

## Determination 2006/27

### The issuing of a notice to fix for a 12-year-old addition to a house at 28 Pentland Avenue, Mount Eden, 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, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicants are K Jarrett and T Hart, the owners of the property (“the applicants”) and the other party is the Auckland City Council (“the territorial authority”).
- 1.2 This determination arises from the decision of the territorial authority to issue a notice to fix for 12-year-old alterations and additions to a house (“the extension”).

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

because it was not satisfied that it complied with the Building Code<sup>2</sup> (Schedule 1, Building Regulations 1992).

I consider that the matters for determination are:

### **1.2.1 Matter 1: The claddings**

Whether the claddings as installed to the walls and roof of the extension comply with Clauses B2 and E2 (see sections 177 and 188 of the Act). By “the claddings as installed” I mean the components of the systems (such as the backing materials, the flashings, the joints and the coatings) as well as the way the components have been installed and work together.

### **1.2.2 Matter 2: Other Building Code matters**

Whether certain building elements in the extension, other than the claddings, comply with the relevant clauses of the Building Code.

### **1.2.3 Matter 3: The durability considerations**

Whether the building elements in the extension comply with Clause B2 “Durability” of the Building Code, taking into account the age of the building work.

- 1.3 I note that the notice to fix dated 28 October 2007 referred to a second alteration to the property that took place in 2000. The territorial authority has since confirmed that the notice to fix applies only to the original alteration work (refer paragraph 3.7), and this determination is therefore restricted to the 1995 building work.
- 1.4 In making my decision, I have considered the submissions of the parties, the report of the expert commissioned by the Department to advise on this dispute (“the expert”), and the other evidence in this matter. I have evaluated the information on the claddings using a framework that I describe more fully in paragraph 6.1.
- 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**

- 2.1 The building work consists of a single-storey extension and associated alterations to the rear of an existing detached house situated on a sloping site, which the territorial authority has identified as in a low wind zone for the purposes of NZS 3604<sup>3</sup>. The original house was built around 1910, and is a single storey building with conventional light timber frame construction, suspended timber-framed floors, weatherboard claddings, timber windows and a profiled metal hipped roof. The extension forms a flat-roofed lean-to against the rear eastern wall to provide a new kitchen/dining and family area. The addition is timber-framed, with a concrete slab an almost flat membrane roof with a perimeter upstand and timber windows. Bevel-backed weatherboards to match the existing house are used on the south-eastern corner walls, with monolithic cladding elsewhere.

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

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

- 2.2 Eaves above the weatherboard walls are about 300mm deep, with an unpainted cedar fascia that extends to form a ribbon plate above the multi-faceted plastered walls. A glazed timber pergola, attached to the ribbon plate, extends around the northeast corner to form a canopy above the timber windows and doors.
- 2.3 The expert noted that he was unable to inspect any of the concealed timber framing, but supplied photographs taken during construction which showed no evidence of any markings identifying the timber as “kiln-dried”. Given the date of construction in 1995, I agree with the expert that the external wall framing is likely to be boron-treated, but I am unable to ascertain the level of boron contained in the timber. It may only be sufficient to provide resistance to insect attack, rather than resistance to fungal decay.
- 2.4 The monolithic cladding is a system described as solid plaster over a solid backing. In this instance it consists of 4.5 mm “Hardibacker” sheets fixed through the building wrap directly to the framing timbers, and covered by a slip layer of building wrap, under metal-reinforced solid plaster. The expert has noted that the unpainted 18mm thick plaster was applied in two coats, with the second plaster coat containing a colouring agent.

### **3. Background**

- 3.1 In September 1995, the territorial authority issued a building consent (No BLD39950682301), which I have not seen, for the building work.
- 3.2 During 1995, the territorial authority carried out various inspections of the construction, including a pre-line inspection on 10 November 1995, a “Hardibacker” inspection on 14 November 1995 and a plaster inspection on 15 November 1995.
- 3.3 In a letter to the territorial authority dated 10 April 1996, the applicants advised that the building work would cease until funds allowed the completion of the bathroom. The territorial authority carried out a final inspection on 10 April 1996 and issued an interim code compliance certificate dated 24 April 1996 for the “Kitchen and Family Room extensions only”.
- 3.4 I have no records of any further communication with regard to this building consent until the territorial authority undertook an inspection of the extension on 27 August 2007. In a letter to the applicants dated 5 September 2007, the territorial authority noted that, as a number of outstanding issues had been identified, the work did not comply with the building code and a notice to fix would be issued.
- 3.5 On 26 October 2007, the territorial authority issued a notice to fix and stated that it was not satisfied that the building work complied with the consent, or with the Building Code, or with the Building Act. The “particulars of contravention or non-compliance” attached to the notice listed requirements regarding the following matters:
1. Issues relating to cladding
  2. Items not installed in accordance with acceptable/alternative solutions approved under the two consents
  3. Items not installed per acceptable trade practice

4. Drainage and ventilation
5. Changes to the building consent
6. Other building related issues
7. Durability issues

The notice also set out the actions that the applicant was to undertake to remedy the contravention or items of non-compliance.

- 3.6 The Department received an application for a determination on 27 November 2007.
- 3.7 In a letter to the applicants dated 8 January 2008, the territorial authority acknowledged that the notice to fix dated 28 October 2007 had been confusing, and had been revised to relate only to the building consent for the original alteration work (refer paragraph 1.4). I have not received a copy of the revised notice to fix.

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

- 4.1 In a covering letter to the Department dated 21 November 2007, the applicants gave some background to the determinable matters. The applicant noted that the later alteration work was subject to the WHRS Tribunal procedure and that an interim code compliance certificate had been issued for the original alterations. The only outstanding item for the original alterations was the repositioning of a bathroom vanity. The applicants disputed the issuing of the notice to fix and stated that the house has always “been weather tight and sound”. The applicants wished to have the notice to fix removed.
- 4.2 The applicant forwarded copies of:
- the territorial authority’s inspection documents
  - the interim code compliance certificate of 24 April 1996
  - the notice to fix dated 26 October 2007.
- 4.3 The territorial authority forwarded a CD-Rom that was entitled “Property File” that contained documents that were pertinent to this determination.
- 4.4 Copies of the submissions and other evidence were provided to each of the parties. Neither party made any further submissions in response to the submission of the other party.
- 4.5 A draft determination was issued to the parties on 21 February 2008. The draft was issued for comment and for the parties to agree a date when the building elements in the extension complied with Building Code Clause B2 Durability.
- 4.6 The applicant commented on the draft in an email to the Department dated 10 April 2008. The applicant accepted the draft with non-contentious comments, but wanted the determination to note the following:
- that area where the plaster is in contact with the ground is naturally sheltered and has a metre wide clear roof above it and the slope of the ground is away from the walls

- This detail has been in place for a number of years but there are no signs of decay to the framing

I have taken these comments into account.

- 4.7 The territorial authority accepted the draft and nominated 16 November 1996 as a date when the extensions complied with Clause B2. The applicant confirmed his acceptance of this date.

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

- 5.1 As discussed in paragraph 1.4, I engaged an independent expert to provide an assessment of the condition of those building elements subject to the determination. The expert is a member of the New Zealand Institute of Building Surveyors.
- 5.2 The expert inspected the claddings on 25 January 2008 and furnished a report that was completed on 31 January 2008, which noted that the construction quality was generally good with the cladding “generally straight and fair”, but little maintenance had been carried out since completion. The expert also noted that the extension is sheltered from prevailing winds and rain and that control joints are not specified by the manufacturer as being required for the dimensions of plaster used on the walls of this addition.
- 5.3 The expert noted that the joinery in the solid plaster cladding had copper head flashings that generally projected about 20mm beyond the jambs. The expert removed a small section of plaster at the jamb to sill junction of a window in the backdoor recess, and noted that the window frame timber was flush with the backing sheets, with sealant at the junction, no visible jamb flashings, and the timber sill rebated to sit in front of the backing sheets. The expert also noted no evidence indicating moisture penetration. I accept that the exposed junction is typical of similar locations elsewhere in the building.
- 5.4 The expert noted that the joinery in the weatherboard cladding had timber mouldings with sloped tops planted over the weatherboards at window heads, full-depth timber sills and timber facings and scribes at the jambs.
- 5.5 The expert removed a small section of cedar fascia beside a pergola joist, and noted that the roof membrane turned down behind the fascia, with a cedar bead planted over the top of the fascia and sealant applied at the junction with the membrane. The expert noted that the plaster appeared to have been applied after the fascia was in place, with plaster pushed up behind the fascia to form an overlap of about 10mm. Apart from a short flashing at the top, the pergola joist penetration was unflashed and unsealed.
- 5.6 The expert inspected the interior of the house, taking non-invasive moisture readings internally, and no evidence of moisture was observed. The expert took five invasive moisture readings through claddings and with long probes from the inside. Readings ranged from 11% to 15%, except for one reading of 17%. The expert noted that his inspection followed an extended dry spell, and considered that moisture levels might increase at other times of year. He therefore expected the area with the 17% reading to exceed safe levels during periods of wet weather.

5.7 Commenting specifically on the wall and roof claddings, the expert noted that:

- the bottom of the plaster is beneath the paving and there are no drip edges or anti-capillary gaps
- there is no clearance from the bottom of the weatherboard cladding to the ground, and the bottom weatherboard is severely decayed
- there are several unsealed cracks in the plaster cladding and there is a gap in the plaster beside the gulley trap at the northeast corner
- the windows in the weatherboard cladding lack head flashings
- the joists at both ends of the pergola are poorly weatherproofed at the junction with the cladding and water is able to penetrate behind the plaster, with the crack in the plaster at one end indicating leaking in this area
- the ends of the roof membrane upstand have pulled away from the upper house walls
- I also note that the vent and wastepipe penetrations through the existing weatherboards in the north-eastern corner appear to be poorly sealed.

5.8 The expert made the following additional comments:

- despite no apparent underlying flashings between the plaster and the original weatherboards, the corner is sheltered and there is no evidence of associated moisture penetration
- although the pergola joist penetrations through the plaster are unsealed, the junctions are sheltered beneath the glazed canopy (apart from the end joists)
- although the head flashing of one sheltered door does not project beyond the jambs, the remaining flashings project sufficiently
- although the jambs and sills appear to be unflashed, most windows and doors in the plaster cladding are sheltered within a recess or beneath the glazed canopy, and there is no evidence of associated moisture penetration
- apart from the ends, the roof membrane forms an adequate upstand against the original weatherboards, which is sheltered beneath the 600mm eaves
- while the perimeter detail of the roof membrane is unconventional, it appears to have provided adequate weathertightness to date with no sign of associated water runoff problems
- while the roof membrane has minimal fall, there is no evidence of prolonged ponding such as patches of moss etc
- although the gulley trap is set within the top coat of plaster, the corner is sheltered with no evidence of associated moisture penetration.

5.9 The expert noted that many of the items in the notice to fix relate to technical non-compliance with E2/AS1, standards and manufacturer's recommendations, which do not necessarily mean non-compliance with the weathertightness provisions of the building code. In addition to the comments outlined in paragraphs 5.7 and 5.8, the expert made the additional comments in response to the notice to fix:

- A spreader over the continuous roof membrane is not necessary and would serve little purpose.
- There are no areas where kick-out flashings are required.
- There are no instances where flashings are not sloped to direct water away from the building.
- The plaster butts against the window head flashing, but is not sealed.
- Where provided, head flashings have adequate slopes and drip edges.
- Summer moisture readings are low and there is no evidence of prolonged moisture accumulation.
- The change from an interior post to a larger lintel appears to have been inspected and approved during construction, and there are no signs of movement or stress after 12 years.
- The roof membrane appears to be in good condition, despite the need for general maintenance, including lichen removal and cleaning.

5.10 The expert concluded that most of the construction details are likely to be adequate for the particular conditions of the extension, providing maintenance repairs are undertaken and durability is measured from the date of completion in 1995. However, the expert also recommended that testing for timber treatment and additional moisture testing during wet weather should be undertaken.

5.11 A copy of the expert's report was provided to each of the parties on 5 February 2007.

## **6. Evaluation for code compliance**

### **6.1 Evaluation framework**

6.1.1 In evaluating the design of a building and its construction, it is useful to make some comparisons with the relevant Acceptable Solutions<sup>4</sup>, which will assist in determining whether the features of this house are code compliant. However, in making this comparison, the following general observations are valid:

- Some Acceptable Solutions cover the worst case, so that they may be modified in less extreme cases and the resulting alternative solution will still comply with the Building Code.
- Usually, when there is non-compliance with one provision of an Acceptable Solution, it will be necessary to add some other provision to compensate for that in order to comply with the Building Code.

6.1.2 The approach in determining whether building work is weathertight and durable and is likely to remain so, is to apply the principles of weathertightness. This involves the examination of the design of the building, the surrounding environment, the design features that are intended to prevent the penetration of water, the cladding system, its installation, and the moisture tolerance of the external framing. The

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<sup>4</sup> An Acceptable Solution is a prescriptive design solution approved by the Department that provides one way (but not the only way) of complying with the Building Code. The Acceptable Solutions are available from The Department's Website at [www.dbh.govt.nz](http://www.dbh.govt.nz).

Department and its antecedent, the Building Industry Authority, have also described weathertightness risk factors in previous determinations<sup>5</sup> (for example, Determination 2004/1) relating to cladding and these factors are also used in the evaluation process.

- 6.1.3 The consequences of a building demonstrating a high weathertightness risk is that building solutions that comply with the Building Code will need to be more robust. Conversely, where there is a low weathertightness risk, the solutions may be less robust. In any event, there is a need for both the design of the cladding system and its installation to be carefully carried out.

## 6.2 Weathertightness risk

- 6.2.1 In relation to these characteristics I find that this extension:

- is built in a low wind zone
- is a fairly simple, one-storey high shape
- has monolithic cladding and weatherboards fixed directly to the framing
- has an attached timber pergola, which is glazed to form a canopy that protects most of the timber joinery and the monolithic cladding
- has external wall framing that may not be treated to a level that provides resistance to the onset of decay if the framing absorbs and retains moisture.

- 6.2.2 The extension has been evaluated using the E2/AS1 risk matrix. The risk matrix allows the summing of a range of design and location factors applying to a specific building design. The resulting level of risk can range from 'low' to 'very high'. The risk level is applied to determine what claddings can be used on a building in order to comply with E2/AS1. Higher levels of risk will require more rigorous weatherproof detailing; for example, a high risk level is likely to require a particular type of cladding to be installed over a drained cavity.

- 6.2.3 When evaluated using the E2/AS1 risk matrix, the weathertightness features outlined in paragraph 6.2.1 show that one elevation of the extension demonstrates a low weathertightness risk rating and the remaining elevations a moderate risk rating. I note that, if the details shown in the current E2/AS1 were adopted to show code compliance, the monolithic cladding on this extension would require a drained cavity.

- 6.2.4 Under the Building Act I am required to consider the E2 requirements applicable at the date of the building consent in 1995, and I note that at that time the relevant acceptable solution E2/AS1 permitted directly fixed solid plaster applied as per NZS 4251 over a drainage slip layer and without a cavity. In contrast, the current E2/AS1 requires a cavity for all risk exposures for this system.

- 6.2.5 I note the applicants' comments with respect to areas where the plaster is below ground level the sheltered nature and drainage of the area. The expert had noted one area which is at risk (refer to paragraph 5.6) from ground moisture. It would appear

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<sup>5</sup> Copies of all determinations issued by the Department can be obtained from the Department's website.



that the laying of pavers has resulted in ground levels being higher than the lower edge of the plaster. This area is also close to a crack in the plaster which may also have contributed to higher moisture levels. This should be attended to as part of regular maintenance. The paver edge detail should also be altered to provide drainage and drying to the lower edge of the cladding. This will also provide drainage when the walls are washed down during normal maintenance.

### **6.3 Weathertightness performance: exterior cladding**

6.3.1 Taking account of the expert's report, I conclude that remedial work is necessary in respect of the following:

- Lack of clearance from the bottom of the plaster cladding to the paving, and the lack of drip edges and anti-capillary gaps at the bottom of the plaster, (refer paragraph 6.2.5).
- Lack of clearance of the weatherboard cladding from the ground, with decay in the bottom board.
- Unsealed cracks in the plaster cladding and the gap beside the gulley trap.
- Lack of window head flashings in the weatherboard cladding.
- Inadequate weatherproofing of the joists at both ends of the pergola.
- Inadequate weatherproofing of the vent and wastepipe penetrations.
- Lack of adhesion at the ends of the roof membrane up-stand.

6.3.2 I note the expert's additional comments in paragraph 5.8, and accept that these areas are adequate in the particular circumstances applying to this extension.

6.3.3 I also note the expert's comment in paragraph 5.10 regarding the need for additional moisture testing to be undertaken during wet weather and testing to confirm the level of timber treatment. I consider that that this testing should be included as part of the process outlined in paragraph 11.3.

6.3.4 Notwithstanding the fact that the solid plaster is fixed directly to the timber framing, thus limiting drainage and ventilation behind the cladding, I have noted certain compensating factors that assist the cladding performance in this particular case:

- Apart from the noted exceptions the cladding is installed to reasonable trade practice.
- Apart from a small wall area, the cladding is sheltered beneath a glazed canopy or within a recess.
- Apart from an isolated area, the cladding has been preventing moisture penetration into the building for about 12 years.
- The plaster cladding appears to have a drainage layer installed behind it that is effective in preventing moisture entering the frame cavity.

6.3.5 I consider that these factors help compensate for the lack of a drained cavity and can assist the extension to comply with the weathertightness and durability provisions of the Building Code.

## 7. The notice to fix

7.1 The following table summarises conclusions on the items listed within the notice to fix dated 26 October 2007, referring to related paragraphs within this determination:

NTF item	Summarised requirement	Summarised conclusion	For discussion refer paragraphs:
<b>2.1</b>	<b>Not to manufacturer's specifications</b>		
a)	Window head flashings 30mm projections past jambs	Adequate in circumstances	5.8 and 6.3.2
b)	No sill flashings	Adequate in circumstances	5.3 and 5.4
c)	Cladding clearance at bottom	Remedial work to ground levels and bottom of plaster and weatherboard claddings required	5.7 and 6.3.1
d)	Cladding overlap at base		
e)	6mm gap at bottom of cladding		
<b>2.2</b>	<b>Not to relevant code requirements at the time</b>		
a)	Cracks and missing plaster	Remedial work required	5.7 and 6.3.1
b)	Clearances to finished floor levels	Repeats 2.1 b) - remedial work to ground levels required	5.7 and 6.3.1
c)	Inter-cladding flashings: Plaster to weatherboards	Generally adequate in circumstances	5.8 and 6.3.2
	Membrane roof to weatherboards	Repairs to membrane ends needed	5.9 and 6.3.1
d)	No spreader to lower roof	Not required for membrane roof	5.9 and 9.2
e)	Roof flashings Apron flashings Kickout flashings	Roof is generally adequate Membrane forms own flashings No flashings need kickouts	5.8, 5.9 and 6.3.2
<b>2.3</b>	<b>Not to accepted trade practice</b>		
a)	No flashing at roof/wall junction	Adequate in circumstances	5.8 and 6.3.2
b)	Flashings to direct water away	Not applicable	5.9
c)	Penetrations need flashings	Remedial work required	5.7 and 6.3.1
d)	Membrane roof ponding	Adequate in circumstances	5.8 and 6.3.2
e)	Need 20mm gap at head flashing	Windows in plaster cladding adequate in circumstances	5.3, 5.8, 5.9 and 6.3.2
f)	Window head flashings 30mm projections past jambs	Adequate in circumstances	5.8 and 6.3.2
g)	Window head flashings to direct water away	Windows in plaster cladding adequate in circumstances	5.2, 5.8, 5.9 and 6.3.2
h)	Need drip edge at cladding base	Remedial work to bottom of plaster required	5.7 and 6.3.1

<b>NTF item</b>	<b>Summarised requirement</b>	<b>Summarised conclusion</b>	<b>For discussion refer paragraphs:</b>
<b>2.3</b>	<b>Not to accepted trade practice (continued)</b>		
i)	Numerous horizontal surfaces	Not applicable (front alterations)	
j)	No window head flashings in weatherboard claddings	Remedial work required	5.7 and 6.3.1
<b>2.4</b>	<b>Drainage and ventilation</b>		
	Inadequate drainage and ventilation	Adequate in circumstances	6.3.4
<b>3.0</b>	<b>Changes to building consent</b>		
a)	Bathroom layout changed	TA and applicants to resolve	11.4
b)	Post not installed	No apparent problems	5.9, 6.3.4 and 11.4
<b>4.0</b>	<b>Other building related issues</b>		
a)	Roof membrane deteriorating	Generally adequate if maintained	5.9 and 5.10
b)	No spreader to lower roof Insufficient downpipes	Not required for membrane roof Adequate in circumstances	5.9 and 9.2 9.3
d)	Smoke detectors	Recommended	9.4
<b>5.0</b>	<b>Durability issues</b>		
	Concerned re times measured from CCC issue	Amend to date from completion	5.10 10.7 and 12.2

## Matter 1: The cladding

### 8. Discussion

- 8.1 I consider the expert's report establishes that the current performance of the solid plaster cladding is not adequate because it is likely to be allowing water penetration into the building in one area at present. Consequently, I am satisfied that the extension does not comply with clause E2 of the Building Code.
- 8.2 In addition, the building work is also required to comply with the durability requirements of clause B2. Clause B2 requires that a building continues to satisfy all the objectives of the Building Code throughout its effective life, and that includes the requirement for the extension to remain weathertight. Because the cladding faults on the extension are likely to allow the ingress of moisture in the future, the building work does not comply with the durability requirements of clause B2.
- 8.3 Because the faults identified with the cladding systems occur in discrete areas, I am able to conclude that satisfactory rectification of the items outlined in paragraph 6.3.1 will result in the extension being brought into compliance with clauses B2 and E2.

- 8.4 It is emphasized that each determination is conducted on a case-by-case basis. Accordingly, the fact that particular cladding systems have been established as being code compliant in relation to a particular building does not necessarily mean that the same cladding systems will be code compliant in another situation.
- 8.5 I note that the extension is in need of maintenance. Effective maintenance of claddings is important to ensure ongoing compliance with clauses B2 and E2 of the Building Code and is the responsibility of the building owner. The Department has previously described these maintenance requirements, including examples where the external wall framing of the building may not be treated to a level that will resist the onset of decay if it gets wet (for example, Determination 2007/60).

## **Matter 2: Other Building Code matters**

### **9. Discussion**

- 9.1 The notice to fix has identified a number of other building code matters. I note that these items were not identified at the time that the interim code compliance certificate was issued in 1996.
- 9.2 The roof membrane and the need for a spreader have been addressed by the expert's comments in paragraph 5.9, and I accept that the roof membrane and the lack of a spreader are acceptable in these circumstances.
- 9.3 With regard to the adequacy of the downpipes installed in the extension, I note that the single downpipe has provided sufficient drainage for a period of 12 years with no apparent problems during that time. I therefore consider that, in this particular case, the provision provided is adequate in the circumstances. In the event of blockage water would escape over the 10 to 15mm edge trim, the butyl upstand preventing water penetrating the main house walls.
- 9.4 Although not a requirement at the time of construction, I urge the applicants to install appropriate smoke detectors.

## **Matter 3: The durability considerations**

### **10. Discussion**

- 10.1 The territorial authority has concerns about the durability, and hence the compliance with the building code, of certain elements of the extension taking into consideration the completion of the building work in 1996.
- 10.2 The relevant provision of clause B2 of the Building Code requires that building elements must, with only normal maintenance, continue to satisfy the performance requirements of the Building Code for certain periods ("durability periods") "from the time of issue of the applicable code compliance certificate" (clause B2.3.1).
- 10.3 These durability periods are:
- 5 years if the building elements are easy to access and replace, and failure of those elements would be easily detected during the normal use of the building

- 15 years if building elements are moderately difficult to access or replace, or failure of those elements would go undetected during normal use of the building, but would be easily detected during normal maintenance
  - the life of the building, being not less than 50 years, if the building elements provide structural stability to the building, or are difficult to access or replace, or failure of those elements would go undetected during both normal use and maintenance.
- 10.4 The 12-year delay between the substantial completion of the extension and the applicants' request for a code compliance certificate raises the issue of when all the elements of the extension complied with clause B2 at the time of completion. I have not been provided with any evidence that the territorial authority did not accept that those elements complied with clause B2 when the extension was inspected in 1996.
- 10.5 It is not disputed, and I am therefore satisfied, that all the building elements in the extension, apart from those matters that are to be rectified, complied with Clause B2 on 16 November 1996. This date has been agreed between the parties, refer paragraph 4.7.
- 10.6 In order to address these durability issues, I sought some clarification of general legal advice about waivers and modifications. I have now received that clarification and the legal framework and procedures based on this clarification are described in previous determinations (for example, Determination 2006/85) and are used to evaluate the durability issues raised in this determination.
- 10.7 I continue to hold that view, and therefore conclude that:
- (a) the territorial authority has the power to grant an appropriate modification of clause B2 in respect of the building elements
  - (b) it is reasonable to grant such a modification, with appropriate notification, because in practical terms the building is no different from what it would have been if a code compliance certificate for the extension had been issued in 1996.
- 10.8 I strongly recommend that the territorial authority record this determination, and any modifications resulting from it, on the property file and also on any LIM issued concerning this property.

## **11. What is to be done now?**

- 11.1 I note that the territorial authority has issued a notice to fix. Under the Act, a notice to fix can require the owner to bring the house into compliance with the Building Code. The Building Industry Authority has found in a previous Determination 2000/1 that a Notice to Rectify (the equivalent to a notice to fix under the Building Act 1991) cannot specify how that compliance can be achieved. I concur with that view.
- 11.2 The territorial authority should now withdraw the notice to fix and issue a new notice that requires the owners to bring the extension into compliance with the Building Code, restricted to the defects listed in paragraphs 6.3.1 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. It is not for me to decide directly how the defects are to be remedied and the extension brought to compliance with the Building Code. That is a matter for the owners to propose and for the territorial authority to accept or reject.

- 11.3 I suggest that the parties adopt the following process to meet the requirements of paragraph 11.2. Initially, the territorial authority should issue the new notice to fix. The owners should then produce a response to this in the form of a detailed proposal (based on the results of testing as outlined in paragraph 6.3.3), 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.
- 11.4 I note that the territorial authority has identified several changes from the approved building consent. I also note that these changes appear to have been accepted by the territorial authority during construction of the extension and covered within the 1996 interim code compliance certificate and that, with regard to the omission of the interior post, the expert has noted no apparent problems related to the change (refer paragraphs 5.9 and 6.3.4). I therefore consider that appropriate documentation of these changes is best left to the applicants and the territorial authority to resolve.

## 12. The decision

- 12.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the wall and roof claddings do not comply with clauses E2 and B2 of the Building Code, and accordingly confirm the territorial authority's decision to refuse to issue a code compliance certificate.
- 12.2 I also determine that:
- (a) all the building elements installed in the extension, apart from the items that are to be rectified, complied with clause B2 on 16 November 1996.
  - (b) the building consent is modified as follows:

The building consent is subject to a modification to the Building Code to the effect that, clause B2.3.1 applies from 16 November 1996 instead of from the time of issue of the code compliance certificate for all building elements, provided that the modification does not apply to those elements of the building extension which have been altered or modified as set out in Determination 2008/27.
  - (c) following the modification set out in (b) above, the territorial authority is to issue a code compliance certificate in respect of the building consent as amended.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 29 April 2008.

John Gardiner  
**Manager Determinations**