

## Determination 2007/121

### Determination regarding un-consented building work undertaken to a 9-year-old house at 37 Fairhurst Place, Rolleston



#### 1. The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004<sup>1</sup> (“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 applicant is the owner and builder of the house, Mr P Lawrence (“the applicant”), and the other party is the Selwyn 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 an 10-year-old house because it is not satisfied that the building work complies with the requirements of the issued building consent, or with clause B2 Durability of the Building Code<sup>2</sup> (First Schedule, Building Regulations 1992). The refusal arose because:
- (a) There was a significant additional building work undertaken which had not been appropriately documented or approved. The additional work is the:
- internal alterations to the garage (“the sleepout”)
  - solid fuel heater installed in the house (“the woodburner”).

<sup>1</sup> The Building Act 2004 is available from the Department’s website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

<sup>2</sup> The Building Code is available from the Department’s website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

- (b) The territorial authority has concerns about the durability of the building work covered by the original building consent.

1.3 The matters for determination are whether:

**1.3.1 Matter 1: The additional building work**

The additional building work complies with the building code.

**1.3.2 Matter 2: The durability considerations**

The elements that make up the house comply with Building Code clause B2 “Durability”, taking into account the age of the building work undertaken under the original consent.

**1.4 The additional building work**

1.4.1 I note that the installation of the woodburner and the alterations to create the sleepout in the garage (“the additional work”) was not included in the original building consent. I therefore consider the additional work to be un-consented.

1.4.2 Irrespective of whether the additional work was the subject of the building consent or not, all building work is required to comply with the requirements of the Building Code.

1.4.3 The additional work could be dealt with either by an amendment to the original building consent, or by the owner seeking a certificate of acceptance. My view of this matter is dependent on the extent of the additional work, whether it is of a type generally consistent with the consented work, whether it was carried out at the same time as the consented work, and whether it was inspected during its construction. This is discussed further in paragraph 9.

**1.4.4 With respect to the sleepout:**

- The additional work is significant, involving the conversion of part of an uninhabitable space to a habitable space, including the installation of associated sanitary facilities.
- The additional work is not consistent with the consented work and covers a significant number of additional building code clauses including, E2 External Moisture, E3 Internal moisture, F7 Warning systems, G4 Ventilation, G5 Interior environment, G6 Interior environment, G7 Natural light, G13 Foul water, G12 Water supplies, and H1 Energy efficiency.
- The consented work was completed some time in about 1997 or 1998. The additional work (to the garage) was completed almost 10 years later. The additional work was not inspected during its construction, nor is it fully documented.

#### 1.4.5 With respect to the woodburner:

- The original consent included a woodburner in the dining room which has been relocated to the lounge. The woodburner itself is consistent with the originally consented work, although its location is not.
- I do not know when the woodburner was installed. It does not appear to have been inspected at the time it was installed, but its compliance with the building code can be verified as the details of its installation can be fully inspected.

1.5 I note that the territorial authority has raised no other concerns about the building work.

1.6 In making my decision, I have considered the submissions of the parties, the report of the independent expert (“the expert”) commissioned by the Department to advise on this matter, and the other evidence in this matter. I have evaluated this information using a framework that I describe more fully in paragraph 7.1.

1.7 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 buildings

2.1 The building work consists of a one storey house and detached garage situated on a flat rural site, which is in a high wind zone for the purposes of NZS 3604<sup>3</sup>. The construction of the house and garage is conventional light timber frame, with concrete slabs and foundations, timber weatherboard claddings, and aluminium windows. The garage building is simple in plan and form; with a 35° pitch profiled metal gable roof and a covered walkway that connects it to the house.

2.2 The expert has noted no evidence as to timber treatment, and I note that the specification calls for the wall framing to be “*H1 treated rimu or H1 treated laser frame*”. However, given the date of construction of the building in 1997, I am unable to determine the particular level of treatment that was used or whether the wall framing of the garage is treated to a level that will provide resistance to fungal decay.

2.3 The cladding to the house and garage is rough-sawn horizontal rusticated timber weatherboards fixed through the building wrap to the framing. Timber facing boards are used at corners and around windows and doors.

### 2.4 The woodburner

2.4.1 The woodburner is a free-standing “Logaire Atlanta” fire installed in the lounge of the house. The manufacturer’s information supplied to me specifies minimum

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<sup>3</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

clearances to combustible materials to meet the requirements of NZS 7421: 1990<sup>4</sup>. This Standard is now superseded, refer paragraph 6.2.3.

## **2.5 The garage alterations (“the sleepout”)**

- 2.5.1 The garage has been recently subdivided to provide a bedroom and bathroom, with a toilet, shower and wash-hand basin in the bathroom.

## **3. Background**

- 3.1 The territorial authority issued a building consent (No. R416972) on 19 May 1997. The territorial authority carried out various inspections during construction, with a pre-line inspection on 24 September 1997 that noted “Garage is to have an office area”.
- 3.2 At some stage, an amendment for a single dividing wall to the garage was approved by the territorial authority. However, I note that the amendment stamp to the drawings gives the date as “15/03”, with no indication of the year in which this additional partition was approved. It appears that the building work was completed during late 1997 or early 1998, although a final inspection was not undertaken until 2000. I have received no record of the final inspection.
- 3.3 The territorial authority issued an Interim Code Compliance Certificate under Section 43(3) of the Building Act 1991 (“the former Act”) on 12 October 2000 “in respect of all work satisfactorily inspected to date”. The certificate gave no details of outstanding work, but noted:
- Further building work is required to be completed and inspected as per the original Building Consent inspection conditions. Please also refer to the most recent inspection notice, which will detail any required rectification work. Outstanding work may also be summarised below. When all works are completed the building owner is required to notify the Territorial Authority (Selwyn District Council) so a further inspection (if required) can be arranged to ensure compliance.
- 3.4 It appears that no further inspection was called for until the applicant planned to sell the property in 2007. I have received no information as to when the woodburner was installed in the house, but the applicant has stated (refer paragraph 4.1) that the sleepout alterations were carried out recently.
- 3.5 The territorial authority carried out a final inspection on 30 March 2007 that identified a number of outstanding items, including several items related to the woodburner, the sleepout and a requirement to provide amended plans.
- 3.6 The territorial authority reinspected the building work on 11 April 2007 and the inspection record notes the requirements for:
- amended plans showing all changes to be submitted and approved
  - work to be undertaken on the ceiling insulation in the sleepout
  - a producer statement for the sleepout alterations.

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<sup>4</sup> New Zealand Standard NZS 7421:1990 Specification for installation of solid fuel burning domestic appliances

3.7 In a letter to the applicants dated 16 July 2007 the territorial authority explained the durability provisions of the building code, and stated that a code compliance certificate could not be issued due to the 10 years elapsed since the issue of the building consent. The territorial authority also identified the lack of approval for the sleepout alterations and woodburner installation, and attached a notice to fix requiring the applicant to propose how the situation would be remedied.

3.8 The Department received an application for a determination on 30 July 2007.

#### **4. The submissions**

4.1 In a statement accompanying the application, the applicant described his experience over 35 years as a successful qualified builder and noted that all required inspections had been carried out when the building was originally constructed, although:

Admittedly, the ensuite added to the garage was installed recently, and has subsequently been sighted by a council representative when he visited the property in March/April this year. All work undertaken to install the ensuite was carried out by qualified tradesmen. As stated earlier, I would not compromise the quality of workmanship on my own home.

4.2 The applicant forwarded copies of the consent drawings.

4.3 The territorial authority made a submission dated 6 August 2007, stating that the issues for determination were the unapproved amendments to the building consent and the age of the building consent, noting:

As the minimum durability period for some elements under B2.3.1 has passed since construction was carried out, the Council cannot be satisfied on reasonable grounds that all building work complies with the Building Consent issued.

4.4 The territorial authority forwarded:

- the consent and specification
- the building consent documentation
- the inspection records
- the interim code compliance certificate
- the letter and notice to fix dated 16 July 2007
- various producer statements, calculations and other statements.

4.5 Copies of the submissions and other evidence were provided to the other parties, who made no submissions in response.

4.6 I forwarded copies of a draft determination to the parties on 20 September 2007. Both parties accepted the draft determination and agreed that 24 September 1997 was the date when all the building elements installed in the building, apart from the items that are to be rectified as described in this determination, complied with clause B2.

## **5. Grounds for the establishment of code compliance**

- 5.1 In order for me to form a view as to code compliance of the amendments, I need to establish what evidence is available and what can be obtained, considering that the additional building work is completed, and consequently, some of the building elements are not able to be cost-effectively inspected.
- 5.2 The territorial authority was not aware of the additional work and did not carry out any inspections. I must therefore rely on the expert's inspection of the visible components of the additional work.

## **6. The expert's report**

- 6.1 As discussed in paragraph 1.6, 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 woodburner installation and the garage alterations on 20 August 2007, and furnished a report that was completed on 23 August 2007.

### **6.2 The woodburner**

- 6.2.1 The expert inspected the installation of the woodburner within the lounge area and measured clearances provided around the hearth, noting that the clearances provided are in accordance with the manufacturer's specifications.
- 6.2.2 The expert also inspected the flue installation within the roof space, and noted that the flue shield was fitted hard against the timber truss at both the top and bottom chords. Assuming, as appears to be the case, that the flue had not been installed with a double shield a 25mm clearance from combustible material is required to comply with NZS 7421: 1990. If a double shield was installed NZS 7421: 1990 did not require the 25mm clearance.
- 6.2.3 I note that NZS 7421: 1990 is now superseded and AS/NZS 2918: 2001<sup>5</sup> is the current Standard referenced in Compliance Document C/AS1. It is not clear when the woodburner was installed and therefore which Standard applied at the time.

### **6.3 The sleepout**

- 6.3.1 The expert inspected the exterior of the garage and noted that the cladding was straight and fair, although it had "not been finished to a standard expected" and there were areas where painting was incomplete or inadequate.
- 6.3.2 The expert noted that most window heads are located tightly under roof projections and, on more exposed windows and doors, head flashings are installed under the timber facing boards.
- 6.3.3 The expert took non-invasive moisture readings and inspected the interior of the sleepout and bathroom; and no evidence of moisture was observed. The expert noted

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<sup>5</sup> AS/NZS 2918:2001 Domestic solid fuel burning appliances - Installation

that the requirements for natural ventilation were met by the opening windows provided. The expert removed power outlet covers to inspect wall insulation, and noted that the exterior walls appeared to be insulated. Insulation was also observed in the ceiling space above the sleepout and bathroom.

6.3.4 Commenting specifically on the garage's exterior, the expert noted that:

- the damp proof membrane under the slab is exposed and inadequately protected at the edges in some areas
- the clearances from the bottom of the cladding to the paving are inadequate, with weatherboards touching or embedded into paving in some areas
- the paint to the weatherboards is inadequate and incomplete, with primed or bare timber in some areas
- the bottoms of the apron flashings over the walkway lack kick-outs and are poorly weatherproofed, with flashings directing water into the cladding and a heavy reliance on sealants.

6.3.5 The expert also noted that interior walls between the sleepout and the garage areas were not insulated.

6.4 A copy of the expert's report was provided to each of the parties on 7 August 2007.

## **7. Evaluation for code compliance**

### **7.1 Evaluation framework: the amendments**

7.1.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solutions<sup>6</sup>, which will assist in determining whether the features of the building work 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.

### **7.2 The sleepout**

#### **7.2.1 Weathertightness risk**

The garage 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 claddings can be used on a building in order to comply with E2/AS1. Higher levels of risk will require more rigorous weatherproof

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<sup>6</sup> 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](http://www.dbh.govt.nz).

detailing; for example, a high risk level is likely to require a particular type of cladding to be installed over a drained cavity. All elevations of this garage demonstrate a low weathertightness risk rating, and would not require a cavity in order to comply with E2/AS1.

### **7.2.2 Weathertightness performance**

Generally the garage cladding appears to have been installed in accordance with reasonable trade practice. However, I accept the expert's opinion that remedial work is necessary in respect of the following:

- lack of protection for the edge of the slab membrane
- the inadequate weatherproofing of the bottom of the walkway apron flashing
- the inadequate clearances from the bottom of the weatherboards to the paving
- the inadequate paint finishes to the weatherboards.

### **7.2.3 Other code requirements**

Generally the sleepout alterations that were able to be inspected appear to comply with those code clauses. I accept the expert's opinion that remedial work is necessary in respect of:

- the lack of insulation in the walls between the sleepout and the uninhabitable garage space.

However, compliance with E3, F7, G12, and G13, as far as these clauses apply to the sleepout, was either not assessed by the expert or was not able to be fully inspected.

## **7.3 The woodburner**

- 7.3.1 Generally the woodburner in the lounge of the house appears to have been installed in accordance with good trade practice and the manufacturer's instructions. However, the installation of the flue needs to be confirmed as complying with the requirements of the New Zealand Standard that was in force at the time the woodburner was installed.

## **Matter 1: The additional building work**

### **8. Discussion**

#### **8.1 The sleepout: Weathertightness**

- 8.1.1 I consider the expert's report establishes that the current performance of the cladding is adequate because it is preventing water penetration into the garage at present. Consequently, I am satisfied that the garage building complies with clause E2 of the Building Code.

- 8.1.2 However, 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

garage building are likely to allow the ingress of moisture in the future, the garage does not comply with the durability requirements of clause B2. I have given further consideration to the question of B2 compliance under Matter 2 of this determination.

- 8.1.3 Because the faults identified with the cladding system to the garage occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 7.2.2 will result in the garage remaining weathertight and in compliance with clauses B2 and E2.

## **8.2 The sleepout: Other building code requirements**

- 8.2.1 I consider the expert's report establishes that there is insufficient evidence to establish that the sleepout complies with all the relevant provisions of the building code.
- 8.2.2 I am able to conclude that satisfactory rectification of the items outlined in paragraph 7.2.3 will result in the sleepout complying with H1 Energy Efficiency. I also consider the evidence gathered by the expert establishes that the sleepout complies with G4 Ventilation, G5 Interior environment, G6 Interior environment, and G7 Natural light.
- 8.2.3 However, the extent to which the remaining code clauses (E3 Internal moisture, F7 Warning systems, G13 Foul water, G12 Water supplies) are dealt with in any certificate of acceptance that might be issued, is to be decided by agreement between the owner and the territorial authority.

## **8.3 The Woodburner**

- 8.3.1 The installation of the flue is to be compared to the satisfaction of the territorial authority against the requirements of the New Zealand Standard that were in force at the time the woodburner was installed.

## **8.4 Changes to the consented plans**

- 8.4.1 I note the changes to the consented plans and consider that the original consent documents should be amended to accommodate these changes to the satisfaction of the territorial authority.

## **9. The appropriate certificate to be issued**

- 9.1 Section 437 of the Act provides for the issue of a certificate of acceptance where an owner has carried out work for which a building consent was required but not obtained. In such a situation, a territorial authority may, on application, issue a certificate of acceptance.
- 9.2 Paragraphs 1.4.1 to 1.4.5 discuss whether a certificate of acceptance should be issued, or an amendment made to the original consent, in respect of the additional work.

9.3 Paragraphs 7.1.1 to 7.3.1 discuss whether the additional work complies with the building code, or can be brought into compliance with the building code, once any defects are fixed.

#### **9.4 The woodburner**

9.4.1 In the case of the woodburner, once the details of its installation are confirmed as being code compliant, I am of the view that the work can be dealt with as an amendment to the original consent and that a code compliance certificate can be issued in respect of the original consent.

#### **9.5 The sleepout**

9.5.1 In the case of the sleepout, there is insufficient evidence to establish whether the additional work complies with the building code. The expert's report has provided me with reasonable grounds to conclude that the sleepout is compliant with some clauses of the Building Code, and can be brought into compliance with some other clauses of the Building Code. I cannot conclude that the building is currently completely code compliant.

9.5.2 I do not believe the additional work can be considered to part of the original consent and I conclude that the territorial authority may issue a certificate of acceptance, in respect of the code clauses with which the building complies, if this is sought by the owner.

### **Matter 2: The durability considerations**

#### **10. Discussion**

10.1 There are concerns about the durability, and hence the compliance with the building code, of certain elements of the building taking into consideration the completion date of the consented work in 1997 or 1998. However I note that the territorial authority's inspection records indicate that no final inspection was undertaken in 1998 to verify compliance with clause B2 at that time (refer paragraph 3.2).

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 B 2.3.1).

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 9-year delay between the substantial completion of the consented work and the applicant's request for a code compliance certificate raises the issue of when all the elements of the building complied with clause B2. I have not been provided with any evidence that, with the exception of the amendments, the territorial authority did not accept that those elements complied with clause B2 at a date in 1997 or 1998. The parties have agreed on 24 September 1997 as the relevant date (refer paragraph 4.6)
- 10.5 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.
- 10.6 I continue to hold that view, and therefore conclude that:
- (a) the territorial 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 (apart from the recent alterations) the building is no different from what it would have been if a code compliance certificate for the building work had been issued in 1997 or 1998.
- 10.7 I strongly recommend that the territorial authority record this determination and any modifications resulting from it, on the property file and also on any LIM issued concerning this property.

## **11. The decision**

- 11.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the additional building work does not comply with the Building Code. Accordingly, I confirm the territorial authority's decision to refuse to issue a code compliance certificate.
- 11.2 I determine that:
- (a) Once the matters set out in paragraphs 6.2.2 have been resolved to its satisfaction the territorial authority is to issue an amended building consent in respect of the woodburner.
  - (b) Once the matters set out in paragraphs 7.2.2 and 7.2.3 have been resolved to its satisfaction, the territorial authority is to issue a certificate of acceptance, if this is applied for by the owner, in respect of the sleepout. The certificate will cover all those code clauses with which the building then complies.

11.3 I also determine that:

- (a) all the building elements installed in the building, apart from the items that are to be rectified as described in this determination, complied with clause B2 on 24 September 1997.
- (b) Building consent No. R416972 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 24 September 1997 instead of from the time of issue of the code compliance certificate for all building elements completed under the building consent excluding the additional building work and any matters that are to be rectified as described in Determination 2007/121.

11.4 I note that that the territorial authority has issued a notice to fix. The territorial authority should now issue a new notice to fix that requires the owners to bring the building up to compliance with the Building Code, incorporating the defects listed in paragraphs 7.2.2 and 7.2.3, and the possible defect referred to in paragraph 6.2.2. The notice to fix should refer to any associated defects that might be discovered in the course of rectification. The notice to fix should not specify how those defects are to be fixed, as that is for the owner to propose and for the territorial authority to accept or reject.

11.5 I would suggest that the parties adopt the following process to meet the requirements of paragraph 11.4. Initially, the territorial authority should issue the notice to fix. 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.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 24 October 2007.

John Gardiner  
**Manager Determinations**