



Determination 2020/033

The refusal to issue a code compliance certificate for historical building work to construct an outbuilding at 2/820 West Coast Road, West Melton



Figure 1: The current sleepout

Summary

This determination concerns the authority's decision to refuse to issue a code compliance certificate for construction of an outbuilding that was later converted to a sleepout. The determination considers the compliance of the building work identified by the authority in its reasons for refusing to issue the code compliance certificate.

1. The matters to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004 ("the Act") made under due authorisation by me, Katie Gordon, Manager Determinations, Ministry of Business, Innovation and Employment ("the Ministry"), for and on behalf of the Chief Executive of the Ministry.¹
- 1.2 The parties to the determination are:
 - the current owner of the building, J Cooney ("the current owner")
 - Selwyn District Council carrying out its duties as a territorial authority or building consent authority ("the authority").
- 1.3 The application for this determination arises from the following:
 - In April 1998 a building consent was issued under the Building Act 1991 ("the former Act") to the original owner, who was also the builder, ("the original owner") for construction of a garage, workshop and store ("the original outbuilding").

¹ The Building Act and Building Code (Schedule 1 of the Building Regulations 1992) are available at www.legislation.govt.nz. Information about the legislation, as well as past determinations, compliance documents and guidance issued by the Ministry, is available at www.building.govt.nz.

- The original owner made various alterations during the prolonged construction, with exterior claddings substantially completed by late 1999 and plumbing and drainage work completed by about May 2003.
- The next owner purchased the property in 2010, and converted the outbuilding into sleeping accommodation (“the sleepout”) in order to provide temporary accommodation following the Canterbury earthquakes. These alterations were made from 2011 to 2013 without obtaining a building consent. It is this owner who originally applied for the determination application, and who I refer to herein as the “previous owner”².
- The previous owner applied for a code compliance certificate in May 2017, which the authority refused in September 2017 because it was not satisfied that the sleepout as completed complied with certain clauses³ of the Building Code.
- In December 2017 the previous owner applied for a certificate of acceptance for the sleepout alterations that had been carried out after 2010. The certificate of acceptance for this work was issued in March 2018. However, the authority remained unsatisfied about the compliance of the original outbuilding, in particular in regard to weathertightness and durability of the claddings and refused to issue a code compliance certificate for that work.

1.4 The matter to be determined⁴ is therefore whether the authority was correct to refuse to issue a code compliance certificate for the building work carried out under building consent No. R418374 (also referred to in this determination as “the original building consent”). In deciding this matter, I must consider whether, in relation to the reasons for refusal provided by the authority, building work carried out under the original building consent complies with the relevant requirements of the Building Code that was in force when the consent was issued:

- (a) Whether the external building envelope of the building complies with Clause B2 Durability and Clause E2 External moisture. (I address this matter in paragraph 6.4.)
- (b) Whether the other identified building work complies with: Clauses B1 Structure, C3 Spread of fire, E1 Surface Water, E3 Internal moisture, F2 Hazardous building materials, F4 Safety from falling, G12 Water Supplies, G13 Foul water and H1 Energy Efficiency. (I address these as part of my conclusion in paragraph 6.5.)

1.5 The current 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 commence from the date of substantial completion of the external building envelope in late 1999. I have taken the 20-year-old age of the claddings into account, and I leave the matter of the modification to the parties to action after other matters are satisfactorily resolved.

1.6 In making my decisions, I have considered the submissions of the parties including the report of the building surveyor engaged by the previous owner (“the building surveyor”), the report of the expert commissioned by the Ministry to advise on this dispute (“the expert”) and the other evidence in this matter.

² The previous owner applied for the determination but subsequently sold the property and is no longer a party to this determination.

³ In this determination, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

⁴ Under sections 177(1)(b) and 177(2)(d) of the Act

1.7 Matters outside this determination

- 1.7.1 This determination is limited to the matters outlined above and does not address the subsequent alterations or other Building Code clauses. I have not considered the building work accepted as compliant under the certificate of acceptance. I also do not consider the woodburner, which was installed under a separate building consent and was issued with a code compliance certificate on 6 June 2013.
- 1.7.2 The authority has referred to a 'wine cellar', which was not built. Engineering drawings dated May 1998 are included in the property file for the subject building consent, but no consent number is shown, the dimensions do not align with those of the outbuilding and there is no other evidence that a wine cellar was contemplated for the outbuilding. I have not considered this further.

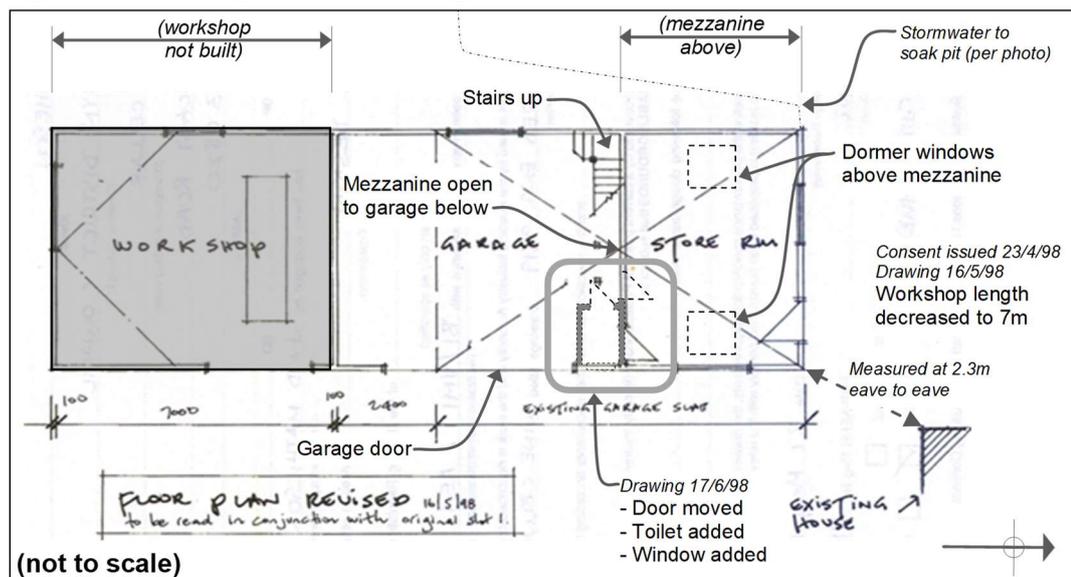
2. The building work

- 2.1 The existing building comprises a detached one and a half storey building located on a large flat, rural site. The building has a rectangular footprint of about 68 square metres, with an upper floor ("the attic") of about 40 square metres.

2.2 The original outbuilding

- 2.2.1 The outbuilding was constructed after a fire had destroyed an existing garage. The new reinforced concrete slab was poured partially over the existing slab and foundations, the extent of which is indicated in Figure 2.
- 2.2.2 The construction is conventional light timber frame with specifically engineered exposed timber roof trusses, timber framed attic floors, rusticated timber weatherboards and plywood wall claddings and aluminium joinery. The plywood wall claddings also provide structural bracing for the building.
- 2.2.3 Figure 2 shows the revised floor plan as at 17 June 1998 (prior to construction commencing in late 1998).

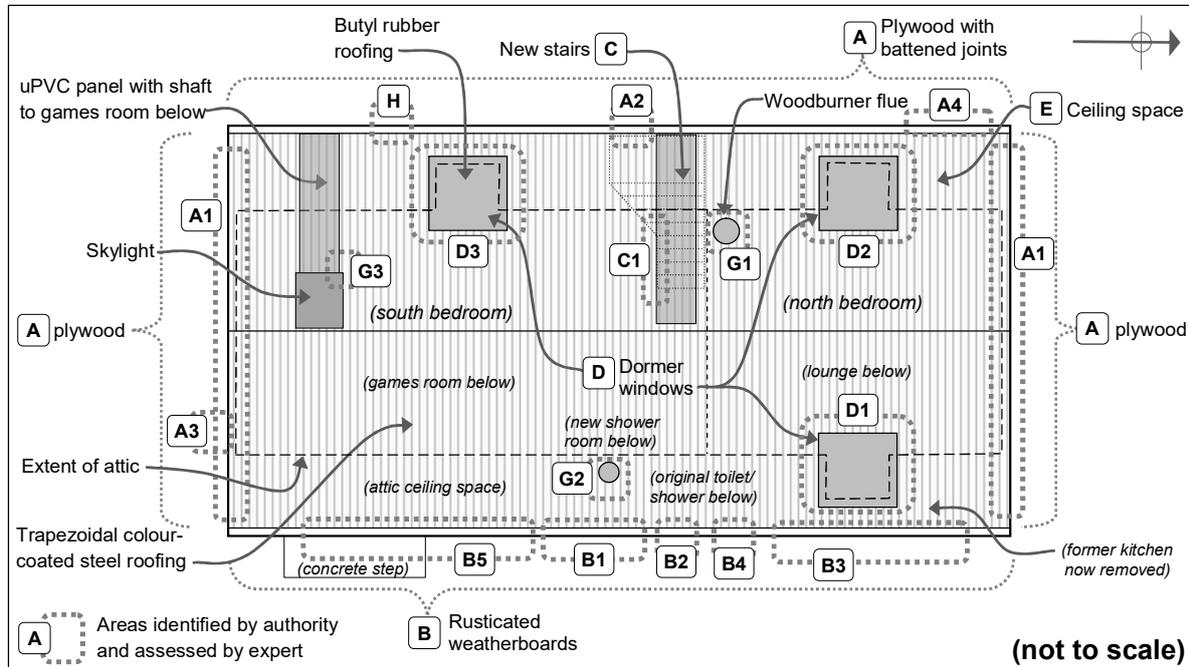
Figure 2: The original outbuilding



2.2.4 The profiled metal roof is a 45° pitch gable, originally with two flat-roofed attic dormers, one on the east side and one on the west. A third dormer was added in about 2013, as shown in Figure 3, when the south bedroom was constructed.

2.3 The altered sleepout

Figure 3: The current building



2.3.1 The completed building contains the following:

- In the lower level:
 - a large games room in the original garage to the south, with unlined ceiling framing and skylight shaft from the plastic roof panel
 - living area to the north converted from the original storeroom in 2011, with a woodburner installed in 2013
 - the original toilet to the east, extended to provide a shower in 2011
 - a new shower room adjacent to the toilet, added in 2013
 - stairs leading up to the attic to the west.
- In the attic:
 - a north bedroom converted from an open mezzanine storage area in 2011
 - a south bedroom open to the staircase, added in 2013 by installing a new floor above the games room and adding a third dormer window.

2.3.2 Given the lack of evidence and the installation of the framing in 1999, I am unable to determine the particular level and type of treatment, if any, applied to any new exterior framing. Therefore, I consider that wall and roof framing may not be treated to a level that will provide resistance to fungal decay.

3. The background

3.1 The original outbuilding

- 3.1.1 The authority issued the original building consent (No. R418374) for the outbuilding on 22 April 1998 under the Building Act 1991 (“the former Act”). Conditions attached to the consent included a list of inspections required by the authority.
- 3.1.2 The original construction was spread over a number of years. The authority recorded the following inspections during 1999:
- Pre-pour foundations and slab on 22 January.
 - Pre-line/bracing on 10 November that noted that reinspection was required when various items were completed.
- 3.1.3 It appears likely that the outbuilding was substantially completed by the end of 2002. However, the drainage inspection did not take place until 2003 with the record noting some work to be completed but also that no re-inspection was required.
- 3.1.4 The original owner provided⁵ a description of work carried out following the drainage inspection, noting that:
- the bathroom layouts have changed since installation of the original toilet, so any comments are now irrelevant
 - proprietary named sleeve anchors were added to the bottom plate as shown on the drawings
 - plasterboard bracing panel was installed as requested and was inspected
 - nailing of ply bracing was not completed at that time
 - fibreglass insulation was installed in exterior walls and skillion ceilings
 - stair handrail was adjusted and inspected (the original stairs have been replaced)
 - product nails were added to all joist hangers and inspected
 - sewer line to the septic tank was backfilled.
- 3.1.5 No final inspection was carried out and the original owner sold the property in 2007 without a code compliance certificate for the outbuilding. At that time, the plan of the outbuilding appears to have been as shown in Figure 2.

3.2 Conversion into sleeping accommodation

- 3.2.1 The previous owner purchased the property in 2010. Following the Canterbury earthquakes the previous owner approached the authority in April 2011 about converting the garage into temporary accommodation (to be used during earthquake repairs).
- 3.2.2 Alterations were carried out in 2011 without a building consent, initially converting the upper store into a bedroom, the lower store into a living space with kitchen fixtures, and adding a shower cubicle to the original toilet.

⁵ The original owner provided a letter dated 7 December 2017 to the previous owner confirming the work carried out to the outbuilding after the authority’s inspections.

- 3.2.3 Further alterations were undertaken in 2013, also without a building consent, which resulted in a two-bedroom, two bathroom self-contained dwelling for guest accommodation.

3.3 The 2017 final inspection

- 3.3.1 On 2 May 2017 the previous owner applied for a code compliance certificate for the work carried out under building consent No. R418374. The authority inspected the building on 25 June 2017. The inspection record identified the following items (in summary, with relevant Figure 3 areas noted in brackets):

- plumbing, structural fixings and insulation incomplete at 1999 pre-line inspection, with outstanding work not re-inspected
- unsealed cladding penetrations (Areas A2, B1, B2, B4, G1, G2, G3)
- waste pipes not sealed to gully trap (Area B3, B4)
- no vent to toilet (Area B2)
- downpipes discharge onto ground
- unsealed internal wet areas
- changes from original building consent:
 - change of use from an “outbuilding” to “sleeping accommodation”⁶
 - location changes to windows and doors
 - gas califont with uninsulated pipework
 - addition of kitchen area
 - addition of showers
 - solid fuel heater added.

3.4 The refusal to issue a code compliance certificate

- 3.4.1 In a letter to the previous owner dated 26 September 2017, the authority noted that “an unauthorised change of use has occurred from outbuilding to Sleeping Accommodation”⁷ and stated that the original outbuilding did not comply with:

...the following clauses of the NZ Building Code.

B1 (Structure), B2 (Durability), E1 (Surface water), E2 (External Moisture), E3 (Internal moisture), G12 (Water supplies) and G13 (Foul water).

- 3.4.2 The authority concluded it could not issue a code compliance certificate for the building work.

3.5 The meeting with the authority and subsequent repairs

- 3.5.1 A meeting between the previous owner and the authority took place on 24 October 2017. The authority explained that the original work for the outbuilding could be assessed against the Building Code that applied when the work was carried out in 1999. The later alterations carried out without building consent to convert the building into a sleepout would be assessed against the current requirements of the Building Code.

⁶ The use “outbuilding” is defined in Clause A1 of the Building Code and is a classified use for the purpose of establishing code obligations, and the use “sleeping accommodation” is defined in Schedule 2 of the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005 for the purpose of establishing a change of use in respect of sections 114 and 115 of the Act.

⁷ Section 114 of the Act requires owners to give written notice to the relevant authority of a proposed change of use, and section 115 provides for approval of a change of use subject to certain conditions relating to compliance.

3.5.2 According to the previous owner's meeting notes the authority recommended the following:

- Apply for Certificate of Acceptance, then [Code Compliance Certificate].
- The original building should be granted [a code compliance certificate] under the rules of the 1999 Building Code.
- Have new plans drawn up for the building to show any changes from existing plans.
- Have an independent Building Surveyor inspect the building to give a report as to remedying the issues found in the letter from [the authority's] inspector who carried out the final inspection.
- Get a Producer Statement or letter with a statement of facts from [the original owner] as owner/builder of the building.

3.5.3 I note that the previous owner subsequently obtained a description from the original owner dated 7 December 2017 (outlined in paragraph 3.1.4).

3.6 The building surveyor's report

3.6.1 The previous owner engaged a building surveyor who carried out a visual inspection of the sleepout on 11 October 2017 and provided a report dated 16 November 2017.

3.6.2 The surveyor noted that there was no "hard-wired stove installed or wiring for a stove" and was of the opinion that the sink bench "on its own does not constitute a kitchen". The surveyor advised the previous owner to check this with the authority.

3.6.3 In regard to the building exterior, the surveyor noted (in summary, with relevant Figure 3 areas noted in brackets):

- concrete floor slab poured over original garage foundations with no protection at the junction and a bottom flashing is needed below wall claddings
- the lack of an appropriate outfall for stormwater discharging from downpipes
- the lack of ground and paving clearances below wall claddings
- for the plywood cladding (Areas A):
 - lack of battens to unflashed vertical joints
 - insufficient overlap to joints in horizontal Z flashing (Areas A1)
 - various holes (Area A2) and unsealed penetrations through the cladding
- for the weatherboard cladding
 - unflashed butt joints in weatherboards (Area B1)
 - unsealed jambs to ranchsliders and shower room joinery (Areas B1, B5)
 - unsealed pipe penetrations (Areas B2, B3)
- at the east gully traps
 - lack of haunching to gully traps (Areas B1, B4):
 - waste pipes not sealed to gully traps (Areas B1, B4):
 - gaps at waste pipe/foundation junction (Area B4)
- for the dormer windows
 - lack of wall cladding/roofing clearances (Areas D1, D2, D3)
 - unflashed weatherboard/plywood corner junctions (Area D1)
 - unflashed corners to plywood claddings (Area D2, D3)
- for penetrations through roofing

- unflushed shower vent (Area G2)
 - hole at the lower end of the skylight (Area G3).
- 3.6.4 In regard to the building interior, the surveyor noted (in summary, with relevant Figure 3 areas noted in brackets):
- for the original staircase (Area C):
 - balustrade wires are too flexible and widely spaced
 - balustrade too low at 800mm
 - gap between stair treads is too high
 - irregular height of the bottom step
 - the height of barrier to south bedroom is too low (Area C1)
 - the games room ceiling is unlined
 - thermal imaging showed evidence of insulation in walls and ceilings.
- 3.6.5 The building surveyor concluded once all the items identified in the report were rectified a certificate of acceptance could be sought.

3.7 The certificate of acceptance

- 3.7.1 Various repairs were carried out as a result of the building surveyor's assessment including removing the kitchen fixtures from the living area, and the previous owner applied for a certificate of acceptance on 8 December 2017.
- 3.7.2 The authority issued a certificate of acceptance under section 99 on 13 March 2018, which stated the authority:
- ...is satisfied, to the best of its knowledge and belief and on reasonable grounds, that, insofar as it can ascertain, the building work described below complies with the building code.
- 3.7.3 The certificate stated the building work described in the certificate had been inspected and assessed as compliant with Clauses C1– 6 Protection from fire, D1 Access routes, F7 Warning systems, G4 Ventilation and G7 Natural light of the Building Code:
- Alteration to rebuild garage – Building work carried out but not authorised within Building Consent R418374.
- Sanitary plumbing and foul water drainage to bathroom and WC
 - Additional dormer window above games room^[8]
 - Mid-floor framing (bedroom south end)
 - Alterations to stairway
- 3.7.4 The certificate does not appear to include the following building work that was carried out but not within scope of building consent No. R418374:
- ranch slider and window in lieu of original garage door (refer Figure 2)
 - additional shower room and shower addition to the toilet (refer Figure 3)
 - other variations from the original consent drawing as shown on the stamped amended drawings submitted with the application.

⁸ The west dormer window to the south bedroom.

3.7.5 The certificate was qualified regarding areas that could not be inspected and where compliance could not be established; namely Clauses B1 Structure, B2 Durability, E2 External moisture, E3 Internal moisture, G8 Artificial light, G9 Electricity, G11 Gas as an energy source, G12 Water supplies, G13 Foul water, and H1 Energy efficiency.

4. The submissions

4.1 The previous owner's submission

4.1.1 The situation regarding the original outbuilding remained unresolved and on 26 June 2018 the Ministry received an application from the previous owner for a determination on the matter. The previous owner summarised the history of the building and the background to the current situation.

4.1.2 The previous owner included the following comments (in summary):

- all outstanding items from the original inspections were completed
- all items identified have been resolved since purchasing the property in 2010
- the time frame was disrupted by the Canterbury earthquakes, which also proved the structural performance of the building
- despite following the process provided by the authority at the meeting in October 2017, it appears that a code compliance certificate is not achievable.

4.1.3 The previous owner provided copies of:

- the original building consent dated 22 April 1998
- the original inspection records
- the application for a code compliance certificate dated 2 May 2017
- the final inspection record and photographs dated 25 June 2017
- the authority's refusal to issue a code compliance certificate dated 26 September 2017
- meeting notes of discussions with the authority on 24 October 2017
- the original owner's statement dated 7 December 2017
- stamped drawings of the alterations
- the certificate of acceptance dated 13 March 2018
- various other statements, photographs and information.

4.2 The authority's submission

4.2.1 The authority provided a submission on 25 July 2018. The authority considered that the reasons for their refusal to issue a code compliance certificate had been clearly communicated with the previous owner in the inspection notice dated 25 June 2017 and the subsequent letter of 26 September 2017.

4.2.2 The authority made a further submission on 10 September 2018, which cited the lack of evidence of repair work undertaken in response to the items identified in its final inspection on 25 June 2017 (see paragraph 3.3.1).

4.2.3 The authority also outlined specific shortcomings regarding certain clauses of the Building Code (in summary):

Table 1: The authority's concerns

Clauses	The authority's concerns (in summary)
B1 Structure	<ul style="list-style-type: none"> nails missing from joist hangers compliance of recent repairs to the ply cladding and the new staircase
B2 Durability	<ul style="list-style-type: none"> many defects identified by building surveyor date back to construction no moisture testing carried out by surveyor so damage to underlying elements not known lack of ground clearances for 19 years to plywood cladding raises questions about its long term integrity as structural bracing given the incomplete pre-lining inspection in 1999, the compliance of insulation and plumbing is unknown
C3 Spread of fire	<ul style="list-style-type: none"> building consent documentation showed the proposed outbuilding 1.8m from the existing house but the as-built separation is only about 1.3m for sleeping accommodation, Acceptable Solution C/AS1⁹ requires a greater fire separation
E1 Surface water	<ul style="list-style-type: none"> photographs of stormwater drain raises questions of compliance
E2 External moisture	<ul style="list-style-type: none"> no evidence that ground levels have been lowered many weathertightness defects identified by building surveyor no evidence that all have been satisfactorily rectified
E3 Internal moisture	<ul style="list-style-type: none"> insufficient space between shower lining and shower rose adequacy of wet area sealing is not known
F2 Hazardous building materials	<ul style="list-style-type: none"> unknown safety glass to window above stair landing
F4 Safety from falling	<ul style="list-style-type: none"> lack of protection against fall from window above stair landing
G12 Water supplies	<ul style="list-style-type: none"> no pre-line plumbing inspection so compliance of pipework unknown
G13 Foul water	<ul style="list-style-type: none"> building surveyor questioned adequacy of septic tank photographs show insufficient fall to waste pipes top of gully trap too close to shower overflow level
H1 Energy efficiency	<ul style="list-style-type: none"> insulation not installed when pre-line inspection carried out so compliance of insulation unknown photographs show that ceiling linings installed on or very close to top of truss chords, leaving insufficient space for insulation and clearances

4.2.4 The authority added that other changes from the original consent drawing remained unresolved, such as changes to dormer window wall claddings and the omission of the workshop¹⁰. I have commented on the omission of a 'wine cellar' in paragraph 1.7.2.

4.2.5 The authority provided digital copies of its property records, which contained additional documents including:

- the original consent documentation

⁹ Acceptable Solutions are a prescriptive means by which compliance with the Building Code can be established. Section 22(2) of the Act provides "A person who complies with an acceptable solution ... must, for the purposes of [the] Act, be treated as having complied with the provisions of the building code to which that acceptable solution ... relates.

¹⁰ I note that the application included drawings that clearly showed the latter omission as shown in Figure 2.

- the authority's computer record of inspections and discussions
- the inspection summary
- the stamped documentation supporting the certificate of acceptance
- correspondence with the applicant
- various other statements, photographs and information.

4.3 The draft determination and submission in response

- 4.3.1 A draft determination was issued to the parties for comment on 25 June 2020.
- 4.3.2 The authority responded on 29 September 2020, noting minor corrections and providing further comment on both the expert's report and the draft determination. In relation to the insulation, the authority noted that placing this on top of the trusses rather than between results in a total thermal construction value of R1.13¹¹, which is 'less than half of the minimum R2.5 required by NZS 4218:1996'¹².
- 4.3.3 No response to the draft determination or other submissions were received from the current owner.

5. The expert's report

- 5.1 As mentioned in paragraph 1.6, I engaged an independent expert to assist me. The expert is a member of the New Zealand Institute of Building Surveyors. The expert viewed the house on 17 and 30 October 2018, providing a report dated 5 November 2018. A copy of the report was forwarded to the parties on 6 December 2018.

5.2 General

- 5.2.1 The expert considered that the overall quality of finish on the exterior envelope of the dormers was of a poor standard. The quality of finish to the ground floor exterior claddings was also below average, particularly as sheet joints were not fully covered.
- 5.2.2 The expert noted the following significant changes from the original consent drawings that were carried without a building consent¹³ (refer paragraph 2.2, Figure 2, and paragraph 2.3, Figure 3):
- the south workshop was not constructed
 - 4.8m wide east garage door replaced with a 3.2m wide ranchslider (Area B5)
 - a third dormer window was added to the west side of the south bedroom (Area D3)
 - dormer walls clad in plywood and weatherboards instead of butyl rubber
 - bathroom with window added adjacent to the east toilet (Area B1)
 - new staircase added, replacing the original (Area C).
- 5.2.3 I note the determination is limited to consideration of the building work carried out under building consent No. R418374. However, for the benefit of the parties I have also included the expert's comments on work that does not appear to have been carried out within the scope of that building consent.

¹¹ The R-Value, also referred to as thermal resistance rating, is the measure used to determine a material's ability to resist the transfer of heat. The higher the R-Value the better thermal resistance the product will provide.

¹² New Zealand Standard NZS 4218:1996 Energy efficiency - Housing and small building envelope

¹³ It is unclear whether this work has been included with the scope of the certificate of acceptance.

5.2.4 The expert also noted there were various other internal alterations covered by the certificate of acceptance.

5.3 Invasive investigations

5.3.1 The expert carried out the following destructive investigations (to investigate areas identified by the authority as noted in Table 1):

- Removal of a vertical batten over a plywood joint revealed nail fixings at 140mm to 160mm centres, with fixings at 150mm centres into the bottom plate.
- Removal of plasterboard under and beside the attic dormers, revealing:
 - fibreglass insulation beneath windows (Areas D1, D2)
 - water stained framing with an invasive moisture reading of 65% and advanced decay identified below the sills (Area D2)
 - water staining to framing in adjacent ceiling spaces but no sign of permanent damage (Areas D1, D2, D3):
 - no sign of water staining to particle board flooring
 - sloping roof insulation supported on polythene
- Access to ceiling space south of dormer D1 revealed water dripping from the extractor duct onto the ceiling lining above the bathroom.
- Removal of cover plate to a waste pipe behind toilet pan revealed insulation within the wall space.

5.3.2 The expert took invasive moisture readings into lower timber framing at areas considered at risk of moisture penetration. The expert used long probes inserted into bottom plates to within 10mm of the outer surface of the framing and noted the following:

- 11% and 12% in the bottom plate at games room ranchslider jambs (Area B5)
- 16% to the bottom of stud behind butt-jointed weatherboards (Area B2)
- 12% in the bottom plate below the toilet wastepipe (Area B4)
- 15% in the bottom plate beneath unsealed redundant water pipes (Area B3)
- 9% to 12% beneath other repaired areas or representative at risk areas.

5.3.3 The above readings were well below the 18% that would generally indicate moisture penetration. The expert also noted that all timber felt firm when drilling and shavings were clean with no discoloration or evidence of damage.

5.4 The expert's assessment of items identified

5.4.1 The expert reviewed the authority's letter dated 10 September 2018 and the items identified in the final inspection record dated 25 June 2017. The expert's comments are summarised in Table 2.

Table 2: The expert's assessment

The authority's concerns (summarised)	Reference	The expert's comments (in summary)
<p>Clause B1 Structure:</p> <ul style="list-style-type: none"> Nails missing from joist hangers. Plywood bracing. Recent repairs and new staircase. 	Para.5.3.1	<ul style="list-style-type: none"> Some hangers comply with manufacturer's current recommendations. For domestic floors where no uplift expected, minimum 3 nails per flange currently required. Some hangers have fewer than 3 nails. No evidence of failure after 20 years in service, including the Canterbury earthquakes. Batten over joint removed to check nailing. Nails at 140-160mm centres vertically. Nailing into bottom plate at 150mm centres (refer E2 for battens and flashings) (refer D1 for new staircase)
<p>Clause B2 Durability:</p> <ul style="list-style-type: none"> Many defects identified by building surveyor date back to construction. Damage to underlying elements. No invasive testing around defects. Lack of ground clearances – integrity of plywood cladding as structural bracing in doubt. 	Para.5.3.2 Para.5.3.3	<ul style="list-style-type: none"> Invasive testing of the dormer window identified decay in the timber framing. <p>Invasive testing of the lower walls (see paragraph 5.3.2) at:</p> <ul style="list-style-type: none"> each side of exterior doors below all penetrations below horizontal lap joints to flashings below cladding patch to west elevation below butt joints to east weatherboards at northeast, northwest and southwest corners. <p>These included areas of reduced cladding clearances. All timber felt firm, with clean shavings, no discoloration and no evidence of past or present moisture entry.</p>
<p>C3 Fire</p> <ul style="list-style-type: none"> As-built separation from house is insufficient. Acceptable Solution C/AS1 requires greater fire separation for sleeping accommodation. 	Figure 2	<p>Measurements on site were:</p> <ul style="list-style-type: none"> 2.9m from wall cladding to wall cladding 2.3m from eave to eave (as closest distance).
<p>D1 Access routes</p> <ul style="list-style-type: none"> Compliance of new staircase. 	Figure 3 (Area C)	<ul style="list-style-type: none"> Tread measured at 250mm. Rise measured at 205mm. Pitch angle 40°, with all steps even. Above dimensions compliant. <p>However space between treads is greater than 100mm sphere (refer Acceptable Solution D1/AS1 4.1.8(a) Open risers).</p>
<p>E1 Surface water</p> <p>Photo of stormwater drain shows:</p> <ul style="list-style-type: none"> trench wider than 600mm no compacted bed no inspection points at bends. 		<ul style="list-style-type: none"> Photo is of unfinished excavated trench. No known history of problems with drain.

The authority's concerns (summarised)	Reference	The expert's comments (in summary)
<p>E2 External moisture</p> <ul style="list-style-type: none"> Clearances to finished floor level. (Acceptable Solution E2/AS1 recommends 150mm to paving and 225mm to soil) <ul style="list-style-type: none"> Many weathertightness defects. No evidence that all have been satisfactorily rectified. 	<p>Figure 3 (Area B5)</p> <p>Para.5.3.2</p> <p>Para.5.3</p> <p>Figure 3 (Area D2)</p> <p>Figure 3 (A1, A2,A4)</p> <p>Figure 3 (Area B1) (Area B5)</p> <p>Figure 3 (Area A3) (Area B3) (Area A2) (Area G2) (Area G1)</p>	<p>On east and north elevations:</p> <ul style="list-style-type: none"> concrete step at east ranchslider door contacts sill gravel drive 80 –100mm below interior floor level north paving 100mm below interior floor level no raised moisture levels in bottom plates no evidence of historic water entry. <p>On west and south elevations:</p> <ul style="list-style-type: none"> clearance to soil exceeds 225mm. <p>Dormer windows (Area D):</p> <ul style="list-style-type: none"> poorly flashed wall cladding junctions evidence of leaking and framing decay in northwest dormer investigations revealed moisture staining from past leaks. <p>Plywood cladding (Area A):</p> <ul style="list-style-type: none"> z-flashing overlapped joints now over-flashed no battens to some short vertical joints new base flashing does not cover slab/foundation junction at north end of west elevation (short section). <p>Weatherboards (Area B):</p> <ul style="list-style-type: none"> unflashed butt joints from infill boards when garage door replaced with ranchslider and shower room window jamb now sealed with flexible sealant flashing installed to cover slab/foundation junction. <p>Cladding penetrations:</p> <ul style="list-style-type: none"> most penetrations now sealed pipes to former kitchen still unsealed hole to ply on west elevation now sealed with metal plate bathroom extract vent pipe leaking - needs soaker flashing woodburner flue needs soaker flashing to prevent leaks.
<p>E3 Internal moisture</p> <ul style="list-style-type: none"> Shower lining/rose clearance. Wet area sealing unknown. 		<ul style="list-style-type: none"> Proprietary shower cubicles generally about 1.8m high. Linings well sealed to walls so unlikely to cause problem. <ul style="list-style-type: none"> Floor tiles in new shower room laid over concrete. Shower is prefabricated cubicle with tray. No tiles within shower enclosures. Acceptable Solution E3/AS1 does not call for water proof membrane elsewhere. <p>Other items noted:</p> <ul style="list-style-type: none"> handbasin/splashback junction in the original toilet and shower room lacks sealant (toilet area) small leak at shower cubicle/wall junction, with slightly elevated moisture but no sign that moisture has spread.
<p>F2 Hazardous building materials</p> <ul style="list-style-type: none"> Glass to stair landing window. 	<p>Figure 3 (Area A2)</p>	<ul style="list-style-type: none"> Safety markings to glass show 5mm toughened float 'Grade A Safety glass' – meets Clause F2.3.3.

The authority's concerns (summarised)	Reference	The expert's comments (in summary)
F4 Safety from falling <ul style="list-style-type: none"> Stair landing window. 	Figure 3 (Area A2)	<ul style="list-style-type: none"> Sill height 1.7m above ground level, but only 400mm above stair landing. Restrictor should be fitted to restrict opening to 100mm to satisfy Acceptable Solution F4/AS1.
G12 Water supplies <ul style="list-style-type: none"> Compliance of pipework. 		<ul style="list-style-type: none"> Water supply operated satisfactorily for some 18 years. No sign of plumbing-related leaking.
G13 Foul water <ul style="list-style-type: none"> Adequacy of septic tank. 		<ul style="list-style-type: none"> All drainage has operated satisfactorily for some 18 years. No sign of problems or non-compliance with G13.
<ul style="list-style-type: none"> Insufficient fall to waste pipes. 	Figure 3 (Area B3)	<ul style="list-style-type: none"> Relates to redundant pipework from former kitchen. No visible waste pipes with inadequate fall.
<ul style="list-style-type: none"> Top of gully trap too close to shower overflow level. 	Figure 3 (Area B1) (Area B4)	Acceptable Solution G13/AS1 (3.3.2) calls for 150mm clearance for: <ul style="list-style-type: none"> 2013 shower, gully top 154mm below shower overflow 2011 shower, gully top 114mm below shower overflow.
<ul style="list-style-type: none"> Lack of terminal vent to toilet. 	Figure 3 (Area B2)	<ul style="list-style-type: none"> Air admittance valve (AAV) now fitted to drain.
H1 Energy efficiency <ul style="list-style-type: none"> Compliance of insulation. 	Para 5.3.1	Insulation sighted in 7 locations: <ul style="list-style-type: none"> ceilings (refer below) behind toilet in exterior wall under stairs via a hole in dormer walls.
Profiled plastic roofing panels.		Roofing panel above staircase: <ul style="list-style-type: none"> clear profiled panel with clear polythene underlay 150mm air cavity with '10mm thick twin wall clear acrylic' twin wall includes 6mm entrapped air roof panel likely to be better than compliant skylight. Roofing panel above games room: <ul style="list-style-type: none"> clear profiled panel with clear polythene underlay lacks air cavity and twin wall unlikely to meet current requirements, but was compliant at time of construction.
<ul style="list-style-type: none"> Ceiling linings installed on or very close to top of truss chords, leaving insufficient space for insulation and clearances. 	Figure 3 (Area E)	<ul style="list-style-type: none"> Fibreglass insulation visible at roof/wall junctions. Ceiling linings align with top of truss top chord – leaving 45mm space for insulation. BRANZ guidance at time recommended 25mm gap. Insulation in place for some 18 years. No evidence of moisture problems on ceiling linings. Performance would be compromised due to compression.
Final inspection record		
Plumbing and insulation not installed at 1999 pre-line inspection.		<ul style="list-style-type: none"> Refer G12, G13 above. Water pipes surface mounted in games room. Pipes within thermal envelope so insulation not required.
Structural fixings incomplete at 1999 pre-line inspection.		<ul style="list-style-type: none"> Refer comments above relating to clause B1.

The authority's concerns (summarised)	Reference	The expert's comments (in summary)
Unsealed penetrations.		<ul style="list-style-type: none"> Refer comments in E2 above.
Waste pipes not sealed to gully trap.	Figure 3 (Area B1,B4)	<ul style="list-style-type: none"> All wastepipes now sealed against gully trap walls. Sealant commonly accepted as alternative solution to Acceptable Solution G13/AS1 Figure 3. Wastepipe from vanity in bathroom runs just below gravel surface tight against the foundation (should be protected from possible damage in future).
No vent to toilet.	Figure 3 (Area B2)	<ul style="list-style-type: none"> AAV now fitted to drain.
Downpipes discharge onto ground.	Figure 3 (Area H)	<ul style="list-style-type: none"> Broken downpipe has been replaced. West downpipe was leaking through unsealed bottom joint due to blockage in underlying drain. Water not backing up into gutters so appeared to be draining through blockage into soak pit. Need risers with grates to allow cleaning and maintenance (essential with number of trees in vicinity).
Unsealed internal wet areas.		<ul style="list-style-type: none"> Refer comments above relating to clause E3.
Changes from original consent		
Change of use from outbuilding to sleepout.		<ul style="list-style-type: none"> The certificate of acceptance covers change of use¹⁴.
Changes to windows and doors.	Figure 3 (Area B1) (Area B3)	<ul style="list-style-type: none"> Garage door changes accepted in certificate of acceptance¹⁵. Other window positions in place at pre-line inspection, with no comment noted in inspection record.
Gas califont with uninsulated pipework.	Figure 3 (Area A3)	<ul style="list-style-type: none"> Pipes now insulated.
Addition of kitchen area.		<ul style="list-style-type: none"> Kitchen fittings now completely removed.
Addition of showers.		<ul style="list-style-type: none"> Shower additions covered in certificate of acceptance.
Solid fuel heater added.		<ul style="list-style-type: none"> Installed under separate consent BC121081. Issued with code compliance certificate on 6 June 2013.

5.4.2 The expert also noted that the building surveyor identified gaps at a waste pipe/foundation junction to the original gully trap (Area B4). The expert considered that gully blockages would result in sewerage overflowing onto the driveway and not into hardfill under the concrete slab.

5.5 The expert's conclusions

5.5.1 The expert considered that the following items required remedial work (in summary):

- inadequately nailed joist hangers (Clause B1)
- openings between the staircase treads (Clause D1)
- Clauses E2 and B2:
 - decay and leaks around west dormer to north bedroom (Area D2)

¹⁴ I note the Project Information Memorandum issued by the authority notes the use of the building as a sleepout.

¹⁵ It is not clear whether these changes are covered by the certificate of acceptance. No clarification of this point was provided in response to the draft of this determination.

- roof leaks around the bathroom vent (Area G2)
- lack of battens to some plywood joints (Area A)
- unsealed redundant water pipes (Area B3)
- unsealed handbasin/splashback junction (Clause E3)
- lack of window restrictor to stair landing window (Clause F4)
- top of original gulley trap not far enough below shower overflow (Clause G13).

6. Compliance of the original outbuilding

6.1 The building consent considered in this determination was issued under the former Act, and accordingly the transitional provisions of the Act apply when considering the issue of a code compliance certificate for work completed under this consent. Section 436(3)(b)(i) of the transitional provisions of the Act requires the authority to issue a code compliance certificate only if it “is satisfied that the building work concerned complies with the building code that applied at the time the building consent was granted”.

6.2 The matter in dispute is whether the authority correctly exercised its power in its decision to refuse to issue the code compliance certificate for those building elements remaining from the original 1998 building consent for the outbuilding (“the remaining elements”). In deciding this matter and taking account of the limited historic records, I have therefore considered whether the remaining elements comply with the relevant performance clauses of the Building Code that was in force when the original building consent was issued in 1998.

6.3 In assessing the above, I have taken into account the age(s) of various elements in the building. An application can be made to the authority for a modification of durability requirements to allow durability periods for the remaining elements to commence from late 1999. I have taken the anticipated modification into account when considering the compliance of the external claddings.

6.4 Weathertightness and durability of the exterior building envelope

6.4.1 The relevant performance requirements of Clause B2 (at the time the consent was issued) were provided in Clause B2.3.1:

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, if 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...
- (b) 15 years if:
 - (i) those building elements (including the building envelope, exposed plumbing in the subfloor space, and in-built chimneys and flues) are moderately difficult to access or replace, or....

6.4.2 The relevant performance requirement of Clause E2 (at the time the consent was issued) was provided in Clause E2.3.2:

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

6.4.3 The inspection records indicate that the building envelope was substantially complete by the preline inspection in late 1999. I have taken that into account when considering the weathertightness performance because the original wall and roof claddings are now more than 20 years old.

6.4.4 The expert has investigated the roof and wall claddings and despite shortcomings in their installation, has found their performance generally satisfactory to date, with the exception of the dormer windows. I accept that the claddings have generally performed adequately. However, this opinion does not extend to the dormer window elements. I note also that some areas that have performed adequately to date will require maintenance to ensure ongoing protection of the underlying structure.

Weathertightness of the dormer windows (Areas D1, D2 and D3)

6.4.5 The expert's investigations included removing linings below one dormer window (Area D2), which revealed current leaks and evidence of advanced decay in the dormer framing. This indicated the dormer had been leaking for an extended period of time. Signs of moisture entry and timber staining were also observed in areas associated with the other north dormer window (Area D1).

6.4.6 I am not satisfied the two northern dormer windows have been weathertight and durable for a considerable time, based on: the expert's investigations; the changes in wall cladding from the consent drawing; the defects identified by the previous owner's building surveyor in 2017; and the similar construction details assumed for the other two dormers. I therefore conclude the two original dormer windows do not comply with Clause E2.

6.4.7 The two original dormer windows are now some 20 years old. Further investigation and remedial work will be required to ensure that the dormers are made weathertight so as to protect the underlying timber framing from the penetration of water which could cause dampness or damage to building elements, as is required to meet the minimum durability requirement of 50 years.

6.4.8 In regard to the remaining building envelope, the expert's report has established that its current performance is adequate because there is no evidence of moisture penetration causing undue dampness or damage. Though the building envelope may have satisfied the minimum 15-year durability period required for Clause B2.3.1, the expected life of the building itself is a minimum of 50 years and careful attention to the performance and maintenance of the building envelope is needed to ensure that it continues to protect the underlying structure.

6.4.9 A modification of the Building Code's durability provisions will allow the durability periods stated in Clause B2.3.1 to commence from the date of substantial completion in late 1999 for the external building envelope. This means that in respect of the remaining areas of the roof and wall claddings the required durability period of 15 years has since expired. Therefore, I am satisfied that the remaining external building envelope have complied with Clause B2.3.1(b)(i) insofar as it relates to Clause E2.

6.5 Other building elements

6.5.1 Table 3 summarises my conclusions on significant items commented on within the final inspection record dated 25 June 2017, the building surveyor's report dated 16 November 2017, the authority's letter dated 10 September 2018, and the expert's report. I have not included building work that was not within the scope of the original building consent.

Table 3: Identified concerns

Areas (in summary)	Area	Expert's observations (summarised from Table 2) with my additional notes added	Compliance	Para.
Structure (Clauses B1 and B2)				
Joist hangers.		<ul style="list-style-type: none"> Some hangers have fewer than 3 nails. No evidence of failure after 20 years in service, including Canterbury earthquakes. 	Does not comply	Table 2 6.5.2
Plywood bracing.		<ul style="list-style-type: none"> Nails at 140-160mm centres vertically. Nailing into bottom plate at 150mm centres. 	Complies	5.3.1
Weathertightness (Clauses B2 and E2)				
Ground clearances.	B5	<ul style="list-style-type: none"> No raised moisture levels in bottom plates. No evidence of historic water entry. <p>On west and south elevations:</p> <ul style="list-style-type: none"> clearance to soil exceeds 225mm. <p>On east and north elevations:</p> <ul style="list-style-type: none"> 80-100mm below interior floor level Concrete step contacts ranchslider sill. 	Complies	5.3.2 5.3.3
Junction of topping slab to old garage foundation.	A4	<ul style="list-style-type: none"> New base flashing fitted. Does not fully cover one small area. 	Complies	
Plywood cladding: <ul style="list-style-type: none"> vertical joints overlapped Z flashing joints holes penetrations 	A1 A2 A3	<ul style="list-style-type: none"> Battens fixed to most joints – some missing. Z-flashing joints now over flashed. Holes now sealed. Penetrations now sealed. Power cable to califont now flashed. 	Complies	
Weatherboards: <ul style="list-style-type: none"> window jambs aligned butt joints pipe penetrations 	B1 B5 B5 B3	<ul style="list-style-type: none"> Window jambs now sealed. Butt joints still uncovered or unsealed. Most penetrations now sealed, except for redundant kitchen sink pipe work. 	Complies Complies (Note minor repairs required for protection of underlying structure)	Table 2
Roofing: hole to skylight lower end.	G3	<ul style="list-style-type: none"> Hole now unable to be found. 	Complies	
Dormer windows: <ul style="list-style-type: none"> cladding/roofing clearances wall cladding corners. 	D1 D2 D3 D2	<ul style="list-style-type: none"> Inadequate clearances to dormers. Poorly flashed junctions to dormers. Claddings deteriorating. Current leaking and decay in northwest dormer. Moisture staining from past leaks. 	Further investigation required Does not comply	6.5.2 6.5.2

Areas (in summary)	Area	Expert's observations (summarised from Table 2) with my additional notes added	Compliance	Para.	
Lack of invasive testing.		<p>Except for dormer windows:</p> <ul style="list-style-type: none"> Invasive/destructive investigations to all identified at-risk junctions. No evidence of past/present moisture entry. 		5.3.2 5.3.3	
Underlying damage.		<ul style="list-style-type: none"> All timber felt firm when drilling, with clean shavings, no discoloration. 	No evidence of non-compliance	5.3.3	
Fire separation (Clause C3)					
Separation from house. Requirement for sleeping.		<ul style="list-style-type: none"> Total separation (eave to eave) is 2.3m. Distance from notional boundary is 1.15m. No rating required if distance to notional boundary greater than 1m. 	Complies	Fig.2 Table 2	
Surface Water (Clause E1)					
Damaged downpipe.	H	<ul style="list-style-type: none"> Broken downpipe has been replaced. West downpipe was leaking through unsealed bottom joint due to blockage in underlying drain. 	Complies	Table 2	
Stormwater drains.		<ul style="list-style-type: none"> Photo is of unfinished excavated trench. Area now grassed with no sign of sinking. No known history of problems with drain. Able to repair/replace if problems arise. 	Complies	Fig.2	
Internal issues (Clauses E3, D1, F2, F4 and H1)					
E3		<p>Other items noted:</p> <ul style="list-style-type: none"> Handbasin/splashback junction lacks sealant (toilet area). 	Does not comply	Table 2	
F2	Stair landing window.	A2	<ul style="list-style-type: none"> Markings show safety glass. 	Complies	Table 2
F4	Stair landing window.	A2	<ul style="list-style-type: none"> Sill height 1.7m above ground level, but only 400mm above stair landing. 	Does not comply	Table 2 6.5.2
F4	South bedroom barrier.	C1	<ul style="list-style-type: none"> Barrier replaced with 1m high balustrade. 	Complies	
H1	Wall insulation.		<ul style="list-style-type: none"> Fibreglass wall insulation observed. 	Complies	5.3.1
H1	Plastic profiled roofing.		<ul style="list-style-type: none"> Compliant at time of construction. 	Complies	Fig.3
H1	Skillion roof insulation.		<ul style="list-style-type: none"> No evidence of moisture problems on ceiling linings after 18 years. Trusses exposed so insulation compressed. 	Insufficient information to establish compliance	5.3.1
H1	Gas califont pipes.	A3	<ul style="list-style-type: none"> Pipes now insulated where exposed. Interior pipework inside thermal envelope. 	Complies	

Areas (in summary)		Area	Expert's observations (summarised from Table 2) with my additional notes added	Compliance	Para.
Other external items (Clauses G12 and G13)					
G12	Concealed pipework		<ul style="list-style-type: none"> Operated satisfactorily for some 20 years. No sign of plumbing related leaking. 	Complies	
G13	Waste pipes/gully joints.	B1 B4	<ul style="list-style-type: none"> All wastepipes now sealed against gully. 	Complies	
G13	Gully trap haunching.	B1 B4	<ul style="list-style-type: none"> Gully traps now haunched with concrete. 	Complies	
G13	Waste pipe/foundation junction.	B4	<ul style="list-style-type: none"> Pipe/gully junction at side of gully. Gully blockage would overflow to driveway. Would not flow back under slab. 	Complies	
G13	Septic tank adequacy.		<ul style="list-style-type: none"> Drainage has operated satisfactorily for some 20 years. No sign of problems or non-compliance. 	Complies	
G13	Insufficient fall to waste pipes.	B3	<ul style="list-style-type: none"> Redundant pipework from former kitchen. No visible waste pipes with inadequate fall. 	Complies	
G13	Terminal toilet vent.	B2	<ul style="list-style-type: none"> AAV now fitted to drain. 	Complies	

6.5.2 I conclude that further investigation and/or remedial work is necessary to the building work from the original building consent, in respect of the following areas:

- Clauses B1 and B2:
 - some inadequately nailed joist hangers
 - damaged and potentially damaged framing associated with dormer windows (Areas D1 and D3)
- Clauses E2 and B2:
 - weathertightness and durability of dormer windows (Areas D1, D2 and D3)
- Clause E3
 - lack of sealant to the handbasin/splashback junction (toilet area)
- Clauses F4:
 - lack of compliant barrier to stair landing window
- Clause H1:
 - though insulation has been installed, there is insufficient information with regard to the performance of the insulation installed in the roof to establish compliance of the whole of the building envelope.

6.5.3 In conclusion, some elements remaining from building consent No. R418374 do not comply with the relevant requirements of the Building Code that applied at the time, and therefore the authority was correct to refuse to issue a code compliance certificate.

7. The decision

- 7.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the authority's decision to refuse to issue a code compliance certificate was correct and I confirm that decision.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 11 December 2020.

Katie Gordon
Manager Determinations