



Determination 2020/011

Regarding the refusal to issue a code compliance certificate for a relocated house with 19-year-old alterations and additions at 215 Horndon Street, Darfield

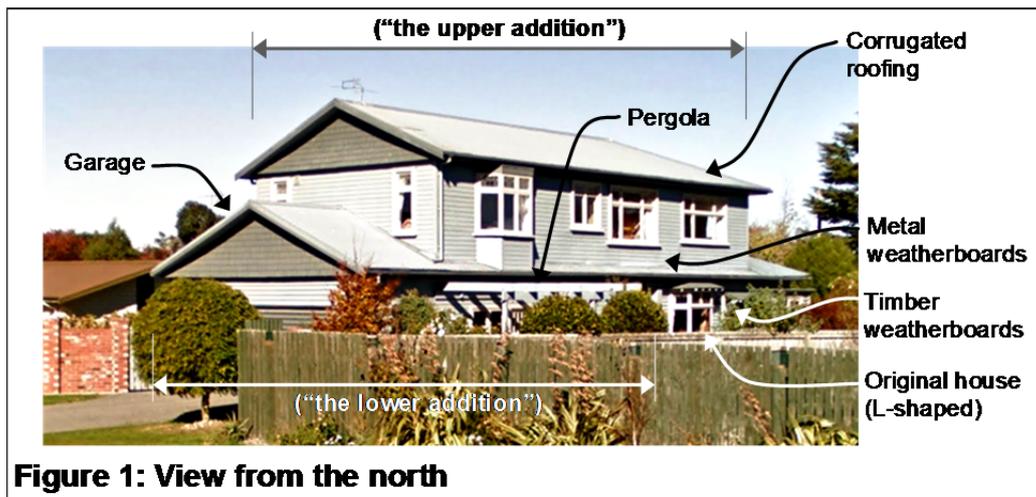


Figure 1: View from the north

Summary

This determination considers an authority's refusal to issue a code compliance certificate for a relocated house with 19-year-old alterations and additions principally for reasons to do with the performance of the building envelope. The determination considers the authority's reasons for the refusal and whether the items identified by the authority are compliant with the Building Code requirements in force when the building consent was issued.

1. The matter 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 owner of the building, J Crossley ("the applicant")
- Selwyn District Council carrying out its duties as a territorial authority or building consent authority ("the authority").

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

- 1.3 This determination arises from the decision of the authority to refuse to issue a code compliance certificate for alteration and additions to a relocated and extended house. The refusal arose because the authority is not satisfied that the building work complies with certain clauses² of the Building Code³.
- 1.4 The matter to be determined⁴ is therefore whether the authority was correct to refuse to issue a code compliance certificate for the reasons given in its final inspection notice dated 13 April 2017 and subsequent letter dated 11 May 2017 (see paragraph 3.6). In deciding this, I must consider whether the house as completed complies with the identified Building Code requirements in force when the original building consent was issued. In deciding this matter I must consider:
- (a) Whether the completed external building envelope of the house complies with Clause B2 Durability and Clause E2 External moisture of the Building Code that was in force at the time the building consent was issued. The completed building envelope includes components remaining from the original relocated house together with the alterations and additions.
 - (b) Whether the other items identified by the authority comply with the relevant parts of the Building Code that was in force at the time the original consent was issued: namely Clauses B1 Structure, E1 Surface water, E3 Internal moisture, F2 Hazardous building materials, G9 Electricity and G11 Gas as an energy source.

1.5 Matters outside this determination

- 1.5.1 This determination does not address Building Code clauses not identified by the authority. I also do not consider the detached garage which was relocated onto the site under a separate building consent.
- 1.5.2 I also note that the owner will be able to apply to the authority for a modification of durability provisions to allow the durability periods specified in Clause B2.3.1 to commence from the date the interim code compliance certificate was issued in June 2000. Although I take the 20-year-old age of the consented work into account in this determination, I leave this matter to the parties to resolve after other matters are satisfactorily resolved.
- 1.5.3 In making my decisions, I have considered the submissions of the parties, the report of the expert commissioned by the Ministry to advise on this dispute (“the expert”) and the other evidence in this matter. The relevant sections of the Building Act 1991 (“the former Act”) are included in Appendix A.

2. The building work

- 2.1 The house comprises a three-bedroom detached building located on a level site in a medium wind zone⁵ for the purposes of NZS 3604⁶. The completed building is reasonably simple in plan and form and is assessed as having a moderate weathertightness risk using the methodology described in the Acceptable Solution for Clause E2 External Moisture, E2/AS1⁷.

² In this determination, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

³ First Schedule, Building Regulations 1992

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

⁵ According to the bracing calculations included in the approved building consent

⁶ New Zealand Standard NZS 3604:2011 Timber Framed Buildings

⁷ An Acceptable Solution is one way, but not the only way to establish compliance with the Building Code. If used, compliance with an Acceptable Solution must be accepted by a Building Consent Authority as complying with the Building Code.

2.2 As shown in Figure 1, the relocated house forms the lower rear half of the ground floor, with an addition to the front (“the lower addition”). The original eaves to the relocated house extend around the ground floor, with an upper floor addition covering about 75% of the ground floor area (“the upper addition”).

2.3 The original relocated house

2.3.1 The original three-bedroom house was a single-storey traditional bungalow (circa 1920’s). The engineer’s report on the house prior to relocation noted traditional construction, with a concrete strip foundation, piled foundations, corrugated steel hipped roofing, timber bevel-back weatherboards and timber joinery. Most of the original internal walls were removed and the interior layout changed as part of the alteration and additions building work.

2.4 The altered house

2.4.1 As shown in Figure 2⁸, the relocated house is shown shaded, with the ground floor addition to the northeast and the new upper level addition above.

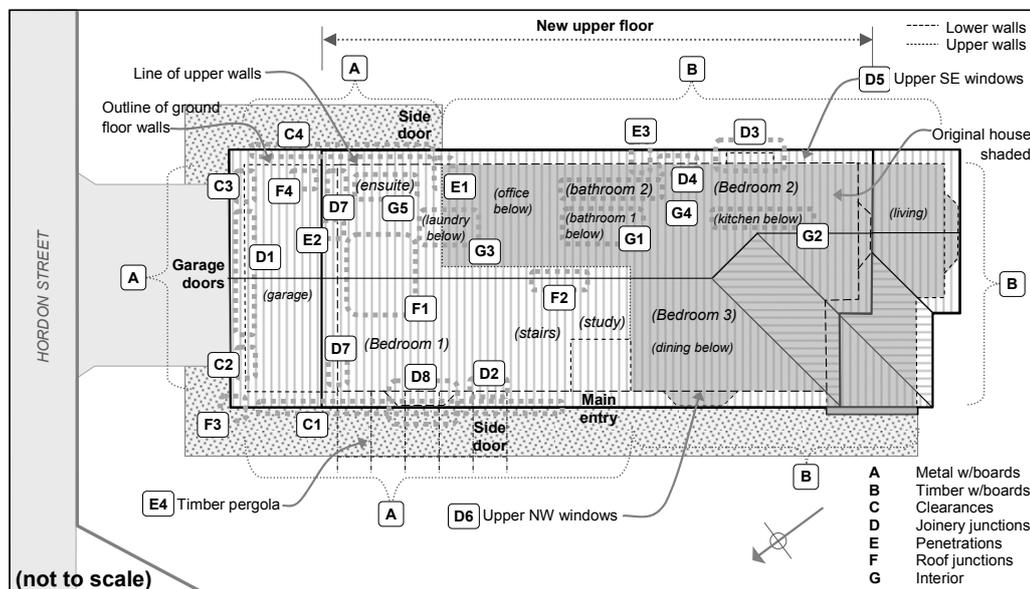


Figure 2: The house as completed

2.4.2 The completed house now accommodates the following:

- On the ground floor:
 - main entry, stairs, office, bathroom 1
 - open plan kitchen/dining/living area.
 - garage with laundry facilities
- On the upper floor:
 - bedroom 1 with ensuite and dressing room
 - bedroom 2, bedroom 3
 - study, bathroom 2.

⁸ The letters A-G listed in the bottom right corner of Figure 2 label specific areas of the house which correspond to those letters listed in Table 1 at paragraph 3.7 of this determination titled “Applicant’s Response” below.

2.5 Timber treatment

- 2.5.1 The specifications call for the framing timber to be ‘treated Pinus Radiata’ to comply with NZS 3602:1990⁹. However, NZS 3602:1995 applied when the building consent was issued in August 1998, which allowed the use of kiln-dried untreated timber.
- 2.5.2 Given the lack of evidence and the installation of framing in 1999, I am unable to determine the particular level and type of treatment, if any, applied to new exterior framing. The original timber framing remaining from the original house is expected to be untreated native Rimu. I therefore consider that wall and roof framing may not be treated to a level that will provide resistance to fungal decay.

3. Background

- 3.1 The authority issued a building consent (No. R418797) for the house relocation, alterations and additions on 7 August 1998 under the former Act. I have not been provided with a copy of the building consent.
- 3.2 The consent documentation included an engineer’s report dated 6 April 1998, which described the materials and visible condition of the original house, with elements generally appearing in ‘reasonable condition’.

3.3 1999 construction

- 3.3.1 The house appears to have been moved onto the site in late 1998/early 1999. I have not seen records of inspections by the authority during relocation and alterations, but the engineer carried out various inspections and provided the reports on 24 March and 8 April 1999 noting (in summary):
- pre-pour foundation inspection by the authority
 - house transported and lowered onto new foundations
 - sub-floor inspection carried out by the engineer
 - upper level framing complete and cladding installed
 - specific items that required attention, requirements for future inspections and information to be provided.
- 3.3.2 It appears that a new builder took over the work and completed the outstanding items. According to the applicant, the engineer inspected and passed the work, but I have seen no record of that inspection.

3.4 The interim code compliance certificate

- 3.4.1 It appears that the authority carried out a first final inspection and issued an interim code compliance certificate on 27 June 2000 under section 43(3) of the Building Act 1991, which stated that it was issued ‘in respect of part only, as specified in the following particulars, of the building work’ under building consent No. R418797.
- 3.4.2 The interim code compliance certificate notes:

Further building work is required to be completed as detailed in the [authority’s] most recent building inspection site sheet. When all works are completed the building owner is required to notify [the authority] where a further inspection may be required to ensure compliance.

⁹ New Zealand Standard NZS 3602:1990 Code of practice for specifying timber and wood-based products for use in building

I have not seen any record of the inspection sheet referred to by the authority and have no details of the ‘further building work’ required by the authority.

- 3.4.3 The authority re-inspected the house on 2 May 2001 and identified 8 outstanding items in respect of downpipe spreader to roof, drainage stack, kitchen gully trap, bathroom waste pipe, handrail to stairs, restrictor stays to windows, bathroom overflow discharge and hot water cylinder. These were subsequently confirmed as completed by the authority (see paragraph 3.5.1).

3.5 The 2012 earthquake repairs

- 3.5.1 No further inspection was carried out and the house remained without a code compliance certificate. After the Darfield earthquake in September 2010, the authority carried out a limited inspection and the computer record of 19 November 2010 noted:

... Relocated dwelling: All issues regarding inspection 02/05/01 have been completed. 8 items as detailed. Letter dated 8th April 1999 Engineer. No Structural damage earthquake.

- 3.5.2 The house suffered some damage during the Canterbury Earthquake Sequence (“CES”)¹⁰, and the EQC¹¹ Claim Assessment dated 9 November 2011 records damage to linings, flooring and two doors.
- 3.5.3 Earthquake repairs were carried out during 2012, with a ‘contractor producer statement for construction’, confirming the completion of the earthquake repair works, provided after completion on 27 May 2013.

3.6 The 2017 final inspection and refusal to issue a code compliance certificate

- 3.6.1 The applicant applied for a code compliance certificate on 10 October 2016 and the authority inspected the house on 13 April 2017 and noted the outcome of the inspection as “fail” and the inspection notice identified the following items (in summary, with areas located in Figure 2 noted in brackets):

1. External observations:

- 1.1, 1.2 Metal weatherboards used in lieu of timber (Areas A)
- 1.3 Cladding clearance to paving (Area C1)
- 1.4 Metal weatherboard joints opening (Area A)
- 1.5 Head flashings upstands not under cladding (Areas D1 to D8)
- 1.6 Vent not vermin proof (Area E1)
- 1.7 Lack of access to inspect roofs
- 1.8 Timber shingles to gable ends
- 1.9 Cladding recently repainted
- 1.10 Second hand windows installed
- 1.11 Surface water riser level with surrounding paving (Area F3)

¹⁰ The Canterbury Earthquake Sequence includes the ‘Darfield Earthquake’ of 4 September 2010 with a moment magnitude of 7.1, followed by a series of aftershocks that included a 6.3 magnitude shake on 22 February 2011.

¹¹ Earthquake Commission

2. Internal observations:

2.1 to 2.4, 2.6 Ground floor bathroom layout (Area G1)

2.5 Kitchen renewed since earthquake (Area G2)

2.7, 2.8 Laundry tub to be secured (Area G3)

2.9 Upper level bathroom layout (Area G4)

2.10 Tanking to tiled showers (Areas G1 and G5)

2.11 Ensuite bathroom (Area G5)

2.12, 2.13 Electrical and gas certificates

3. Engineering work: (see paragraph 3.3.1):

Reports list items to be addressed

No confirmation that items completed.

(The inspection notice refers to an authority inspection report dated 24 March 1999 saying ‘rectification to be carried out as per engineer’s report...’; I have not been provided with a copy of this inspection report.)

3.6.2 In a letter to the applicant dated 11 May 2017, which I take to be the authority’s refusal to issue a code compliance certificate under section 95A of the Act, the authority stated it:

...cannot be satisfied on reasonable grounds that the building work complies with B1 (Structure), B2 (Durability), E1 (Surface water), E2 (External moisture), E3 (Internal moisture), F2 (Hazardous building materials), G9 (Electricity), G11 (Gas as an energy source) of the New Zealand Building Code (NZBC).

3.7 The applicant’s response

3.7.1 The applicant responded to the authority’s observations by commenting on the identified areas as shown in Table 1 (excluding items that required no action). The letter area codes in Table 1 are as shown in Figure 2.

Table 1: Response to the authority’s concerns

Item	Authority’s concerns	Area	Applicant’s comments (4 February 2019 and 12 May 2019)
1. External			
1.1 1.2	Metal ‘weatherboards’ used in lieu of timber	A	<ul style="list-style-type: none"> • Metal cladding installed temporarily, with timber to be installed in future • Agreed to by inspector prior to interim code compliance certificate • Cladding has been performing well
1.3	Insufficient cladding clearance to paving	C1-C4	<ul style="list-style-type: none"> • Now rectified (concrete cut away, sealed and filled with gravel)
1.4	Metal ‘weatherboard’ joints opening	A	<ul style="list-style-type: none"> • Unchanged since interim code compliance certificate • Performing well for past 19 years
1.5	Head flashings upstands not under cladding	D1-D7	<ul style="list-style-type: none"> • Unchanged since interim code compliance certificate • Performing well for past 19 years
1.6	Vent not vermin proof	E2	<ul style="list-style-type: none"> • Now rectified
1.11	Surface water riser level with surrounding paving	F3	<ul style="list-style-type: none"> • Now rectified
Internal			
2.1	Bathroom 1	G1	<ul style="list-style-type: none"> • Layout unchanged since interim code compliance certificate

to 2.4			<ul style="list-style-type: none"> Shower floor has always been tiled Earthquake repairs merely replaced tiles and tanking Shower rose height now rectified
2.6	Bathroom 1 – glass to shower screen	G1	<ul style="list-style-type: none"> Safety glass documentation available
2.7 2.8	Secure laundry tub	G3	<ul style="list-style-type: none"> Now rectified
2.10	Tanking to tiled showers	G2,G5	<ul style="list-style-type: none"> Applicator’s certificate provided for tanking membrane’s application
2.11	Ensuite bathroom	G5	<ul style="list-style-type: none"> Layout unchanged since interim code compliance certificate Shower floor has always been tiled Earthquake repairs replaced tiles and tanking
2.12 2.13	Electrical and gas certificates		<ul style="list-style-type: none"> Will obtain
Engineer’s reports			
	No confirmation that items in engineer’s lists completed		<ul style="list-style-type: none"> Builder confirms that all work was done and passed by engineer Builder has provided statement as LBP¹² Engineer does not keep records that old, can get another engineer to check

3.8 The situation remained unresolved and on 31 January 2019 the Ministry received an application for a determination on the matter. On 27 February 2019 the Ministry sought confirmation from the authority of the outstanding items given the authority’s refusal was made in 2017, which was received as part of its submission on 8 May 2019.

4. The submissions

4.1 The applicant’s submission

4.1.1 The applicant’s submission (4 February 2019 and 12 May 2019) took the form of responses to the authority’s list of outstanding items of its refusal made in 2017 and it’s further confirmation of the items in its submission provided to the Ministry on 8 May 2019, which are included in Table 1. The applicant also noted that the ‘house is dry, weathertight, no leaks, no mould and performs well; has done so for nineteen years’.

4.1.2 The applicant provided copies of:

- some of the consent documentation (but not the building consent itself)
- the engineer’s reports dated April and March 1999
- the interim code compliance certificate dated 27 June 2000
- the authority’s re-inspection record dated 2 May 2001
- the authority’s post-earthquake inspection note dated 19 November 2010
- documentation including the as-built drainage plan, the waterproofing membrane producer statement dated 12 October 2011, the ‘StandardsMark Licence’ for safety glass issued 21 February 2014
- a gasfitting certificate of compliance dated 10 December 2012
- EQC records of the 2012 earthquake repairs

¹² Licensed building practitioner

- the authority’s final inspection notice and photographs dated 13 April 2017
- the authority’s refusal to issue a code compliance certificate dated 11 May 2017
- a statement from the original builder dated 24 December 2018
- the applicant’s photographs of work carried out after the final inspection
- various other statements, and correspondence.

4.1.3 On 12 and 15 July 2019, in response to the expert’s report, the applicant provided a copy of the glass manufacturer’s ‘StandardsMark Licence’ (as above) which confirms that the manufacture of the glass complies with the standard AS/NZS 2208¹³. I note a copy of this licence was provided with the application for determination.

4.2 The authority’s submission

4.2.1 The authority’s submission on 8 May 2019 essentially repeated observations noted in the final inspection record and outlined in paragraph 3.6.1 and Table 1. No further information was provided.

4.3 The draft determination and submissions in response

4.3.1 The draft determination was issued to the parties for comment on 3 September 2019.

4.3.2 The applicant responded on 4 September 2019 accepting the draft determination without comment.

4.3.3 The authority responded on 25 September 2019 accepting the draft determination subject to a non-contentious amendment, referring to the wind zone (noted in paragraph 2.1 of this determination) to be “high” as opposed to “medium”. In response, I note the wind zone at the time the house was moved to site was “medium”, and the bracing calculations for the house at the time incorporated this wind zone. I acknowledge the process for determining the wind zone may have changed since the house was moved to site and the building consent was issued.

5. The expert’s report

5.1 General

5.1.1 As mentioned in paragraph 1.5.3, I engaged an independent expert to assist me. The expert is a member of the New Zealand Institute of Building Surveyors and inspected the house on 20 May 2019, providing a report dated 27 May 2019. A copy of the report was forwarded to the parties on 11 June 2019.

5.1.2 The expert considered the interior finish was ‘to an acceptable trade standard’, with the quality of finish in the three bathrooms ‘very good’. The quality of finish in regard to the exterior was also ‘generally to an acceptable standard’ except for some poorly fitted roofing sheets and vertical joints to metal weatherboard cladding.

5.1.3 The expert noted that the overall shape and form of the additions are ‘largely in accordance with the architectural design concept of the construction drawings reviewed’ except for:

- additional south west entry into dining/living area not constructed

¹³ Australia New Zealand joint standard AS/NZS 2208:1996 Safety glazing materials in buildings

- shower to bathroom 1 on ground floor installed in different position within the room
- pergola fixed to north west wall
- various other minor changes to window sizes and locations.

5.2 Investigations and moisture testing

5.2.1 The expert carried out the following destructive investigations (to investigate the underlying construction of some areas identified by the authority):

- Pulling away bottom of the metal cladding from the north west garage revealed:
 - no water staining and no evidence of past or present moisture ingress
 - invasive moisture readings taken at 0.5m spacings all low at 8-12%.
- Opening up two sample vertical joints in metal cladding revealed:
 - overlaps of 85mm and 230mm, with any gaps filled with paint
 - no water staining and no suggestion of moisture penetration.
- Removal of small area of garage ceiling lining and inspecting bottom of north east wall to ensuite revealed:
 - dry wall framing at about 8%
 - no water stains on packing between framing and shower backing or on the back of shower lining
 - minor water stains on framing ‘well outside of shower enclosure’.
- Removal of lining and trim at bottom of walls beside the garage door revealed:
 - plywood bracing installed under the lining (with plywood fixings sighted at gable end wall within ceiling space)
 - 250mm high x 160mm deep x 50mm wide steel angle brackets bolting door jamb studs to concrete floor slab.

5.2.2 The expert took invasive moisture readings into timber framing into areas considered at risk of moisture penetration. Where access from the outside was not available, long probes were inserted into bottom plates to within 10mm of the outer surface of framing members. The expert’s readings included:

- 8% to 12% in bottom plate at north west side of the garage (Area C1)
- 8% to 14% in bottom plate beside garage door (Areas C2, C3)
- 9% in garage door lintel and 8% to 12% in reveals (Area D1)
- 9% to 10% around north west side door/window to the garage (Area D2)
- 8% to 12% below the kitchen bay window (Area D3).

5.2.3 The expert also took invasive moisture readings into walls adjacent to bathrooms areas where the authority had raised concerns. The expert drilled through shower walls from adjacent rooms to within 20mm of shower linings and recorded:

- 8% to 9% in bottom plates and studs to wall of Bathroom 1 shower (Area G1)
- 8% to 9% in bottom plates and studs to wall of ensuite shower (Area G5).

5.2.4 All invasive moisture readings were well below the 18% which would generally indicate no moisture ingress. In addition, the expert noted that all timber felt firm when drilling and shavings were clean with no discoloration or evidence of damage.

5.3 The expert's assessment of the authority's concerns

5.3.1 The expert reviewed the authority's letter dated 11 May 2017 and the items identified in the final inspection notice dated 13 April 2017. The expert's comments, based on his visual and invasive investigations, are summarised in Table 2, with any items not requiring action excluded from the table.

Table 2: The expert's assessment (reference to areas is from Figure 2)

Inspection notice 13 April 2017		CI.	The expert's comments (in summary)	Area reference
1. Exterior				
1.1 1.2	Metal weatherboards used in lieu of timber	E2	<ul style="list-style-type: none"> No evidence of past or present moisture ingress Invasive readings all below 12% Cladding meeting performance requirements 	Area C1
1.3	Clearance to paving	E2	<ul style="list-style-type: none"> Concrete paving had been cut away from walls, a liquid applied membrane applied to edge of foundations and drainage stones laid in trench Invasive readings in adjacent framing all below 14% Timber garage door reveals are in contact with drainage stones which were to be lowered to provide clearance to the reveals 	Areas C1 to C4
1.4	Metal weatherboard joints	E2	<ul style="list-style-type: none"> Vertical overlaps to two sample joints 85mm and 230mm Gaps at laps at joints will drain condensation which formed on back of the metal on cold days Gaps have and will not compromise weathertightness 	Area A
1.5	Head flashings: <ul style="list-style-type: none"> Garage door Side door/window to garage Kitchen bay window Pantry window 	E2	<ul style="list-style-type: none"> Invasive moisture testing and visual inspection All door and window openings meeting minimum performance requirements, but maintenance recommended to some areas No head flashing to garage door Reliant on flexible sealant No evidence of moisture ingress around door Invasive readings in framing all below 12% Head flashing upstand overlaps cladding Slopes towards cladding – reliant on sealant Invasive readings at lintel below 11%, with firm and clean drill shavings Some protection from eaves about pergola No head flashing to bay window Reliant on flexible sealant to flat top of frame 200mm overhang above provides little protection No evidence of moisture ingress around window Invasive readings in framing all below 12% Head flashing upstands overlap cladding Well protected by 580mm lower eave 200mm above the top of flashing Little risk of moisture penetration 	Area D1 Area D2 (plus below Area D8) Area D3 Area D4

	<ul style="list-style-type: none"> Upper south east and north west windows Small upper north east windows Upper north west bay window 		<ul style="list-style-type: none"> No head flashing Heads well protected by 430mm wide eave 90mm above window head Little risk of moisture penetration Head flashing upstands overlap cladding Sheltered by 200mm verge overhang 120mm above No evidence of moisture penetration Little risk of moisture penetration Head flashing installed Flashing upstand extends up behind gutter 	<p>Area D5, and D6</p> <p>Areas D7</p> <p>Area D8</p>
1.6	<p>Other penetrations</p> <ul style="list-style-type: none"> Vent from dryer Vent from ensuite Vent from Bathroom 1 	E2	<ul style="list-style-type: none"> Louvre grille now fitted to dryer outlet, duct well sealed to cladding No sign of moisture ingress Recommend replacing expanding foam at penetrations with flexible sealant Louvre missing Maintenance needed Has been attended to 	<p>Area E1</p> <p>Area E2</p> <p>Area E3</p>
1.7	<p>Roof cladding</p> <p>No access to inspect roof</p> <p>Roof spaces</p>	E2	<ul style="list-style-type: none"> Flashing junctions generally adequately fitted Recommend replacing poorly fitting sheets and replacing loose nails with roofing screws Able to gain adequate view of all roof surfaces Sheet laps poorly fitting above the north end of Bedroom 1 on both north west and south east sides Several loose nails around ridge capping centre Garage and upper storey roof spaces inspected No visual evidence of any moisture ingress to any accessible areas Area above Bathroom 2 where underlay not properly fitted – requires attention 	<p>Areas F1 and F2</p> <p>Area G4</p>
1.11	Surface water riser not sealed	E1	<ul style="list-style-type: none"> PVC extension riser sitting in existing riser Not sealed at the junction, risking water and silt entering drain from paving Paving falling towards junction is below 1m² in area and would take many years to for silt to accumulate and block drain Does not breach performance requirements Maintenance will ensure ongoing compliance 	Area F3
Photo	Photograph of downpipe from upper roof	E1 E2	<ul style="list-style-type: none"> Holes drilled into downpipe extension Can discharge over vulnerable apron flashing Discharge should be directed away from flashing Maintenance recommended 	
Photo	Pergola fixed to wall	E2	<ul style="list-style-type: none"> Pergola fixings penetrate wall cladding Ribbon plate reasonably well protected by 580mm wide eave 350mm above plate No indication of moisture ingress on inside of wall on which pergola mounted Invasive moisture readings into door/window lintel and bottom plate below ribbon plate show no moisture ingress 	Area E4

2. Interior				
2.1	Bathroom 1:	E3	<ul style="list-style-type: none"> Pre-earthquake repair photos show fixtures in same location and show tiled walls and floor Builder's repair quote includes "Lift and dispose, replace tiles" 	Area G1
	Layout changed			
2.2	Waterproofing	E3	<ul style="list-style-type: none"> Invasive moisture readings low in office partition Subfloor below shower revealed no signs of past or present leakage Producer Statement provided for purpose-made membrane under new tiling Waterproofing meeting performance requirements 	
2.3	Shower rose height	E3	<ul style="list-style-type: none"> Extra row of ceramic tiles installed since inspection Shower rose now 300mm from the top of tiles Note that E3/AS1¹⁴ recommends shower linings etc extend 300mm minimum above rose, but proprietary shower cubicles generally only about 1.8m high, so that clearance per would reduce rose height to 1.5m 	
2.4	Level entry with no fall to waste	E3	<ul style="list-style-type: none"> Original tiles replaced after earthquakes Repairs carried out due to impact damage from falling objects into tiles No evidence of prior failure, so repair work exempt from building consent under Schedule 1 of Act 	
2.6	Bathroom 1 – safety glass to shower screen	F2	<ul style="list-style-type: none"> When original consent issued in 1998, the relevant standard was NZS 4223.3:1993¹⁵, which allowed removable stickers Shower glass replaced since then. Etched markings on glass say 'Safety glass' which is not strictly in accordance with NZS 4223.3:1999¹⁶ I note that manufacturer's 'StandardsMark Licence'¹⁷ confirms glass compliance with AS/NZS 2208 	
2.7 2.8	Secure Laundry tub	E3	<ul style="list-style-type: none"> Now secured and well-sealed to bench top Timber upstand of bench top also sealed to lining Sealant to upstand/lining junction delaminating Recommend raking out and resealing junction 	Area G3
2.10	Bathroom 2 – membrane to tiling	E3	<ul style="list-style-type: none"> Has a shower over an acrylic spa bath E3/AS1 does not call for water proof membrane elsewhere Shower curtain fitted since inspection No sign of water staining on ceilings below Opening to spa bath surround provided access to concealed timber framing below shower rose No sign of past or present leaks on framing or flooring below bath or from plumbing pipes Waterproofing meeting performance requirements 	Area G4

¹⁴ Acceptable Solution E3/AS1 for Building Code Clause E3 Internal moisture

¹⁵ New Zealand Standard NZS 4223.3:1993 Glazing in buildings - Human impact safety requirements was referenced in Acceptable Solution F2/AS1 for Building Code Clause F2 Hazardous building materials, until November 2000

¹⁶ New Zealand Standard NZS 4223.3:1999 Code of practice for glazing in buildings - Human impact safety requirements was referenced in Acceptable Solution F2/AS1 for Building Code Clause F2 Hazardous building materials, from 1st December 2000 onwards

¹⁷ Certificate No. SMKB20265 issued by SAI Global: Standards Australia International, formerly Standards Australia

2.11	Ensuite bathroom	E3	<ul style="list-style-type: none"> • Pre-earthquake repair photos show fixtures in same location and show tiled walls and floor • Builder's repair quote includes "Lift and dispose, replace tiles" • Invasive moisture readings low in bedroom partition • No water stains on the garage ceiling below shower • Inspection of adjacent ceiling space revealed no signs of past or present leakage from shower • Producer Statement provided for purpose made membrane used under new tiling • Waterproofing meeting performance requirements 	Area G5
2.13	Gas certificates		<p>Two certificates provided</p> <ul style="list-style-type: none"> • Gasfitting Certification Certificate dated 25/01/2001 for a space heater and a kitchen hob • Gasfitting Certificate of Compliance dated 10/12/2012 for freestanding cooker¹⁸ 	
	No confirmation that items in engineers lists completed		<ul style="list-style-type: none"> • Plywood bracing and steel brackets sighted in north east garage wall <p>Inspection of subfloor allowed sight of:</p> <ul style="list-style-type: none"> • floor joist blocking • foil draped over joists, showing flooring removed • all visible piles had bituminous dampcourse between pile and bearer • all visible packing was tight • skew nailing not visible due to limited access 	

5.4 The expert's conclusions on compliance

5.4.1 Based on his investigations as outlined above, the expert came to the following conclusions on compliance with the following Building Code clauses (in summary):

- In regard to Clause B1 Structure:
 - floors generally 'level and stable to walk across'
 - doors operated without binding
 - earthquake repairs included only two doors requiring attention
 - no significant structural damage during earthquakes
 - good in-service history 'having stood for 19 years and survived through the Canterbury Earthquake Sequence with minimal cosmetic damage'
 - no evidence of non-compliance with Clause B1.
- In regard to Clause B2 Durability:
 - invasive and destructive investigation in all areas of concern raised by authority revealed no evidence of moisture ingress or damage
 - no evidence of non-compliance with Clause B2.
- In regard to Clause E1 Surface water:
 - surface water riser on the north corner of the garage can allow surface water and silt to enter the drain
 - however, water drains from paving area under 1m², so would take many years to accumulate and block drain
 - not considered to be breach of Clause E1.

¹⁸ I note this certificate was issued in 2012 and is therefore not part of the work described in the 1998 building consent.

- In regard to Clause E2 External moisture:
 - invasive and destructive investigation in all areas of concern raised by authority, revealed no evidence of past or current moisture ingress
 - no evidence of non-compliance with Clause E2.
- In regard to Clause E3 Internal moisture:
 - visual inspection and invasive moisture testing of shower walls, revealed no evidence of past or present leaks from wet areas
 - no evidence of non-compliance with Clause E3.
- In regard to Clause F2 Hazardous building materials:
 - glass to ground floor shower were marked as safety glass, but did not include all the information recommended in NZS 4223.3:1999 (I note the 1999 version of the Standard was first referenced in Acceptable Solution F2/AS1 for Building Code Clause F2 Hazardous building materials on 1 December 2000).
- In regard to Clause G11 Gas as an energy source:
 - energy works certificates provided
 - no evidence of non-compliance with Clause G11.

6. Discussion

6.1 Compliance of the building work

- 6.1.1 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 current 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’.
- 6.1.2 In order to determine whether the authority was correct in refusing to issue a code compliance certificate, I must therefore consider whether the house as completed complies with the provisions of the Building Code that applied when the consent was issued in 1998.
- 6.1.3 In assessing the compliance of the completed building work, I have taken into account the age of various elements in the building. An application can be made to the authority for a modification of durability requirements under section 67 of the Act to allow durability periods for the house to commence from June 2000 (see paragraph 3.4.1). Although that matter is not part of this determination (see paragraph 1.5.2), I have taken the anticipated modification into account when considering the compliance of the external claddings.
- 6.1.4 I note the owner has carried out work in response to the authority’s final inspection (see Table 1), and the expert carried out his inspection of the building work after the owner carried out this work.

6.2 Clause B1 Structure

- 6.2.1 While the authority has said that the completed work does not satisfy Clause B1 Structure it has not identified any specific areas of non-compliance, and it has based its position on the absence of advice confirming that the matters referred to in the

engineer's reports dated 24 March and 8 April 1999 (see paragraph 3.3.1) have been attended to. The applicant has advised that the engineer no longer has the records confirming this. The original builder has confirmed that the matters detailed by the engineer were completed and that the engineer inspected the completed work; this statement has not been challenged.

6.2.2 The authority's inspection record dated 2 May 2001 does not refer to any outstanding structural matters, and the inspection dated 19 November 2010 following the Darfield earthquake notes "All issues regarding inspection 02/05/01 have been completed"; the same inspection records "No Structural damage earthquake".

6.2.3 The Building Code is a performance-based document. The expert observed no evidence of non-compliance with Clause B1, that the building had sustained only cosmetic damage during the Canterbury Earthquake Sequence, and that no faults had become apparent in the 19 years since completion. Taking the above into account and the anticipated modification of durability requirements, I am able to conclude that the completed work satisfies Clause B1.

6.3 Clauses B2 Durability and E2 External moisture

6.3.1 The expert has found no evidence of historic or current moisture entry through the external building envelope, despite his inspection taking place some 19 years after substantial completion of the house in 2000. He has also found no evidence of damage caused by any moisture entry into the underlying timber framing during that time.

6.3.2 I consider the expert's report establishes that the current performance of the building envelope is adequate because there is no evidence of current or past moisture penetration into the timber framing. Consequently, I am satisfied that the external building envelope complies with clauses B2 and E2 of the Building Code.

6.3.3 The durability requirements of Clause B2 require a building to satisfy all the performance requirements of the Building Code throughout its effective life, and that includes the requirement to remain weathertight. The durability requirements of Clause B2 include a requirement for roof and wall claddings to remain weathertight for a minimum of 15 years and for timber framing to remain structurally adequate for a minimum of 50 years.

6.4 Clauses E1 Surface water, E3 Internal moisture and F2 Hazardous building materials

6.4.1 In respect of internal wet areas, the applicant is of the view that all changes were inspected and approved by the authority before the interim code compliance certificate was issued in June 2000. While I have no records of the inspections carried out by the authority to confirm this, the applicant has provided a 'Construction Review certificate' for the installation of a waterproofing membrane, which is dated 12 October 2011, some 11 years after the interim code compliance certificate.

6.4.2 In the absence of any other evidence it is unclear when, or to what extent work was carried out to the internal wet areas after practical completion in June 2000, however the installation of a waterproofing membrane some 11 years after practical completion appears to demonstrate some works described in the original building consent have been superseded, and I leave the regularisation of the change to the parties. I note the expert's report establishes that the current performance is adequate, with no evidence of historic or current moisture entry.

- 6.4.3 I also accept the expert's opinion that the surface water riser is adequate in the circumstances and I have reasonable grounds to be satisfied that the building complies with the requirements of Clauses E1 Surface water.
- 6.4.4 In respect of Clause E3 Internal moisture I have no evidence to show that the original completed work was not compliant with the requirements of Clause E3 that were in force at the time the building consent was issued. However it is unclear if or when subsequent works were carried out to supersede the work completed under the building consent. Taking account of the above, especially the expert's report, I have reasonable grounds to be satisfied that the building complies with the requirements of E3 Internal moisture that were in force at the time the building consent was issued.
- 6.4.5 In respect of Clause F2 Hazardous building materials I have no evidence to show that the original glazing was not compliant with the requirements of Clause F2 that were in force at the time the building consent was issued. However the building work described in the original building consent is superseded by works carried out after practical completion in June 2000.

6.5 Clauses G9 Electricity and G11 Gas an energy source

- 6.5.1 The authority has stated it cannot be satisfied that the consented work complies with Clauses G9 Electricity and G11 Gas an energy source because "electrical [and] gas certificate[s have] not been provided".
- 6.5.2 The building consent was issued under the former Act, and accordingly the transitional provisions of the current Act apply when considering the issue of a code compliance certificate for work completed under this consent. The former Act provision that considers energy work is section 32A, energy work is defined in section 2 of the former Act¹⁹ as:
- (a) gasfitting; or
 - (b) prescribed electrical work
- 6.5.3 Section 32A of the former Act (see Appendix A) considers when a building consent was required for energy work. Subsections 32A(2) and (3) state a building consent is not required for energy work unless:
- the energy work relates to a specified system contained in a building and which is covered by a compliance schedule, or
 - the energy work would require a waiver or modification of the Building Code.
- 6.5.4 Section 436(2) of the transitional provisions states an application for a code compliance certificate in respect of building work to which this section applies must be considered and determined as if this Act had not been passed. The effects of section 436 require an authority to consider section 32A of the former Act when deciding to issue a code compliance certificate.
- 6.5.5 Section 43 of the former Act (see Appendix A) considers energy work in relation to a code compliance certificate as follows:
- (2A)²⁰ In any case where the building work comprises or includes energy work in respect of which a building consent has been issued, the owner shall include with that advice any energy work certificate that relates to that energy work.

¹⁹ The energy work provisions of the former Act are essentially the same as the current Act; the definition of energy work is identical to that in the current Act;

²⁰ Equivalent to section 92(4) of the current Act

(3A)²¹ Failure to provide to a territorial authority an energy work certificate in respect of any energy work in respect of which a building consent has been issued shall be sufficient grounds for the territorial authority to refuse to issue a code compliance certificate in respect of that energy work.

- 6.5.6 In the owner's case, the energy work does not relate to a specified system in the building which is covered by a compliance schedule, nor was energy work subject to a waiver or modification of the Building Code.
- 6.5.7 Where an energy work certificate is required under subsections 32A(2) or (3) of the former Act, or where an owner has elected to obtain a building consent for energy work under subsection 32A(4) of the former Act, subsection 43(2A) of the former Act requires the owner to provide to the authority any energy work certificate that relates to the energy work.
- 6.5.8 I am of the view that under subsection 32A(4) an owner must expressly seek a building consent for energy work that otherwise does not require a building consent. Based on the information provided to me, I am of the view that the owners did not expressly seek to have the energy work included in the building consent.
- 6.5.9 I note the consented plans only make reference to the location of a water storage heater and the location of kitchen appliances; there is no specific gas or electrical work shown such as location of lighting and electrical circuits and outlets, nor to what energy source the water storage heater and the appliances were to be powered by. I have not seen the consented specification. It is arguable that the building consent did not include energy work, but even if it had, the energy work referenced was not energy work which required a building consent under the former Act.
- 6.5.10 I consider the building work described in the building consent does not comprise or include energy work in respect of which a building consent was required or in respect of which a building consent has been granted. I therefore conclude that the owner is not required to include an energy work certificate with the application for code compliance certificate, and the authority was incorrect to refuse to issue a code compliance certificate on the basis that an energy work certificate has not been provided.

6.6 The authority's remaining concerns

- 6.6.1 In respect of the cladding, the authority's final inspection on 13 April 2017 also notes the use of the metal cladding in lieu of timber weatherboards. Neither the interim code compliance certificate, the final inspection 13 April 2017, nor the letter to the applicant dated 11 May 2017 note the lack of approval for the change to the cladding at the time of installation. I leave the regularisation of the change in cladding to the parties. However, I note the following:
- The change to the cladding was completed under the former Act which did not require the same formal building consent amendment process that is described under the current Act.
 - The change to the cladding is an extension of the original work and is of a type generally consistent with the consented work.
 - The change to the cladding was carried out at the same time as the consented work, and while I have no records of the inspections carried out by the authority I consider the authority was aware of the change and inspected and

²¹ Equivalent to section 94(3) of the current Act

approved the cladding during its construction along with the construction and inspection of the consented work.

- The expert's report establishes that the current performance of the building envelope is adequate, with no evidence of historic or current moisture entry through the external building envelope, despite his inspection taking place some 19 years after substantial completion of the house in 2000.

6.6.2 Other changes from the consented work were raised by the authority and as noted by the expert (see paragraph 5.1.3). However, the owner has submitted that, with the exception of the pergola, the changes are in respect of work that was in place at the time the interim code compliance certificate was issued and the authority has not disputed this. I consider the observations made above in respect of the change to the cladding also apply to these items.

6.7 Maintenance

6.7.1 Clause B2.3.1 of the Building Code requires that building elements be subject to 'normal maintenance', but that term is not defined in the Act. I take the view that normal maintenance is that work generally recognised as necessary to achieve the expected durability for a given building element. With respect to the building work, the extent and nature of the maintenance will depend on a combination of factors, for example the material or system, its geographical location and level of exposure. I note Schedule 1 of the Building Act outlines building work for which building consent is not required, and allows for general repair, maintenance and replacement.

6.7.2 The consented work is now 20 years old. The expert's investigations have shown that the cladding has performed in excess of the minimum 15-year durability period required by Clause B2.3.1(b) but has identified some areas that require maintenance to ensure that the cladding continues to protect the underlying structure from damage for the further 31 years required to meet the minimum durability of 50 years required by Clause B1.3.2(a).

6.7.3 Effective maintenance of the house is important to ensure ongoing compliance with the Building Code and is the responsibility of the building owner. The Ministry has previously described maintenance requirements associated with the external building envelope, including examples where the external wall framing of the building may not be treated to a level that will resist the onset of decay if it gets wet (for example, Determination 2007/60).

7. The decision

7.1 In accordance with section 188 of the Building Act 2004; in regard to the Building Code that was in force at the time the building consent was issued, I hereby determine that:

- the house complies with Clauses B1 Structure, B2 Durability, E1 Surface water, Clause E2 External moisture, E3 Internal moisture, and Clause F2 Hazardous building materials
- the authority was incorrect to refuse to issue the code compliance certificate for the house because energy work certificates had not been provided in respect of Clauses G9 Electricity and G11 Gas as an energy source
- the authority was correct at the time to refuse to issue the code compliance certificate for the house because it had insufficient information to confirm the

compliance of the building work, and in respect of the items that required rectification at the time the application was made and which have now been rectified; both as noted in Table 1.

- 7.2 As I have determined that the building work complies with the relevant Building Code clauses that were in force at the time the building consent was issued, I reverse the authority's decision to refuse to issue a code compliance certificate for the building work, requiring the authority to make a new decision taking into account the findings of this determination.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 22 June 2020.

Katie Gordon
Manager Determinations

Appendix A: The legislation

A.1 The relevant sections of the Building Act 1991 include:

32A Exemption for energy work

- (1) Subject to subsections (2) to (4) of this section, energy work does not require a building consent.
- (2) Subsection (1) of this section does not apply in respect of any energy work that relates to any system or feature—
 - (a) That is contained in, or proposed to be contained in, any building (whether existing or proposed); and
 - (b) That—
 - (i) In the case of any such existing system or existing feature, is covered by a compliance schedule, or would be so covered if a compliance schedule were issued in respect of the building:
 - (ii) In the case of any proposed system or proposed feature, will be required to be covered by a compliance schedule.
- (3) Subsection (1) of this section does not apply in respect of any energy work in any case where, if that work required a building consent, such a consent could not be granted unless it were granted subject to a waiver or modification of the building code or any document for use in establishing compliance with the building code.
- (4) Where any owner wishes to obtain a building consent in respect of any energy work that does not require a building consent, the owner may apply for a building consent in respect of that work (whether or not the application also relates to any other building work), and in any such case this Act shall apply in all respects as if the energy work to which the application relates required a building consent.]

43 Code compliance certificate

- (1) ...
- [(2A) In any case where the building work comprises or includes energy work in respect of which a building consent has been issued, the owner shall include with that advice any energy work certificate that relates to that energy work.]
- (3) ...
- [(3A) Failure to provide to a territorial authority an energy work certificate in respect of any energy work in respect of which a building consent has been issued shall be sufficient grounds for the territorial authority to refuse to issue a code compliance certificate in respect of that energy work.]
- (4) ...