MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HIKINA WHAKATUTUKI

Determination 2016/051

Regarding the refusal to issue a code compliance certificate for a 6-year-old house at 4 Korotaha Terrace, Rothesay Bay, Auckland

Summary

This determination is concerned with the compliance of a 6-year-old house. The determination considers the authority's reasons for refusing to issue a code compliance certificate, and whether information provided in a building surveyor's report was adequate to establish that the building work complies with the requirements of the Building Code.

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 owner of the house, the Basra Family Trust ("the applicant"), acting through an agent
- Auckland Council ("the authority")[2], carrying out its duties as a territorial authority or building consent authority.

1.3 This determination arises from the decision of the authority to refuse to issue a code compliance certificate for the 6-year-old house because it was not satisfied that the building work complies with the requirements of the building consent documents and certain clauses[3] of the Building Code (First Schedule, Building Regulations 1992). The authority's concerns about the compliance of the building work relate in part to

[1] The Building Act, Building Code, compliance documents, past determinations and guidance documents issued by the Ministry are all available at www.building.govt.nz or by contacting the Ministry on 0800 242 243.
[2] The building consent was issued by North Shore City Council, which later transitioned into Auckland Council. The term "the authority" is used for both.
[3] Unless otherwise stated, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

the effects of any moisture ingress prior to remedial work being undertaken, along with the compliance of specific items as described in the notice issued under section 95A (refer paragraph 3.4.2).

1.4 The matter to be determined[4] is therefore the authority's exercise of its powers of decision in refusing to issue the code compliance certificate due to the concerns outlined in the notice issued under section 95A. In deciding this matter I must consider whether there is sufficient evidence of compliance of the items identified in the notice.

1.5 In making my decision, I have considered the submissions of the parties, including the report of the building surveyor engaged by the applicant, and the other evidence in this matter.

2. The building work

2.1 The building work consists of a house constructed over three levels on a sloping site: the site slopes northwest to southeast. The basement level contains a family room, study, and bedroom; Level 1 contains a garage, three bedrooms, and toilet facilities; Level 2 contains living, dining, kitchen and a fully-enclosed deck. The entry is between Levels 1 and 2.

2.2 The plans call for H3.1 framing to enclosed balconies, H1.2 to external wall framing, and H3.1-treated plywood. Wall framing is generally 100x50mm with timber beams supporting floors and roof with some steel members, and concrete block walls acting as retaining walls to the basement level.

2.3 The external cladding is a mix of plastered brick veneer and timber weatherboard, both installed on a cavity. The weatherboard is a standard bevel back profile taken from NZS 3617[5].

2.4 The flat roofs (with a design gradient of 1.5^{o}) are clad with butyl rubber over plywood, with internal gutters and parapets. The Level 2 deck has a floating composite floor with no fixings penetrating the deck membrane. The deck balustrade is glazed on two sides, with a solid-framed weatherboard cladding to one side.

2.5 There is a small glass canopy over the main entry between Levels 1 and 2, and a similar glass canopy over the doors to the Level 2 deck. The canopies were consented as cantilevered timber structures clad with butyl rubber, but glass canopies supported by a steel-framed tension structure have been installed in their place.

2.6 There is a butyl-lined planter trough to the exterior wall beside the Level 1 entry door. The trough backs onto a concrete blockwork wall that forms the internal stairs; the inside face of the wall has linings on H3.1 timber strapping.

3. The background

3.1 The authority issued building consent No. BB1232618 on 24 November 2008 for the construction of two dwellings at the site. This determination considers only one dwelling constructed under that consent, being the dwelling identified in the plans as located on Lot 1.

[4] Under sections 177(1)(b) and 177(2)(d) of the Act
[5] New Zealand Standard NZS 3617: 1979 Specification for profiles of weatherboards, fascia boards, and flooring

3.2 Construction was carried out in 2009/2010. The authority undertook various inspections during construction, including final inspections on 10 March and 28 April 2010; these inspections failed due to concerns largely regarding roof and deck membrane installation, and parapet and saddle flashings. The field memorandum dated 28 April 2010 noted:

> 1 Parapet flashings to top roof can be temporary (sic) applied.
>
> 2 All saddle flashing are required to be sighted by [the authority]. Weatherboards to be removed to allow inspection.
>
> Confirmation of report to roof and deck membrane to be supplied to [the authority] for approval.

3.3 It is unclear whether the items identified by the authority in 2010 were addressed as a result of the inspection, but it appears no application was made for a code compliance certificate when construction was completed, and no further inspections were carried out until 2015.

3.4 The 2015 inspections and refusal to issue the code compliance certificate

3.4.1 From the sequence of events it appears that the applicant applied to the authority for a code compliance certificate at some time in 2015. The authority carried out an inspection on 16 April 2015, identifying a number of items as requiring rectification.

3.4.2 On 20 April 2015, the authority provided notice under section 95A (the "95A notice") saying that it was refusing to issue a code compliance certificate. The authority listed 7 "items identified", 10 "items to be rectified" (refer Table 1, paragraph 3.5.4), along with outstanding documentation required. The authority recommended the applicant engage a building surveyor to assist in resolving the outstanding issues.

3.5 The building surveyor's report

3.5.1 It is unclear to me at what stage work was carried out in relation to the items referred to in the 95A notice, however, the applicant subsequently engaged a building surveyor to carry out an inspection and provide comment on the items listed in the notice.

3.5.2 The building surveyor carried out inspections on 16 April, 1 & 7 September, 19 October, and 5 November 2015.

3.5.3 The building surveyor provided comment on those items in a letter dated 15 February 2016 (refer Table 1). In a covering email to the authority, the building surveyor noted that 'the majority was done before I went to site and the only item I saw was the flashing which I asked to be removed'.

3.5.4 An application for a minor variation to the approved plans was applied for in respect of the change of cladding from a proprietary fibre-cement weatherboard to timber bevel back weatherboard. Attached to the application was a set of elevations indicating the walls where the timber pine weatherboards had been installed, and a Producer Statement PS1 – Design from a chartered professional engineer dated 22 December 2015 for the glass canopy to the Level 2 deck.

Table 1

Items listed in 95A notice		Surveyor's comments (in summary)
Items identified (in summary)		
1	Brick veneer weep holes not evident.	Weep holes have been cut (photo provided).
2	Glass canopies • Installed otherwise than in accordance with the approved plans. • EDPM washers/weather seals to support fixings not evident. • Weatherboard behind support bracket at the L2 deck appears to have split during installation. • Silicone used to secure the glass to metal support. • Requires the following to be submitted: minor variation, PS1 from engineer, design detail from designer.	An EPDM boot has been fitted over the metal support rods (Photo provided). PS1 and design details provided.
3	Evidence of moisture ingress at the internal stairwell landing.	Previous investigation by a consultant had been carried out that established water ingress was from poor weatherproofing and no outlet from the planter trough above. Trough was emptied and re-waterproofed, and an outlet pipe installed. No signs of moisture ingress found in surveyor's two 2015 inspections. Conclusion is that repairs to trough have stopped the ingress. Trough now filled with potted plants rather than soil.
4	Butyl rubber lap joins to the roof membrane were identified as lifting in areas as were some of the associated gutter/outlet areas. Further assessment required of the membrane beneath the floating timber deck.	Roof membrane joints had been re-sealed. Unable to inspect membrane under floating deck, but no moisture ingress found in rooms below.
5	Change in cladding – minor variation to be submitted for approval.	Application for minor variation provided.
6	Completed saddle flashings – unable to ascertain how these have been fitted.	A sample flashing was opened up. Under the parapet cap flashing a saddle flashing was visible going behind the weatherboards. (Photos provided).
7	B1, B2, & E2 to be investigated further by suitably qualified individual (building surveyor).	Inspections carried out on 16 April, 1 & 7 September, 19 October and 5 November 2015. No further evidence of moisture ingress found.
	Items to be rectified	**Agents comment (refer paragraph 4.1)**
A	Barrier at front location.	Safety glass barrier had been removed, replacement installed to existing fittings.
B	Head flashing termination to be sealed and decorated (underside edge at end detail – gaps evident, 5-10mm).	Sealed
C	Internal corner flashings to be sealed at bottom edge finish detail. Gaps evident, vermin proofing issue.	Sealed
D	Pipe penetrations to be sealed. Electrical conduit at front elevation, 40mm waste at side elevation.	Sealed

E	Window restrictors to be fitted where climbing points have been identified.	2 missing stays installed
F	Internal handrail support bracket to be rectified.	Fixed
G	Vanity, shower to wall, w/c to wall, toilet water supply, all require silicon seals to be completed.	Completed
H	100mm storm water drainage requires re-fixings into position. Down pipe to be re-plumbed in s/w system.	New fixing installed
I	Cladding to window appears to require silicon seal. Gapping evident, rear elevation joinery x1 unit.	Seal installed
J	Smoke alarms to be completed.	1 missing alarm now installed

3.6 On 3 March 2016 the authority advised the surveyor that the surveyor's report had 'not been accepted' and noted that it was seeking further information regarding the repair of the planter trough and the role undertaken by the 'designer' in the remedial works (I take the reference to designer to mean the agent). The building surveyor responded that his understanding of the work to the planter trough was that it was 'just painted with extra tar and an overflow added'.

3.7 The authority confirmed in an email to the agent on 15 March 2016 that it did not accept the building surveyors report, noting that the remedial work to the planter trough had been carried out prior to the involvement of the building surveyor.

3.8 In an email to the authority on 22 April 2016 the agent set out his view that the authority's refusal was too general in terms of the code clauses referenced, the authority's reasons were not grounds for refusing to issue a code compliance certificate, and that the issues that had been identified in the 95A notice had all been addressed. The agent provided comment on some of the items as follows (in summary):

- The remedial work to the planter trough was carried out prior to the 95A notice; the interior works were deliberately left open for inspection before they were covered up.
- After the 95A notice was received no subsurface works were carried out until a qualified building surveyor had been engaged. The surveyor inspected the subsurface before the works were covered up.

The agent requested the authority provide clarification on the reasons for refusing to issue the code compliance certificate.

3.9 By email on 16 May 2016 the authority outlined to the agent the reasons why the authority considered the report was not acceptable (in summary, with item numbers in brackets):

- Further investigation is required on the effect of the lack of weep holes (1).
- Confirmation required that the PS1 is for the Level 2 deck canopy in its entirety (2).
- The authority has concerns regarding the top fixing point of the design detail, and that the onsite installation may not be in accordance with the detail (2).

- Confirmation required of whether there were any ingress issues prior to the boots being installed (2).
- No report was received from the consultant regarding the moisture ingress issues, and no scope of works was approved for the remediation. Concerns regarding effect of E2 failure in respect of the effect of any moisture ingress on compliance with B1 and B2 (3).
- Clarification of the type and extent of investigation that was undertaken in relation to the roof and deck membranes is required (4).
- Details to be provided and 'manufactures (*sic*) specifications required for the weatherboard type' to support the amendment (5).
- The inspection of 2010 highlighted that all saddle flashings needed to be sighted by the authority. Investigation by the building surveyor of one saddle is insufficient (6).

The authority concluded by noting that further investigation was required, including of the remedial work carried out to date, for the authority to be satisfied that the building work was compliant and changes to the approved plans identified.

3.10 The Ministry received an application for a determination on 13 July 2016 and sought further information from the authority, which was received on 4 August 2016.

4. The submissions

4.1 In a covering letter to the application, the agent set out the background to the dispute and provided comment on items A to J listed in the 95A notice (see Table 1 paragraph 3.5.4), noting also that the documentation requested had been supplied. In addition the agent submitted:

- regarding silicone sealant used to fix the glass canopy – the glass is mechanically fixed at one end with silicone used for the remainder. 'Fixing method accepted as being widespread'
- regarding roof membrane joints – the product used had a 1mm strip on the edge where no glue had been factory applied; that strip was glued on site
- regarding saddle flashings – 'the building surveyor required some over flashings to be removed' and inspected and 'certified' these.

4.2 The agent provided copies of the following documents with the application for determination:

- A summary of the background.
- The building surveyor's letter of 15 February 2016.
- The section 95A notice dated 20 April 2016.
- Email correspondence between the parties.
- A table of the items listed in the 95A notice, and the agent's comment on the status of those items.

4.3 The agent also provided responses from the applicant on the concerns highlighted in the authority's email of 16 May 2016. The applicant raised the concern that the process in getting the issues resolved appears to be very much 'open ended' and the

applicant was seeking a definitive end. I have summarised the applicant's responses on the 95A notice items as follows (item numbers in brackets):

- There is no evidence of moisture ingress as a result of the weep holes having been plastered over (1).
- There is no evidence of moisture ingress as a result of the EPDM boots not being installed at the time of construction (2).
- The product used has a narrow strip of approximately 1mm that does not have factory adhesive applied and is usually left without adhesive. In this installation, the 1mm strip was bonded to the layer below. (4)
- The building surveyor required the over flashing be removed, he then inspected the under flashings. There is no evidence of water penetration in any locations where these flashings are (6).

4.4 In regards to the identified moisture ingress at the internal stairwell and the resulting remedial work (3) the applicant provided the following comment:

- The outlet in the base of the planter trough as constructed had become blocked; water ingress resulted through an electrical duct penetration at the top of the trough. Water had run down a block wall that had been strapped with H3 timber; no deterioration to the timber was evident. A small section of skirting and carpet had deteriorated, and this was replaced after the building surveyor's inspection.
- The whole planter trough had been plastered and waterproofed and a new drainage hole installed on the side at the base prior to inspection by the authority. Plastering was necessary to enclose the duct cable and slope the base to the new outlet.
- No further water ingress has occurred since the trough was remediated.

4.5 By email on 4 August 2016, the authority confirmed 'none of the issues raised in the 95A notice have been resolved and all remain at issue'. The authority provided copies of relevant correspondence relating to the outstanding items, along with a copy of the property file on a DVD.

4.6 The Ministry requested information from the agent on 9 August; being a copy of the PS1 for the Level 2 canopy, clarification of the covering over the Level 2 deck, the type of weatherboards installed, and the construction behind the planter trough. The agent responded to this on 10 August 2016.

4.7 A draft determination was issued to the parties for comment on 5 September 2016.

4.8 On 9 September 2016, the applicant accepted the draft without comment.

4.9 In a response received on 19 September 2016, the authority accepted the decision in the draft determination, but submitted the following:

- Interior works were not left open for the authority's inspection of 16 April 2015 (refer paragraph 3.8).
- The area immediately adjacent to the trough is a mixture of masonry block, brick veneer, and timber framing, located at a mid-floor junction. The authority is of the view that the reason for moisture ingress needs to be established.

- The authority does not consider the matters requiring attention are insignificant.
- The building consent was required to be amended to exclude 'all building work' that was completed without the authority first approving the work, either as a minor variation or as a consent amendment.

4.10 By email on 25 September 2016, the agent for the applicant:

- clarified that the interior works were left open for the building surveyor to inspect, on the understanding that the authority would not then need to inspect them
- described the construction adjacent to the trough, noting that 'the block work comes up to the top of the trough' and that this was evident in an attached photograph showing the blockwork protruding, as well as by the authority's pre-line inspection and the building surveyor's inspection
- restated that the reasons for the leak at the plant trough were clear (refer Table 1, item 3) and that those faults had been removed
- disputed the authority's requirement with regard to the amendment to the building consent.

5. Discussion

5.1 Under section 94 of the Act, when considering an application for a code compliance certificate the authority must be satisfied on reasonable grounds that the building work complies with the building consent.

5.2 A building consent is an approval granted by a building consent authority that the building work described in the plans and specifications will result in the construction of a building that complies with the Building Code, if that building work is carried out in accordance with the plans and specifications.

5.3 A building consent authority's responsibilities under the Act include checking that building work has been carried out in accordance with the building consent. The building consent will usually include a list of inspections (i.e. progress points at which the building work will be checked and components inspected).

5.4 In this case the authority's inspections in 2010 highlighted specific areas of concern regarding the roof and deck membranes and the saddle flashings (refer paragraph 3.2). There is no indication that these issues were addressed at that time.

5.5 Sometime after completion, the building experienced moisture ingress issues at one location, apparently caused by inadequate drainage of a planter trough. The applicant elected to have the remedial work to the trough carried out without involving the authority.

5.6 The authority carried out a further inspection some five years after completion, resulting in a number of items being identified by the authority that meant the authority considered it did not have reasonable grounds to be satisfied that the building work was compliant.

5.7 While a number of those items were subsequently addressed, I consider it reasonable for the authority to have sought relevant information on the consequential effects of the moisture ingress (item 3), or evidence that there had been no moisture ingress resulting from construction defects that had been identified (items 1, 2, 4 and 6).

5.8 The building surveyor reported that he undertook a number of inspections during 2015 and that he 'did not find any further evidence of moisture ingress'. I note however, the building surveyor did not indicate the type of investigation carried out[6]; it is unclear whether his comments are based only on a visual assessment, or involved the use of non-invasive tools such as a capacitance meter, or an invasive investigation.

5.9 Where an assessment is based on visual observations, it is important to identify the locations and building elements that were observed. Likewise, where moisture readings are obtained using either invasive or non-invasive means, it is important to clearly identify the location the readings were taken and their relationship to areas of high risk of moisture ingress. I consider the information provided to the authority was insufficient in respect of not adequately describing the extent and type of investigations undertaken, if any, in regards to the consequential effects of defects in the external building envelope or in support of compliant building elements; specifically:

- in relation to the saddle flashings
- the effects of the lack of weep holes on the drainage and ventilation and whether this has caused any undue dampness or damage to building elements such as timber framing
- the lack of weatherproofing to the canopy support rods and any effect on underlying building elements.

5.10 In regards to the saddle flashing, I am of the view that it is reasonable to accept the sample flashing opened up for inspection by the building surveyor to be representative of similar flashings installed. However, this should be supported with adequate information on the assessment of areas that would have been affected should the flashings not have been installed correctly.

5.11 Likewise, the statement that there were no signs of moisture ingress found in relation to the deck and roof membranes should have been supported with information about the assessment used to reach that view. However, the only matter in contention appears to stem from the laps to the butyl rubber roofing.

5.12 The installation instructions for the roof membrane used require 'seam tape' rather than adhesive to form lapped joints when the roof pitch is less than 5^{o} (the pitch here is 1.5^{o}). The use of the tape may well have led to a 'free edge' to the upper membrane that was not fully adhered to the lower membrane as suggested by the agent. It is reasonable to assume the same situation applies to the Level 2 deck covered by the floating composite floor. No other non-performance issues, in terms of Clause E2, have been raised in relation to the performance of the roof or the deck.

5.13 I consider adequate information has been given in regard to the remedial work to the planter trough. The trough is outside the building envelope and the building construction immediately adjacent the trough is durable and able to resist the ill effects from past leaks without the need for further investigation.

5.14 The agent has submitted that the items listed as A to J in the 95A notice have been rectified. Those items can be confirmed as completed satisfactorily by the authority.

[6] For more information on the types of assessments, see "Levels of Investigation – visual, non invasive, thermal imaging, invasive, destructive" http://www.buildingsurveyors.co.nz/faq/

5.15 I am of the view that the matters that require attention in order for the authority to make a new decision on whether to issue a code compliance certificate are not significant, and I offer the following suggestions to assist the parties in resolving the outstanding issues:

- The building surveyor to confirm the type and extent of assessment undertaken in relation to the outstanding matters (saddle flashings, weep holes, canopy support rods).
- The authority to reconsider the conclusions reached by the building surveyor on the basis of the assessment carried out.
- The use of silicone to fix one end of the glass canopy to the metal support to be confirmed as acceptable by the author of the PS1 or manufacturer, and update/annotate the design drawings if necessary.

5.16 The authority has also raised the matter of an amendment to the building consent being required with respect to the changes made to the work as consented: this work includes:

- the change of cladding from a proprietary fibre-cement weatherboard to timber bevel back weatherboard,
- the installation of glass canopies in place of the approved cantilevered timber structures, and
- the addition of the floating floor to the Level 2 deck.

I consider such changes are minor in nature, but are variations that should have been approved, either informally or formally, prior to the building work being carried out.

5.17 The records do not provide a clear indication that approval was sought for these changes prior to their construction – there are no notations on the inspection records concerning the changes, nor does it appear that the authority recorded the changes on the consent drawings[7]. However, I do not consider that the absence of information on the records indicates that the changes were not approved; they would have been readily apparent during inspections, and there is no record of the authority raising the changes as a concern until the issue of the section 95A notice some five years after the works completion. I am of the view in this case that the updating of the consent file and consent records is the appropriate means of recording the variations.

6. The decision

6.1 In accordance with section 188 of the Building Act 2004 I hereby determine that the authority correctly exercised its powers of decision in refusing to issue the code compliance certificate, and I confirm that decision.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 20 October 2016.

John Gardiner
Manager Determinations and Assurance

[7] See *Minor variations to building consents: Guidance on definition, assessment and granting*, available on the Ministry's website www.building.govt.nz