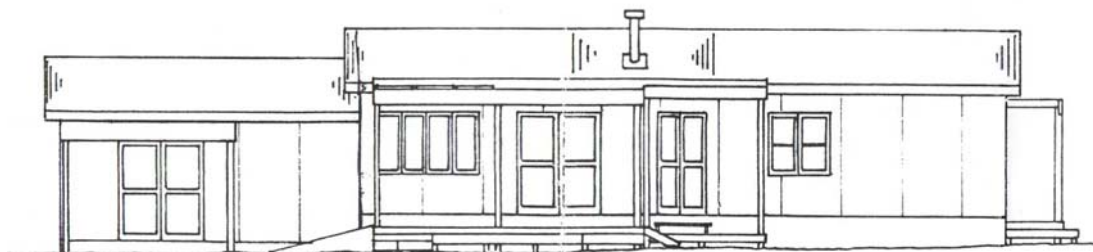


Determination 2008/34

Refusal to issue a code compliance certificate for an 8-year-old house and garage at 48 Galbraith Street, Waihi



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, M and D Flude (“the applicants”) and the other party is the Hauraki District Council (“the territorial authority”).
- 1.2 This determination arises from the decision of the territorial authority to refuse to issue a code compliance certificate for a house, which has taken 10 years to build, because it was not satisfied that the house complied with the Building Code² (Schedule 1, Building Regulations 1992).
- 1.3 The matters for determination are:

Matter 1: Compliance with the Building Code

Whether the house complies with the relevant clauses of the Building Code (see sections 177 and 188 of the Act)

Matter 2: The durability considerations

Whether the elements that make up the building work comply with Clause B2 “Durability” of the Building Code, taking into account the age of the building work.

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.

- 1.4 In making my decision, I have considered the submissions of the parties, the report of the expert commissioned by the Department to advise on this dispute (“the expert”), and the other evidence in this matter.
- 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 work consists of a single-storey house and a fully detached garage located on a level site, which is in a medium wind zone for the purposes of NZS 3604³. The house is simple in shape and form and is of timber framed construction and, with the exception of the concrete slab to the lounge/bedroom area, has timber-framed floors. The main roof is at two levels and has wall-to-roof junctions and 600 mm wide eaves and verge projections. A small porch is constructed at the rear of the building and this has a wall-to-roof junction with the main building but lacks eaves or verge overhangs as well as gutters and downpipes.
- 2.2 I have not received any information as to the treatment, if any, of the external wall framing to the house.
- 2.3 The main house external wall cladding consists of PVC weatherboards fixed directly to the framing over absorbent building paper. The rear porch is clad with fibre-cement sheets.
- 2.4 The garage is a proprietary purpose-made building with profiled metal cladding to the walls and roof.

3. Background

- 3.1 The territorial authority issued a building consent (No 8090) in June 1997 under the Building Act 1991 (“the former Act”). I have not been provided with any information as to when the garage was consented and built.
- 3.2 The territorial authority carried out a series of inspections of the building during its construction between 1998 and 2002. It appears the house was altered during its construction with a verandah and porch added, and the changes made to the internal layout including the installation of a wood-burner.
- 3.3 On 25 August 2000, the territorial authority issued an interim code compliance certificate for part of the work covered by consent No 8090. The interim certificate noted the following outstanding matters:
- 1 Complete the lining of all walls & ceilings.
 - 2 Protect all walls & floor[s] in wet areas.
 - 3 [Hot water] cylinder to be fitted with seismic restraints.
- 3.4 On 16 April 2007, the territorial authority inspected the property and in a “Final Inspection” document listed elements that had failed the inspection and other miscellaneous items of non-compliance.

The final inspection noted 15 items that had failed, and in addition the inspection noted, in summary, the following items:

³ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

1. Floor lay out not as consent, fire installed, verandas added and not on plans.
2. Laundry not vented.
3. Wall linings not finished.
4. Not painted inside and out completely.
5. Foundations not checked.
6. Garage ground heights incorrect.
7. Storm-water discharging onto neighbours.

3.5 On 24 April 2007, the territorial authority wrote to the applicants saying that the house was not finished and that it could not issue a code compliance certificate. In addition the territorial authority said:

as this consent is close to 10 years old, . . . Council will not issue a Code Compliance Certificate due to the limitations of 10 years and also . . . Council is not satisfied on reasonable grounds that this dwelling will meet NZBC B2/AS1 Durability.

3.6 On 20 June 2007, the territorial authority wrote to the applicants confirming that it would not issue a code compliance certificate for the house. The territorial authority also listed a number of items that it considered to be outstanding, as follows:

1. The building work has made major amendments to the original consented plans. The floor layout has changed, a fire has been installed and a verandah added.
2. There are a number of areas such as the bathroom, laundry that have not been completed.
3. Window flashings and scribes are not completed.
4. Garage finished ground heights are incorrect.
5. Storm water is discharging to the neighbour's property.
6. Painting has not been completed.
7. There is insufficient sub floor ventilation and natural ventilation.
8. Exterior cladding is not completed.
9. Windows and sashes not fitted correctly.

3.7 The Department received the application for a determination on 1 October 2007, and, on receipt of the appropriate application fee, the determination process commenced on 12 October 2007.

4. The submissions

4.1 In a covering letter to the Department dated 23 September 2007, the applicants noted that the house had been constructed over a 10-year period. The applicants also stated that the house had been inspected by a territorial authority officer at each stage of its construction. The applicants advised that they had a revised floor plan that was stamped 'approved' by the territorial authority. The applicants also submitted that the inspection records showed that the territorial authority was aware of the amendments to the building and had inspected and passed the amended work. The applicants accepted some matters and said they would be fixed but disputed the remainder. The applicants requested either a code compliance certificate or a list of items to be fixed.

- 4.2 The applicants forwarded copies of:
- some plans
 - territorial authority inspection documentation
 - the correspondence with the territorial authority.
- 4.3 The territorial authority did not make a submission.
- 4.4 Copies of the documents from the applicants were provided to the territorial authority and all the other evidence was provided to both parties. Neither party made any submissions in response to the information that was provided.
- 4.5 A draft determination was issued to the parties on 21 February 2008. The draft was issued for comment and for the parties to agree a date when the building elements complied with Building Code Clause B2 Durability.
- 4.6 The parties accepted the draft without comment and agreed that compliance with Clause B2 was achieved on 25 August 2000.

5. The expert's report

- 5.1 As mentioned in paragraph 1.4, I engaged an expert, who is a member of the New Zealand Institute of Building Surveyors, to provide an assessment of the condition of the accessible building elements of the building.
- 5.2 The expert inspected the property on 30 November 2007 and furnished a report that was completed on 10 January 2008. The expert noted that the “overall standard of workmanship/finish is below average” as was the standard of Gibraltar board stopping, painting and general internal finish. However, apart from some detailing, the cladding system is installed satisfactorily and the roof appears to be in sound condition.
- 5.3 The expert took non-invasive readings at the interior of the external walls followed by some invasive readings and no elevated readings were recorded in either case. However, the expert noted that at least one timber window sill is decaying though this may be as a result of condensation forming on the window.
- 5.4 Commenting on weathertightness matters the expert noted that, while there were no signs of moisture ingress at the time of the inspection, the following items will not comply with the durability requirements of the code:
- No moulded end plugs are installed between the cladding and the jambs of the exterior joinery units.
 - Some window sashes are not fitted properly, and cracked or missing glazing could allow the entry of moisture.
 - The ends of the flashings over the heads of the external joinery are not sealed.
 - No flashings are installed to the jambs and the sills of the exterior aluminium joinery units and there is a lack of flashing tape at the sills and top corners of the units.
 - Some external angles of the cladding and penetrations through the cladding are poorly finished.

- The sub-floor area lacks adequate ventilation.

5.5 Commenting specifically on other code clauses, the expert noted that:

Clause C1 Outbreak of Fire

- the timber storage box is situated too close to the solid fuel heater

Clause E1 Surface Water

- some gutters and downpipes are broken or poorly fixed, and some downpipes are not connected to a surface water drainage system
- the ground clearance to the garage is not adequate

Clause E3 Internal Moisture

- the wall surfaces to the bathroom and laundry adjacent to sanitary fixtures and subject to water splash are not adequately sealed

Clause G3 Food Preparation and Prevention of contamination

- the kitchen does not have linings that are impervious and easily cleaned

Clause G4 Ventilation

- there is no ventilation to the bedroom/office

Clause G7 Natural Light

- there is no natural light to the bedroom/office

Clause G10: Piped services

- no adequate ventilation has been provided for the gas bottle installed in the kitchen

Clause F7 Warning Systems

- no smoke detectors were installed.

5.6 The expert also observed that the building is in general need of repair and maintenance (e.g. decay in one window sill).

5.7 Comparing the as-built house with the relevant consented plans, the expert noted some differences and that the territorial authority had requested amended plans be provided.

5.8 A copy of the expert's report was provided to each of the parties on 14 January 2008.

6. Matter 1: Compliance with the Building Code

6.1 Evaluation for compliance with relevant Building Code clauses.

6.1.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solution⁴, 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:

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.

- 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 As regards the external cladding, 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 altered house:

- is single storey
- is situated in a medium wind zone
- has 600mm wide eaves and verge projections that provide good protection to the claddings beneath them
- has no decks or balconies
- has external wall framing that is likely not to be treated to a level that provides some resistance to the onset of decay if the framing absorbs and retains moisture.

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 risk rating can range from 'low' to 'very high'. The risk rating is applied to determine what claddings 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 particular types 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 that all elevations of the house demonstrate a low weathertightness risk. I note that, in order to comply with E2/AS1, the wall cladding of this building would not require a drained cavity.

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

6.3 Performance of the building elements

6.3.1 In some instances, the building elements, and in particular those relating to the cladding, do not appear to have been installed in accordance with good trade practice. Based on the expert's opinion, I accept that, remedial work is necessary in respect of the following:

- The close proximity of the timber fire wood storage box to the solid fuel heater.
- The broken or poorly fixed gutters and downpipes.
- The downpipes not connected to a surface water drainage system.
- Poorly fitted window sashes, along with cracked or missing glass, allowing the entry of moisture.
- The lack of sealing to the ends of the head flashings to the external joinery.
- The exterior aluminium joinery unit jambs lacking flashing or scribes to protect the jamb to weatherboard junctions.
- The poorly finished external corners and penetrations to the cladding.
- The lack of paint to exterior surfaces (timber and fibre-cement sheet).
- The lack of sub-floor ventilation.
- The inadequate sealing of internal surfaces to the bathroom and laundry.
- The inadequate sealing of internal linings in the kitchen.
- The lack of provision for ventilation and natural light to the bedroom/office.
- The lack of ventilation to the LPG gas cylinder.

6.4 Discussion

6.4.1 I consider that the expert's report establishes there is no evidence of external moisture entering the building, and accordingly, that its external cladding does comply with Clause E2 at this time.

6.4.2 However, 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 building to remain weathertight. Because the cladding faults on the building are likely to allow the ingress of moisture in the future, the house does not comply with the durability requirements of Clause B2.

6.4.3 The office/bedroom is a habitable space and must therefore comply with the Building Code with respect to ventilation (Clause G4) and provision of natural light providing an awareness of the outside (Clause G7).

6.4.4 I note the expert's comments in paragraph 5.4 with respect to the installation of the smoke detectors. While the Building Code did not require smoke detectors at the time the building consent was issued, I also recommend that they now be installed.

6.4.5 Building Code Clause E1.3.2 says:

E1.3.2 Surface water, resulting from an event having a 2% probability of occurring annually, shall not enter buildings.

However, the limitation on Building Code Clause E1.3.2 says:

Performance E1.3.2 shall apply only to Housing, Communal Residential and Communal Non-residential buildings.

6.4.6 I consider the garage falls outside the definition of “*Housing, Communal Residential and Communal Non-residential buildings*”, and I am therefore of the view that Building Code Clause E1.3.2 does not apply to the garage.

6.4.7 The requirements for the provision of bottled LPG gas is described in Clause G10 “Piped Services” which cites NZS 5261⁶ as an Acceptable Solution. Appendix G of NZS 5261 says that LPG cylinders may be located indoors if they have a capacity not exceeding 25 litres (9 Kg) and are located in a situation where there is air movement across the cylinder. I accept the capacity of the cylinder is acceptable for use indoors as it is only marginally above the 9 Kg limit, but provision for ventilation across the cylinder should be provided to comply with Clause G10.

6.4.8 In addition, the expert’s report establishes that the current performance of other building elements is not adequate. Consequently, I am satisfied that the building also does not comply with Clauses C1, E1 (with respect to the collection and disposal of surface water), E3, and G3 of the Building Code.

6.4.9 Both the territorial authority and the expert have noted that the as-built work differs in some respects from the consent documents, however, there appear to be an approved plan showing some of the amended work and evidence that the territorial authority also knew of and inspected the amended work. I suggest that the territorial authority investigate this matter and seek to amend the building consent documents accordingly. It appears that all the work was inspected by the territorial authority during construction.

6.4.10 Because the faults identified with the building occur in discrete areas, and because the territorial authority has approved other substantial building elements, I am able to conclude that satisfactory rectification of the items outlined in paragraph 6.3.1 will result in the building becoming code-compliant.

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

6.4.12 Effective maintenance of buildings 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). In this instance, as the expert has pointed out that the house is in general need of repair and maintenance, such requirements are especially relevant.

⁶ New Zealand Standard NZS 5261:2003 Gas installation

7. Matter 2: The durability considerations

7.1 The territorial authority has concerns about the durability, and hence the compliance with the building code, of the building elements, taking into consideration the construction of the building work from 1998 to 2000. I note that the final inspection did not take place until April 2007.

7.2 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 code compliance certificate” (Clause B2.3.1).

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.

7.3 In this case the delay between the commencement of the building work and the applicant’s request for a code compliance certificate has raised concerns with the territorial authority that various elements of the building are now well through 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.

7.4 It is not disputed, and I am therefore satisfied, that all the building elements complied with Clause B2 on 25 August 2000. This date has been agreed between the parties, (refer paragraph 4.6).

7.5 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.

7.6 I continue to hold the views expressed in the previous relevant determinations, and therefore conclude that:

- (a) the territorial authority has the power to grant an appropriate modification of Clause B2 in respect of all of the building elements in the building that were constructed under consent No 8090
- (b) it is reasonable to grant such a modification, with appropriate notification, because in practical terms the construction is no different from what it would have been if a code compliance certificate had been issued in August 2000.

7.7 I strongly recommend that the territorial authority record this determination, and any modification resulting from it, on the property file and also on any LIM issued concerning this property.

8. What is to be done now?

- 8.1 I note that the territorial authority has not issued a Notice to Rectify or a notice to fix. The territorial authority should now issue a notice to fix that requires the owners to bring the building up to compliance with the Building Code, identifying the defects listed in paragraph 6.3.1, but not specifying how those defects are to be fixed. That is a matter for the applicants to propose and for the territorial authority to accept or reject. It is important to note that the Building Code allows for more than one method of achieving compliance.
- 8.2 I would suggest that the parties adopt the following process to meet the requirements of paragraph 8.1. Initially, the territorial authority should issue the notice to fix. 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 matters. Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

9. The decision

- 9.1 In accordance with section 188 of the Building Act 2004, I determine that:
- (a) the building work does not comply with Clauses B2, C1, E1, E3, G3, G4, G7, and G10 of the Building Code, and accordingly confirm the territorial authority's decision to refuse to issue a code compliance certificate.
 - (b) all the building elements installed in the building, apart from the items to be rectified, complied with Clause B2 on 25 August 2000.
 - (c) 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 25 August 2000 instead of from the time of issue of the code compliance certificate for all of the building elements, apart from the items to be rectified as described in paragraph 6.3.1 of Determination 2008/34.
 - (d) following the modification set out in (c) above together with any other amendments made to the original consent, the territorial authority is to issue a code compliance certificate in respect of the building consent as amended, once the matters set out in paragraph 6.3.1 have been fixed to its satisfaction.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 14 May 2008.

John Gardiner
Manager Determinations