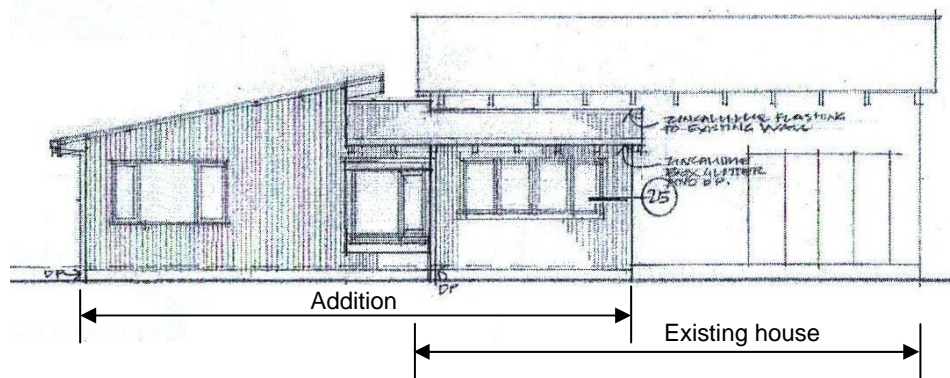


## Determination 2008/50

### Refusal to issue a code compliance certificate for an addition to a house at Lot 1, Perrymans Road, Tai Tapu, Christchurch



#### 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 applicants are the owners, A and P Garrett (“the owners”) acting through H & J Peddie (“the designer”) as the owner’s agent. The other party is the Selwyn District Council (“the territorial authority”). I have included the builder (PMH Builders Ltd) as a party with an interest in the matter.
- 1.2 This determination arises from the decision of the territorial authority to refuse to issue a code compliance certificate for a six-month-old addition to an existing house (“the addition”) because a condition imposed on the building consent had not been complied with and the territorial authority did not believe it had reasonable grounds to establish that the foundations complied with the building consent.
- 1.3 I consider that the matter for determination is whether the territorial authority’s decision not to issue a code compliance certificate, because the pre-pour inspections of the excavation and reinforcing steel for the concrete floor slab were not carried out by an engineer or other nominated professional, is correct.
- 1.4 In making my decision, I have considered the submissions of the parties, a site inspection report carried out by a firm of engineers, and the other evidence in this matter.

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

- 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 the excavation and reinforcing steel for the concrete floor slab for an addition to an existing two-storey house, which is situated on a level site. The addition is single-storey of light timber-framed construction clad in corrugated steel to walls and roof. The addition contains a garage, bedrooms, laundry and dining areas.
- 2.2 The floor slab has been formed in two levels. The floor to the garage is 375mm below the remaining floor level and was poured first.

## 3. Sequence of events

- 3.1 On 17 May 2007, the territorial authority issued building consent (No. 061476) for the additions.

- 3.2 A firm of consulting engineers (“the first engineers”) engaged by the applicants provided ‘Producer Statement - PS1 - Design’ for the addition, including the design of the concrete floor slab and foundations. The Producer Statement includes the following design assumption:

50 kPa allowable bearing pressure minimum under all foundations to be verified by Geotechnical Engineer.

(I note that NZS 3604<sup>2</sup> defines good ground as having an allowable bearing pressure of 100 kPa.)

- 3.3 The building consent was issued subject to the following conditions:

The Engineer or their nominated professional will carry out inspections as follows as confirmed on 02/11/06.

Contact [the first engineers] directly to arrange these inspections.

- Excavation for foundations including ground bearing capacity.
- Reinforcing steel in foundation before concrete is formed.

The Engineer, or their representative will provide a Producer Statement Construction review on completion of the Project as confirmed on 02/11/06, prior to the issue of the Code Compliance Certificate.

I have not been made aware of what was “confirmed on 02/11/06”. However, I note the “Producer Statement - PS1 – Design” is also dated 2 November 2006.

- 3.4 The building consent also contained the following condition:

Selwyn District Council Building Consent Authority Officers will carry out the following inspections:

Inspection 1

To check DPC, reinforcing/thickenings/waste pipes to floor slab before concrete is poured

- 3.5 I have not seen copies of the territorial authority’s inspection records for the concrete foundations. However, it appears that the pre-pour inspection for the garage

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<sup>2</sup> New Zealand Standard NZS 3604:1999 Timber Framed Buildings

foundation (the first pour”) was carried out by the territorial authority’s inspector on 3 July 2007, and the garage slab (“the first slab”) was poured the next day. It appears the remaining foundations (“the second slab”) were not poured until after 20 January 2008.

- 3.6 The designers engaged another engineer (“the second engineer”) who inspected the work on 20 January 2008 and sent an email to the designers the following day that said:

All trenches and excavations were satisfactory, aside from a patch of grass and topsoil which had not been stripped at the time.

I have just spoken with [the builder] and he has told me that the remaining topsoil had been removed today. If this topsoil has been removed we have no objection with work proceeding.

- 3.7 The builder provided a producer statement dated 23 November 2007, in respect of fitch beams, excavations, reinforcing steel and concrete.

- 3.8 On 24 January 2008, the territorial authority emailed the builder saying:

1. Council has assessed the Application for a Code of Compliance (*sic*), and is unable to issue this document at the present time, as all the Conditions of the Building Consent have not been met.
2. Council awaits further information related to verification of the foundations as advised.
3. In the event insufficient verification is obtained as discussed, an application for a ‘Determination’ to the Department of Building and Housing may be necessary.

- 3.9 The Department received the application for a determination on 26 March 2008.

## 4. The submissions

- 4.1 In a submission attached to the application, the builder stated that due to an oversight, the first engineer had not monitored the installation of the foundation reinforcing. The builder noted that the second engineer’s statement regarding the excavations had been forwarded to the territorial authority together with concrete supply invoices and the builder’s producer statement. This information had also been supplied to the first engineers, who had given the impression that the information was sufficient for the territorial authority to issue a code compliance certificate. The builder also offered to undertake investigations to verify the placement of the reinforcing steel.

- 4.2 In a letter dated 23 February 2008, but not received by the Department until 20 March 2008, the designers summarised the parties to the building contract and stated the reasons why a determination was sought.

- 4.3 The designers forwarded copies of:

- the plans and specification
- the first engineers’ ‘Producer Statement - PS1 – Design’
- the building consent
- the builder’s producer statement
- the concrete supply invoices

- the relevant correspondence
  - photographs illustrating details of the sequence of the construction of the foundations.
- 4.4 In a submission to the Department dated 14 March 2008, the territorial authority referred to the conditions imposed on the building consent. The territorial authority noted that the project was supervised by professional architects and a registered engineer, who would have been aware of the imposed conditions. Accordingly, the territorial authority had assumed that the conditional processes had been carried out and that:
- . . . Council . . . is unable to issue the Code Compliance Certificate, due to the missing inspections related to the foundations and reinforcing steel. As a consequence of this, verification of compliance with the Building Consent issued can not be achieved.
- 4.5 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.

## 5 The draft determination

- 5.1 I prepared a draft determination which was sent to the parties on 8 April 2008. The draft was issued for comment and for further submissions on the matters discussed in above.
- 5.2 The draft determination contained the following observations:
- The submission from the territorial authority contained no evidence or argument to suggest that the foundations do not comply with the details shown in the building consent. The “DPC, reinforcing/thickenings/waste pipes” were inspected by the territorial authority before the placing of the concrete. The territorial authority has not expressed any concerns that the foundations do not comply with the Building Code, other than stating that the conditions of the building consent were not met with respect to inspection by an engineer.
- The territorial authority does not appear to have advised the applicant what evidence would satisfy it that the work complies with the building code, such as onsite verification or statements from either, or both, engineers.
- 5.3 The territorial authority responded in a letter to the Department dated 14 April 2008. In summary, the territorial authority said:
- to date, no adequate verification had been received that the foundation construction complied with the design, which was required as one of the conditions of the building consent
  - no information has been received that adequately verifies the foundation construction
  - verification had been received that the ground bearing is not less than 50 kPa
  - not all the cross-sectional area of the foundations could be tested and the lapping of the reinforcing and the cross-sections of the concrete cannot be determined
  - verification was required from a suitably qualified engineer that the construction of the foundation (and not the floor slab) complied with the building consent

- whilst the territorial was not saying that the foundations do not comply with the Building Code, it required verification that they do comply in order to meet its obligations under section 94

5.4 On 21 April 2008, the building owners emailed the Department and stated that the draft determination was not accepted on the basis that the owners wished to provide additional information. This information would involve the exposure of the foundations for inspection by the first engineers.

## **6 The first engineers' foundation inspection**

6.1 The first engineers visited the site on 30 April 2008 and investigated two locations where they had previously instructed the contractor to undertake the excavation and removal of side concrete cover to the new perimeter foundation. At each location, the top and bottom longitudinal bars and two vertical stirrups were exposed.

6.2 In a letter to the Department dated 8 May 2008, the first engineers described the investigation process and noted that:

The exposed reinforcing was found to be as shown in our structural trades documentation dated November 2006.

Based on our inspection of the exposed reinforcing as well as site photographs provided by the contractor, we believe that the foundation reinforcing has been provided as shown on our structural documentation.

6.3 The first engineers also attached sketch plans and photographs detailing the construction that was exposed by the inspection.

## **7 Discussion**

7.1 Taking into account the submissions from the parties following the issuing of the draft determination, I now consider that I have sufficient information to determine the matter.

7.2 The 'Producer Statement - PS1 - Design' uses a minimum allowable bearing pressure of 50 kPa. The Producer Statement requires the bearing pressure to be verified by a geotechnical engineer. The territorial authority has received verification that the ground bearing is satisfactory (refer paragraph 5.3). I note this confirmation can also be gained from the opinion given in the email from the second engineer to the designers (refer paragraph 3.6).

7.3 Verification that the foundations have been built in accordance with the building consent appears to be the only matter that is now preventing the territorial authority from issuing the code compliance certificate.

7.4 Confirmation that the foundations have been built in accordance with the building consent can be taken from the opinion of the first engineers which was based upon:

- post construction inspections by exposing the reinforcing in two locations
- review of photographs of the exposed reinforcing.

(In my view, a review of the photographs in the absence of other corroborating evidence would not have provided sufficient evidence.)

- 7.5 I conclude that the opinion of the first engineers and the information described in paragraph 7.4 provides reasonable grounds to establish that the foundations have been built in accordance with building consent.
- 7.6 I acknowledge the importance of the condition placed on the building consent, with respect to the inspection of the foundation, and I note that this should have been complied with. However, I am of the view that the verification sought by the territorial authority, in the absence of the condition being met, could have been agreed between the parties without requiring the intervention of the Department.

## **8. The Decision**

- 8.1 In accordance with section 188, I determine that the foundations comply with the building consent. I therefore reverse the territorial authority's decision to refuse to issue the code compliance certificate.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 11 June 2008.

John Gardiner  
**Manager Determinations**