



## Determination 2013/052

# Regarding the compliance with Clause G6 (Airborne and impact sound) of replacement flooring in an apartment at 26 Albert Street, Auckland

### 1. The matters 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 the determination are
- the applicant, Auckland Council (“the authority”), carrying out its duties as a territorial authority or building consent authority
  - the owner of the subject apartment, Unit 1906, I Gandha (“the owner”) who is acting via a legal adviser
  - the owners of the other property, Unit 1806, R & Y Parlane (“the neighbours”) who are acting via a legal adviser.
- 1.3 I also consider Body Corporate 407404 (“the body corporate”) to be a person with an interest in this matter.
- 1.4 The application for determination arises from removal of carpet to one of the apartments in the complex and changing the floor covering to tiles (“the building work”). The building work was undertaken without a building consent being sought. The authority’s initial view expressed in the documents accompanying the initial application was that the new flooring does not comply with the building consent that was granted in 2008 for the installation of the flooring, does not comply with the Building Code (Schedule 1 of the Building Regulations 1992), and that contrary to section 112 of the Act the building does not comply to at least the same extent as approved under the 2008 building consent.
- 1.5 In its amended application, the authority has requested that the determination consider:

Whether the replacement of the carpet and underlay, with tiles and a [proprietary] underlay system (“the building works”), required building consent under s40 of the [Act], or whether they were exempt under s41(1)(b) and Clause 1(ah) of Schedule 1 of the [Act]?

Whether s112 of the [Act] is applicable in this case?

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

Whether section 18 of the [Act] is applicable to the building works, or whether the building works are required to achieve performance criteria additional to clause G6 of the Building Code?

Whether the building works comply with the Building Code requirements in relation to Clause G6 (airborne and impact sound)?

- 1.6 I consider the matter to be determined<sup>2</sup> is therefore whether the building work complies with the Building Code to the extent required by the Act. In considering this matter, I have also discussed whether building consent was required for the work or whether the work was exempt under Schedule 1 paragraph (ah), and the application of section 112.
- 1.7 I have received no information in regard to any other building work carried out during the refurbishment. This determination is therefore limited to the building work as described in paragraph 1.4.
- 1.8 In making my decision, I have considered the submissions by the parties and the other evidence in this matter. The relevant legislation is contained in Appendix A.

## 2. The building work and background

- 2.1 The authority issued building consent No. B/2005/35223 for construction of the apartment and podium additions to the original hotel on 23 April 2007. The construction was completed with floors of the living and dining areas of Unit 1906 lined with carpet and underlay as specified by the consent, which achieved an IIC<sup>3</sup> rating of 68 when installed.
- 2.2 The building consent was issued subject to ‘condition 14 (Acoustic Insulation Submission of Test Results)’:

To ensure compliance with NZ Building Code G6 for inter-tenancy noise control, a specialist sound-proofing inspection by an independent [authority] contractor will be required before issue of the building Code Compliance Certificate.

- 2.3 A code compliance certificate for work carried out under the consent was issued on 26 September 2008.
- 2.4 The owner elected to refurbish the unit shortly after purchasing it in October 2012, removing the carpeting and underlay and replacing it with new hard flooring consisting of ceramic tiles with a proprietary underlay. The new tile floor covering has an IIC tested rating of 58.
- 2.5 On 10 April 2013 the authority wrote to the owner about the refurbishment. The authority stated that

[the building consent] requires a horizontal noise transmission compliant with the approved building consent documents ... [the new flooring] is now in breach of the Building Code.

All building work (even though a consent may not be required) is still required to comply with the Building Code. A lesser requirement than the Building Code is not compliant with the approved building consent for the refurbishment of this building.

<sup>2</sup> Under section 177(1)(a)

<sup>3</sup> Impact insulation class (refer Appendix A.2)

Any new floor coverings installed since the Code Compliance Certificate was issued ... must be compliant with the required STC<sup>4</sup> rating of the approved building consent.

The new floor coverings installed in [the subject apartment] do not comply with the building consent and must be removed and replaced with a covering as good as or better than those approved under the building consent.

- 2.6 It appears that the owner wrote to the authority on 23 April 2013; I have not seen a copy of that letter.
- 2.7 On 26 April 2013 the authority again wrote to the owner. The authority restated its views set out in the previous letter and stated that
- ... Due to the fact that the Code Compliance Certificate was issued with carpeted areas in the building you are now unable to change this to a lesser standard of compliance without building consent approval. The Building Act 2004, section 112(1)(b) and (2)(c) are clear about this.
- 2.8 The authority went on to confirm that ‘the test data confirms the FIIC<sup>5</sup> rating is now 58’, and the authority confirmed its view that consent was required for the work that was undertaken, which it described as ‘an alternative solution to the FIIC level originally achieved by the building consent.’ The authority required that if tiles were to be laid on the floor they achieve no less than the 68-70 achieved previously and that the new flooring ‘must be removed and replaced with carpet as per the approved building consent’.
- 2.9 On 21 May 2013, the owner’s legal adviser responded to the authority, stating that the owner did not agree with the authority’s interpretation of the Act for the following reasons (in summary):
- The replacement of the flooring is exempt building work under Schedule 1(ah) which provides for the replacement or alteration of linings or finishes of any internal wall, ceiling, or floor of a dwelling as being exempt from the requirement for building consent, and the exemption does not require comparable materials to be used.
  - Section 112(1) only applies where the building work requires consent, and is not applicable in situations where the alteration is exempt building work.
  - The acoustic testing of the new flooring following its installation showed a FIIC of 58. The Building Code requires the STC of walls, floors and ceilings be a minimum of 55, and therefore the new flooring complies to the extent required by the Act.
  - There are no legal grounds for issuing a notice to fix for the building work on the grounds of failing to obtain consent or a certificate of acceptance, as there has been no contravention or failure to comply with the Act.
- 2.10 An application for a determination was received by the Ministry on 30 May 2013, and an amended application including the neighbours as parties to the matter was received on 9 July 2013.

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<sup>4</sup> Sound transmission class (refer Appendix A.2)

<sup>5</sup> FIIC – Field Impact Insulation Class

### 3. The submissions

- 3.1 An initial application from the authority was received by the Ministry on 30 May 2013, in which the authority requested the determination consider:
- the compliance of the replaced flooring
  - whether a building consent was required or whether the building work meets the test for exempt building work under Schedule 1 of the Act
  - whether the refurbishment is an alteration for the purposes of section 112 of the Act regardless of whether consent is required
  - if the building work is exempt whether it must comply to the same extent as the approved building consent.
- 3.2 An amended application was then received by the Ministry on 9 July 2013, in which the authority set out the questions that it considered to be the matters to be determined (refer paragraph 1.5).
- 3.3 The authority also submitted that the same issue has recently arisen with other apartments within the same building. The authority provided copies of
- some correspondence between the parties (provided with the initial application)
  - results from soundproofing testing carried out in 2008
  - results from impact testing carried out to Unit 1906 in November 2012.
- 3.4 The neighbours provided a submission on 25 July 2013. The neighbours submitted (in summary)
- the specifications that were consented for the floor coverings were referred to in promotional material and the neighbours relied on this in purchasing their unit
  - the consented materials achieved an IIC rating of 68; the new flooring in Unit 1906 achieves an IIC rating of 58
  - Schedule 1(ah) does not apply where the floor lining performs a dual purpose as acoustic insulation in addition to flooring (as opposed to linings or finishes in a free standing dwelling)
  - the degradation of acoustic performance is such that other owners on the same level as Unit 1806 have complained of the sound believing that it came from Unit 1806
  - the change in flooring material is building work which is an alteration for the purposes of section 112 of the Act; the degree of compliance is key to the application of section 112 and in this case the building work has decreased the extent to which the building complies with Clause G6
  - section 18(1) does not apply as the building work is subject to provisions to the contrary in section 112

- whether the building work complies with Clause G6 is ‘beside the point as they required building consent under section 40 but were ineligible for consent under section 112’.

3.5 The owner of Unit 1906 provided a submission by email on 6 August 2013. The owner set out some of the background and submitted (in summary):

- at the time the consent was applied for the developer had considered hard floor surfaces and the acoustic consultants provided recommended criteria in this regard
- the only relevant requirement in the consent was the provision of a specialist sound-proofing inspection to ensure compliance with clause G6; there is nothing to suggest the authority intended to condition the whole of the building contract specification and require on-going compliance with those specifications; a specific IIC rating of 68 was not required
- it is not accepted that the building work decreased the extent to which the building complies with the Building Code; the IIC class, ie. no less than 55, is the same before and after the works
- it is possible that the level of sound transmission is greater now than when Unit 1906 was carpeted, but that is not a matter controlled by the Building Code or the Act
- the building work can be considered exempt building work under either Schedule 1(a) as a replacement with a comparable component or assembly in the same position of a component or assembly incorporated or associated with a building
- alternatively the building work can be considered exempt building work under Schedule 1(ah) as a replacement or alteration of lining or finishes of a floor; the Ministry’s guidance document on exempt building work states that this exemption does not require comparable materials to be used
- section 112 is only engaged in the situation where the relevant building works require a building consent; it is not applicable in this circumstance where the alteration is exempt work
- that the building work complies with the requirements of the Building Code has been verified by expert assessment.

3.6 The owner provided copies of

- a report dated 22 January 2007 setting out sound and impact noise transmission requirements for the units both laterally and vertically, including for internal tiled surface areas
- technical data on the proprietary underlay used
- Determination 2005/95: Sound transmission between household units after alterations

3.7 A draft determination was issued to the parties for comment on 8 August 2013.

3.8 The authority responded in a submission dated 20 August 2013, accepting the draft subject to non-contentious amendments.

- 3.9 The owner accepted the draft without further comment in a response received on 22 August 2013.
- 3.10 The neighbours did not accept the draft and provided a submission on 22 August 2013. The neighbours submitted (in summary):
- The structurally thin floors meant that the structure by itself fell short of the acoustic requirements and required the addition of a building element to achieve compliance; the acoustic underlay and carpet must therefore be interpreted as a building element and an integral component of the floor structure and cannot be considered merely as linings.
  - Whilst the carpet and underlay served as floor linings, that function was incidental and subordinate to their primary function as a specified component of the inter-tenancy floor structure without which compliance with clause G6 could not be achieved.
  - Any alteration to the carpet and underlay was by definition an alteration of an integral component of the inter-tenancy floor structure and beyond the scope of Schedule 1(ah).
  - Without the requirement for consent the authority would have no control over ad hoc alterations and whether they continue to comply with the noise transmission requirements of the Building Code that assume critical importance in multi-level developments.
  - Building work potentially affecting the level of compliance with clause G6 in a multi-level development is neither minor nor low risk in nature given the potential for a dramatic impact on the quiet enjoyment of adjoining occupants.
  - The additional element of heavy duty carpet and acoustic underlay enabled the floor slab to exceed the requirements of clause G6 and in doing so set the 'compliance benchmark' in terms of section 112(1)(b) for any alteration to that work.
- 3.11 The body corporate made no submission in response to the draft.
- 3.12 I have amended the determination as I consider appropriate.

## **4. Discussion**

### **4.1 General**

- 4.1.1 The matter for determination is whether the building work complies with the Building Code to the extent required by the Act.
- 4.1.2 In considering this matter I have also discussed whether a building consent was required for the work, or whether the work is exempt under Schedule 1(ah), and the application of section 112.

### **4.2 Compliance of building work**

- 4.2.1 I note that in accordance with section 17 of the Act the building work must comply with the Building Code regardless of whether a building consent is required. The clause of the Building Code that applies to installation of the new flooring is Clause G6 Airborne and impact sound. Clause G6.3.2 requires the IIC of floors be no less

than 55; achieving a level above that is voluntary and not a requirement of the Building Code.

- 4.2.2 Paragraph 1.0.1 of Acceptable Solution G6/AS1 requires that sound transmission through building elements be minimized using one or more of a number of construction techniques, including physical separation of building elements comprising each face of a floor and ceiling assembly or the use of noise control building elements. Figures 2 to 5 go on to illustrate the Acceptable Solutions, and for floor and ceiling assemblies carpet on underlay is shown as a requirement. The use of tiled flooring, as in this case, does not accord with the Acceptable Solution.
- 4.2.3 Verification Method G6/VM1 provides for demonstration of compliance by a standard of measuring performance and states that field test results shall be within 5dB of the performance requirement.
- 4.2.4 In this case the FIIC was confirmed at 58 and accordingly I consider the new flooring as installed complies with Clause G6.3.2 of the Building Code.
- 4.2.5 In correspondence to the owner the authority stated the view that the building work must comply to the extent that was approved under the building consent, and in its amended application for determination questioned 'whether section 18 of the [Act] is applicable to the building works, or whether the building works are required to achieve performance criteria additional to clause G6 of the Building Code?'
- 4.2.6 I note here that compliance with the building consent is a requirement at the time the authority considers the issuing of the code compliance certificate. There is however nothing in the Act to prevent an owner from undertaking building work subsequent to the issue of a code compliance certificate that varies from that which was originally consented and brings about a lesser level of performance as long as the building work complies to the extent required by the Act, i.e. the building work must comply with the Building Code (section 17), and if the building work is not exempt then a building consent is obtained.

### **4.3 Exemption under Schedule 1(ah)**

- 4.3.1 The authority has asked whether the building work was eligible for exemption from the need for a building consent under Schedule 1. Eligibility for exemption under Schedule 1(ah) is not a determinable matter under section 177(1)(a) or 177(1)(b), however, as the owner's legal adviser has raised the possibility of the authority issuing a notice to fix for building work carried out without consent, I can provide some guidance on whether exemption is appropriate in this case.
- 4.3.2 Section 17 of the Act states that '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'. Section 41 sets out those cases in which a consent is not required and includes 'any building work described in Schedule 1'. Schedule 1 to the Act, 'Exempt Building Work', lists work for which a building consent is not required.
- 4.3.3 Schedule 1(ah) says that building consent is not required for 'the replacement or alteration of linings or finishes of any internal wall, ceiling, or floor of a dwelling'. I consider the removal of the existing carpet and underlay and replacement with a tiled flooring falls within this exemption.

- 4.3.4 The submission from the neighbours referred to a guidance document on exempt building work published by the Ministry<sup>6</sup> (“the guide”), and suggested that the examples given confine the application of Schedule 1(ah) in respect of flooring to situations where worn or damaged flooring need to be repaired or replaced and does not address the dual function where the flooring also performs as acoustic insulation. The neighbours consider that the scope of Schedule 1(ah) was not intended to be so broad as to allow changes to floor linings that provide acoustic insulation in multi-level dwellings.
- 4.3.5 The guide states:
- The primary purpose of Schedule 1 is to exempt building work that is minor and low risk in nature and where the benefits of requiring a building consent do not exceed associated compliance costs.
- ...
- [Schedule 1(ah)] allows you to replace or alter all the linings and finishes of internal walls, ceilings or floors of a dwelling (residential house). This exemption does not require comparable materials to be used, unlike exemption [under Schedule 1(a)].
- Examples where this exemption could apply [include] replacement of worn-out flooring in a dwelling.
- 4.3.6 I am of the view that the examples listed in the guide do not limit the application of Schedule 1(ah) to only those examples. I note that Schedule 1(ah) also does not exclude building work to multi-unit dwellings nor does it exclude materials or components that provide ‘dual functions’, in this case a flooring surface that also contributes to acoustic insulation; the overarching proviso is that the building work must comply with the Building Code.

#### **4.4 Conclusion**

- 4.4.1 The building work is exempt building work under Schedule 1(ah) and complies with the Building Code. As I have concluded that the building work is exempt under Schedule 1(ah) no building consent is required and therefore section 112 does not apply. I have not considered the question of the extent of compliance required under section 112 because section 112 only applies when a building consent authority proposes to grant a building consent for alterations (refer Appendix A.4).
- 4.4.2 I note that the neighbours may well consider the circumstances in which they elected to purchase their apartment have changed due to the flooring surface in the apartment above having changed from that which was consented. However, any remedy sought by the neighbours lies outside the scope of the Building Act 2004.

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<sup>6</sup> A guide to building work that does not require a building consent, dated December 2010



## **5. The decision**

- 5.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the flooring installed to Unit 1906 as described in this determination complies with Clause G6 of the Building Code.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 20 September 2013.

John Gardiner  
**Manager Determinations and Assurance**

## Appendix A: The relevant legislation

A.1 The relevant provisions of the 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.

**18 Building work not required to achieve performance criteria additional to or more restrictive than building code**

(1) A person who carries out any building work is not required by this Act to—

- (a) achieve performance criteria that are additional to, or more restrictive than, the performance criteria prescribed in the building code in relation to that building work; or
- (b) take any action in respect of that building work if it complies with the building code.

(2) Subsection (1) is subject to any express provision to the contrary in any Act.

**19 How compliance with building code is established**

(1) A building consent authority must accept any or all of the following as establishing compliance with the building code:

- (a) compliance with regulations referred to in section 20;
- (b) compliance with the provisions of a compliance document;
- (c) a determination to that effect made by the chief executive under subpart 1 of Part 3:

...

**20 Regulations may specify that there is only 1 means of complying with building code**

(1) Regulations may be made under section 401 that specify that there is only 1 means of complying with all or any of the provisions of the building code.

(2) Without limiting subsection (1), the regulations may specify the means of compliance with the building code by requiring the use in the prescribed circumstances (if any) of all or any of the following:

- (a) prescribed acceptable solutions;
- (b) prescribed verification methods:

...

**40 Buildings not to be constructed, altered, demolished, or removed without consent**

(1) A person must not carry out any building work except in accordance with a building consent.

...

**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; or

...

### **Schedule 1: Exempt building work**

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

...

(ah) the replacement or alteration of linings or finishes of any internal wall, ceiling, or floor of a dwelling:

## A.2 The relevant Clauses of the Building Code

### **Clause A2 Interpretation**

Impact insulation class (IIC) a single number rating derived from measured values of normalised sound pressure impact levels in accordance with Method ASTM E492, Annex A1. Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine. It provides an estimate of the impact sound insulating performance of a floor-ceiling assembly

Sound transmission class (STC) a single number rating derived from measured values of transmission loss in accordance with classification ASTM E413, Determination of Sound Transmission Class. It provides an estimate of the performance of a partition in certain common sound insulation situations

### **Clause G6 Airborne and impact sound**

#### **Objective**

**G 6.1** The objective of this provision is to safeguard people from illness or loss of amenity as a result of undue noise being transmitted between abutting occupancies.

#### **Functional requirement**

**G 6.2** Building elements which are common between occupancies, shall be constructed to prevent undue noise transmission from other occupancies or common spaces, to the habitable spaces of household units.

#### **Performance**

**G 6.3.1** The Sound Transmission Class of walls, floors and ceilings, shall be no less than 55.

**G6.3.2** The Impact Insulation Class of floors shall be no less than 55.

## A.3 The relevant compliance document

### **Verification Method G6/VM1**

#### **2.0 Impact Sound Insulation Field Tests**

**2.0.1** The performance for impact sound insulation may be verified using the procedures detailed in ISO 140: Part VII, and the field impact insulation class may be verified using the method described in ASTM E 989. Field test results shall be within 5dB of the performance requirement.

A.4 Section 112 of the Building Act (which in this case does not apply as the building work did not require building consent)

**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, the building will—

(a) comply, as nearly as is reasonably practicable, with the provisions of the building code that relate to—

(i) means of escape from fire; and

(ii) access and facilities for persons with disabilities (if this is a requirement in terms of section 118); and

(b) continue to comply with the other provisions of the building code to at least the same extent as before the alteration.

...