



Determination 2009/28

Determination regarding the code compliance of a 9-year-old addition to a house at 13 Balfour Crescent, Castlepoint



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 the Department. The applicants are the owners, Mr D Anderson and Mrs J Anderson (“the applicants”). The other party is the Masterton District Council (“the authority”) carrying out its duties and functions as a territorial authority or building consent authority.
- 1.2 This determination arises from the decision of the authority to refuse to issue a code compliance certificate because it is not satisfied the work complies with the Building Code² (First Schedule, Building Regulations 1992). The authority contends that because what is built (“the addition”) is not in accordance with the consented drawings, and is consequently an inhabited area, rather than a ‘storeroom’, the work may not meet the requirements of Building Code Clause E2. The decision is disputed by the applicants.
- 1.3 I take the view that the matters to be determined, in terms of sections 177(a) of the Act, are:

Matter 1: The wall cladding

Whether the addition complies with Building Code Clause E2 “External Moisture”.

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.

Matter 2: The bathroom window

Whether the addition complies with Building Code Clauses F2 “Hazardous Building Materials”.

Matter 3: The durability considerations

Whether the addition complies with Building Code Clause B2 “Durability”, taking into account the age of the building work.

- 1.4 In making my decision, I have considered the submissions of the parties, the report from an independent expert (“the expert”) commissioned by the Department to advise on this dispute, and the other evidence in this matter. I have evaluated this information using a framework that I describe more fully in paragraph 6.1.
- 1.5 In this determination, unless otherwise stated, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

2. The building work

- 2.1 The building is a two-storey house situated on a sloped section, in a very high wind zone for the purposes of NZS 3604³ and in the corrosion zone. The site is located in a small, isolated coastal settlement that is noted for its high wind. However, the site is well protected from both the prevailing northwest wind, and southerly storms. The 12 year old house is timber framed and floored and built on pole foundations. The house is clad in vertical grooved, ply-cladding panels that are painted in a light colour. The house has a colour steel roof, powder coated alloy joinery, and a large butynol surfaced ply deck.
- 2.2 The lower level addition (“the addition”), which is the subject of this determination, is a basement addition with a concrete slab built between the lower pole foundations below the deck and the main part of the house. The addition is a rectangular basement unit that consists of a sheltered entry, small kitchen unit, and living area, with a separate bedroom and en-suite bathroom. The walls are clear of the ground and fully exposed to salt air. The addition has window joinery only on the north eastern elevation.

3. The background

- 3.1 Building consent number 99076 was issued by the authority on 15 November 1999. The consent was for a lower level storeroom addition to be constructed under the existing house.
- 3.2 It is unclear when the building work was carried out, however, it appears that the cladding was installed in late 1999, shortly after the consent was issued.
- 3.3 The authority issued a notice to rectify (NR0173) on 13 January 2005, contending that the building work was not completed in accordance with the Building Act 1991 or the Building Code. Specifically, as the particulars of contravention, the notice to rectify cited:
1. The window to the washroom is to be fitted with safety glass.
 2. The widows [sic] to the exterior wall have been sealed along the widow [sic] head with sealant in lieu of a mechanical flashing. This is not in accordance with the

³ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

building code and new head flashings will need to be fitted to these windows and extend up behind the exterior ply cladding.

3. During inspection for code compliance of this consent it was noted that the alteration to the dwelling was no longer a storage area and that a bedroom and kitchen had been included.

3.4 The Department received an application for determination on 29 January 2009.

4. The submissions

4.1 The application for determination stated that the authority would not issue a code compliance certificate. The applicants also noted 'We built a room under deck as per plan'.

4.2 The applicant forwarded copies of:

- the PIM and building consent
- the notice to rectify
- the consented plans.

4.3 Copies of the submissions and other evidence were provided to the parties. Neither party made any further submissions in response to the information that was provided.

4.4 A draft determination was issued to the parties for comment on 18 March 2009. The draft was issued for comment and for the parties to agree a date when the building work complied with Clause B2 "Durability".

4.5 Both parties agreed on 1 December 1999 as a date when the building elements in the addition complied with Clause B2.

5. The expert's report

5.1 As discussed in paragraph 1.4, I engaged an independent expert to provide an assessment of the condition of those building elements subject to the determination. The expert is a member of the New Zealand Institute of Building Surveyors. The expert inspected the house on 23 February 2009 and furnished a report that was completed on 3 March 2009.

5.2 The expert noted that most of the area is well protected, with the only area of cladding exposed to the weather being the north-east elevation and north-west end wall. The expert took non invasive recordings at risk locations and found no moisture or reason to feel that moisture had entered the structure.

5.3 The expert noted that the cladding was well installed and well finished, with tidy and effective flashings and well maintained paintwork.

5.4 With respect to the cladding, the expert observed the following:

- there are gaps between the window flashing and the window head and between the window jamb and the cladding junction
- the shaped timber fascia profile at the base of the cladding, and the deck surface and fixings on the deck (roof of the addition) require maintenance.

5.5 With respect to the bathroom window, safety glass has been installed.

6. Evaluation for code compliance

6.1 Evaluation framework

- 6.1.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solutions⁴, which will assist in determining whether the features of this house are code compliant. However, in making this comparison, the following general observations are valid:
- Some Acceptable Solutions are written conservatively to 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.
- 6.1.2 The approach in determining whether building work is weathertight and durable and is likely to remain so, is to apply the principles of weathertightness. This involves the examination of the design of the building, the surrounding environment, the design features that are intended to prevent the penetration of water, the cladding system, its installation, and the moisture tolerance of the external framing. The Department and its antecedent, the Building Industry Authority, have also described weathertightness risk factors in previous determinations⁵ (for example, Determination 2004/1) relating to cladding and these factors are also used in the evaluation process.
- 6.1.3 The consequences of a building demonstrating a high weathertightness risk is that building solutions that comply with the Building Code will need to be more robust. Conversely, where there is a low weathertightness risk, the solutions may be less robust. In any event, there is a need for both the design of the cladding system and its installation to be carefully carried out.

6.2 Weathertightness risk

- 6.2.1 In relation to these characteristics, I find that the addition:

Features tending to increase risk

- is under the large butynol deck attached to the main house, that is the deck is the roof to the addition

Features tending to decrease risk

- is single storey
- is very simple in plan and form
- is in a very high wind zone but is in a protected micro climate and is very sheltered
- is protected by very large eaves
- has some walls that are not exposed to the weather at all.

⁴ 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.

⁵ Copies of all determinations issued by the Department can be obtained from the Department's website.

- 6.2.2 The house has been evaluated using the E2/AS1 risk matrix. The risk matrix allows the summing of a range of design and location factors applying to a specific building design. The resulting level of risk can range from 'low' to 'very high'. The risk level is applied to determine what cladding can be used on a building in order to comply with E2/AS1. Higher levels of risk will require more rigorous weatherproof detailing; for example, a high risk level is likely to require a particular type of cladding to be installed over a drained cavity.
- 6.2.3 When evaluated using the E2/AS1 risk matrix, the weathertightness features outlined in paragraph 6.2.1 show the addition demonstrates a medium weathertightness risk rating. I note that, if the details shown in E2/AS1 were adopted to show code compliance, the ply cladding panels to the addition would now require the incorporation of a drained cavity, however, this was not a requirement at the time of construction.

Matter 1: The cladding

7. Discussion

- 7.1 The authority is concerned with compliance with Clause E2, given they believe the addition was consented as a storeroom. While the plans show part of the addition labelled as a 'storage area [sic]', the plans also show a washroom and an area intended as a bedroom, and that the addition was to have wall and ceiling insulation. The description of the project in the building consent of "Add storeroom etc under dwelling" is not fully appropriate, and I consider that the plans should have signalled to the authority that the addition was intended as a habitable space.
- 7.2 I consider that the expert's report establishes that the current performance of the cladding is adequate because it is preventing water penetration into the addition at present. Consequently, I am satisfied that the building work complies with Clause E2 of the Building Code.
- 7.3 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 additions to remain weathertight.
- 7.4 Taking account of the expert's report, I conclude that remedial work is necessary only in respect of the sealing of the gaps between the head flashing junctions and sealing of the jamb to cladding junctions. Because the minor faults on the addition may allow the ingress of moisture in the future, I take the view that the building work does not comply with the durability requirements of Clause B2.
- 7.5 Because the faults identified with the cladding occur in discrete areas, I am able to conclude that satisfactory rectification of the lack of sealing at the head flashing junctions and the jamb and cladding junctions will result in the building work being brought into compliance with Clause B2.
- 7.6 The expert has observed that the shaped timber fascia profile at the base of the cladding is in need of maintenance and that it may be better to remove it.
- 7.7 Although not part of the consented work, I note that the performance of the butynol deck membrane is critical to the ongoing Building Code compliance of the addition.

The condition of the butynol membrane should be closely monitored and maintained accordingly.

- 7.8 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).

Matter 2: The bathroom window

8. Discussion

- 8.1 Taking into account the expert's inspection of the bathroom window, I consider that the requirement to have safety glass installed in the bathroom window, which was listed on the notice to rectify, has been met.
- 8.2 Accordingly, I consider that the addition complies with Building Code Clause F2 "Hazardous Building Materials".

Matter 3: The durability considerations

9. Discussion

- 9.1 The expert has expressed concerns about the durability of the addition, and hence the compliance with the building code of certain elements of the building work, taking into account the completion of the work in 1999.
- 9.2 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).
- 9.3 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.
- 9.4 The 9-year delay between the substantial completion of the building work consented in 1999 and the application for determination 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 1999.

- 9.5 It is not disputed, and I am therefore satisfied, that all the building elements complied with Clause B2 on 1 December 1999, refer paragraph 4.5.
- 9.6 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.
- 9.7 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, because 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 1999.
- 9.8 I strongly recommend 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.

10. The decision

10.1 In accordance with section 188 of the Building Act, I determine that:

- the addition complies with Clause E2
- the addition complies with Clause F2
- the addition does not comply with Clause B2

and accordingly I confirm the authority's decision not to issue a code compliance certificate.

10.2 I also determine that:

- a) all the building elements installed in the building complied with Clause B2 on 1 December 1999
- 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 December 1999 instead of from the time of issue of the code compliance certificate for the building elements described in 2009/28.
- c) the authority is to issue a code compliance certificate in respect of the building consent as amended once the matters set out in paragraph 7.5 have been remedied to its satisfaction.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 20 April 2009.

John Gardiner
Manager Determinations