completed, noting:
- Attempts to have one since have been declined by [the authority] and we at least require a determination to:
1. Confirm that this refusal is justified;
 2. Extend the time to enable a Code Compliance Certificate be issued; and
 3. Isolate the matters, if any, that may be precluding the issue of a Code Compliance Certificate.
- 4.2 The applicant forwarded copies of:
- some of the drawings
 - the building certifier’s inspection summary
 - a statement from the engineer regarding the foundations.
- 4.3 A copy of the applicant’s submission was provided to the authority. The authority did not acknowledge the application or made any submission in response.
- 4.4 The authority confirmed in an email to the Department dated 2 July 2009 that it was not satisfied that the building complied with clauses B2 “Durability” and E2 “External Moisture” of the Building Code.
- 4.5 A draft determination was issued to the parties on 7 July 2009. The draft was issued for comment and for the parties to agree a date when the house complied with Building Code Clause B2 Durability.
- 4.6 Both parties accepted the draft and agreed that compliance with Clause B2 was achieved on 1 October 2001.
- 4.7 The applicant’s lawyer accepted the draft with respect to its technical findings, and said that remedial work would be completed. However, the lawyer pointed out that the present tenancy arrangements meant that the house would not be available from this work until early 2010, and that the remedial work would also benefit from being completed during the summer. The lawyer submitted that there were ‘time limits’ on a notice to fix that would require the work to be completed by a certain date, and therefore requested that the issue of the notice to fix be delayed as appropriate.
- 4.8 In response I note that while a notice to fix must include a date when it must be complied by, that time period is not prescribed. In my view the legislation does not prevent a notice to fix being issued with the time period for compliance being agreed between the parties.

5. Grounds for the establishment of code compliance

- 5.1 In order for me to form a view as to the code compliance of the building work, I must establish what evidence is available and what could be obtained considering that the building work is completed and some of the elements were not able to be cost-effectively inspected.
- 5.2 In this case the evidence supplied by the applicants included the building certifier's inspection summary (refer paragraph 3.2). The expert has also supplied copies of various other producer statements and documentation.
- 5.3 I therefore need to decide if I can rely on the inspections that were undertaken by the building certifier, particularly in regard to inaccessible building components. In the absence of any evidence to the contrary, I take the view that I am entitled to rely on the inspection records, but I consider it important to look for evidence that corroborates these records and can be used to verify that the building certifier's inspections were properly conducted.
- 5.4 In summary, I find that the following evidence can provide me with reasonable grounds to form a view as to the code compliance of the building work as a whole:
- The summary record of inspections carried out by the building certifier, which indicates satisfactory inspections of the inaccessible components.
 - The producer statements and other information, which indicate compliance of certain building elements.
 - The expert's report as outlined in paragraph 6.

6. The expert's report

- 6.1 As mentioned in paragraph 1.5, 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. The expert inspected the cladding on 17 June 2009 and furnished a report that was completed on 22 June 2009.
- 6.2 The expert noted the following variations from the consent drawings:
- Solid plaster cladding was changed to EIFS cladding.
 - Additional windows were installed in the south east elevation.
 - A timber-framed wing wall was added between the garage and the entry.
 - The balustrade construction details were changed.
 - The side deck was reduced in size.
 - The skillion roof over the northeast end was changed to a trussed roof.
 - The shower trays were changed to tiles.
- 6.3 The expert noted that the general construction appeared to be of 'excellent quality' and the house was well maintained. The expert noted that the EIFS was 'well fixed

and aligned' with 'no evidence of cracking or premature deterioration'. The expert noted that control joints are not specified by the manufacturer as necessary for the dimensions of EIFS used on the walls of this building.

6.4 The expert noted that the windows are recessed by the thickness of the EIFS, with metal head flashings that are well protected by the 600mm soffits. The expert also noted that the edges of the uPVC sill flashings were visible, and there was no sign of any moisture penetration or cracks in the reveals.

6.5 The expert inspected the interior of the house, taking non-invasive moisture readings, and no evidence of moisture was observed. The expert took 23 invasive readings through the EIFS at areas considered at-risk and noted 10 elevated readings as follows:

The front deck

- from 22% to more than 40% in the balustrade framing
- 18% and 23% at the balustrade to wall junctions
- from 23% to more than 40% in the canopy framing

The side deck

- 25% at a balustrade to wall junction
- 28% in the top of the balustrade framing

The garage wing wall

- 31% in the bottom plate of the timber-framed wing wall beside the garage.

I note that all the readings taken in the framing to the upper level exterior walls were below 13%. Moisture levels that vary significantly generally indicate that external moisture is entering the structure and further investigation is required.

6.6 Commenting specifically on the external envelope, the expert noted that:

- the bottom of the cladding of the timber-framed wing wall between the garage and the entry is buried beneath the paving, and moisture is entering the framing

The deck balustrades

- the deck balustrades have no cappings and the metal channel supporting the upper glass is fixed through the flat tops of the balustrades
- there is no evidence of saddle flashings at the junctions with the walls

The front deck canopy

- the soffit is cracked, and water appears to be entering the junction between the louvres and the membrane roof
- the high moisture penetration into the canopy framing requires investigation to determine the source(s) of the leaks and any resulting timber damage.

6.7 I note that the expert was engaged to make a site inspection at the time the authority had not confirmed its reasons for refusing the code compliance certificate. Given the lack of information from the authority, the expert also assessed compliance with other Building Code clauses and commented that glass to the deck balustrades and

the shower doors has not been verified as safety glass as required by Clause F2 “Hazardous Building Materials”.

6.8 A copy of the expert’s report was provided to the parties on 23 June 2009.

Matter 1: The external envelope

7. Evaluation framework for code compliance

7.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solutions⁶, which will assist in determining whether the features of these houses 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.
- Usually, when there is non-compliance with one provision of an Acceptable Solution, it will be necessary to add one or more other provisions to compensate for that in order to comply with the Building Code.

8. Weathertightness

8.1.1 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. Weathertightness risk factors have also been described in previous determinations⁷ (for example, Determination 2004/1) relating to cladding and these factors are also used in the evaluation process.

8.1.2 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.

8.2 Weathertightness risk

8.2.1 This 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 cladding systems can be used on a building in order to comply with E2/AS1. Higher levels of risk will require more rigorous

⁶ 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.

⁷ Copies of all determinations issued by the Department can be obtained from the Department’s website.

weatherproof detailing; for example, a high risk level is likely to require a particular type of cladding to be installed over a drained cavity.

8.2.2 The house has the following environmental and design features in relation to its weathertightness risk profile:

Increasing risk

- the house is built in a high wind zone
- the house is two storeys high, and fairly complex in plan and form
- the upper walls have monolithic cladding fixed directly to the framing
- the house has two decks, with monolithic-clad timber-framed balustrades
- the upper level has external wall framing that is unlikely to be treated to a level that is effective in helping resist decay if it absorbs and retains moisture

Decreasing risk

- the house has 600mm eaves projections to shelter the walls
- the upper suspended floor, including the deck floors, is concrete
- except for a small wing wall, the lower exterior walls are concrete block

8.2.3 When evaluated using the E2/AS1 risk matrix, these features show that all elevations of the house demonstrate a moderate weathertightness risk rating.

8.3 Weathertightness performance

8.3.1 Generally the monolithic cladding appears to have been installed in accordance with good trade practice and the manufacturer's instructions, but some areas have not been satisfactorily completed, as outlined in paragraph 6.6. Taking account of the expert's report, I conclude that remedial work is necessary in respect of the following:

- at the ground floor wing wall, the lack of clearance from the bottom of the cladding to the paving, with moisture penetrating into the bottom plate
- for both decks, the fixings through the uncapped flat tops of the monolithic-clad balustrades, with high levels of moisture penetration into the framing apparent
- for both decks, the lack of evidence of saddle flashings at the junctions of the balustrades with the walls, with moisture penetrating into the framing
- the lack of weathertightness of the front deck canopy, with high levels of moisture penetration that require investigation to determine the source(s).

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

- Apart from the noted exceptions the cladding is installed to good trade practice.
- There are no cracks in the cladding.

- There is no moisture penetration into the framing of exterior walls, with penetration limited to deck areas, the deck canopy and the wing wall – where defects have been identified.

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

8.4 Weathertightness conclusion

8.4.1 I consider the expert's report establishes that the current performance of the claddings is not adequate because it is allowing water penetration into the timber framing of a wing wall, the deck balustrades and the canopy at present. Consequently, I am satisfied that the house does not comply with Clause E2 of the Building Code.

8.4.2 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 house are likely to continue to allow the ingress of moisture in the future, the building does not comply with the durability requirements of Clause B2.

8.4.3 Because the faults identified with the cladding systems occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 8.3.1 will result in the house being brought into compliance with Clauses B2 and E2. I note that the repair work will need to include full investigation of the untreated framing to determine the extent of damage to the timber.

8.4.4 It is emphasised that each determination is conducted on a case-by-case basis. Accordingly, the fact that a particular cladding system has been established as being code compliant in relation to a particular building does not necessarily mean that the same cladding system will be code compliant in another situation.

8.4.5 Effective maintenance of claddings is important to ensure ongoing compliance with Clauses B2 and E2 of the Building Code and is the responsibility of the building owner. The Department has previously described these maintenance requirements, including examples where the external wall framing of the building may not be treated to a level that will resist the onset of decay if it gets wet (for example, Determination 2007/60).

9. The appropriate certificate to be issued

9.1 Having found that the building can be brought into compliance with the Building Code, I must now determine whether the authority can issue either a certificate of acceptance or a code compliance certificate.

9.2 Section 437 of the Act provides for the issue of a certificate of acceptance where a building certifier is unable or refuses to issue either a building certificate under section 56 of the former Act, or a code compliance certificate under section 95 of the

current Act. In such a situation, a building consent authority may, on application issue a certificate of acceptance. In the case of this house, the owner is seeking a code compliance certificate and has not applied for a certificate of acceptance.

- 9.3 In this situation, where I have reasonable grounds to conclude that the consented building work can be brought into compliance with the Building Code, I take the view that a code compliance certificate is the appropriate certificate to be issued in due course.

Matter 2: The durability considerations

10. Discussion

- 10.1 There are concerns regarding the durability, and hence compliance with the building code, of certain elements of the building taking into consideration the age of the building work completed in 2001.
- 10.2 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).
- 10.3 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.
- 10.4 The 8-year delay between the substantial completion of the building work in 2001 and the authority’s refusal of a code compliance certificate raises the matter of when all the elements of the building complied with Clause B2. I have not been provided with any evidence that the authority did not accept that those elements complied with Clause B2 at a date in 2001.
- 10.5 In this case the delay since completion of the building work in 2001 has raised concerns that various elements of the building are now well through or beyond their required durability periods, and would consequently no longer comply with Clause B2 if a code compliance certificate were to be issued effective from today’s date.
- 10.6 It is not disputed, and I am therefore satisfied that all the building elements, excluding those items that are to be rectified, complied with Clause B2 on 1 October 2001. This date has been agreed between the parties, refer paragraph 4.6.

- 10.7 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.
- 10.8 I continue to hold that view, and therefore conclude that:
- (a) the authority has the power to grant an appropriate modification of Clause B2 in respect of all the building elements.
 - (b) it is reasonable to grant such a modification, with appropriate notification, as in practical terms the building is no different from what it would have been if a code compliance certificate for the building work had been issued in 2001.
- 10.9 I strongly suggest that the authority record this determination and any modifications resulting from it, on the property file and also on any LIM issued concerning this property.

11. What is to be done now?

- 11.1 I note that the authority has not issued a notice to fix. A notice to fix should be issued that requires the owners to bring the house into compliance with the Building Code, identifying the items listed in paragraphs 8.3.1 and 6.7, and referring to any further defects that might be discovered in the course of investigation and rectification, but not specifying how those defects are to be fixed. It is not for the notice to fix to stipulate how the defects are to be remedied and the house brought to compliance with the Building Code. That is a matter for the owner to propose and for the authority to accept or reject.
- 11.2 I suggest that the parties adopt the following process to meet the requirements of paragraph 11.1. Initially, the authority should issue the notice to fix. I note the date that the notice must be complied with should be agreed between the authority and the owner. 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.
- 11.3 I note that the expert has identified various changes from the building consent, and I leave these matters to the parties to resolve.
- 11.4 Once the matters set out in paragraphs 8.3.1 and 6.7 have been rectified or resolved to its satisfaction, the authority may issue a code compliance certificate in respect of the building consent as amended.

12. The decision

- 12.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the external envelope does not comply with Building Code Clauses B2 and E2, and

accordingly I confirm the authority's decision to refuse to issue a code compliance certificate.

12.2 I also determine that:

- (a) all the building elements installed in the house, apart from the items that are to be rectified as described in this determination, complied with Clause B2 on 1 October 2001.
- (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 October 2001 instead of from the time of issue of the code compliance certificate for all the building elements, except the items to be rectified as set out in paragraph 8.3.1 and 6.7 of Determination 2009/65.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 24 August 2009.

John Gardiner
Manager Determinations