BUILDING PERFORMANCE

Determination 2025/016

The issue of a code compliance certificate for a dwelling in respect of compliance with clause G3 *Food Preparation and prevention of contamination* and E2 *External moisture*

72 Bells Road, West Melton, Canterbury

Summary

This determination considers an authority's decision to issue a code compliance certificate for construction of a dwelling. The determination considers the entry of vermin to external elements of the construction, and whether particular elements comply with Building Code clause G3 *Food Preparation and prevention of contamination* and E2 *External moisture*.

In this determination, unless otherwise stated, references to "sections" are to sections of the Building Act 2004 ("the Act") and references to "clauses" are to clauses in Schedule 1 ("the Building Code") of the Building Regulations 1992.

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

1. The matter to be determined

1.1. This is a determination made under due authorisation by me, Peta Hird, for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment ("the Ministry").[1]

1.2. The parties to the determination are:

1.2.1. G and J Miles, the owners of 72 Bells Road, West Melton, Canterbury ("the property") who applied for this determination

1.2.2. M Hewat, a licensed building practitioner who completed carpentry elements of the building work ("the first builder")

1.2.3. H Blunt, a licensed building practitioner who supervised the construction of the wall cladding system ("the second builder")

1.2.4. Selwyn District Council, carrying out its duties as a territorial authority and building consent authority ("the authority").

1.3. I consider Build Canterbury Limited ("the construction company") is a person with an interest in this determination as the master franchise holder responsible for design and construction of the building work.

1.4. This determination arises from the authority's decision to issue a code compliance certificate for a new dwelling constructed under building consent BC220084. The owners are of the view the code compliance certificate should not have been issued on the basis the building work has not been completed in compliance with the building consent plans and specifications and they contend the building work does not comply with the Building Code.

1.5. The matter to be determined, under sections 177(1)(b) and 177(2)(d) of the Act, is the authority's decision to issue the code compliance certificate for the building consent.

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

1.6. In deciding this matter, I will consider whether:

1.6.1. the building work for the cladding cavity closers, joinery support bars and eave ventilation closers have been carried out in accordance with the building consent,

1.6.2. the building work for the cladding cavity closers and eave ventilation closers complies with Building Code clause G3.3.1(a),

1.6.3. the building work for the joinery support bars complies with E2.3.2, and

1.6.4. the decision to issue the code compliance certificate should be confirmed, reversed or modified.

1.7. I have not considered compliance of any building work beyond the matters described above, nor any civil, contractual or financial arrangements between the parties.

2. The building work and background

2.1. On 26 January 2022, the owners applied for a building consent to construct a new single storey detached residential dwelling with double garage ("the dwelling"). The construction of the dwelling includes timber framed walls and roofs, lightweight profiled metal roof cladding, aluminium joinery, and a proprietary autoclaved aerated concrete wall panel cladding system over a cavity

2.2. On 5 April 2022, the authority granted the building consent. During construction the authority conducted a number of inspections.

2.3. On 1 May 2023, the owners applied for the code compliance certificate, noting all the building work was completed on 28 April 2023.

2.4. An authority final inspection record on 8 May 2023 confirmed "All aspects of project completed" and the inspection outcome was "Pass" following receipt of "All required documentation to support" the code compliance certificate.

2.5. On 9 May 2023, the authority issued a code compliance certificate for the completed building work, being "satisfied, on reasonable grounds, that - the building work complies with the building consent".

2.6. On 20 July 2023, the owners met with the authority to discuss their concerns regarding compliance of the building work and the issuing of the code compliance certificate.

2.7. The owners subsequently applied for a determination concerning the authority's decision to issue the code compliance certificate.

3. Submissions

The owners

3.1. The owners applied for the determination to have the code compliance certificate for the dwelling reversed, on the basis that the constructed dwelling differs in some respects from the approved plans and specifications in the building consent.

3.2. They contend vermin can freely enter the dwelling through areas which were not built according to the approved plans and specifications, and submit (in summary):

3.2.1. Birds are accessing areas of the roof cavity, between the spouting and the end of the roofing, and appear to be nesting; the plans and specifications show "a 10mm ventilation space together with a vermin stop between the soffit and the barge boards which we assume is intended to run the full length of the skillion roofing. We assume that this is necessary to achieve compliance… This does not appear to be present within any of the skillion roof structures"; "it is our belief that entry of vermin into the roof cavity would not comply with the code of compliance."

3.2.2. There are gaps at the bottom of the exterior walls which differ from the approved plans and specifications, and allows for the entry of vermin into the wall cavities.

3.2.3. Joinery sill support bars on the bottom of the front entry door, sliding doors and below windows are not the required length; this potentially allows water ingress into the dwelling and fails to meet the "required standards... that must be met" for a code compliance certificate.

3.3. The owners provided a number of photographs of elements of the completed building work, including areas between the roof and eaves, and underneath cladding and joinery.

3.4. The owners also provided a list of as-built dimensions of ten window and door openings (excluding the garage door) where the sill support bars were shorter than the width of the trim openings at both ends. The dimensions ranged from 0mm to 130mm, with six greater than 100mm.

The first builder

3.5. The first builder disagrees that the sill support bars are not to the required length. They advised these were "delivered precut to length by the window supplier; are installed as per their specification; and satisfy the building code clause E2.3.2. We have not modified any of the support bars that were provided by the supplier".

3.6. The first builder refereed to some of the photographs provided by the owners, noting they "clearly show window support bars correctly installed. There were two

other photos that had the end of support bars obscured but also looked to be installed correctly".

3.7. The first builder provided information:

3.7.1. from the window supplier, including the window schedule and the sill support cut list from the window supplier

3.7.2. regarding a mitre soaker that was installed at the corner junction of the jambs and sills of the joinery

3.7.3. regarding the roof framing during construction, photographs showing solid blocking between the top plate and the purlin, "preventing rodents or birds getting into the house. We believe all the work in this area complies with the Building Code".

The second builder

3.8. The second builder is an authorised agent for the exterior wall cladding system and supervised the installation in accordance with the building consent and Clauses B2 *Durability* and E2 *External Moisture*. The second builder is of the view that the building work is in compliance with E2/AS1 and G3.3.1submits (in summary):

3.8.1. The detail of the wall base in the consent drawings[2] does not provide a dimension between the vermin strip and the foundation; the 6mm annotated on the detail relates to the overhang of the bottom plate in relation to the foundation.

3.8.2. Acceptable Solution E2/AS1 sets out dimensional requirements in the 'comment' below paragraph 9.1.8.3 where it states:

> 'It is important the openings in vermin-proofing are kept clear and unobstructed in order to maintain draining and venting of the cavity. The closure shown is only one option for vermin-proofing. Provided openings are as specified, other dimensions can vary, so allowing the use of other shapes such as channels and right-angles'."[3]

3.8.3. The size of the openings in the cavity base closer / vermin proofing complies with E2/AS1 paragraph 9.1.8.3.

3.8.4. Although related to masonry veneer, E2/AS1, paragraph 9.2.6(c)(iii) provides that vermin proofing is required to be fitted 'where gaps greater than 13mm exist'.

[2] Detail 3 on plan a5.01, dated 29 March 2022.
[3] The 'comment' is referring to figure 66, in E2/AS1, titled 'Cavity base closer/vermin proofing'.

The authority

3.9. The authority submits (in summary):

3.9.1. The "cladding base closers/vermin strip showed poor vermin proof sealing of the dry cavities against the foundation edge. The consented detail shows 6mm … [but the as-built] dimension[s] of this detail was varying by [approximately] 4mm up to 25mm in multiple locations on the elevations and the framing bottom plate (with DPM[4]) is visible where overhanging the foundation at the larger gaps – this is a non-compliance issue".

3.9.2. The "window support bars [stop] short of the joinery by [approximately] 100mm (not measured) however Window Association New Zealand guidelines[5] Figure 72B indicates that the sill support bar may be up to 100mm short of the trim opening at either end. It is recommended that the bar is installed to the full width of the opening to ensure it picks up the window or door frame support blocks. However, in some cases the use of non-proprietary corner soakers may require shortening of the bar - This element of the … installation appears to comply".

The construction company

3.10. The construction company submits (in summary):

3.10.1. It is unaware of any inspection by the authority "that indicates non-compliance of any element of the dwelling" after the issue of the code compliance certificate.

3.10.2. The joinery sill support bars "have been fitted in accordance with [the Window and Glass Association of New Zealand] Guide E2/AS1 Figure 72B".

3.10.3. In relation to the eave ventilation closers, the building consent plans "refer to the home being constructed with a flat soffit however the detail … shows ventilation requirements for a raking soffit".

3.10.4. The photograph provided by the first builder "showing solid blocking to the soffit/building junction is consistent with [the construction company's] own photographic documentation. The area where [the owners'] video appears to show is where a bird is entering into the soffit area adjacent to the outdoor portico area. Based on the as-built construction, it would appear birds can only enter and remain in the soffit space and cannot enter the skillion or other roof spaces above the habitable living area of the home itself".

[4] Damp-proof membrane.

[5] I have assumed the authority was referring to the Window and Glass Association of New Zealand 'Guide to Window Installation' as described in E2/AS1 (Amendment 10, dated 23 November 2022). Figure 72B is from Acceptable Solution E2/AS1, third edition, amendment 10, effective from 5 November 2020.

4. Discussion

4.1. The matter to be determined is the authority's decision to issue a code compliance certificate for the dwelling.

4.2. Section 17 of the Act requires all building work must comply with the Building Code, and section 19 sets out several different methods to establish compliance. Section 49 requires that an authority must grant a building consent if it is satisfied that the provisions of the Building Code would be met if the building work is carried out in accordance with the plans and specifications.

4.3. Section 94 requires an authority to issue a code compliance certificate if it is satisfied on reasonable grounds that the building work complies with the building consent. I consider that the obligation in section 94, in combination with the scheme formed by sections 17 and 49, is to ensure compliance with the building consent issued so as to achieve compliance with the Building Code.[6]

4.4. Section 188(1) of the Act provides the power to confirm, reverse or modify an authority's decision to issue a code compliance certificate by way of a determination. Previous determinations[7] have established a process for considering the issue of a code compliance certificate. The first step is to consider whether the building work concerned was completed in accordance with the building consent. If the building work, or some elements of the building work, does not comply with the building consent then the second step is to consider whether it nonetheless complies with the Building Code.

Compliance with the building consent

Cavity closers at the base of the AAC cladding system

4.5. This item relates to the gap between the cavity closers at the base of the wall panel cladding system and the external face of the concrete foundation as constructed.

4.6. In respect of the building consent:

4.6.1. The cladding is a proprietary autoclaved aerated concrete (AAC) cladding system over a 40mm wide cavity, specified to be installed to the manufacturer's technical manual.

4.6.2. The specifications and the manufacturer's technical manual refer to the use of the manufacturer's proprietary 'PVC base cap/vermin strip' moulding fixed to the bottom edge of the panels. The same specifications also confirm construction tolerances for concrete and timber framing.

[6] Refer *Body Corporate 366567 v Auckland Council* [2024] NZHC 32 at [92] and [94].
[7] For example, Determination 2008/030 at paragraph 1.6, and Determination 2021/008 at paragraph 6.1.2.

4.6.3. The manufacturer's technical literature dimensions the base cap moulding (including the horizontal vent strip) as 37mm wide, and drawings showing the back edge of the moulding abutting the foundation.

4.6.4. The architectural plans specify the proprietary 'vented…PVC base moulding' as the cavity closer, fitted to the bottom edge of the panels. The plans show the moulding sitting out from the concrete foundation by an unspecified dimension, but approximately scaled to 12mm.[8]

4.6.5. Included a product appraisal requiring the system be installed to the manufacturer's technical literature and noting the 'accessories' for the cavity system include a 'base cap / vermin strip' moulding.

4.7. In respect of the as-built construction:

4.7.1. The authority has confirmed gaps measured between "4mm and up to 25mm in multiple locations".

4.7.2. The owners supplied photographs showing gaps between the as-built cavity closers and the external face of the concrete foundation; these included some tape measurements showings gaps ranging from between approximately 10mm to 30mm.

4.8. Comparing the plans and specifications with the dimensions provided by the owners and the authority, I am of the view the cavity closers at the base of the wall cladding system as constructed does not comply with the building consent where the gap to the foundation exceeds 12mm.

Joinery sill support bars

4.9. This item relates to the length of the as-built joinery sill support bars when compared against the width of the external window and door openings.

4.10. In respect of the building consent:

4.10.1. Aluminium windows and doors are specified to be "manufactured and installed to NZBC E2/AS1" and to include "support bar with built in drainage and ventilation to NZBC E2/AS1, to provide continuous support to the window unit".[9]

4.10.2. The specifications require sill support bars installed to 'Window and Glass Association New Zealand window installation guide'. This guide refers to E2/AS1 and notes sill support bars 'may be up to 100mm short of the trim

[8] The same plan detail includes a 6mm dimension for the offset of the timber baseplate over the edge of the foundation, which is about half the distance that moulding is shown out from the foundation.

[9] E2/AS1 Figure 72B and paragraph 9.1.10.5b) sets out the requirements for sill support bars.

opening at either end….in some cases the use of non-proprietary corner soakers may require shortening of the bar'.

4.10.3. The plans specify the installation of proprietary sill support bars for 'selected [aluminium] door joinery'. There is no detail for the full height window joinery; however, the plans include a sill support bar for a window where the external wall extends below the window opening.

4.11. In respect of the as-built construction I note that, although not clear, several of the photographs provided by the owners show what appears to be some mitred soakers in place.

4.12. The building consent plans and specifications provide for the installation of sill support bars, and the evidence provided by the parties does indicate they have been incorporated into the construction of the doors and windows.

4.13. Acceptable Solution E2/AS1 and the specified Window and Glass Association New Zealand 'window installation guide' permits sill support bars to be short of the trim openings in some situations, but only for a maximum of 100mm at either end.

4.14. The evidence provided by the owners indicate that in some instances (not all) the distance measured was greater than 100mm. Therefore, the installation of the sill support bars does not comply with the building consent in those instances where the distance from the end of the sill support bars to the trim openings exceeds 100mm.

Eave ventilation closures

4.15. This item relates to the construction of the roof eaves at the end of the profiled metal roof into the gutter.

4.16. In respect of the building consent:

4.16.1. Proprietary asymmetrical profiled metal roof cladding on a 30-degree pitched roof is specified. Two types of eaves/soffits are detailed including, closed in soffits where the eave projects past the external wall, and a skillion ceiling roof with ventilation on the underside of the soffit.

4.16.2. The building consent specifications state the roof cladding was to be installed and fixed in accordance with E2/AS1 and the New Zealand Metal Roof Manufacturer's 'New Zealand Metal Roof and Wall Cladding Code of Practice'.[10] The specifications also include a reference to 'closure strips' under the sub-title 'Accessories', but they are not specified to be installed in under sub-section 3 'Execution'.

[10] I note the 'New Zealand Metal Roof and Wall Cladding Code of Practice' requires 'Underlay laid horizontally must be laid commencing at the lowest point of the roof, running over the bottom purlin and lapped 20mm maximum into the gutter…'

4.16.3. Some key features of both details in the plans include:

- The roof cladding extends into the line of the gutter.
- The roof underlay is above the roof purlins and extends into the gutter.
- A roof purlin is shown close to the edge of the roof cladding.
- Timber blocking is shown between the structural roof members, above the top plates. A small gap is shown between the timber blocking and the adjacent roof purlin.
- The proprietary metal fascia, to which the gutter is fixed, does not extend up to the underside of the roof cladding.

4.17. In respect of the as-built construction:

4.17.1. A photograph provided by the first builder shows some timber blocking installed between the roof rafters, above the line of the top plate. The same photograph also shows a section of gutter installed to the end of the rafters.

4.17.2. Regarding the video of a bird entering between a section of gutter and under the end of the roof cladding, it is not clear the extent of the construction the bird is accessing.[11]

4.17.3. Photographs provided by the owners show a clear space to the back of the gutter and under the ends of the roof cladding, and none show the roof underlay extending into the gutter.

4.18. I have received insufficient information to ascertain if the '10mm ventilation inlet' and 'vermin stop' to the skillion ceiling part of the roof construction has been constructed in accordance with the building consent.

4.19. It appears that some elements of the roof eaves have not been constructed in accordance with the building consent; specifically, where the plans indicate the roof underlay was to extend into the gutter. In the absence of any detailed assessment of the roof construction, I have insufficient information to ascertain the full extent of any non-compliance of the construction of the roof eaves beyond the four areas photographed by the owners.

Conclusion

4.20. In summary, in regard to compliance with the building consent I conclude:

4.20.1. the as-built cavity closers at the base of the wall cladding system, where the gap to the foundation exceeds 12mm, does not comply with the building consent

[11] It is not clear which part of the roof this relates to.

4.20.2. the sill support bars do not comply with the building consent where the distance from the end of the sill support bars to the trim openings exceeds 100mm

4.20.3. There is evidence to show the building wrap does not extend into the gutter as detailed in the building consent. I have insufficient information to ascertain the full extent of non-compliance beyond the area(s) shown in the four photographs or other roof eave construction details.

4.21. As some of the building work was not completed in compliance with the building consent, as second step, I now consider whether those particular elements complied with the Building Code.

Compliance with the Building Code

Vermin proofing – Clause G3.3.1(a)

4.22. As noted above, the owners are concerned about vermin accessing the building envelope via gaps at the bottom of the wall cladding and between the roof and eaves.

4.23. There is no Building Code requirement for the general prevention of vermin accessing buildings (or parts of the building's construction such as the building envelope) other than, in this case,[12] the specific requirements of Building Code Clause G3 - *Food preparation and prevention of contamination*.

4.24. The objective and functional requirements of Clause G3 are concerned with safeguarding people from illness due to contamination and enabling hygienic food preparation (storage, preparation and cooking of food) without loss of amenity.[13]

4.25. In respect of requirements relating to 'vermin' that applies to detached dwellings, performance clause G3.3.1(a), requires

> Food preparation facilities to be hygienic and include:
> (a) space for a refrigerator, or a perishable food storage area capable of being cooled and protected from vermin and insects, ...

4.26. I consider G3.3.1 requires food preparation facilities, such as kitchens, to be 'hygienic', and this includes protecting food storage areas from vermin.

4.27. Food preparation facilities (for example, the kitchen and its food storage areas) are interior spaces of the dwelling, and access by vermin to areas within the external cladding and at roof eaves does not constitute access to food preparation facilities. Any access by vermin from the external envelope to internal spaces is prevented by other building elements, such as framing, building wrap, insulation and interior

[12] Clause G15 – *Solid waste* requires the restricting of access by vermin to rubbish, but this only applies to rubbish chutes and so is not relevant in this case.
[13] refer G3.1(a) and (b) and G3.2.1.

linings. These building elements collectively protect the food preparation facilities in the dwelling from vermin and insects.

4.28. That being so, I consider the issues raised by the owner concerning the cavity closers and eaves, do not constitute non-compliance with Building Code Clause G3.3.1(a).

Vermin proofing in E2/AS1

4.29. Regarding E2/AS1, this is an Acceptable Solution to establish compliance with Code Clause E2, which is concerned with external moisture entering the building. E2/AS1 includes vermin proofing to ensure it does not impede the performance of external wall claddings, such as the drainage and ventilation of wall cladding cavities.[14]

Penetration of external moisture – Clause E2.3.2

4.30. Building Code Clause E2.3.2 provides:

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

4.31. From the information provided to me, I understand there are six areas where the gap between the sill support bar and window / door frame is greater than 100mm. Those being:

- the left side of the main living room window (east side) – a gap of 120mm
- the left side of the living room window (west side) – a gap of 115mm
- the left side of the front door – a gap of 120mm
- the left side of the laundry door (west side) – a gap of 130mm
- the right side of the bedroom window (northwest side) – a gap of 110mm
- the left side of the media room window – a gap of 130mm.

4.32. The doors and windows appear to have soakers installed at either end of the bottom of their frames. The presence of the soakers will assist in managing water ingress in the first instance.

4.33. I note that only a small amount of water can access the areas where there are gaps at the ends of the sill support bars, and some openings are sheltered/protected from direct rain by overhanging eaves and the porch over the front entrance.

4.34. I consider that any water ingress at the gaps listed above will be minor and not cause undue dampness or damage to any building elements. That being so, I find the sill support bars meet the performance requirement of clause E2.3.2.

[14] Those being paragraphs 9.1.8.2 e) and 9.1.8.3.

Conclusion

4.35. In summary, I conclude:

4.35.1. the cladding cavity closers and eave construction does not result in non-compliance of food preparation facilities with Building Code clause G3.3.1(a).

4.35.2. the joinery support bars comply with Building Code Clause E2.3.2.

Remedy

4.36. As noted above, section 188(1) provides me with the power to confirm, reverse, or modify the authority's decision to issue the code compliance certificate and I have discretion in how that power is exercised.[15]

4.37. I am satisfied that some elements of the disputed building work do not comply with the building consent. However, I have found that those particular elements comply with the corresponding Building Code clauses and therefore the concerns raised by the owners do not provide grounds for me to reverse the code compliance certificate.

5. Decision

5.1. In accordance with section 188 of the Building Act 2004, I determine that the particular elements of the completed building work identified in this determination do not comply with the building consent but comply with the Building Code; accordingly, I confirm the authority's decision to issue the code compliance certificate.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 31 March 2025.

Peta Hird

Lead Determinations Specialist

[15] *Estate Properties Ltd v Hastings District Council* [2021] NZDC 17000 at [47].