Determination 2025/023

Regarding the issue of three code compliance certificates and compliance of items of building work

3 Sideys Road, RD 24, Southburn, South Canterbury

Summary

This determine considers the issue of three separate code compliance certificates, related to three different building consents, for building work to make various alterations and additions to an existing detached dwelling. All three building consents were issued under the Building Act 1991. This determination considers if the building work complies with the Building Code that applied at the time the building consents were granted.

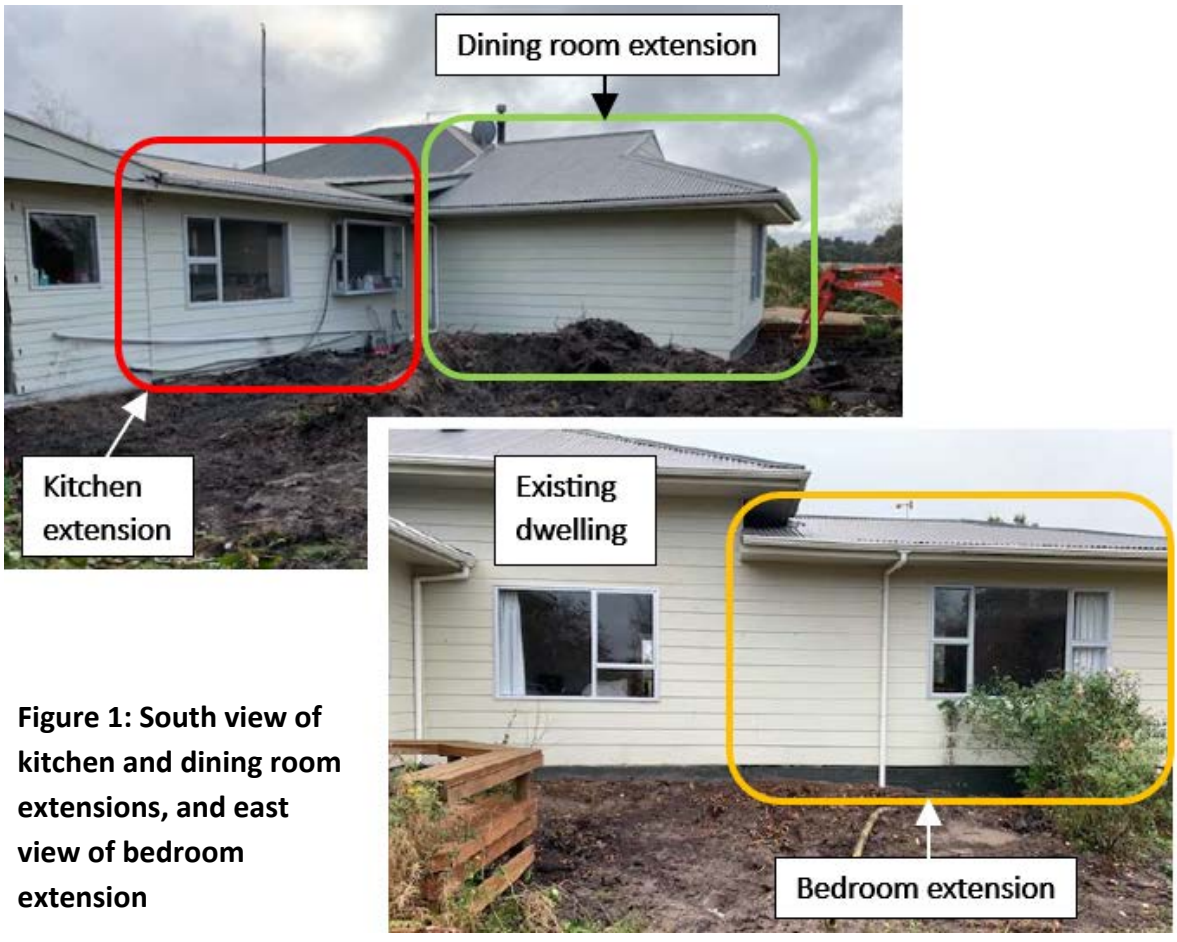

Figure 1: South view of kitchen and dining room extensions, and east view of bedroom extension

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 (eg, 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, Peta Hird, for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment ("the Ministry").[1]

1.2. The parties to the determination are:

1.2.1. Highgrounds Farming Company Limited, the owners of the property who applied for this determination ("the owners")

1.2.2. Waimate District Council, carrying out its duties as a territorial authority or building consent authority ("the authority").

1.3. This determination arises from decisions by the authority to issue three code compliance certificates for building work to alter and extend an existing single storey detached dwelling (refer to figures 1 and 2). The owners are of the view that some of the building work carried out by the previous owners did not comply with the Building Code and the code compliance certificates should not have been issued.

1.4. The matters to be determined are:

1.4.1. in terms of section 177(1)(a), whether specific items of the building work identified by the owners, carried out under the three building consents, comply with the relevant clauses of the Building Code that applied at the time the building consents were granted by the authority (refer Table 1)[2]

1.4.2. in terms of section 177(1)(b) and (2)(d), the authority's decisions to issue the three code compliance certificates for building consents 990246, 020290, and 040011.

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

[2] The owner's application for determination included more building items that they consider do not comply with the Building Code than those set out in Table 1. However, as there is insufficient evidence available to reach a conclusion on some items, these have not been included in the determination.

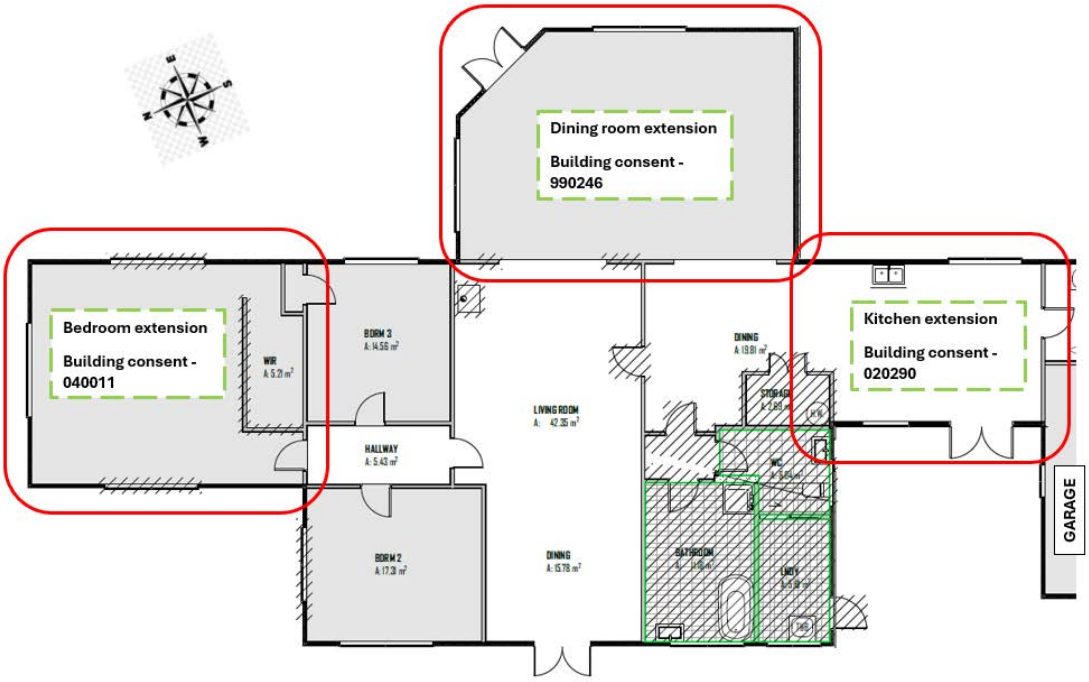

Figure 2: Floor plan (not to scale)

2. The background and building work

2.1. The building consents were applied for by the previous owners of the property and issued by the authority under the Building Act 1991 ("the former Act").

2.1. The three building consents, along with the respective issue dates of the code compliance certificates are:

2.1.1. Dining room extension – consent number 990246, code compliance certificate issued 16 May 2001

2.1.2. Kitchen extension – consent number 020290, code compliance certificate issued 20 September 2019 subject to a modification of Building Code Clause B2 Durability[3]

2.1.3. Bedroom extension – consent number 040011, code compliance certificate issued 27 September 2019 subject to a modification of Building Code Clause B2 Durability.

2.2. The building work was undertaken between 1999 and 2005.

2.3. The owners bought the property in September 2019 and carried out new building work in 2021 to renovate the dwelling. It appears this work included addressing the issues the owners raised in their application for determination, and I have taken this

[3] Refer to paragraph 3.6.

into consideration when deciding on a remedy under section 188(1)(a) in respect of each of the three code compliance certificates.[4]

The dining room extension

2.4. On 12 October 1999, the previous owners applied for a building consent for the 'Dining room extension'. Building consent 990246 was issued by the authority on 10 November 1999. Construction was undertaken between 1999 and 2001, and several inspections were undertaken by the authority.

2.5. The building work was an approximate 40m² extension to the east side of the existing dwelling. The construction consisted of timber piles, subfloor, wall framing and prefabricated roof trusses. The wall cladding was horizontal fibre-cement weatherboards incorporating aluminium joinery, and the roof cladding was lightweight profile metal.

2.6. The building consent refers to compliance with NZS 3604:1990[5]; this is referenced in the Acceptable Solutions B1/AS1[6] and E2/AS1[7] that were current at that time. Similarly, I have also referred (where necessary) to Acceptable Solution B2/AS1.[8]

The kitchen extension

2.7. In September 2002, the previous owners applied for a building consent for the 'Kitchen extension'. Building consent 020290 was issued by the authority on 25 September 2002. Construction occurred between October 2002 and 18 December 2003, and several inspections were conducted by the authority.

2.8. The building work was an approximate 22m² extension between an existing garage and the existing dwelling.[9] Approximately 7m² of the floor was an "existing wooden floor" adjacent to the main dwelling. The remaining floor area was a new 50mm thick concrete topping floor laid on a damp proof membrane above 100mm thick 'existing concrete'. The construction consisted of timber wall framing, prefabricated roof trusses at 1.8m centres and purlins. The wall cladding was fibre-cement weatherboards incorporating aluminium joinery, and the roof cladding was lightweight profiled metal with a roof underlay.

[4] Refer to *Estate Properties Ltd v Hastings District Council* [2021] NZDC 17000 for discussion on section 188(1)(a).
[5] New Zealand Standard NZS 3604:1990 *Code of practice for light timber frame buildings not requiring specific design*.
[6] Acceptable Solution B1/AS1, amendment 3, effective 1 December 1995 to 30 November 2000.
[7] Acceptable Solution E2/AS1, second edition, effective 28 February 1998 to 30 November 2000.
[8] Acceptable Solution B2/AS1, second edition, effective 28 February 1998 to 30 November 2000.
[9] Generally, it is not clear from the building consent documentation what the stated means of compliance was for the proposed building work. However, based on the construction detailed in the building consent documents, the means of compliance in relation to structural elements was based on New Zealand Standard NZS 3604:1999 *Timber Framed Buildings*.

The bedroom extension

2.9. On 15 January 2004, the previous owners applied for a building consent for the 'Bedroom extension'. Building consent 040011 was issued by the authority on 1 March 2004. Construction occurred between August 2004 and 1 July 2005, and several inspections were conducted by the authority.

2.10. The building was an extension to the north end of the existing dwelling. It was constructed with timber piled foundations, subfloor, walls, lintels, and prefabricated roof trusses. The external wall cladding was horizontal fibre-cement weatherboards incorporating aluminium joinery and the roof cladding was lightweight profiled metal and roof underlay.

2.11. Based on the construction detailed in the building consent documents, it appears the means of compliance was based (in part) on NZS 3604:1999.

3. Legislation

3.1. Section 7 of the former Act requires that 'All building work shall comply with the Building Code to the extent required by this Act'.

3.2. While all three building consents were granted under section 34 of the former Act, different sections of the former and current Acts apply depending on when decisions were made by the authority to issue the code compliance certificates.[10]

3.3. For the authority to issue the code compliance certificates, the building work must comply with the Building Code that was in force at the time the consent was granted. If the building work does not comply, the threshold for issuing the code compliance certificates was not met.

3.4. The authority granted modifications to Clause B2 *Durability* for the kitchen and bedroom extension so that the durability periods in clause B2.3.1 started on the date when the building work was completed for each consent, rather than when the code compliance certificates were issued. For the kitchen extension this was 18 December 2003, and for the bedroom extension it was 1 July 2005.

3.5. For the purposes of assessing compliance of the building work with clause B2, I have taken those modifications into account. I have also taken into consideration the in-service history of the building and age of the various building elements.

3.6. In regard to clause B2, I am only required to consider whether building elements, with only normal maintenance,[11] continued to satisfy the performance

[10] Section 43(3) of the former Act applies to the decision to issue the code compliance certificate for the dining room extension, and the transitional provision in section 436(3)(b)(i) of the current Act applies to the decision to issue the code compliance certificates for the kitchen and bedroom extensions.

[11] The term 'normal maintenance' is discussed in previous determinations (see for example 2007/089) as being work generally recognised as necessary to achieve the expected durability for a given building

requirements of the code to the extent provided in clause B2.3.1. For example, an assessment of compliance of the roof claddings constructed under each of the building consents, has been considered against the requirements of performance clause B2.3.1(b) of 15-years.

3.7. In this case I have received no information to ascertain the extent to which the previous owners may have undertaken any 'normal maintenance' of the relevant building elements being considered in this determination.

4. Building Code compliance

4.1. The items of concern raised by the owners have been tabulated below, along with my assessment of their compliance with the Building Code. Where items are similar or related to more than one building consent, they have been combined into one entry.

4.1. In correspondence to the Ministry, the authority confirmed it did not wish to make a submission in the relation to the determination. I have considered the information contained in the three building consent files provided by the authority, including relevant inspection records.

4.2. The building consents' plans and specifications describe some aspects of the proposed building work in a varying degree of detail, but the means of establishing compliance with the Building Code is not clear in some instances. Therefore, in the absence of this information I have referred to the relevant Acceptable Solutions, Verification Methods, and other referenced standards that were current at the time the various building consents were granted by the authority. Regardless, the overarching test remains the compliance of the building work with the performance criteria in the Building Code.

Table 1: Compliance of building work

The common items combined
Clause B1 *Structure* – clauses B1.1, B1.2, B1.3.1, B1.3.2, B1.3.3, B1.3.4
The building work: Wall framing – Lintel supports and fixings, and studs not connected to bottom plate. The owners referred to a lack of fixings and structural support for lintels at internal and external openings constructed across the dining room and kitchen extensions.
Compliance assessment The building consents do not include details about the fixing of lintels to resist uplift or studs to the bottom plate connections, and no information has been provided to indicate the as-built

element. See also Acceptable Solution B2/AS1 (second edition, amendment 3, effective 1 July 2001 to 1 April 2004), paragraph 2.1.1.

construction was in accordance with the relevant Acceptable Solution (B1/AS1) or associated referenced standard (NZS 3604)[12].

Regarding structural fixings to secure the lintels, photographs of the external openings are from inside the building, not the external side of the wall framing where the straps were more likely to have been installed, and so I cannot draw any conclusions as to whether fixings were or were not used. However, there is evidence that there were inadequate structural supports at the ends of the lintels to prevent uplift.

In a photo of the kitchen extension, the timber studs supporting the lintel were not connected or fixed to the bottom plate, and one stud did not reach the top plate. The studs concerned appeared to have been fixed to a single existing stud to the north side of a window opening.

This means both the downward loads from the roof and the uplift forces acting on the building through wind action were not adequately addressed in the construction and there was more than a low probability of the building or building elements losing equilibrium and collapsing throughout their lives.

I have taken into consideration the owners' submission, in respect of the dining room extension, that several openings were "moveable with hand pressure", alongside the evidence of inadequate supports to prevent uplift. Based on the in-service history it is likely the internal and external openings remained substantially stable due to the presence of, and acting in combination with, the internal linings and external cladding.

However, I must consider the physical conditions likely to affect the stability over the intended life of the building and building elements, being no less than 50 years. This includes but is not limited to earthquake and wind actions (clause B1.3.3(f) and (h) respectively).

Given the as-built construction of the openings, I consider that the building was likely experiencing adverse effects such as shaking and racking under loadings, leading to more than a low probability of structural failure. This means the building and building elements were not likely to the withstand the combination of loads they would have experienced throughout their lives and consequently did not safeguard people from injury caused by such structural failure.

Conclusion: The building work to construct the lintels and studs did not comply with clause B1.

Clause E2 *External moisture* – clauses E2.1, E2.2, E2.3.1, E2.3.2

Building work: External door and window joinery constructed without head flashings

The owners raised concerns about external joinery units having been constructed without head flashings to deflect external moisture in the dining room and kitchen extensions.

Compliance assessment

I note head flashings are only one means of demonstrating compliance with the Building Code.

Based on the photographs and the building consents, it is not clear how the heads of the joinery were constructed.

The window and door heads are either at, or just below, the soffit of the extended roof eaves. Therefore, the likelihood of external moisture reaching the heads of the joinery in quantities that could have caused undue dampness or damage to the building was low, and there is no evidence of failure in the period required in clause B2.3.1 (b).

[12] The versions of New Zealand Standard NZS 3604 dated 1990 or 1999.

Conclusion: The construction of the external door and window joinery in respect of the joinery heads complied with clause E2.

Building work: Roof cladding construction and installation, including fixings, junctions and flashings at 'changes of direction'.

Compliance assessment

None of the building consents provided construction information that detailed how the junctions between the roofs were to be formed.

There is evidence of failure of the construction of the roof cladding at or close to the junctions between all three building extensions where they connected to the existing dwelling. Issues with the construction included but are not limited to, a lack of, or poorly installed, or incomplete flashings at several 'changes of direction'[13] and use of a sealant (which subsequently deteriorated) to fill gaps at other junctions, such as where the kitchen extension roof abutted the existing roof of the dwelling. Photographs show that below these points of the roof cladding, the consequences of the installation were water damage to several timber building elements used in the constructions of the roofs, and water damage to some internal ceiling linings the owners described as "black mould".

The evidence demonstrates the roof constructions did not adequately shed precipitated moisture, and allowed the penetration of water into the roof spaces below the roof cladding, causing water damage to some building elements as well as undue dampness and damage to the ceiling linings below. The external moisture ingress at these junctions does not safeguard the occupants of the building from illness that can result from the presence of mould.

While it is not clear when the external moisture ingress became evident, non-compliance of some of the building work such as the lack of or poorly installed flashings at several changes of direction would have been evident during construction.

Conclusion: The building work to construct the roof claddings did not comply with clause E2.

The dining room extension (990246)

Clause E2 *External moisture* – clauses E2.1, E2.2, E2.3.3, E2.3.4

Building work: Sub-floor construction, specifically ground clearance and ventilation.

The owners noted, "Once the [plasterboard] was removed on the inside of the wall, it was evident water had been moving up the wall due to the ground level being close to the timbers".

Compliance assessment

One building consent plan specifies the construction of subfloor vents, 750mm from corners and at 1.8m centres around the perimeter of the building extension (refer to E2/AS1, paragraph 4.1.5, and NZS 3604:1990 subpart 4.8).[14]

Along the southeast elevation, some proprietary subfloor ventilation openings were formed in the external baseboard, but these were obstructed by vegetation and part of a timber deck. Along the southwest elevation, the finished ground level appears to have been above the

[13] A 'change of direction' flashing is now more commonly referred to as an 'apron flashing'.

[14] A letter from the authority to the previous owners, dated 14 January 2000, raised a concern with 'Subfloor Clearance' and provided construction advice regarding how to make the building work comply.

bottom of the baseboard and no evidence provided to confirm the specified vents were installed. On the east and northwest elevations, it is not clear if there were any ventilation openings under the baseboard and no evidence provided to confirm the specified vents were installed.

A photograph shows water staining to the underside of part of one bearer and the top of a pile. There is no indication of structural failure of the pile, subfloor building elements (bearers and floor joists) or external walls above. Regardless, the as-built building elements were susceptible to damage and were not adequately protected from the adverse effects of moisture entering the space below the suspended floor. Further, the baseboards were in contact with or in close proximity to the ground and would absorb moisture causing damage. This moisture would then be transmitted, causing condensation and degradation to the adjacent building elements such as bearers and floor joists.

The building work for the sub-floor of the extension was not constructed in a manner that protected building elements from the adverse effects of external moisture entering the space below the suspended floor.

Conclusion: The subfloor construction did not comply with clause E2.

The kitchen extension (020290)

Clause B1 *Structure* – clauses B1.1(a) and (b), B1.2, B1.3.1, B1.3.3, B1.3.4

Building work: Roof trusses installed at 1.8m centres

Compliance assessment

A building consent plan details the use of several prefabricated roof trusses to be set out at 1.8m centres[15]. The as-built construction appears to have complied with the building consent.

The parties have provided no evidence to indicate any structural failure or instability resulting from the as-built spacing of the roof trusses. Regardless, I have considered the comparison of the as-built spacings with the Acceptable Solution of the time, being "truss spacings shall not exceed…1200 mm for light roofs", as well as the physical conditions likely to affect the stability of the building and building elements such as, but not limited to, earthquake and wind actions (clause B1.3.3(f) and (h) respectively).

In my opinion, the increased span of the purlins means there is greater potential of uplift forces on the roof. I am of the view the roof trusses would have been likely to flex under wind loadings, applying pressure to roof claddings and fixings, affecting durability and increasing the potential for penetration of external moisture.

I consider this does not demonstrate a low probability of rupturing, becoming unstable, losing equilibrium, or collapsing throughout the remainder of the life of the building and building elements, being 50-years from December 2003.

Conclusion: The construction (spacing) of the roof trusses did not comply with clause B1.

[15] The owners contacted a manufacturer of roof trusses who confirmed "They would not have recommended 1800mm spacing without an engineer's report".

Building work: Construction of the top plate, with a join beneath a point load.

Compliance assessment

The plans accompanying the building consent do not include details regarding connections and supports for the top plates, or structural connections of the roof trusses to the top plates. Similarly, I have received no information from the parties to indicate the as-built construction complied with the Building Code based on B1/AS1 or NZS 3604:1999, regarding the top plate connection or its supports, or by any other means of compliance such as a specific engineering design.

B1/AS1 and referenced standard NZS 3604:1999 provide details on connections and supports for top plates, including where trusses land more than 150mm away from a wall stud.[16]

The owners have provided evidence showing a roof truss was supported above a join in two timber top plates, with the roof truss offset approximately 175mm to 225mm from the nearest wall stud. The two top plates are connected by a metal bracket, and there is no additional structural support from the underside of the bracket to the timber lintel below.

The evidence indicates where the two top plates met, at the join with the metal bracket, they were not in alignment by being deflected/deformed downwards, which I take to be due to the point load being exerted by the roof truss seated within close proximity of the join.

The structural support for the roof truss, being the top plates, showed signs of deflection and instability due to the construction, loss of equilibrium and more than a low probability of collapsing throughout the life of the building elements.

Conclusion: The as-built construction did not comply with clause B1.

Building work: East elevation load bearing wall, timber acting as a lintel rested on a window opening (nearest to the existing dwelling) lacked support and fixings.

The owner has stated that the combination of different timber building elements applied a point load onto a timber lintel above the north jamb of the window, causing the window frame to flex.

Compliance assessment

The proposed construction method was not detailed in the building consent. B1/AS1 and referenced standard NZS 3604:1999; sub-section 8.6 provides for lintels, and associated supports.

A photograph shows a timber beam supported on a small timber packer, resting on timber top plate with another timber block below, all of which were supported on a timber lintel. No structural fixings between the elements can be seen.

Based on the size and location of the timber packer, with the small area supporting the beam above and the lack of fixings to this beam, and the supporting evidence showing the flexing in the window frame, I consider the construction had more than a low probability of losing equilibrium and collapsing throughout its lifetime.

Conclusion: The as-built construction did not comply with clause B1.

[16] See item 10.2.2.6, tables 10.12 and 10.13, and figure 10.21 'Truss/top plate connections'. Items 8.7.1.1 (c), figure 8.13, 8.7.1.4, 8.7.3.1 and 8.7.3.2.

Building work: Timber bottom plate to the external walls, including the support and fixing.

Compliance assessment

B1/AS1 and referenced standard NZS 3604:1999; item 8.7.2.2 provides bottom plates of loadbearing walls shall be continuously supported by either a joist, solid blocking, or a concrete floor slab. No information has been provided to indicate the as-built construction to construct the bottom plate complies with the Building Code based on B1/AS1, or NZS 3604:1999, or by any other means.

Evidence provided by the owners suggest several sections of bottom plate to the west and east sides of the kitchen extension were not fully supported and showed signs of being out of alignment and deflecting downwards. One photo shows timber packers acting as supports between a concrete footing and the bottom plate, but there appears to be a lack of support beneath a point load which caused the bottom plate to deflect.

The sections of bottom plate concerned were not continuously supported and the evidence showing the bottom plate was "flexing" means they had become unstable and lost equilibrium.

Conclusion: The as-built construction did not comply with clause B1.

Clause E1 *Surface water* (E1.3.2) and Clause E2 *External moisture* (E2.3.2, E2.3.3, E2.3.4)

Building work: External concrete paved surface, in relation to the external wall cladding and surface water[17]

Compliance assessment

In completing the assessment, I have considered the relevant Acceptable Solutions that applied at the time of the consent being granted. Regarding E1, Acceptable Solution E1/AS1[18], paragraph 2.0.1, prescribes suspended floors and slabs on ground to be at least 150mm above the finished level of the surrounding ground immediately adjacent to a building. Regarding E2, Acceptable Solution E2/AS1[19], paragraphs 4.2.2 and 4.2.5 and figure 6, prescribes the height of a concrete floor above the adjacent ground if the ground is permanently paved, being 150mm, and the ground to be shaped to carry water away from the building.

In the photos provided by the owners, a concrete paved area has been constructed to the west side of the extension. The owners' submissions have indicated that the fall of the surface sloped towards the building (E1) and the finished surface/ground level was above the base of the external wall cladding (E2).[20]

The building consent plans do not show the external concrete paved surface, and it is not clear when it was constructed, but it can be seen in the authority's photograph dated 13 January 2013. The finished level of the as-built paved surface appears to have been at or slightly below, by up to 150mm, the finished floor level of the kitchen extension.

[17] In the absence of any information to the contrary, I have assumed the concrete paved surface formed part of the access route that allows persons to approach the main entrance from the apron or construction edge of the building and enter the building.

[18] Acceptable Solution E1/AS1, Amendment 6, effective 6 January 2002 to 30 September 2010.

[19] Acceptable Solution E2/AS1, second edition, amendment 4, effective 1 July 2001 to 8 February 2004.

[20] The owners raised similar concerns with reported damage to part of the floor construction of the existing dwelling. However, it is not clear whether this was solely attributable to surface water being directed from the external concrete paved surface towards the building at an external door location, and/or as a result of the construction of a raised flower bed along the south side of the dwelling.

As discussed in relation to the construction of the sub-floor of the dining room extension, building elements in contact with or close proximity to the ground are at risk of absorbing moisture and causing damage. The concrete paved surface sloping towards the dwelling has increased the risk of external moisture accumulating around the sub-floor and external wall elements. The concrete paved area was not constructed in a manner that prevented water entering the building, for example, in the area of the existing timber floor. Neither did it prevent the undue dampness or damage to the external wall cladding or supporting timber framing or protect building elements from the adverse effects of external moisture entering the space below the suspended floor.

Conclusion: The building work did not comply with clauses E1 and E2.

Clause E1 Surface water – clauses E1.1(a), E1.2, E1.3.2, E1.3.3

Building work: Installation of the roof gutter

Compliance assessment

The owners provided a photo showing a roof gutter on the west elevation of the extension nearest the existing dwelling that had sustained damage at some time and was subsequently taped over. The owners' submission indicates that their concern is in relation to the remediation of the damage, prior to the code compliance certificate being issued.

It is not clear when the gutter was damaged and repaired. Regardless, a photograph provided by the authority dated 10 January 2013 shows the gutter was undamaged at that time. On that basis, I consider the installation of the roof gutter complied with the Building Code to the extent required by clause B2.3.1(c), being 5-years from when the building work was completed in December 2003.

Conclusion: The roof gutter had met the requirements of compliance with clause B2 in respect of clause E1.

Clause G9 *Electricity* – G9.1(a), G9.2, G9.3.1

Building work: Installation of electrical wiring in the roof space

Compliance assessment

The owners provided evidence that some electrical cables were laid over some roof purlins. An 'electrical report' from a specialist electrical company, following a site visit on 21 January 2022, noted "that some of the wiring had not been run correctly and was not to NZ Standards of wiring as cables run through and over purlins".[21]

I have referred to Acceptable Solution G9/AS1[22] paragraph 1.0.1, which references Electrical Code of Practice ECP 50 and ECP 51 for electrical installations within domestic dwellings. NZECP 51: 1993[23] paragraph 3.1.14 provides "Supports for cables shall be as follows: (a) Cables shall be located in areas where they are not likely to be subjected to mechanical damage such as people being able to stand on them."

[21] The report did not clarify which New Zealand Standards the company was referring to.
[22] Acceptable Solution G9/AS1, amendment 3, effective 1 July 2001 to 22 June 2007.
[23] NZECP 51:1993 *New Zealand Electrical Code of Practice for Electrical Wiring Work in Domestic Premises'* effective from 1 April 1993. This was current when the energy work was undertaken.

With the cables being laid over the top of some roof purlins, they were subject to mechanical damage during the course of the profiled metal roof cladding above fixed down to the purlins. Damage would also occur when a person accessed the roof to undertake normal maintenance or necessary repairs or replacement and walked across the areas(s) of the roof concerned.

Conclusion: The building work did not comply with clause G9.

The bedroom extension (040011)

Clause B1 *Structure* – clauses B1.1(a) and (b), B1.2, B1.3.1, B1.3.3, B1.3.4

Building work: Wall bracing

The owners have stated that not all bracing elements were constructed.

Compliance assessment

The building consent included details of three bracing elements to be constructed using proprietary strip braces and a proprietary plasterboard product. The assumed means of compliance, based on the building consent documentation, was Acceptable Solution B1/AS1[24], references NZS 3604:1999. Sub-sections 5.5 and 8.3 provides information on requirements for wall bracing designs and systems to resist horizontal loads, including the bracing capacity of wall bracing elements and the distribution of the same

A photograph provided by the owners shows strip braces installed to the side of a window. It is not clear if the proprietary plasterboard product specified was installed; regardless, the external walls were lined internally with plasterboard.

I have not received evidence that any lack of bracing has caused instability of the external walls or cracks internally or externally which would be evident if sufficient bracing was not being provided. I have considered the physical conditions likely to affect the stability of the building and building elements such as, but not limited to, earthquake and wind actions (clause B1.3.3(f) and (h) respectively). The installation of the proprietary strip braces in combination with the internal plasterboard lining, which is likely to provide an element of bracing even when not installed as such, would result in there being a low probability of rupturing, becoming unstable, losing equilibrium or collapsing throughout the lives of the building and building elements.

Conclusion: I consider the extension would have complied for its required life with B1 in respect of the wall bracing.

Clause E1 *Surface water* - clauses E1.1(a), E1.2, E1.3.2, E1.3.3

Building work: Surface water pipes and outfalls

Compliance assessment

The owners provided a photograph showing a single length of “flexible pipe” laid across an excavated piece of ground to the southeast side of the bedroom extension. The photo shows the end of the pipe terminating in the soil, with no indication any surface water was disposed of to an appropriate outfall.

[24] Acceptable Solution B1/AS1, amendment 5 incorporating erratum, effective 1 July 2001 to 28 February 2005.

The flexible pipe, connected to the rainwater downpipe, did not convey the surface water from the roof to an appropriate outfall (clause E1.3.3(a)) and was unlikely to avoid damage from superimposed loads or normal ground movements (clause E1.3.3(f)).[25]

Conclusion: The surface water discharge from the downpipe did not comply with clause E1.

5. The code compliance certificates

5.1. The test to be applied by the authority in deciding to issue the three code compliance certificates is whether the building work complied with the Building Code that applied at the time the consent was issued.

The dining room extension

5.2. As noted in table 1, some elements of the building work to construct the dining room extension did not comply with the Building Code, specifically clauses B1 and E2. For example, the construction methods used regarding the lintels did not have a 'low probability' of losing equilibrium, and evidence of failure of the roof cladding installation resulted in water ingress into the extension leading to undue dampness and/or damage to building elements.

5.3. Therefore, I consider the building work as constructed did not meet the threshold for the code compliance certificate to be issued in May 2001.

The kitchen extension

5.4. Section 43(3A) of the former Act states that failure to provide an energy works certificate, in respect of electrical and/or gas fitting work, to the territorial authority shall be sufficient grounds to refuse to issue the code compliance certificate in respect of that energy work.

5.5. The authority's 'Code Compliance Certificate Checksheet' states "N" [No] regarding 'Electrical Certificate of Compliance & Safety'. Therefore, I have assumed a copy of an energy works certificate was not provided to the authority prior to its decision to issue the code compliance certificate. However, this does not necessarily mean an energy works certificate was not produced or provided by the installer of the electrical work to the previous owners of the building.

5.6. Regardless, as noted in table 1, some elements of the building work to construct the kitchen extension did not comply with the Building Code such as clauses B1 and E2. Similar to the decision for the dining room extension, the construction methods used regarding the lintels did not have a 'low probability' of losing equilibrium and

[25] E1/AS1, paragraph 3.9.1, also refers to compliance required with Clause B1 *Structure* and all drains to be constructed to withstand the combination and frequency of loads likely to be placed upon them. There is no indication the as-built "flexible pipe" was bedded and backfilled adequately (refer to E1/AS1, paragraph 3.9.2).

evidence of failure of the roof cladding installation resulted in water ingress into the extension leading to undue dampness and/or damage to building elements.

5.7. Therefore, I consider the building work as constructed did not meet the threshold for the code compliance certificate to be issued in September 2019.

The bedroom extension

5.8. As noted in table 1, elements of the building work to construct the bedroom extension did not comply with the Building Code such as clauses E1 and E2. Again, evidence of failure of the roof cladding installation resulted in water ingress into the extension leading to undue dampness and/or damage to building elements, and surface water from the roof did not discharge to an appropriate outfall.

5.9. Therefore, I consider the building work as constructed did not meet the threshold for the code compliance certificate to be issued in September 2019.

6. Decision

6.1. In accordance with section 188 of the Building Act 2004, I determine that:

- some elements of the building work constructed under building consents 990246, 020290, and 040011 (described in Table 1 of this determination) did not comply with the relevant clauses of the Building Code, namely B1, B2, E1, E2, and G9,
- therefore the provisions of sections 43(3) of the former Act and 436(3)(b)(i) of the current Act were not met for the issuing of the three code compliance certificates;
- however, as the owners have already removed and rectified the non-compliant building work to which the code compliance certificates relate, I have elected not to reverse the authority's decisions to issue those certificates.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 22 May 2025.

Peta Hird

Lead Determinations Specialist