MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HIKINA WHAKATUTUKI

Determination 2015/008

Regarding the refusal to issue a code compliance certificate for 18-year-old additions and alterations to a house at 7 Farrington Road, Christchurch

1. The matter to be determined

1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004[1] ("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 building owners, Dr D & G Jellyman ("the applicants")
- Christchurch City Council ("the authority"), carrying out its duties and functions as a territorial authority or a building consent authority.

1.3 This determination arises from the decision of the authority to refuse to issue a code compliance certificate for the additions and alterations ("the alterations") because it was not satisfied that the building work complied with certain clauses of the Building Code[2] (Schedule 1, Building Regulations 1992). The authority's concerns primarily relate to the weathertightness of the wall cladding.

1.4 The matter to be determined[3] is therefore whether the authority correctly exercised its powers when it refused to issue a code compliance certificate for the house. In making this decision I must consider the grounds on which the authority made its decision, and whether the external building envelope of the alterations complies with Clause B2 Durability and Clause E2 External Moisture of the Building Code that was in force at the time the building consent was issued. The building envelope includes the components of the systems (such as the new wall claddings, windows, roofing

[1] The Building Act, Building Code, compliance documents, past determinations and guidance documents issued by the Ministry are all available at www.dbh.govt.nz or by contacting the Ministry on 0800 242 243.
[2] In this determination, unless otherwise stated, references to sections are to sections of the respective Building Acts and references to clauses are to clauses of the Building Code.
[3] Under sections 177(1)(b) and 177(2)(d) of the Act

and decks), as well as the way the components have been installed and work together.

1.5 I have not considered any other building elements or other clauses of the Building Code.

1.6 In making my decision, I have considered the submissions of the parties, the report of the expert commissioned by the Ministry to advise on this dispute ("the expert"), and the other evidence in this matter.

2. The building work

2.1 The house was originally built in 1965. It was a single storey construction with piled floor and concrete foundation walls, timber framed walls with stone brick wall cladding, aluminium joinery and profiled metal roof cladding. The house is situated on a flat site, and I have assumed it is located in a low wind zone for the purposes of NZS 3604[4].

2.2 The alterations carried out in 1996 included the addition of a timber framed upper floor, with the ground floor layout modified and extended slightly on the south-west elevation to accommodate a stairwell, and a roughcast plaster finish added to the external walls on the lower level. The light timber framed construction includes particle board flooring and textured flush-jointed fibre-cement cladding directly fixed to the framing. Face-fixed exterior joinery is comprised of powdercoated double glazed aluminium windows and doors. Interior partitions are lightweight timber framed with plasterboard linings.

2.3 There is an enclosed deck is on the northwest elevation. The timber framed balustrade has a flat timber capping and top-fixed metal handrail, and the cladding matches the house. The deck is waterproofed with a liquid applied glass fibre reinforced membrane.

2.4 The roof is pitched with profiled metal sheeting and projecting roof eaves of up to 600mm, including PVC gutters, extending to the majority of the building perimeter.

2.5 The house is moderately complex in plan and form and is assessed as having a medium weathertightness risk.

3. Background

3.1 On 22 April 1996 the authority issued building consent No. 96002415 under the Building Act 1991 ("the former Act") for the alterations; a condition on the consent required a certificate be provided from the licensed applicator of the texture coating system.

3.2 Foundation, framing and pre-line inspections were undertaken by the authority in May and June 1996. A site inspection on 27 August 1997 stated that the work appeared complete and that a final inspection should be booked in.

3.3 On 8 December 2000, some three years later, the authority issued a further notice requesting a final inspection be arranged and requested a certificate be provided from the licenced applicator for the textured coating finish.

3.4 A further inspection was carried out on 8 February 2001, with the authority noting that a handrail was required to the top section of the stairway and restating that a certificate was required from the applicator of the textured coating. The authority

[4] New Zealand Standard NZS 3604:1999 Timber Framed Buildings

issued a further notice on 8 August 2001 asking the applicants to notify if the handrail and certificate requirements had been completed, and another notice was sent on 27 July 2004.

3.5 On 17 February 2005 the applicants wrote to the authority advising that the upstairs handrail had been attached and the applicants provided a copy of the required certificate. The applicants asked if a time needed to be made to inspect the handrail.

3.6 The authority replied on 25 February 2005, advising that 'due to the age of this project' the authority was unable to issue a code compliance certificate. The authority set out its reasons as follows:

> The [authority] is unable to be assured that the building envelope will comply with the building code clause B2 Durability requirements. The materials have been in service for approximately nine years and the code requires that at the time of signing the Code Compliance Certificate the roofing and cladding will be durable for a further fifteen years.

3.7 The applicants responded on 21 March 2005, explaining that the required certificate had been sent to the authority in 2001 but apparently wasn't received by the correct person, and the handrail wasn't previously installed as there was a wooden cap handrail on the other side of the stairwell. The applicants were frustrated that having installed the handrail, they had then been declined on the cladding. They raised a number of questions related to guaranteeing the cladding substrate and decorative finish and requested a copy of the regulation pertaining to the decision. The applicants followed up with a further letter dated 28 March 2005 requesting confirmation that the letter had been received and was being considered.

3.8 In an undated email, the authority advised that it had declined to issue the code compliance certificate 'because the project does not comply with the building code'. The authority also stated that:

> If the building work had been completed within the timeframe of the Building Act 1991 a [code compliance certificate] may have been issued; however it is now nine years since the consent was issued.
>
> The paint surface is keeping the cladding in compliance with the building code.
>
> Under the BA 1991 Section 43(6) the [authority] has to consider on reasonable grounds, for each building consent, if the code compliance certificate can be issued.

The authority recommended the applicants apply for a determination if they disagreed with the decision.

3.9 The applicants replied by email on 2 June 2005 to clarify their understanding of the issue. They queried the comment regarding the paint surface keeping the cladding in compliance with the Building Code and questioned the reasons why a code compliance certificate could not be issued.

3.10 The authority briefly responded by email on 2 June 2005, stating that the code compliance certificate could not have been issued until the handrail was installed, and that the issue could have been resolved by providing another copy of the applicator's certificate at the time.

3.11 The matter remained unresolved, and was raised again in 2014 when the applicants sought to sell the property. It appears that in the meantime some minor repairs to the cladding were carried out in 2014 to repair damage from a series of earthquakes.

3.12 The authority confirmed by email on 22 July 2014 to the Ministry and applicants that a copy of the application for determination had been received. The authority advised

that it may be possible to resolve this issue without requiring the determination and that the matter would be investigated further when the original file was scanned.

3.13 The Ministry received the application for a determination on 23 July 2014.

3.14 The applicants wrote to the authority on 29 July 2014, commenting on the misunderstandings and miscommunications on both sides and provided a timeline of events. The applicants referred to an email dated 28 July 2014 from the authority (email not provided) stating that:

> The [authority] could issue a code compliance certificate (CCC), even at this late stage, if we had reasonable grounds to consider that the building work complied with the building code of the day.

3.15 The applicants questioned why the provision of the handrail and the required certificate did not provide this compliance. The applicants also referred to the authority's advice that a building report could be provided by a weathertightness expert verifying that the cladding would continue to comply. The applicants advised that they had contacted a number of building inspectors who stated they were not prepared to provide an assurance that the cladding could be guaranteed for a further 15 years.

3.16 In an email to the applicants on 4 August 2014, the authority set out the relevant clauses of the Building Code and stated that in order for a code compliance certificate to be issued the authority would need to be satisfied on reasonable grounds that the alterations complied at this time with the Building Code that was in effect at the time the consent was issued. The authority referred to a durability modification, but noted that 'we would need to record good decisions for this so the durability period would still need to be reasonable.' The authority also noted that its knowledge of construction detail and weathertightness failure mechanisms meant that it would require evidence of critical construction details such as flashings and joints. The authority suggested that the applicants continue with the application for a determination.

4. The submissions

4.1 In a covering letter to the application dated 16 July 2014 the applicants set out the matter in dispute between the parties and provided copies of the correspondence between the parties along with invoices for maintenance work and photographs of the installed handrails.

4.2 The applicants submitted the following:

- The applicants believed the builder had taken care of providing a certificate from the applicator in 1996. The applicants received the certificate from the applicator in 2001 and assumed that the authority had also received a copy. The handrail was purchased but not installed. Subsequent to the inspection on 8 August 2001 the applicants installed the handrail and sent a copy of the applicator's certificate to the authority with a rates notice and assumed the matter was resolved.
- The applicants discovered in 2004 that a code compliance certificate had not been issued and wrote to the authority requesting its issue. (See also paragraph 3.6 regarding the refusal). They queried the comment about the paint surface keeping the cladding in compliance after nine years, saying that it should certainly be compliant now, having been repainted in 2014.

- The applicants were recently advised by the authority that the best option was to have a building report undertaken by an inspection company. Having contacted a company, they were advised that the two outstanding issues were too minor to require a building report.

4.3 The authority provided copies of relevant documentation from the property files.

4.4 A draft determination was issued to the parties for comment on 2 November 2014.

4.5 In a response received on 27 January 2015 the authority accepted the draft without further comment.

4.6 In a submission received on 29 January 2015, the applicants noted the following:

- The original cladding was stone brick; the roughcast plaster was added to match the cladding used in the upper floor.
- The reasons for refusal given by the authority were unclear; had the applicants been aware of the issues, repairs could have been undertaken prior to repainting the addition.
- Given that the reasons given by the authority for refusing to issue the code compliance certificate were incorrect it seems the authority 'has a measure of culpability'.
- Is repair work required to meet the current Building Code or the code that applied 'at the time of construction'?

4.7 In response to the applicant's submission regarding remedies that may be available to them, I suggest the applicants seek their own legal advice on the matter. I have addressed the applicants question regarding the Building Code that is applicable to the remedial work in paragraphs 7.3 to 7.6.

5. The expert's report

5.1 As described in paragraph 1.6, I engaged an expert, who is a registered building surveyor, to assist me. The expert carried out a site visit on 26 August 2014 and produced a report that was completed on 5 September 2014. Copies of this report were sent to the parties on 12 September 2014.

5.2 The report described the house and extension, the risk factors present for weathertightness, and some of the background to the dispute. The expert observed that the building was generally well presented and maintained but considered that there were various 'workmanship issues' such as the cladding 'being left unsealed behind gutters, and gaps left through the cladding at joinery perimeters, horizontal construction joints and apron flashing junctions'.

5.3 The expert carried out a series of invasive moisture tests and found elevated readings at eight external framing locations ranging from 21% to 36%. Destructive testing of the cladding was undertaken in one location to expose the external framing and an elevated reading of 47% was recorded in the external framing. Plaster texture coating was also removed in four locations to expose cladding junctions.

(I note here that moisture levels above 18% or which vary significantly from the equilibrium levels generally indicate that external moisture is entering the structure and investigation is needed. Readings over 40% indicate that the timber is saturated and decay will be inevitable over time.)

5.4 In respect of the external envelope the expert made the following observations (moisture readings and locations in brackets):

The stairwell

- (20% - timber framing below the end of the gutter at the west end of the stairwell). The fibre-cement sheet was not texture coated behind the end of the gutter and there was an unsealed slot in the cladding.
- (36% - timber framing below the end of the gutter at the south end of the stairwell). The PVC gutter was installed prior to texture coating the adjacent cladding. There was a split in the apron flashing over the end of the gutter allowing water to run onto the face of the fibre-cement sheet which is unsealed behind the end of the gutter.
- (20% - timber framing below the horizontal PVC jointer at the stairwell west external corner, and 20% - below the corresponding junction on the south corner of the stairwell). The flange of the PVC jointer was cut back from the west corner, leaving a 6mm gap through the cladding. A vertical metal angle is fixed over the external corner, but a gap has been left above and below the PVC jointer. The cladding sheet was broken below the jointer, leaving a gap behind the texture coat. The external angle junction of the PVC jointer was unsealed. The cladding junctions above and below the external corner were generally poorly sealed, allowing water entry.
- (25% - timber framing below the stairwell left hand window jamb). The drill shavings were mushy but not discoloured.
- (20% - timber framing below the junction of the PVC horizontal jointer and the stairwell south window jamb). Removal of the texture coating at the window jamb junction indicated that sealant was installed but a gap was left next to the window flange and the jointer was cut 6mm short. The cladding sheet was deteriorating. The bottom of the stairwell window was prised away from cladding. No sealant was found at the window/cladding junction. No foam strip or sealant was visible behind the window flange. It complied with the manufacturer's instructions at the time, though the instructions were changed two years later.
- (47% - timber sill plate below the stairwell window). The fibre-cement sheet was wet and crumbling. No sill tray flashings were installed though this was advised in the manufacturer's instructions as giving 'good long-term protection'. The sill plate was discoloured and appeared to be decayed. The timber is likely to be treated; given the high moisture levels and poor condition of the cladding sheet, untreated framing would typically be black and crumbling. There was a vertical sheet junction installed 50mm from the window jamb junction; this complied with the manufacturer's instructions at the time, though the instructions were changed two years later. Earthquake damage to the vertical sheet junction below the stairwell window was recently repaired prior to the cladding being repainted.

The deck

- Lack of flashing turnout at the end of the apron flashing junction with untextured cladding substrate at the north end of the deck. (14% - in soffit framing below this junction)
- (26% - balustrade top plate at the west corner of the deck.) The timber shavings were soft and mushy but not highly decayed, indicating that the timber is probably treated. The handrail is top-fixed into a flat timber balustrade capping with a vulnerable mitred junction. The capping has been recently repainted and the mitre junction is well sealed. There was a gap between the timber capping and the balustrade cladding. Water running off timber capping can be drawn into the junction by capillary action.
- (26% - balustrade top plate at the north corner of the deck.) The timber shavings were soft and mushy but not highly decayed, indicating that the timber is probably treated.
- Vulnerable junctions between the timber balustrade cappings and the cladding at the house junctions. Some protection was provided by the overhead eaves (10% - timber framing below both junctions).
- There is a single drain outlet to the deck approximately 60mm wide. No overflow is installed, risking interior flooding if the outlet gets blocked. The membrane is generally in good condition. There is a slight ridge across the middle of the deck and the membrane appears to have been repainted in this area. Deck slopes of 0.4° and 0.9° were measured falling towards the outlet. A slight reverse slope of 0.2° measured over the ridged area indicated the deck probably ponds when wet.

Cladding generally

- Unsealed butt junction in horizontal jointer on north east elevation. (12% - timber framing below the junction)
- (21% in the master bedroom trimming stud on the south east elevation) The bottom of the master bedroom window was prised away from the cladding. A tiny fillet of sealant was found at the window/cladding junction. No foam strip or sealant was visible behind the window flange.
- No other elevated moisture readings were found below windows, many of which are protected by either 300 or 600mm wide eaves. The lack of adequate jamb seals found at the window cladding junctions on the southwest stairwell and southeast bedroom indicate that all window cladding junctions are at risk.

5.5 The expert summarised the deficiencies affecting compliance with the Building Code as follows:

- Inadequate window joinery perimeter seals
- Poorly sealed horizontal construction joints
- Poorly sealed apron flashing junctions
- Flat timber balustrade cappings
- Minimal deck falls and lack of overflow

6. Discussion

6.1 Establishment of compliance with the Building Code

6.1.1 I note that the building consent was issued under the former Act, and accordingly the transitional provisions of the Act apply when considering the issue of a code compliance certificate for work completed under that consent. Section 436(3)(b)(i) of the transitional provisions requires the authority to issue a code compliance certificate if it 'is satisfied that the building work concerned complies with the building code that applied at the time the building consent was granted'.

6.1.2 I consider the expert's report clearly establishes that the current performance of the building envelope of the alterations is not adequate because there is evidence of moisture penetration and of probable decay. Consequently, I am satisfied that the house does not comply with Clause E2 of the Building Code.

6.1.3 No laboratory testing was undertaken to confirm the presence of preservative treatment or decay in the timber framing. The expert observed an area that appeared to be decayed and noted that the timber was likely to be treated. I accept the expert's assessment.

6.1.4 In addition to Clause E2, the building work is 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; the cladding systems are required to satisfy Clause E2 for a minimum of 15 years, however the expected life of the framing is a minimum of 50 years. Careful attention to the performance of the external envelope is needed to ensure that it protects the underlying structure for the minimum required life of 50 years. Because there is probably already decay present and the cladding faults are likely to continue to allow the ingress of moisture, I consider the alterations do not comply with Clause B2.

6.1.5 Given the extent of non-compliance with Clause E2 and the expert's limited investigation, the building's current and ongoing compliance with Clause B1 must also be considered in any further investigation. The rectification of the alterations will require careful investigation into the causes, extent, level and significance of moisture ingress and decay, and any required timber replacement in the framing. I note here that the cladding materials in the house are already 18-years-old, which is beyond the 15-year minimum effective life required for these elements.

6.1.6 As I have found that the house does not comply with the requirements of Clauses B2 and E2, I am of the opinion that the authority was correct in its decision to refuse to issue the code compliance certificate.

6.2 Durability concerns

6.2.1 I note that the delay in seeking a code compliance certificate also raises concerns regarding compliance with Clause B2.3.1, taking into consideration the age of the building work.

6.2.2 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).

6.2.3 I continue to hold the views expressed in previous relevant determinations; that an authority, following the appropriate application from the owner, has the power to grant a modification to the Building Code requirements of an existing building

consent without a determination (refer also to the article titled 'Modification of durability periods' in Codewords Issue 39, August 2009[5]). I am of the view that a modification of this requirement can be granted if the authority can be satisfied that the building complied with the durability requirements at a date earlier than the date of issue of the code compliance certificate, that is agreed to by the parties and that, if there are matters that are required to be fixed, they are discrete in nature.

6.2.4 However, because of the extent of further investigation required for the alterations to this house and the potential impact of such an investigation on the external envelope, I am not satisfied that there is sufficient information on which to make a decision about this matter at this time and I leave it to the parties to resolve in due course.

6.2.5 I strongly suggest that the authority record this determination and any modifications resulting from it, on the property file and also on any LIM issued concerning this property.

6.3 Reasons for refusing issue of code compliance certificate

6.3.1 The authority advised in 2005 that due to the age of the project, it was unable to be assured that the envelope complied with B2 Durability requirements, citing that at the time of signing the code compliance certificate the roofing and cladding had to be durable for a further fifteen years (refer paragraph 3.6).

6.3.2 The authority further advised that 'if the building work had been completed within the timeframe of the Building Act 1991 a [code compliance certificate] may have been issued', and 'the paint surface is keeping the cladding in compliance with the building code' (refer paragraph 3.8).

6.3.3 The authority's assertion that the cladding had to be durable for a further fifteen years is incorrect; as explained in paragraph 6.2.3 the authority has the power to modify the durability period. The authority's further assertion that 'the paint surface is keeping the cladding in compliance with the building code' is also incorrect as the authority had no evidence on which to base this assertion.

7. What happens next?

7.1 I note that the authority has not issued a notice to fix but has provided written notice of its refusal to issue a code compliance certificate. It is for the authority to consider whether a notice to fix is warranted in this case[6].

7.2 In order to obtain a code compliance certificate, or in response to a notice to fix if one is issued, the applicants will need to undertake remedial work to bring the alterations into compliance with the Building Code.

7.3 In response to the draft determination, the applicants have queried whether the remedial work is required to meet the current Building Code or the Building Code as it applied at the time the building consent was granted.

7.4 As noted in paragraph 6.1.1, the building consent was issued under the former Act and to issue the code compliance certificate the authority must be satisfied that the building, as a whole, complies with the Building Code that applied at the time the consent was granted.

[5] Codewords articles are published by the Ministry and are available on the Ministry's website at www.dbh.govt.nz/codewords-index
[6] Refer Determinations 2013/015 2014/062 for further discussion on notices to fix

7.5 However, section 17 of the Act requires all building work to comply with the Building Code (that is any remedial building work, any further alterations, or any new building work undertaken must comply with the current Building Code) regardless of whether a building consent is required. The remedial work therefore is required to comply with the "current" Building Code, that is the Building Code current at the time the remedial work is consented (which could be by way of an amendment to the existing building consent in this case or by way of a new building consent if the work is separate from the building work covered by the existing consent) or if no consent is required the Building Code current at the time the remedial work is carried out.

7.6 There have been no significant changes to the performance requirements of Clause E2 of the Building Code since the consent was issued, however there is now a better understanding of how compliance is achieved and this is reflected in the Acceptable Solution. Confusion often arises because of the mistaken belief that compliance must be achieved by using an Acceptable Solution, such as E2/AS1 in this instance. The Acceptable Solution E2/AS1 has been substantially amended since the consent in this case was issued. E2/AS1 now applies to a much wider range of types of cladding and provides much more detailed solutions. However, it is not mandatory to use an Acceptable Solution such as E2/AS1; it is one way but not the only way of achieving compliance with the Building Code. If an Acceptable Solution is not used, the compliance method is called an alternative solution. The Ministry's website contains guidance on the use of alternative solutions[7].

7.7 Prior to carrying out remedial work the applicants should submit to the authority a detailed proposal, produced in conjunction with a competent and suitably experienced person, in respect of the items requiring remedial work as set out in this determination and referring to any further defects that might be discovered in the course of investigation and rectification.

7.8 Any outstanding items of disagreement can then be referred to the Chief Executive for a further binding determination.

8. The decision

8.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the authority incorrectly used its powers in its refusal to issue a code compliance certificate on the grounds given. However, I determine that the alterations do not comply with the Building Code and accordingly I confirm the authority's decision to refuse to issue a code compliance certificate.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 2 March 2015.

John Gardiner
Manager Determinations and Assurance

[7] http://www.dbh.govt.nz/UserFiles/File/Publications/Building/Building-Act/alternative-solutions.pdf