

Determination 2022/019

Regarding the authority's refusal to issue a code compliance certificate for the stucco monolithic plaster cladding on an extension to an existing dwelling

468A Wright Road, Aongatete, Katikati, Bay of Plenty

Summary

This determination considers whether the authority was correct to refuse to issue a code compliance certificate because it considers the stucco monolithic plaster applied to the external walls of an extension of an existing dwelling does not comply with clauses E2 *External moisture* and B2 *Durability* of the Building Code.



Figure 1: Southwest corner of dwelling.

The legislation discussed in this determination is contained in Appendix A. In this determination, unless otherwise stated, references to “sections” are to sections of the Building Act 2004 (“the Act”) and references to “clauses” are to clauses in Schedule 1 (“the Building Code”) of the Building Regulations 1992.

The Act and the Building Code are available at www.legislation.govt.nz. Information about the legislation, as well as past determinations, compliance documents (e.g., acceptable solutions) and guidance issued by the Ministry, is available at www.building.govt.nz.

1. The matter to be determined

- 1.1. This is a determination made under due authorisation by me, Charlotte Gair, Manager Advisory, Determinations, Ministry of Business, Innovation and Employment (“the Ministry”), for and on behalf of the Chief Executive of the Ministry¹.
- 1.2. The parties to the determination are:
 - 1.2.1. The owner of the dwelling, S Guscott (“the owner”), who applied for this determination.
 - 1.2.1. Western Bay of Plenty District Council (“the authority”), carrying out its duties as a territorial authority or building consent authority.
- 1.3. I note the owner purchased the property in 2020, but it was the previous owner that arranged for the building work that is the subject of this determination (“the previous owner”). However, since the previous owner no longer has any material interest in the property and was not a recipient of the written notice issued by the authority to refuse to issue the code compliance certificate, they have not been considered a party to the determination.
- 1.4. This determination arises from the authority’s decision to refuse to issue a code compliance certificate² for an extension added to an existing residential dwelling between 2000 and 2001. The refusal arose because:
 - 1.4.1. the authority is not satisfied on reasonable grounds that the external stucco monolithic plaster finish complies with clauses E2 *External moisture* and B2 *Durability* of the Building Code regarding the weathertightness of the cladding.
- 1.5. The matter to be determined³ is whether the authority was correct in its decision to refuse to issue a code compliance certificate for building consent 64033 for the reasons set out in its written notice to the owner dated 7 December 2020.

¹ The Building Act 2004, section 185(1)(a) provides the Chief Executive of the Ministry with the power to make determinations.

² Under section 95A of the Act.

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

- 1.6. In deciding this matter, I must consider whether the external envelope of the extension to the dwelling complies with the relevant performance clauses in respect of E2 *External moisture* and B2 *Durability* of the Building Code that were in force at the time the authority granted the building consent.
- 1.7. While the original building consent was granted under section 34⁴ of the Building Act 1991 (“the former Act”), the transitional provision under section 436⁵ of Building Act 2004 (“the current Act”) applies in this case.

Matters outside this determination

- 1.8. This determination only considers the reasons identified by the authority in its written notice to the owner to refuse to issue a code compliance certificate. This determination does not discuss any other aspects of the Building Code not identified by the authority.
- 1.9. This determination does not address any matters related to the original dwelling that was first constructed in the 1950s.
- 1.10. I also note that the owner will be able to apply to the authority for a modification of durability provisions to allow the durability periods specified in clause B2.3.1 to start from the date the building work was completed in 2001. Although I take the age of the consented building work into account in this determination (i.e. 21-years old), I leave this matter to the parties to resolve.⁶

2. The building work

- 2.1. The original dwelling is a single storey timber framed building with an external stucco monolithic plaster cladding (see figure 1).
- 2.2. The building work in this case relates to the construction of an 8.5m wide x 4m long extension to the south end of the existing dwelling (see figure 2). The building work consists of constructing timber piles, subfloor framing, and light timber wall framing, with particleboard flooring, and solid monolithic stucco cladding directly fixed over the external wall framing. Timber-framed windows have been installed, and the roof eaves are approximately 600mm wide.
- 2.3. The building consent plans stated the external cladding was to be “solid plaster on mesh on 10mm [thick proprietary cement boarding] to match existing stucco”.

⁴ The Building Act 1991, section 34 gives territorial authorities the authority to grant or refuse a building consent application.

⁵ The Building Act 2004, section 436 applies to building work consented under the former Act and must be considered and determined as if the current Act hadn't been passed.

⁶ I note this issue has already been considered by the authority, as recorded in its inspection report dated 3 December 2020 that included the statement “the date for durability amendment is 30 April 2001”.

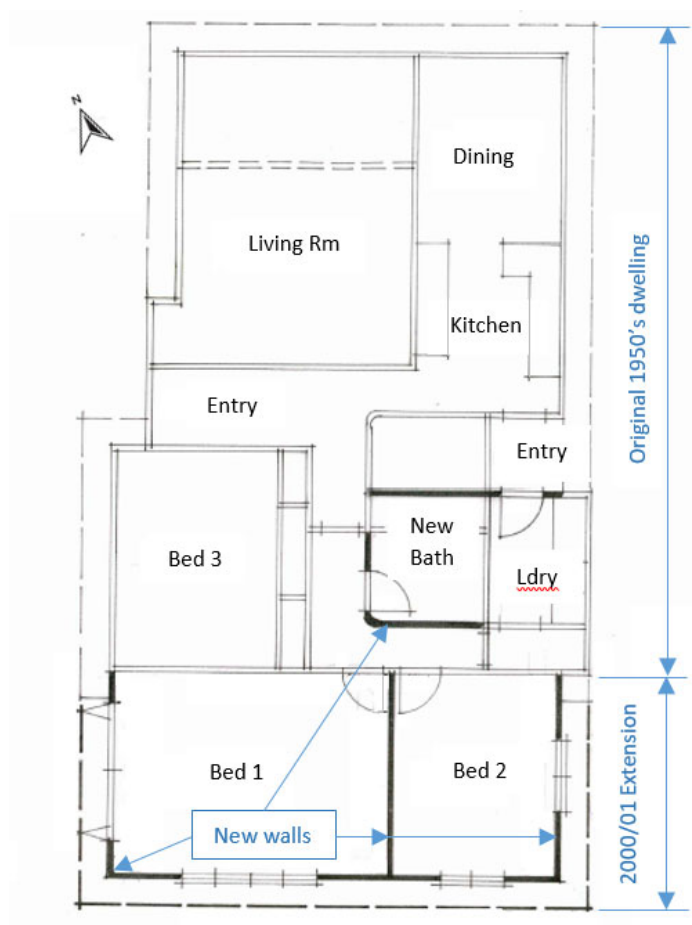


Figure 2: Floor plan (not to scale).

3. Background

- 3.1. The previous owner relocated the dwelling onto the new site in 1991.
- 3.2. On 17 October 2000, the previous owner applied for a building consent for a 34m² “house extension”⁷, along with other internal alterations to the existing dwelling. The application for the building consent did not reference the means of demonstrating compliance with the Building Code in respect of the external stucco plaster cladding.
- 3.3. On 24 October 2000, the authority issued building consent 64033 for the extension to the dwelling.
- 3.4. The building consent was issued with several conditions which included (but are not limited to) the following:

⁷ The building consent application form stated the area of the extension was to be 32.8m², but the building consent plans indicate an area of 34m². The as-built area is approximately 34.8m².

- 3.4.1. Exterior cladding and backing to be fixed in accordance with manufacturers' instructions.
- 3.4.2. Exterior window and door joinery exposed to weather conditions should be flashed correctly to seal the windows from water penetration.
- 3.4.3. Head flashings should be provided in all cases except where the joinery is hard up to the eaves.
- 3.5. The building work commenced in October 2000 and was completed in April 2001.
- 3.6. The authority conducted two inspections during the construction of the extension.⁸ The only inspection that referred indirectly to the external cladding is dated 7 December 2000; the inspection report noted "sill trays to fit to windows".
- 3.7. On 3 December 2020, the authority carried out a final inspection on the property. The authority's inspection report records the outcome as "fail", and includes various statements related in part to the external stucco plaster wall cladding which include (but are not limited to):
 - 3.7.1. the exterior cladding appears to have been reasonably maintained
 - 3.7.2. non-invasive moisture readings appear not to indicate water ingress but needs to be confirmed
 - 3.7.3. it appears that corner trays have been fitted to two windows only
 - 3.7.4. this [building consent] was issued under the Building Act 1991 so the work needs to comply with the building code in force at the time, rather than the approved plans
 - 3.7.5. due to the age of the building/building work, a weathertightness report or investigation by a competent person with suitable experience in weathertightness...confirming...performance of the building envelope with respect to [the] requirements of the Building Code clauses B2 and E2 is required
 - 3.7.6. any remedial work is required to be approved and inspected by the [authority] prior to being completed onsite
 - 3.7.7. windows (sills, jambs) have been plastered so that they are all but buried, which will prevent escape of any rainwater which may penetrate behind the stucco, potentially causing damage.

⁸ A foundation inspection on 27 October 2000 and a separate pre-line inspection on 7 December 2000.

- 3.8. On 7 December 2020, the authority issued a written notice to the owner under section 95A of the Act that confirmed its decision to refuse to issue the code compliance certificate for building consent 64033. The notice stated that:
- 3.8.1. the authority “could not be ‘satisfied on reasonable grounds’ that the building work complies with the...Building Code, or that the building work is performing as intended”
 - 3.8.2. a report is required from a suitably qualified person that would “need to confirm the weathertightness performance of the building envelope with respect to the requirements of the building code clauses B2 and E2”
 - 3.8.3. the report would need to address the issues that were identified during the inspection by the authority:
 - a) Flashings to window and door openings.
 - b) The embedment of window jambs and sills in the plaster coating with no apparent means of allowing any water which may penetrate the timber to plaster junctions to escape.
- 3.9. The Ministry received an application for a determination on 11 January 2021.

4. Submissions

The owner

- 4.1. The owner holds the view the building work complies with the former Act as the extension was built in 2001.
- 4.2. On 11 January 2021, the owner corresponded with the Ministry, stating that he had been in the cladding industry for about 22 years, and was a builder for three years prior to that. The owner stated he had conducted “a very thorough inspection (without being invasive by removing cladding or [internal plasterboard linings])” before purchasing the property. From the owner’s knowledge and experience in the building industry, including with solid plaster systems, he stated he “was more than happy with the cladding and joinery (windows, and no doors) on the three walls in question”.
- 4.3. On 19 January 2021, the owner supplied pictures of the head and sill flashings installed on the windows. The owner noted the jamb flashings on the timber joinery cannot be seen without removing the cladding entirely from those areas.
- 4.4. The owner also supplied a copy of a “pre-sale condition report” dated 23 September 2020. The author of the report, who inspected the dwelling on behalf of

the owner on or about 21 September 2020, is a Licenced Building Practitioner (“the LBP”).⁹ The LBP stated:

- 4.4.1. the original plaster on the building is in good condition¹⁰
 - 4.4.2. the original timber joinery “appears to be operating ok at [the] time of [the] inspection”.
- 4.5. On 5 February 2021, the owner provided more photographs to the Ministry. This included images of the following:
- 4.5.1. The original front door and door head.
 - 4.5.2. The windows in the south and west walls, with small areas of internal plasterboard lining removed to expose wall insulation, timber wall framing, and building paper.
- 4.6. On 6 July 2021, the owner provided another “pre-sale condition report” (also dated 6 July 2021) from the same LBP who provided the earlier report dated 23 September 2020. The report from 6 July 2021 covered the whole building and not just the extension added between 2000 to 2001. The report confirmed:
- 4.6.1. The type of cladding was monolithic textured plaster, and this was assessed to be in a “good” condition.
 - 4.6.2. The LBP took several non-invasive moisture meter readings (which “are indicative only...and are not conclusive”). In bedrooms one and two, the LBP recorded five moisture meter readings¹¹, and all were less than less than 40 per cent and were “considered dry”¹².
 - 4.6.3. The report summary stated, “based on LBP’s moisture meter readings taken at the time of inspection the LBP had no issues regarding [the] weather tightness of the property”.

The authority

- 4.7. The authority maintains the view it “cannot be satisfied on reasonable grounds that the cladding complies” with:

⁹ Licence class “Carpentry”, date granted 12 December 2011

(www.lbp.ewr.govt.nz/publicregistersearch.aspx – accessed on 18 January 2022). I note the LBP register is now hosted at <https://kete-lbp.mbie.govt.nz/advanced-building-practitioner-search/>.

¹⁰ It is unclear from the report whether the LBP was referring, or not, to the plaster cladding on whole building, and/or the extension to the building, which is the matter to be determined.

¹¹ Four of the readings were taken on the exposed surface of some timber skirting boards at floor level, and one was taken from a piece of exposed timber framing adjacent to a window in bedroom two.

¹² The LBP report stated a moisture meter reading of 0–40 per cent was “considered dry”; 40–80 per cent was “considered damp”, and 80 per cent and above was “considered wet”.

- 4.7.1. clause E2.3.2 of the Building Code. This is due to the lack of flashings to window and door openings, as well as the embedment of window jamb flashings and sills in the plaster coating. The external moisture has no apparent way of escaping back outside if it penetrates through the timber structure behind the plaster.
- 4.7.2. clause B2.3.1 of the Building Code as it relates to clause E2.3.2.
- 4.8. While the authority has made no formal submission, it provided the Ministry with copies of the following regarding building consent 64033:
 - 4.8.1. Plans and specifications, and other related documentation.
 - 4.8.2. Site inspection records.
 - 4.8.3. The written notice from the authority to the owner, dated 7 December 2020, confirming its decision to refuse to issue the code compliance certificate.

5. Expert's report

- 5.1. The Ministry engaged an independent expert ("the expert") with over 30 years' experience in the building industry to provide advice on this dispute. The expert is a Registered Building Surveyor and Registered Quantity Surveyor.
- 5.2. The expert inspected the building extension on 27 July 2021.
- 5.3. The expert issued a Building Assessment Report to the Ministry on 19 August 2021¹³, and a copy was provided to the parties on 23 August 2021.

Summary of expert's findings

- 5.4. The expert's findings included the following (in summary):
 - 5.4.1. The building extension has generally been finished to an acceptable trade standard, with exception of "the window sill flashing and control joint installations".
 - 5.4.2. The stucco plaster cladding to the east and south elevations of the extension appears to perform well "despite the lack of control joints and resultant cracks".
 - 5.4.3. However, there is evidence of external moisture ingress in the west elevation, which has affected areas of the timber framing in that location.

¹³ I note an error in the report in that it is dated 19 August 2020.

- 5.4.4. Specifically, the expert noted a “lack of control joints leading to vertical cladding cracks, elevated moisture levels, timber decay and mould on [the] west elevation”.
- 5.4.5. Since the Building Code is performance-based, the building work is not fulfilling several aspects of the Building Code.
- 5.4.6. The building work breaches clause E2.3.2 of the Building Code as the west elevation cladding fails to prevent water from penetrating the structure, causing “undue dampness and damage to building elements”.
- 5.4.7. The expert found “tell-tale signs of moisture entry at floor level”. This includes corrosion on carpet spikes and a “slight separation” of both the skirting and plasterboard linings. The moisture readings taken by the expert indicated high levels of moisture.
- 5.4.8. Once the owner removed a section of plasterboard linings below the window in the west wall, the expert discovered “a large patch of mould on the rear face of the lining”. This indicates “the cladding has been leaking for some time”.
- 5.4.9. The moisture reading registered a relatively high 28 per cent¹⁴ from the “visibly damp framing”¹⁵. A timber sample taken from the bottom end of the stud revealed “moderately advanced soft rot”, advising “timber replacement is probably required”.
- 5.4.10. The expert took a sample of timber from the west wall and had it analysed at an accredited laboratory. The laboratory’s findings stated, “The fungal morphology, its distribution and the fungal and decay types identified suggested that the sample examined had been exposed to moisture conditions that are inconsistent with sound building practice and/or weather-tight design, and that appropriate remediation is needed to correct this.”
- 5.4.11. The laboratory also stated that the sample “contained advanced decay of a type that often occurs well beyond the sample”. The analysis summary stated that no timber treatment or toxigenic mould was detected, but there was an “intermediate risk” associated with the soft rot detected “and

¹⁴ Reference the former Department of Building and Housing (“DBH”) “*Weathertightness: Guide to the Diagnosis of Leaky Buildings*”, published May 2011 (section 3.1.4 on page 23 and Appendix II details the difference in moisture content thresholds in timber), accessed on 19 January 2022.
<https://www.building.govt.nz/assets/Uploads/building-code-compliance/e-moisture/e2-external-moisture/weathertightness-guide-to-diagnosis-of-leaky-buildings.pdf>

¹⁵ I note the range of moisture reading percentages used by the LBP (see paragraph 4.6.2, and footnote 12) are taken from a different set of reference data and consequently do not align with the data range used in the DBH *Weathertightness: Guide to the Diagnosis of Leaky Buildings*.

therefore as a general rule of thumb replacement is typically necessary for [the] untreated framing”.

Means of compliance with the Building Code

5.5. The expert’s report also included references to the following regarding one means of demonstrating compliance with the Building Code:

5.5.1. Acceptable Solution E2/AS1¹⁶ that applied when the building consent was granted in October 2000. E2/AS1 refers to three separate pieces of guidance related directly, or indirectly, to solid plaster cladding:

- a) The *Good Stucco Practice* published by BRANZ, dated February 1996.¹⁷
- b) NZS 3604:1990 *Code of practice for light timber framed buildings not requiring specific design* (Amendment 1).¹⁸
- c) NZS 4251:1974 *Code of practice for solid plastering* (Amendment 1 and 2), superseded in part by NZS4251.1:1998.¹⁹

Window flashings

5.6. The expert noted that NZS 4251.1:1998 figure 1(b) provided head, jamb and sill flashings details (see Appendix B)²⁰, but no flashing details were included in NZS 4251:1974.

5.7. Clause 2.1.4.1 of NZS 4251.1:1998 states:

Openings and penetrations in areas to be plastered shall be formed prior to plastering being started. Weather protection around door and window openings in exterior claddings shall be prevented by the installation of head, sill and side flashings. Head and sill flashings shall extend horizontally no less than 30mm beyond each side of the framing to the opening and all flashings shall be installed before plastering commences.

¹⁶ Acceptable Solution E2/AS1 “External Moisture”, 2nd edition (05) effective from 28 February 1998 to 30 November 2000 (A2787).

¹⁷ The *Good Stucco Practice* reference was included as a comment in E2/AS1, noting that “*Useful information and guidance on solid plaster construction is given in ‘Good Stucco Practice’ published by BRANZ*”.

¹⁸ I note that the expert’s report refers to NZS 3604:1999, which relates to *Timber-framed buildings*, and not NZS 3604:1990 which is cited in Acceptable Solution E2/AS1.

¹⁹ I note the expert’s report refers to NZS 4251:1998; the appropriate reference is NZS 4251.1:1998 (as stated in NZS 4251:1974). This determination uses the reference NZS 4251.1:1998.

²⁰ NZS 4251.1:1998 is a superseded standard (superseded by NZS 4251.1:2007), but it was current in October 2000 when building consent 64033 was granted. Figure 1(b) has been reproduced in Appendix B for context only, noting that the original building consent plans did not indicate how the windows were to be installed.

5.8. The expert also noted that “no flashing details for timber windows were included in the BRANZ Good Stucco Practice”; it only provided details for aluminium windows. However, I note that the Good Stucco Practice does not exclude the use of any other material types of joinery.²¹

5.9. Section 3.7.1 of the Good Stucco Practice states:

The provision of proper flashings around openings in the cladding is essential, with windows having both head and sill flashings...Head flashings must project at least 30 mm beyond each side of the opening to ensure that water dispersed from each end does not enter any possible gap between the cladding and window or door jamb.

Head flashings

5.10. The expert noted that “the steel head flashings extend at least 30mm past the openings”.

5.11. The expert noted that the head flashing above the window in the west elevation “is embedded in the cladding (ideally the flashing downstand should be clear of the cladding to provide a drip edge)”. However, the expert noted that “the 600mm wide eaves provide very good protection to the window head (located about 400mm below the eaves”.

5.12. The expert stated that while the installed flashings do not comply with NZS 4251.1:1998 or the BRANZ Good Stucco Practice, the details “appear to be performing” as no corrosion was observed and the junctions look reasonably well sealed.

Jamb flashings

5.13. The expert noted that NZS 4251.1:1998 provides “a concealed jamb flashing detail for timber windows”, and the Good Stucco Practice shows three concealed jamb flashing details for aluminium windows.

5.14. The expert stated that:

No visible jamb flashings are installed. It could not be confirmed from on-site observations that there are no jamb flashings installed (but if concealed flashings are installed, they do not drain to the exterior).

²¹ Section 1.2 of the Good Stucco Practice. Timber joinery was still common back in 2000 and 2001. If BRANZ intended that timber joinery should not be included in the practice, it would be reasonable to assume the Good Stucco Practice would have said so.

The as built jamb junctions do not appear to comply with either the NZS 4251.1:1998 or BRANZ [Good Stucco Practice] details but look reasonably well sealed and appear to be performing.

Sill flashings

5.15. The expert stated that:

No sill flashings are installed other than non-standard window corner flashings to the west and east elevation windows. The corner flashings appear to consist of a flat steel strip rebated into the edge of the window stud and wrapped around the window sill, projecting through the front of the plaster cladding. The corner flashings don't appear to provide any weathertightness protection, with no hems to direct water to the exterior. The sill junctions do not comply with either the NZS 4251.1:1998 or BRANZ [Good Stucco Practice] details but look reasonably well installed and appear to be performing.

Control joints

5.16. Both NZS4251.1:1998²² and the Good Stucco Practice²³ require vertical control joint installation above and below window openings, and at a maximum centre-to-centre spacing of 4m.

5.17. Acceptable Solution E2/AS1 also requires control joints to be spaced at maximum 4m centres.²⁴ However, it does not refer to control joints above and below window jambs.

5.18. The expert stated that:

The south elevation [of the extension] is longer than 4m, requiring a control joint. There are no visible control joints installed, which has likely contributed to the slight cracks radiating away from the windows on all three elevations. There is also a full height crack at the junction between the original and new plaster cladding on the west elevation.

5.19. In respect of the east and south elevations, the expert stated that despite the lack of control joints and resultant cracks, the east and south elevation stucco claddings appear to be performing.

Subfloor

5.20. The expert noted that while the particle board flooring used in the extension is "generally in pristine condition with no weathertightness concerns", there is a small ant nest in the northwest corner indicating a nearby moisture source possibly

²² Clause 2.1.9.3 of NZS 4251.1:1998.

²³ Clauses 3.8.3 and 3.8.6 of the Good Stucco Practice.

²⁴ E2/AS1 "External Moisture", second edition, dated 28 February 1998, section 2.3.2 e).

associated with “leaking at the vertical crack between the original and new plaster cladding on the west elevation”.

Moisture meter readings

- 5.21. The expert took several moisture meter readings of parts of the timber framing to the extension to the dwelling. Eleven moisture readings were taken on the east and south elevations registered at normal levels, ranging from nine to 16 per cent. Timber drill shavings looked “in good condition at all eleven at-risk locations tested”. Compared to the west elevation, the east and south elevations are relatively sheltered.
- 5.22. On the west elevation of the extension, the expert recorded three normal moisture level readings (in between 11 and 15 per cent) and two medium readings (23 to 24 per cent). While the timber drill shavings all appeared to be in good conditions, the medium moisture readings were taken adjacent to a slight vertical crack below the jamb, which was exposed to the westerly weather.

Building Code compliance

- 5.23. The expert provided an overall assessment of the building work in terms of compliance with the Building Code that applied in 2000 when the building consent was granted (whist noting the transitional provision in section 436 of the current Act). The expert stated:
- 5.23.1. The west elevation cladding has failed to prevent penetration of water. This has caused dampness and damage to building elements, which breaches clause E2.3.2 of the Building Code.
- 5.23.2. As the building materials require reconstruction or major renovation, because they aren’t sufficiently durable, they breach clause B2.2.
- 5.23.3. The structural framing has failed the minimum 50-year performance durability period, which breaches clause B2.3.1 a).
- 5.23.4. The external solid plaster cladding has failed the minimum 15-year performance durability period, which also breaches clause B2.3.1 b).

6. Draft determination

- 6.1. On 2 February 2022, a draft determination was issued to the parties.
- 6.2. On 23 February 2022, the owner accepted the draft determination without any comments or non-contentious amendments.
- 6.3. On 24 February 2022, the authority accepted the draft determination without any comments or non-contentious amendments.

7. Discussion

- 7.1. The matter to be determined is whether the authority was correct to refuse the issue of a code compliance certificate for building consent 64033 for the reasons it stated in a written notice it issued to the owner under section 95A of the current Act on 7 December 2020.
- 7.2. The item of dispute is in respect of the monolithic stucco plaster external cladding installed on the extension to the dwelling between 2000 and 2001, and its compliance with the Building Code that applied at the time the building consent was granted in October 2000.
- 7.3. There are two Building Code clauses the authority gave as its reasons to refuse to issue a code compliance certificate (namely E2 *External Moisture* and B2 *Durability*).
- 7.4. Specifically, the authority referred to issues it identified during its inspection on 3 December 2020, namely:
 - 7.4.1. Flashings to window and door openings, and
 - 7.4.2. The embedment of window jambs and sills in the plaster coating with no apparent means of allowing any water which may penetrate the timber to plaster junctions to escape.

However, the written notice did not state which performance clauses of the Building Code related to the issues raised, but the authority did subsequently clarify their view by referring to clauses E2.3.2 and B2.3.1 (refer to paragraph 4.7).

The legislation and regulations

- 7.5. Building consent 64033 was issued in October 2000 under the former Act, so the transitional provision of the current Act applies when considering the issue of a code compliance certificate for building work completed under this consent. Section 436(3)(b)(i) of the transition provision of the current Act 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”.

The means of compliance with the Building Code

- 7.6. The Building Code is performance based, and there are several ways of demonstrating compliance with it, including (but not limited to) an Acceptable Solution or Verification Method that applied at the time the building consent was granted in October 2000.

- 7.7. In this case the building consent application, plans, and specifications did not reference a specific means of demonstrating compliance with the Building Code in respect of the external stucco plaster cladding to be applied to the external walls of the extension to the dwelling.
- 7.8. The building consent plans only stated that the external cladding was to be “solid plaster on mesh on 10mm [thick proprietary cement boarding] to match existing stucco”. The plans and specifications did not state how the stucco plaster was to be applied or reference a relevant standard or code of practice.
- 7.9. In the absence of that information, the expert identified several means to achieve compliance with the Building Code, such as:
- 7.9.1. Acceptable Solution E2/AS1 External Moisture (second edition, dated 28 February 1998)
 - 7.9.2. the associated New Zealand standards and code of practice that are cited in E2/AS1
 - 7.9.3. the Good Stucco Practice that is referred to in commentary in E2/AS1 as an alternative means of compliance.
- 7.10. Reference to these documents were used as the basis of the findings in the expert’s report (refer to paragraph 5.5).

The expert’s findings

- 7.11. The expert did identify some items of concern. These are summarised as:
- 7.11.1. A lack of control joints and resultant cracks to the surface finish of the stucco plaster.
 - 7.11.2. Evidence of external moisture ingress (specifically to the west elevation of the extension) behind the stucco plaster cladding due to elevated moisture meter readings, corrosion on carpet spikes, separation of linings, visibly damp timber framing, moderately advanced soft rot in the timber sample taken, and a large patch of mould on the rear face of the lining.
 - 7.11.3. The head flashing above the window in the west elevation is embedded in the cladding.
 - 7.11.4. No visible jamb flashings are installed, and if concealed flashings are installed, they do not drain to the exterior.
 - 7.11.5. No sill flashings are installed other than non-standard window corner flashings to the west and east elevation windows. The corner flashings don’t appear to provide any weathertightness protection, with no hems to direct water to the exterior.

7.11.6. Areas of the building work that do not comply with Acceptable Solution E2/AS1, New Zealand standard NZS 4251.1:1998, and the Good Stucco Practice.

Weathertightness

7.12. Building Code clause E2.3.2 states:

Roofs and exterior walls shall prevent the penetration of water that could cause undue dampness, or damage to building elements.

7.13. In consideration of his findings, the expert is of the view that the west elevation cladding has failed to prevent penetration of water. This has caused dampness and damage to some building elements, which breaches clause E2.3.2.

7.14. Taken together, all the expert's findings indicate that the monolithic stucco plaster cladding has allowed external moisture to penetrate the interior of the dwelling particularly to the west elevation of the extension. On this evidence, and in the absence of any contrary information, the cladding does not meet the requirements of clause E2.3.2 that applied at the time the building consent was granted.

7.15. However, although the cladding does not meet the requirements of clause E2.3.2, it is unclear when the penetration of external moisture started to occur, whether it was directly after the stucco plaster cladding system was first installed (approximately 21 years ago), or at an unspecified point of time thereafter.

Durability

7.16. Building Code clause B2.2 states:

Building materials, components and construction methods shall be sufficiently durable to ensure that the building, without reconstruction or major renovation, satisfies the other functional requirements of this code throughout the life of the building.

7.17. In consideration of his findings, the expert was of the view that as the building materials require reconstruction or major renovation because they aren't sufficiently durable, they breach clause B2.2.

7.18. Similarly, the expert was of the view that the structural framing supporting the external wall to the west elevation of the extension has failed the minimum 50-year performance durability period, which breaches clause B2.3.1 a). This is based on the evidence of timber decay and soft rot found in the sample taken, as well as the elevated moisture meter readings.

7.19. The expert was also of the view that the external solid plaster cladding has failed the minimum 15-year performance durability period, which breaches clause B2.3.1

b). This is based on the lack of control joints and resultant cracks, as well as issues with the installed head, jamb, and sill flashings to the window openings.

7.20. Based on the findings of the expert, and in the absence of any evidence to the contrary, the building work does not comply with clauses B2.3.1 a) or b).

8. Conclusion

- 8.1. The authority holds the view that it “cannot be satisfied on reasonable grounds that the cladding complies” with clauses E2.3.2, and B2.3.1 as it relates to E2.3.2, and the expert has come to the same conclusion.
- 8.2. The items identified by the expert as being non-compliant are construction defects rather than degradation through age and it is clear the work would never have achieved compliance.
- 8.3. In the absence of evidence to the contrary, I agree with the views of the authority and the expert.

9. Decision

- 9.1. In accordance with section 188 of the Building Act 2004, regarding the Building Code that was in force at the time building consent 64033 was granted in October 2000, I determine the authority was correct to refuse to issue the code compliance certificate. Accordingly, I confirm the authority’s decision.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 06 October 2022.

Charlotte Gair

Manager Advisory, Determinations

Appendix A: The legislation and regulations

A. The former Act

34 Processing building consents

(1) The territorial authority shall grant or refuse an application for a building consent within the prescribed period.

(2) A territorial authority may, within the prescribed period, require further reasonable information in respect of the application and, for the purposes of this Act, the prescribed period shall be deemed to have been suspended until the further information is received by the territorial authority.

(3) After considering an application for building consent, the territorial authority shall grant the consent if it is satisfied on reasonable grounds that the provisions of the building code would be met if the building work was properly completed in accordance with the plans and specifications submitted with the application.

(4) The territorial authority may grant a building consent subject to—

(a) Such waivers or modifications of the building code, or any document for use in establishing compliance with the building code, subject to such conditions as the territorial authority considers appropriate; and

(b) Such conditions as the territorial authority is authorised to impose under this Act or the regulations in force under this Act.

(5) In formulating any conditions under subsection (4) of this section, the territorial authority shall have due regard to the provisions of the building code and the matters set out in section 47 of this Act.

B. The current Act

436 Transitional provision for code compliance certificates in respect of building work carried out under building consent granted under former Act

(1) This section applies to building work carried out under a building consent granted under section 34 of the former Act.

(2) An application for a code compliance certificate in respect of building work to which this section applies must be considered and determined as if this Act had not been passed.

(3) For the purposes of subsection (2), section 43 of the former Act—

- (a) remains in force as if this Act had not been passed; but
- (b) must be read as if—
 - (i) a code compliance certificate may be issued only if the territorial authority is satisfied that the building work concerned complies with the building code that applied at the time the building consent was granted; and
 - (ii) section 43(4) were omitted.

C. Building Code regulations

Clause B2 – Durability

Performance

B2.3.1

Building elements must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the specified intended life of the building, it stated, or;

- a) The life of the building, being not less than 50 years, if:
 - i) Those building elements (including floors, walls and fixings) provide structural stability to the building, or
 - ii) The building elements are difficult to access or replace, or
 - iii) Failure of those building elements to comply with the building code would go undetected during normal use and maintenance of the building.
- b) 15 years if:
 - i) Those building elements (including the building envelope...) are moderately difficult to access or replace, or
 - ii) Failure of those building elements to comply with the building code would do undetected during normal use of the building, but would be easily detected during normal maintenance.

Appendix B: Extract from NZS 4251.1:1998, Figure 1(b)

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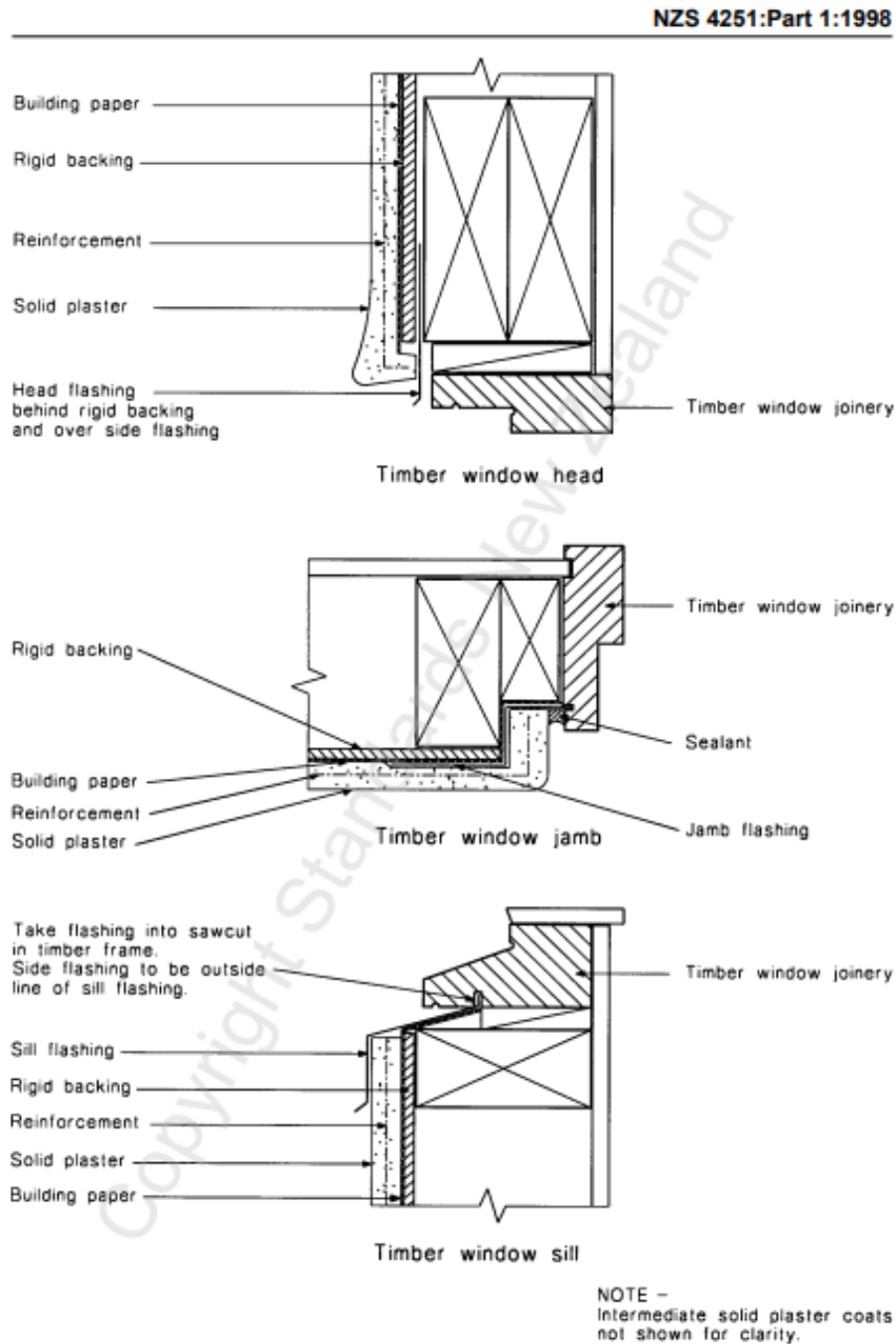


Figure 1(b) – Flashing for timber window frames