

Determination 2007/83

The issuing of a notice to fix for a house at 14 Princes Road, Ruakaka, Whangarei



1. The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004¹ (“the Act”) made under due authorisation by me, John Gardiner, Manager Determinations, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicant is the owner of the building, Mr M Swanson (“the applicant”) and the other party is the Whangarei District Council (“the territorial authority”).
- 1.2 This determination arises from the decision of the territorial authority to issue a notice to fix for a 7-year-old house because it was not satisfied that it complied with the Building Code² (First Schedule, Building Regulations 1992).
- 1.3 As the material placed before me is unclear, I have structured this determination from the notice to fix. The notice to fix states that there has been a contravention of section 40 of the Act because the basement development work was not part of the original building consent for the house, but was carried out without a consent having been

¹ The Building Act 2004 is available from the Department’s website at www.dbh.govt.nz.

² The Building Code is available from the Department’s website at www.dbh.govt.nz.

obtained. The notice to fix also states that the building work taken as a whole does not comply with clauses B2, D1, E1, E2, E3, F2, F4, and G4 of the Building Code. The remedial work required by the notice to fix is to “attend to items listed on Advice Notice 9934CC and to remove all un-consented works (or seek a determination from the Department of Building and Housing.)”

- 1.4 Accordingly, in order to assist the parties to this determination, I have decided to limit my consideration of the building work to the question of whether that work complies with the Building Code. Thus the two matters for determination are whether:
- the basement development work in the building (“the basement development”) complies with applicable clauses of the Building Code
 - the building elements generally comply with clauses D1, E2, E3, F2, F4, G4, and G12, taking account of the items listed in Field Advice Notice No 9934CC
- 1.5 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 the elements of the building work that are the subject to this determination, and the other evidence in this matter.
- 1.6 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

- 2.1 The building work consists of a single-storey detached house situated on an exposed level site, which is low-lying and in an area that may be subject to flooding. The house is relatively complex in plan and form and construction is conventional light timber frame constructed on concrete or timber-framed floors. The roofs are generally low-pitched including the curved upper roof, and have relatively simple wall-to-roof junctions. There are parapets to most roof edges and the upper roof has 300mm wide eaves projections and one 900mm wide verge projection.
- 2.2 A tiled timber-framed deck is constructed outside the living area and this has a flat roof over it. This roof is supported on monolithic-clad steel columns and beams and the deck has monolithic-clad timber-framed balustrades. A set of tiled timber steps and a landing give access to the main entry, which is also protected by an extension of the curved upper roof that is supported on steel columns and beams, which are partly monolithic-clad.
- 2.3 The main floor areas of the house are a minimum of 1500 mm above the finished ground level and the top of the concrete garage floor slab is 225mm above ground level. The basement development has a concrete floor slab, the top of which is on the same level as the adjoining ground.
- 2.4 The basement development has timber-framed walls and partitions lined with timber panelling, or with fibre-cement sheet up to 500mm from ground level, and

plasterboard above that. The ceiling is plasterboard lined. The floor is tiled and the room contains a number of joinery fittings. The level of finish makes the room suitable for a variety of domestic uses, and indicates that it is intended to be used as a habitable space (see paragraph 7.2.1). As I noted in paragraph 1.3, the territorial authority has stated that this area was neither included in the consented documentation for the building work for this house, nor was it the subject of a separate building consent.

- 2.5 I have received no written evidence as to the treatment, if any, of the external wall framing timber.
- 2.6 The external walls, columns and beams of the house are clad with 40 mm thick EIFS sheets fixed through the building wrap directly to the framing, and which are finished with a rough-textured plaster coating and a paint system.

3. Background

- 3.1 A firm of engineering consultants (“the consultants”) carried out a flood assessment survey for the property and set out its findings in a letter to the designers of the house on 20 December 1999. Taking into account the site location and the relevant flood information, the consultants concluded that the floor level of any house on the property should be approximately 1100mm to 1300mm above the ground level on the proposed site. The consultants concluded that:

. . . in terms of [the Building Act 1991] and provided that the floor level is set at a minimum of 3.00 m above LINZ datum:

- a) The land on which building work is to take place is neither subject to nor likely to be subject to inundation, and
- b) The building work itself is not likely to accelerate or worsen or result in the inundation of the land or any other property.
- c) The activity is designed to accommodate the flood hazard and will have no adverse upstream or downstream effects.

It is noted that a) above contradicts the earlier content of the consultants’ letter which says that the site is clearly subject to inundation, hence the recommendation to set the floor level at 3.00 m above the LINZ datum.

- 3.2 The territorial authority issued a building consent on 28 March 2000. The consent was subject to the provisions of section 36(2) of the Building Act 1991 in respect of inundation (flooding). I note that the consented plans for the house have been signed by the consultants and therefore assume the house design and construction incorporated the levels recommended in paragraph 3.1 above.
- 3.3 Approved Building Certifiers (“the building certifier”) inspected the building work as it progressed but did not pass the house after a final inspection was carried out on 19 January 2001. From that point the inspection record appears to show that the next inspection, of the interior, was carried out by the territorial authority on 17

August 2004, and that the building failed a further inspection carried out by the territorial authority on 24 August 2004.

- 3.4 The territorial authority carried out a final inspection of the building on 28 March 2007 and noted some 33 concerns on a Field Advice Notice referenced as 9934CC. One of these concerns noted:

Illegal work constructed at rear of garage and adjacent to garage outside approved documents and consent. Note flood zone re engineer's report.

- 3.5 The territorial authority issued a notice to fix dated 2 April 2007 that noted that the particulars of Contravention or Non-Compliance were:

1. Contravention of section 40 of NZ Building Act 2004. (i.e. un-consented work in base area, timber framed in flood zone.
2. Non compliant with B1, B2, E1, E2, E3 F2, G4, of NZ Building Code.

The applicant was to:

1. Attend to remedial works note on Field Advice Notice 9934CC.
2. Rectify un-consented works at basement level. (i.e. remove all un-consented works or seek a determination from the Department of building and Housing.

- 3.6 An application for a determination was received by the Department on 26 April 2007 and the application fee was received on 11 May 2007, from which date the Department could commence to determine the matters in question.

4. The submissions

- 4.1 In a letter received by the Department on 26 April 2007, the applicant described the basement development and noted that the building certifier had signed off that area. All the partitions were described as being “purely cosmetic, non-load bearing and were put in to hide unsightly piles”.

- 4.2 The applicant forwarded copies of:

- some of the plans
- the consent documentation
- some inspection records
- the territorial authority's Field Advice Notice and its notice to fix
- a set of photographs showing some aspects of the basement development.

- 4.3 The territorial authority did not make a submission.

- 4.4 A copy of the draft determination was sent to the parties for comment on 22 June 2007. Part of my objective in issuing the draft was to ensure I have established some

clarity for the parties regarding the matter in dispute as the submissions and lack of material from the territorial authority were insufficient to make the matter clear. Both parties accepted the draft without comment.

5. The expert's report

5.1 As mentioned in paragraph 1.5, I engaged an independent expert, who is a member of the New Zealand Institute of Building Surveyors, to provide an assessment of the condition of those building elements required to comply with the clauses set out in the notice to fix, the subject of the determination.

5.2 The expert inspected the house on 24 May 2007 and furnished a report that was completed on 26 May 2007. The expert noted that “the house is well presented, regularly maintained with no items of significant disrepair obvious”. The cladding generally was finished to a good standard. There were “no signs of leaking, staining or damage to internal linings”. The expert examined an opening in the textured finish at one window sill and established the presence of appropriate flashings. I am prepared to accept that the details exposed at this situation apply to other similar locations throughout the building. The expert also noted that the parapets have been re-modelled with sloping surfaces and a triple-membrane coating.

5.3 The expert took non-invasive moisture readings internally around the house and two “relatively high” readings were recorded. Subsequently, invasive moisture readings were taken at these two locations and readings of 16 % to 18% were recorded. Moisture levels above 18% recorded after cladding is in place generally indicate that external moisture is entering the structure.

5.4 Commenting specifically on the cladding, the expert noted that:

- there is no evidence that horizontal control joints are installed at the mid-storey height
- the cladding is in contact with the membrane to the roof over the deck
- the cladding has been taken down to or below the finished ground levels in many locations
- there are some holes in the cladding where it abuts the external joinery units
- the deck tiles and the steps on the north elevation finish hard against the cladding
- the deck levels are too high in relation to the internal floor levels
- the meter box is ineffectively sealed against the cladding.

5.5 The expert also commented on all the other items set out on the territorial authority's Field Advice Notice 9934CC. The expert noted that the applicant had attended to the majority of these but some details, producer and maintenance statements, and the

electrical certificate had yet to be forwarded to the territorial authority. I suggest that the territorial authority inspect all the items that have been rectified to ensure that they are code-compliant, and also ensure that the relevant documentation has been provided.

5.6 The expert also noted that items that had been listed in the Field Advice Notice but had not yet been rectified included:

- the requirement for stainless steel fixings to bracing units that are less than 600mm above ground level (clause B1)
- the adjustment to the hot water temperature (clause G12)
- the lack of restricting stays to some windows (clause F4).

5.7 A copy of the expert's report was provided to each of the parties on 31 May 2007. The applicant replied on June 11 pointing out that because there is no flood insurance no liability for flood damage will fall to the territorial authority. The basement framing is H3 or higher and the cladding does not require control joints. He also noted that there have been no floods in the basement despite recent high tides, wind and rain.

6 Discussion - Compliance of Consented Work

6.1 The notice to fix refers to a Field Advice Notice dated 23 March 2007, which includes a number of items requiring attention that were part of the consented work and are required to comply with various code clauses. Almost half of the thirty three items listed relate to weathertightness clause E2. Referring first to this clause I consider that the expert's report establishes there is no evidence of external moisture entering the building, and accordingly, the building complies with clause E2 at this time.

6.2 However, the notice to fix also refers to the durability requirements of clause B2. Clause B2 requires that a building continues to satisfy all the objectives of the Building Code throughout its effective life, and that includes the requirement for the building to remain weathertight. Because the cladding faults on the building are likely to allow the ingress of moisture in the future, the house does not comply with the durability requirements of clause B2.

6.3 Because the faults identified with the cladding system occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 5.4 will result in the cladding on the building remaining weathertight and in compliance with clause B2.

6.4 The expert has pointed out the lack of a horizontal control joint at the "mid-storey" height. I note that the territorial authority does not appear to have any concerns regarding this omission. There is no cracking apparent in the cladding at this time and the building is not fully two stories in height. In addition, the sub-floor area is generally unlined and is well ventilated. Accordingly, I am prepared to accept that a

horizontal control joint is not required in this instance. The requirement for horizontal control joints requirement is necessitated by cross-grain shrinkage in floor joists, and most movement resulting from this will have occurred by this time.

6.5 Taking account of the expert's opinion, I conclude that remedial work necessary in respect of the other building elements and code clauses includes:

- the provision of stainless steel fixings to bracing units that are less than 600mm above ground level
- the adjustment to the hot water temperature
- the provision of restricting stays to some windows.

6.6 I also suggest that, when following up outstanding items in the Field Advice Notice, the territorial authority should inspect all the items that the expert has noted as having been rectified to ensure that they are code-compliant. In addition, the territorial authority should ensure that all the relevant documentation it requires has been provided by the applicant.

7 Discussion - Compliance of the basement development

7.1 I turn now to consideration of the basement building work, only in terms of its compliance with the Building Code. Foremost in this case is code clause E1, the code requirement that surface water should not enter a building. This requirement is obviously applicable to habitable space.

7.2 The Building Code

7.2.1 The Building Code defines a "habitable space" as:

A space used for activities normally associated with domestic living, but excludes any bathroom laundry, water-closet, pantry, walk-in wardrobe, corridor, lobby, clothes drying room or other space of a specialised nature occupied neither frequently nor for extended periods.

7.2.2 The relevant provision of the Building Code in respect of floor levels, in clause E1 "Surface water", is:

1.1 Provision

E1.3.2 *Surface water*, resulting from a storm 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*.

7.3 As described in paragraphs 1.4 and 7.1, I have considered the matter of the basement development in terms of the Building Code only.

7.4 Taking into account the form of the basement development and its current usage, I am of the opinion that the space is a habitable room. While it may be questionable whether the space is "occupied neither frequently nor for extended periods", I

consider that it cannot be defined as a “space of a specialised nature”. As such, I am of the opinion that the requirements of clause E1.3.2 apply to the development. The consultant’s report of 20 December 1999 stipulated that the floor level of any house built on the site in question should be 1100mm to 1300mm above ground level. The house as designed has its main floor level at least 1500mm above the ground, and the garage floor at least 225mm above the ground. The top of the basement development floor slab is at the same level as the adjoining ground.

- 7.5 In Determination 99/2005, the Building Industry Authority determined that clause E1.3.2 did not apply to a garage as it was not a habitable room. However, as stated in Paragraph 7.4, I consider the basement development to be a habitable room and therefore the requirements of clause E1.3.2 apply to it. As its floor level is at ground level, the basement development clearly does not comply with the consultant’s recommendation as to a floor height of between 1100mm and 1300mm above the original ground level. Nor was it subject to a building consent. Accordingly, I am of the opinion that the basement development does not comply with clause E1 of the Building Code.
- 7.6 I have not received enough information to be able to form a view as to the compliance of the unconsented basement development building work with Building Code clauses other than clause E1. The territorial authority is urged to satisfy itself as to compliance with all applicable Building Code clauses when considering any proposal from the owner to make the basement building work code compliant in terms of those provisions.
- 7.7 I make no comment as to whether or not a waiver to Building Code clause E1 is appropriate in this case.

8. The Decision

- 8.1 In accordance with section 188 of the Building Act 2004, I determine that:
- the building work does not comply with clauses B1, B2, F4, and G12 of the Building Code, and accordingly confirm the territorial authority’s decision to include the relevant items on a notice to fix
 - the basement development does not comply with clause E1 of the Building Code.
- 8.2 The territorial authority should now withdraw its notice to fix and issue a new notice to fix that requires the owners:
- to rectify the un-consented works at the basement level (unless the territorial authority continues to take the view that these works must be removed.)
 - to bring the building up to compliance with the Building Code, identifying the defects listed in paragraphs 5.4 and 5.6 and referring to any further defects that might be discovered in the course of rectification, but not specifying how those defects are to be fixed. That is a matter for the applicants to propose and for

the territorial authority to accept or reject. It is important to note that the Building Code allows for more than one method of achieving compliance.

- 8.3 Once all the consented building work has achieved compliance the territorial authority is to issue a code compliance certificate for that work.
- 8.4 I would suggest that the parties adopt the following process to meet the requirements of paragraph 8.2. Initially, the territorial authority should issue the notice to fix. The owner should then produce a response to this in the form of a technically robust proposal, produced in conjunction with a competent and suitably qualified person, as to the rectification or otherwise of the specified 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 27 July 2007.

John Gardiner
Manager Determinations