



Determination 2010/113

Refusal to issue a code compliance certificate for the re-cladding of a house at 54 Levley Lane, Katikati

1. The matters to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004¹ (“the Act”) made under due authorisation by me, John Gardiner, Manager Determinations, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicant is the owner I Gordon (“the applicant”) acting through the cladding manufacturer and installer, and the other party is the Western Bay of Plenty District Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.2 This determination arises from the decisions of the authority to refuse to issue a code compliance certificate and to issue a notice to fix for alterations to a house because it was not satisfied that the work complied with certain clauses² of the Building Code (1st Schedule, Building Regulations 1992), because the new wall cladding was not installed in accordance with the building consent. The authority’s concerns relate to the weathertightness of the window junctions.
- 1.3 The matter to be determined³ is therefore whether the authority was correct to refuse to issue a code compliance certificate. In making this decision, I must consider whether the altered window junctions comply with Clause B2 Durability and Clause E2 External Moisture of the Building Code to the extent required by the Act. The window junctions include the components (such as the uPVC weatherboards, the windows and the flashings), as well as the way the components have been installed and work together.
- 1.4 I have no evidence on any dispute relating to other aspects of the building work, and this determination is therefore limited to the junctions of the new cladding with the original windows. In making my decision, I have considered the submissions of the parties and the other evidence in this matter.

¹ The Building Act, Building Code, compliance documents, past determinations and guidance documents issued by the Department are all available at www.dbh.govt.nz or by contacting the Department on 0800 242 243.

² In this determination, unless otherwise stated, “sections” are sections of the Act and “clauses” are clauses of the Building Code.

³ Under sections 177(1)(b), 177(2)(d) and 177(2)(f) of the Act

2. The building work

2.1 The building work consists of the replacement of some of the weatherboard cladding to an existing two-storey 1970's house, which is situated on a level site in a high wind zone for the purposes of NZS 3604⁴.

2.2 The existing house

2.2.1 The house construction is conventional light timber frame, with a concrete slab and foundations, block veneer and weatherboard walls, pressed metal roof tiles and aluminium windows. The house is long and narrow, with some complexity in plan and form, and is assessed as having a moderate weathertightness risk.

2.2.2 The house is two-storeys high at both ends, and single-storey between. The 40° pitch gable roofs have limited eaves and verges, and include lower-pitched dormer windows to the southern end.

2.2.3 Given the age of the original house, I consider that the framing will be boron-treated.

2.3 The wall claddings

2.3.1 Most lower walls are block veneer, with the remaining walls all originally clad with horizontal cedar weatherboards. The cedar weatherboards have a rusticated profile and face-fixed windows. Based on photographs, the original timber weatherboards are retained on:

- all panels above ground floor windows and doors
- the east elevation, including:
 - the full-height 2-storey high wall to the north
 - the upper walls around the raised roof to the staircase
 - the east and north upper deck walls at the south games rooms

2.3.2 Early in 2010, some original timber weatherboards were replaced with uPVC weatherboards, which have a rusticated profile to match the remaining original cedar weatherboards. The consent drawings and photographs show that the new uPVC weatherboards are installed to:

- the north and west upper walls and gable ends
- the dormers to the south roof slope.

2.4 The uPVC weatherboards

2.4.1 The cladding is a proprietary system of horizontally fixed inter-locking uPVC weatherboards fixed directly through the building wrap to the framing. The cladding manufacturer provides purpose-made uPVC flashings, trims and accessories, which include head, sill and jamb flashings for windows and doors.

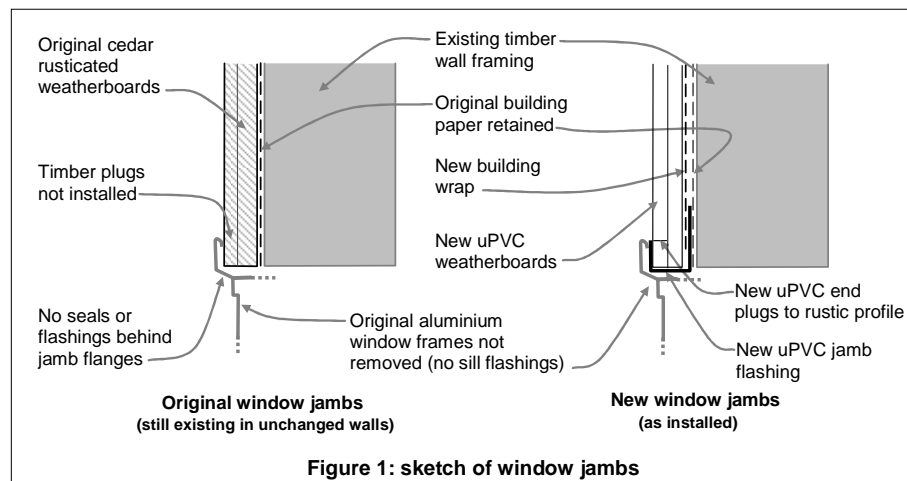
⁴ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

2.4.2 The cladding system has been appraised by BRANZ⁵. The appraisal is still current and states that the direct-fixed cladding will comply with Clauses E2 and B2, providing the system is 'designed, used, installed and maintained' according to the conditions described in the certificate, which include installing the weatherboards in accordance with the manufacturer's instructions.

2.5 The window junctions

2.5.1 The original windows were left in place during the building work so sill flashings could not be installed in accordance with the manufacturer's current instructions, which are designed for use with new buildings rather than for re-cladding work.

2.5.2 The existing windows within the new weatherboards are therefore face-fixed, with new metal head flashings, uPVC jamb flashings and moulded end plugs to fit the rusticated profile of the boards. The sketch in Figure 1 shows the jamb junctions before and after re-cladding:



2.5.3 Based on the supplier's and installer's statements, together with photographs taken during installation of the new cladding, the work at the windows included:

- the original building paper left in place, except at corners of windows to the west gable end where framing was investigated, and:
 - strips of 300mm wide 'heavy weight roofing paper' beneath window jambs, underlapping new jamb flashings by about 150mm
 - new uPVC jamb flashings ('window jamb flashing base')⁶ installed under window jamb flanges
 - new metal head flashings installed above original windows, projecting about 50mm past the jambs and with the upstand taped to the original building paper
- new building wrap installed over the existing building paper and the original windows not removed, with:
 - new wrap overlapping head flashing upstand and taped
 - new wrap overlapping rear leg of jamb flashing upstand and taped

⁵ BRANZ Appraisal Certificate No. 490 (2005)

⁶ Descriptions as per manufacturer's installation instructions provided in brackets

- uPVC weatherboards installed with:
 - the ends fitted into the window jamb flashing base
 - uPVC rustic plugs ('end plugs') inserted under the jamb flanges.

3. Background

- 3.1 The authority issued a building consent (No. 80822) in March 2010 for the re-cladding work. I have not seen a copy of the consent.
- 3.2 The consent documentation included manufacturer's installation instructions, which were based on new construction (rather than re-cladding). The consent drawings included details based on removing existing windows, wrapping and taping rough openings, installing new flashings including sill tray flashings, and then re-installing the existing windows.
- 3.3 Work started in April 2010 to remove the existing weatherboards, and it appears that the applicant requested that the existing windows be left in place during re-cladding.
- 3.4 The authority was advised at short notice that the proposed window installation details had changed. The authority refused to approve the rough revised detail submitted by the installer, declining also to inspect the building work until the unauthorised amendment was resolved.
- 3.5 The work proceeded as outlined in paragraph 2.5.3 in preparation for the authority's pre-cladding inspection.
- 3.6 Subsequently correspondence continued over some months without resolution; with the cladding manufacturer approving the amended window junctions, based on the successful history of use on other new and re-clad buildings. An extensive set of photographs were taken during the installation work and the cladding was completed in order to close in the house.
- 3.7 Despite continuing correspondence, the situation remained unresolved and in a letter to the applicant dated 24 June 2010, the authority stated that it believed:
- ...that the work has not been completed as per the approved plans and [the authority] has no other option than to issue a notice to fix. Your builder was advised not to carry out any re-cladding work until a decision had been made on the proposed amendments by the Council. He chose not to take this advice.
- 3.8 The authority issued a notice to fix dated 28 June 2010, which stated that the authority believed 'the building work has not been carried out in accordance with the building consent' and the applicant was required to 'provide evidence that the work has been carried out in accordance with the approved building consent'.
- 3.9 The Department received an application for a determination on 23 August 2010 and sought further information, photographs and clarification of specific items from the manufacturer, which were received on 20 September 2010.

4. The submissions

4.1 In a submission dated 16 August 2010 on behalf of the applicant, the manufacturer outlined the background to the current situation; describing the cladding installation and the history of its successful application in both new and existing buildings. The manufacturer noted that cladding details had changed in line with E2/AS1 in 2004, to include sill tray flashings for direct-fixed cladding. However, there is no specific technical manual to cover re-cladding existing buildings, so each such project needs to be individually considered to provide the most appropriate solution. The manufacturer considered the dispute resulted from the authority's refusal to accept that alternative window junctions could still be compliant with Clause E2.

4.2 The manufacturer forwarded copies of:

- a series of construction photographs
- the correspondence with the authority
- the notice to fix dated 28 June 2010
- a series of photographs of the completed and retained claddings
- a list of similar consented projects completed from 2003 to 2006 in the region
- extracts from the manufacturer's technical installation document
- various other testimonies and information.

4.3 The authority forwarded copies of:

- the consent drawings
- the revised detail submitted by the installer
- BRANZ Appraisal Certificate No. 490 (2005) dated 4 April 2006
- correspondence with the installer, the manufacturer and the applicant
- the notice to fix dated 28 June 2010.

4.4 A draft determination was issued to the parties for comment on 11 October 2010. Both parties accepted the draft without comment.

5. Discussion

5.1 The authority did not accept the amended detail that allowed the original windows to remain in place during the cladding work, and therefore did not inspect the work as it was being carried out. Based on the installer's submitted rough drawing alone, the authority's view that the junctions may not be code compliant does not seem unreasonable.

5.2 However, I have since received additional technical details and photographs taken during and following the cladding installation and have also sought further clarification. This information has allowed me to better understand the window treatment as completed and conclude there are reasonable grounds to come to the view that the window installation is appropriately compliant.

- 5.3 As the re-cladding is alteration work it needs to comply with the Building Code to the extent required by Section 112(b) of the Act (see Appendix). The new window junctions must therefore continue to comply with the code to 'at least the same extent as before the alteration.' That level of compliance is generally lower than would apply to the construction of a new building.
- 5.4 The following summarises factors that I consider to be relevant to the window jambs:
- The owner's decision to re-clad some walls was with the aim of reducing maintenance of the aging and cupping timber, rather than resulting from any lack of weathertightness.
 - The original weatherboards had been performing satisfactorily for more than 30 years with no evidence of significant moisture penetration through the face-fixed windows, which have no jamb or sill flashings and no jamb plugs.
 - There is no evidence that the lack of jamb or sill flashings have directly resulted in significant moisture penetration into the wall framing and the original weatherboards remain in place on about a third of the walls.
 - The consented details called for windows to be removed and re-installed, with the framed openings treated and flashed as shown in the drawings. The rough amended detail submitted by the installer is unclear and its weathertightness initially appeared questionable.
 - The window junctions as installed were commonly used prior to the 2004 revision of the manufacturer's instructions, with a successful history of use.
 - In comparison with the original window junctions, the new junctions provide similar protection to the heads, additional protection to the jambs (see Figure 1) and the same protection at the sills.
- 5.5 Taking account of the above observations and the nature of the re-cladding as alterations, I am satisfied that the new window junctions provide weathertightness and durability at least as good as prior to the re-cladding. I am therefore able to conclude that this building work complies with Clauses E2 and B2.

6. The decision

- 6.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the altered window junctions to this house comply with Clause E2 and Clause B2 of the Building Code, and accordingly I reverse the decisions of authority to issue the notice to fix dated 28 June 2010 and to refuse the code compliance certificate.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 15 November 2010.

John Gardiner
Manager Determinations

Appendix: The legislation

The relevant section of the Act in regard to alterations is:

112 Alterations to existing buildings

- (1) A building consent authority must not grant a building consent for the alteration of an existing building, or part of an existing building, unless the building consent authority is satisfied that, after the alteration, the building will—
 - (a) comply, as nearly as is reasonably practicable ... , with the provisions of the building code that relate to—
 - (i) means of escape from fire; and
 - (ii) access and facilities for persons with disabilities (if this is a requirement in terms of section 118); and
 - (b) continue to comply with the other provisions of the building code to at least the same extent as before the alteration.
- (2) Despite subsection (1), a territorial authority may, by written notice to the owner of a building, allow the alteration of an existing building, or part of an existing building, without the building complying with provisions of the building code specified by the territorial authority if the territorial authority is satisfied that,—
 - (a) if the building were required to comply with the relevant provisions of the building code, the alteration would not take place; and
 - (b) the alteration will result in improvements to attributes of the building that relate to—
 - (i) means of escape from fire; or
 - (ii) access and facilities for persons with disabilities; and
 - (c) the improvements referred to in paragraph (b) outweigh any detriment that is likely to arise as a result of the building not complying with the relevant provisions of the building code.