



## Determination 2015/072

# Regarding the compliance with the Building Code of repairs to the foundations of an earthquake damaged house at 91A Clarendon Terrace, Woolston, Christchurch

### Summary

This determination considers the compliance of the building work carried out with Clauses B1 and B2, and discusses whether there is an obligation to comply with Clause E1.3.2 of the Building Code when repairs are carried out to foundations. The determination also discusses whether the building work carried out was exempt under Schedule 1.

### 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 and Assurance, Ministry of Business, Innovation and Employment (“the Ministry”), for and on behalf of the Chief Executive of the Ministry.

1.2 The parties to this determination are:

- the owners of the house, G Lewis and J Elliott (“the applicants”)
- Christchurch City Council (“the authority”), carrying out its duties as a territorial authority or building consent authority

1.3 I also consider the Earthquake Commission (“EQC”) to be a person with an interest in this determination. EQC is also acting for Fletcher Construction – Earthquake Recovery, the Project Management Office established by the Earthquake Commission (“the PMO”).

1.4 This determination arises from the applicants’ concerns around building work that was completed on the foundations of their house in order to repair earthquake damage. The applicants believe that a building consent should have been issued for the repair work before it was completed, and that the subsequent repairs have not been properly carried out and have increased the likelihood that their house will be subject to flooding.

1.5 I therefore take the view that the matters for determination<sup>2</sup> are:

**Matter 1:** whether the finished floor level complies with Clause E1 of the Building Code to the extent required by the Act<sup>3</sup>. I discuss this in paragraph 5.2.

<sup>1</sup> The Building Act, Building Code, compliance documents, past determinations and guidance documents issued by the Ministry are all available at [www.building.govt.nz](http://www.building.govt.nz) or by contacting the Ministry on 0800 242 243.

<sup>2</sup> Under section 177(1)(a) of the Act.

<sup>3</sup> 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.

**Matter 2:** whether the repaired house piles comply with Clause B1 – Structure and Clause B2 – Durability of the Building Code to the extent required by the Act. I discuss this in paragraph 5.3.

- 1.6 The applicant has asked I determine whether the building work was eligible for an exemption from the need for a building consent under Schedule 1(a)<sup>4</sup>. Eligibility for exemption under Schedule 1(a) is not a determinable matter under section 177(1)(a) or 177(1)(b); however, I have provided some guidance on whether this type of exemption is appropriate in this case (see paragraph 5.1).
- 1.7 In making my decision, I have considered the parties’ submissions, the report of the independent expert commissioned by the Ministry to advise on the dispute (“the expert”), and the other evidence in this matter. I have not considered any other aspects of the Act or other clauses of the Building Code.
- 1.8 The relevant sections of the Act and clauses of the Building Code referred to in this determination are set out in Appendix A.

## 2. The building work and background

- 2.1 The applicants’ house is located on a flat site adjacent to the Heathcote River in Christchurch. The site and house are located entirely within a flood management area, within a “50-year” flooding zone. The average ground level of the site is 10.8m above the Christchurch City datum (“RL”). According to the authority’s modelling data, the height of the river in a 2% AEP<sup>5</sup> flood event is RL 11.78m.
- 2.2 The house is a simple L-shaped, single storey dwelling. Construction is conventional light timber framing clad with plastered concrete block veneer. The house has a concrete perimeter foundation, with 33 concrete piles supporting a suspended timber floor.
- 2.3 The house suffered some damage in the Canterbury earthquakes in 2010 and 2011<sup>6</sup>, which resulted in the concrete perimeter foundation settling in some places. This in turn caused the floors in the bedrooms, dining and living rooms to bow upwards (hogging).
- 2.4 The house was inspected on 7 December 2011 by a firm of consulting engineers (“the engineers”) on behalf of the EQC. A site investigation of the soil on the applicants’ property was carried out on 10 April 2012.
- 2.5 On 28 September 2012, the engineers completed a ‘Foundation Assessment and Advice’ report (“the engineering report”). The engineering report stated that the applicants’ property is in:

Technical Category 2 Zone (TC2 – yellow). TC2 is defined as having minor to moderate land damage from liquefaction being possible in future significant earthquakes.

The report confirmed that ‘The perimeter foundation has suffered a minor amount of settlement creating hogging of the floor’, and recorded ‘floor height variations of up to 40mm...with floor slopes exceeding 1.0% in these hogged areas’.

<sup>4</sup> Schedule 1 was replaced on 28 November 2013. All references to Schedule 1 in this determination refer to the Schedule current at the time the building work was carried out (refer Appendix A).

<sup>5</sup> Annual Exceedance Probability (AEP). This is commonly referred to as a ‘1-in-50 year event’

<sup>6</sup> The Canterbury Earthquake Sequence includes the ‘Darfield Earthquake’ of 4 September 2010 with a moment magnitude of 7.1, followed by a series of aftershocks that included a 6.3 magnitude shake on 22 February 2011.

- 2.6 The report referred to Ministry guidance<sup>7</sup> as to when foundations should be relevelled, namely ‘...when the floor slopes between any two points further than 2m apart exceed 0.5%, or a variation in floor height greater than 50mm exists’, and recommended that the floors in the affected rooms should be lowered ‘by approximately 10mm–15mm’, so as to bring them back within these guideline measurements.
- 2.7 The report further noted that as the exterior cladding on the house was in reasonable condition it would be ‘prudent not to disrupt the perimeter foundation and perimeter block wall during the re-level’. Instead, the report recommended that the piles immediately under the hogged areas should be removed and replaced, and the floors relevelled, stating that ‘The purpose of the [re-levelling] is not to produce a perfectly level floor but to reduce the steeper floor slopes’.
- 2.8 The applicants were concerned about this proposed course of action, due to their house’s location within a flood plain. The engineers noted these concerns in Section 5 of the engineering report, and concluded that ‘We consider that the drops will require less than 20mm and therefore are not materially significant in relation to the quantum of flood heights’.
- 2.9 The engineering report went on to consider the requirement for a building consent for the recommended work on the foundation piles. It referred to both Schedule 1(a) and the authority’s own guidance: ‘Information for homeowners and building practitioners – building work that does not require a building consent – form B-390’ (“Form B-390”). From these sources, it concluded that the recommended work did not require a building consent as it involved ‘replacement of four to eight piles and minor floor releveling’.
- 2.10 The PMO subsequently issued a scope of works for the repairs, which was awarded to the successful contractor (“the contractor”). I have not seen a copy of the full scope of works, but the contract quotation (which I assume was accepted) describes the foundation repair work to be completed as ‘Jack and pack piles x15’. The EQC claim assessment for the repairs also refers to the need to ‘Jack and pack piles 15’.
- 2.11 I have not been provided with exact dates for when the repairs were carried out, but I assume it was sometime after 20 August 2012 as the contractor issued the applicants with a notice to vacate the property from this date.
- 2.12 Twelve of the house’s piles were repaired. The repair work involved cutting off the tops of the piles, then packing the resulting space between the top of the cut off piles and the bearers above with packing timber. The thickness of the amount cut off the top of the piles varied, with the size of the known off-cuts between 9mm and 29mm. Some piles did not require packing. The cut down piles were then tied to the bearers using wire ties.
- 2.13 In March 2014, the Heathcote River flooded and the floodwater entered the applicants’ house, causing damage to the carpets and internal wall linings.

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<sup>7</sup> “Guidance: Repairing and rebuilding houses affected by the Canterbury earthquakes” *Department of Building and Housing* (Nov 2011)

2.14 The applicants made a complaint to the EQC, as they were of the opinion that the building repair works, through lowering the internal floor levels, had made the house more prone to flooding. They also asked the PMO to investigate ‘the workmanship that was completed on [their] piles’. I have not been advised of the outcomes of either of these processes; however there is an “Agreement of work” dated 30 March 2015 which records:

Repair Strategy

Engineer report meet schedule 1 of the NZ building Act adjusted No Building Consent required CCC have confirmed this.

2.15 On 10 June 2015, the applicants applied for a determination.

### **3. The submissions**

#### **3.1 The applicants**

3.1.1 The applicants made a submission with their application for a determination. In it they expressed their concerns about:

- the engineers’ decision to effect the repairs by lowering the foundations of their house, when it was located within a flood plain
- the engineers’ decision that no building consent was required for the building work
- the difference between the extent of the works described in the engineering report, and that described in the scope of works which was eventually carried out, in terms of both:
  - the number of piles that were reduced in height – 12 as opposed to the four to eight originally specified in the engineers’ report
  - the amount by which some of the piles were reduced in height – 30mm as opposed to the 10 to 15mm originally specified in the engineers’ report
- the code-compliance of the building works, with respect to the lack of a damp course inserted between the tops of the cut-down concrete piles and the bearers.

3.1.2 The applicants also described the flooding that occurred in March 2014 and how they believe this was related to the building work carried out on their house:

...in March 2014 we were flooded by just a few millimetres with contaminated wastewater. The water did not come over our threshold it came into the joists and saturated the carpets. We then had to move out of our house while the house was repaired... The house had never been flooded prior to 2014, but as we have seen floodwaters before we were aware of just how much a small amount of difference in levels can cause a large amount of damage. We feel that our building has been made worse by the lowering, and that this is an infraction of Section 42A(2)(b).

3.1.3 The applicants then went on to outline the matters that they were seeking a determination about, namely the requirement for a building consent to be issued for the building work and the compliance of the building work with the Building Code.

3.1.4 With their submission the applicants provide copies of:

- the authority’s planning map showing the flood management area that their house is located within, dated 6 May 2012

- the engineers' report, dated 28 September 2012
- the PMO 'Engineered project inspections' form (undated), and 'Agreement of work', dated 30 March 2015
- an extract from the contractors' 'Contract quotation' form (date not shown), and their 'Contractor's producer statement for construction form PS3', signed 30 July 2013
- the 'EQC claim assessment' form, dated 30 August 2011
- photos of some of the lowered piles.

### **3.2 The authority**

- 3.2.1 The authority acknowledged the application on 25 June 2015, noting that the matters to be determined did not relate to any decision made by the authority but that it was an interested party.
- 3.2.2 The authority stated that the extract from form B390 (refer paragraph 2.9) was in relation to work the authority would consider for exemption under Schedule 1(k)<sup>8</sup> where the exemption is at the authority's discretion. As such the reference was not relevant to the determination.
- 3.2.3 In regards to reference at paragraph 0 that the authority confirmed that consent was not required, the authority stated that no such advice was recorded in its document management system, and that if advice was given it would be an opinion only.

### **3.3 The draft determination and responses received**

- 3.3.1 A draft determination was issued to the parties and EQC for comment on 6 October 2015. I note the draft erred in referring to an exercise of the authority's powers of decision under sections 41 and 42A in respect of work done under Schedule 1 and forming one of the matters for determination. Building consent authorities and territorial authorities have no powers of decision under those sections of the Act, and section 42A was not in force until after the date the building work was carried out. This error has been since been corrected (refer paragraph 1.6).
- 3.3.2 The authority responded by email on 8 October 2015, submitting the following comment (in summary):
- A PS3 submitted by the applicants, records the work as being completed by 30 July 2013.
  - The authority now considers the building work detailed was exempt at the time from the requirement to obtain building consent without the authority using its discretionary powers under Schedule 1 (k).
  - The discussion and reference to section 112 is moot as there was no building consent; it can only be used as a guide to the level of compliance expected.
  - Likewise section 42A was not inserted into the Act until after the building work was carried out (section 42A was inserted in the Act in November 2013; the provision had no predecessor).

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<sup>8</sup> Now Schedule 1(2)

- 3.3.3 The authority also provided a copy of the version of form B390 that was current at the time, noting that at the time of the repairs the authority had ‘decided to quantify a proportion of structural elements that could be replaced’, and the current version is now primarily about the authority’s discretionary exemption.
- 3.3.4 The applicants responded to the draft determination by email on 8 October 2015, noting that the draft required amendment in respect of references to section 42A and the authority making a decision in respect of the exempt building work. The applicants also stated that further repairs on the foundations were about to be carried out and it was the applicant’s view that the proposal should be put before the authority if a consent is required.
- 3.3.5 The applicants also expressed concern that the expert indicated ‘the house needs to be lowered further’ (refer paragraph 4.4), and sought clarification from the authority as to whether it would consider this acceptable given the location of the site within the Heathcote River Flood Management Area.  
(I in response, the expert’s reference is to the floor in one location being lowered to reduce the slope of the floor.)
- 3.3.6 On 9 October 2015 the authority responded to the applicants, noting that the Flood Management Area is identified in the District Plan which falls under the Resource Management Act and as such it cannot be subject to a determination under the Building Act.

#### **4. The expert’s report**

- 4.1 As stated in paragraph 1.7, I engaged an expert to assist me in this matter. The expert is a member of the New Zealand Institute of Building Surveyors. He conducted a site visit of the applicants’ property on 30 July 2015, during which he observed the earthquake repair works to the piles and foundations of the house, surveyed the floor levels within the house, and took samples of the packing materials used in the repairs, which he sent away for testing.
- 4.2 The expert provided a report dated 28 August 2015 within which he assessed the building works’ compliance with Clauses B1 and B2 of the Building Code.
- 4.3 With respect to the floor levels within the house, the expert noted that the south-west side of the building had ‘remained fairly level’ and was ‘most likely undisturbed’. From this he estimated that the applicants’ house had ‘dropped approximately 28mm in the Master Bedroom and approximately 20mm along the NW side of the Lounge and Dining Room’.
- 4.4 The expert noted that the largest pile offcut that he found was 29mm and that the pile this came from was immediately below the lounge. When the width of the cutting blade and the width of the packing material (subsequently inserted between the pile and the bearer) were taken into account, the floor in this location had been lowered by 24mm. However the floor level in one location was still too high and was causing a slope in excess of 1:200 towards the north-west wall. The expert was of the opinion that this required further lowering to reduce the slope between the level immediately above the pile and that at the north-west wall of the lounge.
- 4.5 In regards to the packing samples, the laboratory report showed the following (in summary):
- Fungal morphology suggestive of exposure to ‘moisture conditions that are inconsistent with sound building practice and/or weather-tight design’.

- Five of the six samples were most likely untreated Radiata Pine.
- All samples contained fungal growths, but no structurally significant decay was detected.
- Some of the samples have been exposed to conditions close to those conducive to severe decay.

4.6 With respect to Clauses B1 and B2, the expert concluded that the building work was non-compliant in the following respects (relevant clauses of the Building Code in brackets):

- The packing between the concrete piles and timber bearers was not secured in place, and as a result could ‘dislodge and result in instability of the structure’ (B1.1.3).
- The bearers above the cut-down piles had been inadequately secured to the piles, as the metal ties used were ‘very loose and could allow the bearers to move sideways and slip off the pile during an earthquake’ (B1.1.3).
- No damp-proof course had been installed between the tops of the cut-down piles and the timber packing (where used) or the bearers (where piles were fixed directly to them) (B2.3.1(a)).
- Untreated *Pinus Radiata* timber had been used as packing between the piles and the bearers in 5 of the 6 samples tested, and results of laboratory testing raise concerns regarding durability. (B2.3.1(a)).

4.7 In addition, the expert raised concerns regarding the age of the packing materials used (in his opinion some old second-hand timber had been used in places) and the amount of packing inserted (which did not cover the entire top of some piles).

## 5. Discussion

### 5.1 Exemption under Schedule 1

5.1.1 The applicants are of the view that a building consent should have been applied for and issued for the building work. From the applicants’ submission, I believe that this view is based on their assessment that the building work did not come within the advice in the authority’s Form B-390 regarding exemptions under Schedule 1 (k).

5.1.2 Section 40 of the Act sets out the general requirement that building work should not be carried out except in accordance with a building consent. Section 41 specifies the situations where a building consent is not required, including in subsection 41(1)(b):

...any building work described in Schedule 1

5.1.3 Schedule 1 specifies building work for which a building consent is not required. Schedule 1(a), current at the time the work was carried out, provided for the following building work to be undertaken without building consent:

1 A building consent is not required for the following building work:

(a) any lawful repair and maintenance using comparable materials, or replacement with a comparable component or assembly in the same position, of any component or assembly incorporated or associated with a building, including all lawful repair and maintenance of that nature that is carried out in accordance with the Plumbers, Gasfitters, and Drainlayers Act 2006, except—

...

(ii) complete or substantial replacement of any component or assembly contributing to the building's structural behaviour or fire-safety properties; or

- 5.1.4 In my view it is clear that the repair work carried out on the piles of the applicants' house fell within this exemption. Around one-third (12) of the house's 33 piles were altered by cutting a small amount (ranging from 9mm to 29mm) off the tops of the piles and re-fixing the piles to the bearers above, in some instances with wooden packing material inserted between the tops of the piles and the bearers. This work cannot be considered 'complete or substantial replacement' as described in the exclusion (a)(ii), and instead falls squarely within the type of exempt general repairs covered by Schedule 1(a).
- 5.1.5 I note here that the applicants' have based their views on the advice given in the authority's Form B-390. This document relates primarily to decisions about discretionary exemptions made by the authority under Schedule 1(k), and the examples given are intended as guidance on situations where an authority may consider granting such an exemption. If building work is already exempt from the need to have a building consent, there is no need to apply to the authority for an exemption.
- 5.1.6 As I have come to the conclusion that the building work in the current case was exempt from the need for a building consent under Schedule 1(a), there was no need for the applicants or the PMO to apply for an exemption.

## 5.2 Matter 1: compliance with Clause E1

- 5.2.1 As stated in paragraph 5.1.4, the building work involved lowering the height of around one-third of the piles of the applicants' house in an effort to re-level the interior floor levels. In making the decision to re-level, rather than replace, the foundations, the engineers referred to the Ministry's guidance document: *Guidance: Repairing and rebuilding houses affected by the Canterbury earthquakes* (2011).
- 5.2.2 Table 2.3 of this guidance sets out criteria to help home owners and building practitioners decide whether the foundations of their house require releveling or rebuilding following the earthquakes. The foundation type of the applicants' house is classified as 'Type B' within this table: "Timber-framed suspended timber floor structures with perimeter concrete foundation". It also falls within the criteria in 'Column 3' of the table for situations where a foundation re-level is indicated. For Type B floors these criteria are 'The variation in floor level is > 50 mm and < 100 mm'. In the engineers' report (Section 5) it was recorded that, before the building works were carried out, 'Floor height variations of up to 40mm were measured with floor slopes exceeding 1.0% in these hogged areas'.
- 5.2.3 The applicants have expressed their concerns that this re-leveling work has adversely affected the code-compliance of their house, in particular with respect to the performance criteria in clause E1.3.2. Clause E1.3.2 states:
- Surface water*, resulting from an event having a 2% probability<sup>9</sup> of occurring annually, shall not enter buildings.
- 5.2.4 I have discussed the degree of compliance with the Building Code required in situations where buildings have been damaged by the Canterbury earthquakes in previous determinations: see in particular Determination 2014/058<sup>10</sup>. In my opinion, the reasoning set out in those previous determinations still stands.

<sup>9</sup> Such an event is referred to as a 2% AEP (Annual Exceedance Probability), or more commonly as a '1-in-50 year event'.

<sup>10</sup> Determination 2014/058 Regarding the issuing of a building consent to repair earthquake damage to concrete foundations and floor slab, Ministry of Business, Innovation and Employment, 5 December 2014



- 5.2.5 In the first instance, it is important to distinguish between the need for building work (i.e. the repairs to the foundations) to comply with the Building Code as required by Section 17 of the Act and the Building Code obligations that apply to the building as a whole after the building work has been carried out.
- 5.2.6 Section 17 of the Act requires that all building work must comply with the Building Code. It doesn't matter whether the building work is to construct a new building (or foundations) or carry out alterations or repairs to a building, or whether or not consent is required, all such building work must comply with the Building Code. However, it is important to note that the requirements are limited to only those clauses of the Building Code that are relevant to the building work being undertaken.
- 5.2.7 The Building Code is made up of clauses that set out the performance requirements that buildings and building work must meet. Most clauses of the Building Code have a subject to which the Building Code obligations are expressed to apply. There are Building Code obligations that apply to:
- a building or household unit
  - particular building elements of a building
  - different building systems within a building
  - amenities for a building
  - building materials
  - other characteristics of a building, or matters associated with a building or building work.
- 5.2.8 The Building Code obligations for Clause E1 that relate to repairs or rebuilds depends on the scope of repair work to be carried out. In general, if the building work relating to foundations is confined to releveling and repair work, as defined in the Ministry's November 2011 guidance (see paragraph 5.2.2), then the Clause E1.3.2 requirement will not apply, as building and site works are not being constructed. In these cases, the existing foundations are being repaired and there is not an opportunity to raise the floor level. This means that there is no requirement under Section 17 for the repair work on the piles of the applicants' house to comply with Clause E1.3.2.
- 5.2.9 Given that the building work was carried out under Schedule 1 as building work exempt from the requirement to obtain building consent, the provisions under section 112 in respect of the compliance of the building as a whole after the alteration do not apply.
- 5.2.10 In their submission, the applicants have also expressed the view that the building work breaches the conditions specified in Section 42A(2)(b) of the Act. These conditions attach to the situations set out in Section 42A(1) where a building consent is not required and have the same effect of section 112; in essence require that after the alteration the building must continue to comply with the other provisions of the Building Code to at least the same extent as before the alteration. I note here that section 42A was not in force at the time the building work was carried out and cannot be applied retrospectively.
- 5.2.11 While neither sections 112 or 42A apply in this case, I reiterate for the benefit of other owners that, as stated in Determination 2014/058 (paragraph 5.2.4), in the context of the repair work to earthquake damaged buildings neither section 112 nor section 42A require reinstatement of the building to what it was before the

earthquake. What is required is compliance to the same extent as before the repair works are carried out.

5.2.12 Given there is no requirement to comply with Clause E1 under section 17, and sections 112 and 42A do not apply, I do not need to consider the compliance with respect to the subject building work, and I make no determination in this respect. However I make the following comments to assist the parties:

- In the case of the applicants' house, the site has an average ground level of RL 10.8m and the floor of the house sits approximately 600mm above the ground, bringing the floor level to about RL 11.4m. The height of flood water in a 2% AEP flood event is 11.78m (meaning water would be 380mm above the level of the floor in a 2% AEP event).
- According to the authority's data, the land in this area has settled by a maximum of 0.1 to 0.2m as a result of the earthquakes. Assuming the floor has dropped by the maximum 200mm, the floor at an original level of 11.6m would still be expected to experience inundation of about 180mm in a 2% AEP event. What this means in terms of the existing level of compliance is that even if the house had not settled as a result of the earthquakes, the applicants' house would not have complied with Clause E1.3.2.
- The repair work to the piles, which have had the effect of lowering parts of the floor by up to a maximum of 24mm, have not affected the level of compliance with Clause E1.3.2 to any significant extent. In my view the applicants' house would have flooded in a 2% AEP event prior to the work being carried out, and it will continue to do so after to a similar extent.
- I note that the authority requires a minimum 400mm freeboard to prevent water entering a building through wave action; resulting in a floor level of 12.18m.

### 5.3 Matter 2: compliance with Clauses B1 and B2

5.3.1 As outlined in paragraphs 5.2.6 and 5.2.7, different types of building work must comply with different aspects of the Building Code, depending on the work's nature and scope. In the current case, the repair work to the piles of the applicants' house must comply with Clause B1 – Structure and Clause B2 – Durability.

5.3.2 As stated in paragraph 1.7, I engaged an expert to advise me on the building work's compliance in this regard. In his report, the expert outlined several ways in which the building work failed to comply with Clauses B1 and B2, namely:

- the packing between the piles and bearers is unsecured and could dislodge – non-compliant with Clause B1.1.3
- the bearers have been inadequately secured to the cut down piles, enabling the bearers to potentially slip off the piles – non-compliant with Clause B1.1.3
- no damp-proof course has been installed between the tops of the piles and the packing or bearers – non-compliant with Clause B2.3.1(a)
- the packing material used is untreated timber – non-compliant with Clause B2.3.1(a)

5.3.3 I concur with the expert's assessment, and therefore conclude that the building work does not comply with Clauses B1 and B2 of the Building Code, for the reasons set out in paragraph 5.3.2 of this determination.

## **6. The decision**

- 6.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the building work does not comply with Building Code Clauses B1.3.1 and B2.3.1(a).

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 13 November 2015.

John Gardiner  
**Manager Determinations and Assurance**

## Appendix A

A.2 The relevant sections from the Building Act include:

### **17 All building work must comply with building code**

All building work must comply with the building code to the extent required by this Act, whether or not a building consent is required in respect of that building work.

### **41 Building consent not required in certain cases**

(1) Despite section 40, a building consent is not required in relation to—

...(b) any building work described in Schedule 1 for which a building consent is not required (see section 42A); or

### **42A Building work for which building consent is not required under Schedule 1**

(1) Despite section 40, subject to the conditions set out in subsection (2) and whether or not a building consent would otherwise have been required, a building consent is not required for building work in the following categories:

(a) building work described in Part 1 of Schedule 1; or...

(2) Subsection (1) is subject to the following conditions:

(a) the building work complies with the building code to the extent required by this Act:

(b) after the building work is completed, the building,—

(i) if it complied with the building code immediately before the building work began, continues to comply with the building code; or

(ii) if it did not comply with the building code immediately before the building work began, continues to comply at least to the same extent as it did then comply:...

### **112 Alterations to existing buildings**

(1) A building consent authority must not grant a building consent for the alteration of an existing building, or part of an existing building, unless the building consent authority is satisfied that, after the alteration,—

...(b) the building will,—

(i) if it complied with the other provisions of the building code immediately before the building work began, continue to comply with those provisions; or

(ii) if it did not comply with the other provisions of the building code immediately before the building work began, continue to comply at least to the same extent as it did then comply.

A.2 Schedule 1 Exempt building work (current at the time the building work was carried out)

1 A building consent is not required for the following building work:

(a) any lawful repair and maintenance using comparable materials, or replacement with a comparable component or assembly in the same position, of any component or assembly incorporated or associated with a building, including all lawful repair and maintenance of that nature that is carried out in accordance with the Plumbers, Gasfitters, and Drainlayers Act 2006, except—

...

(ii) complete or substantial replacement of any component or assembly contributing to the building's structural behaviour or fire-safety properties; or

...

(k) any other building work in respect of which the territorial authority (or, as the case requires, the regional authority) considers that a building consent is not necessary for the purposes of this Act because that building work—

(i) is unlikely to be carried out otherwise than in accordance with the building code; or

(ii) if carried out otherwise than in accordance with the building code, is unlikely to endanger people or any building, whether on the same land or on other property:

A.2 The relevant sections from the Building Code include:

**Clause B1—Structure**

**B1.3.1** *Buildings, building elements and sitework* shall have a low probability of rupturing, becoming unstable, losing equilibrium, or collapsing during *construction* or *alteration* and throughout their lives.

**B1.3.2** *Buildings, building elements and sitework* shall have a low probability of causing loss of *amenity* through undue deformation, vibratory response, degradation, or other physical characteristics throughout their lives, or during *construction* or *alteration* when the *building* is in use.

**Clause B2—Durability**

**B2.3.1** *Building elements* must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the *specified intended life* of the *building*, if stated, or:

(a) the life of the building, being not less than 50 years, if:

(i) those *building elements* (including floors, walls, and fixings) provide structural stability to the *building*, or

(ii) those *building elements* are difficult to access or replace, or

(iii) failure of those *building elements* to comply with the *building code* would go undetected during both normal use and maintenance of the *building*.

**Clause E1—Surface water**

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

**Limits on application**

Performance E1.3.2 shall apply only to *housing, communal residential and communal non-residential buildings*.