Determination 2007/73

Refusal by a territorial authority to accept a window installation detail at Parehua Country Estate, Martinborough

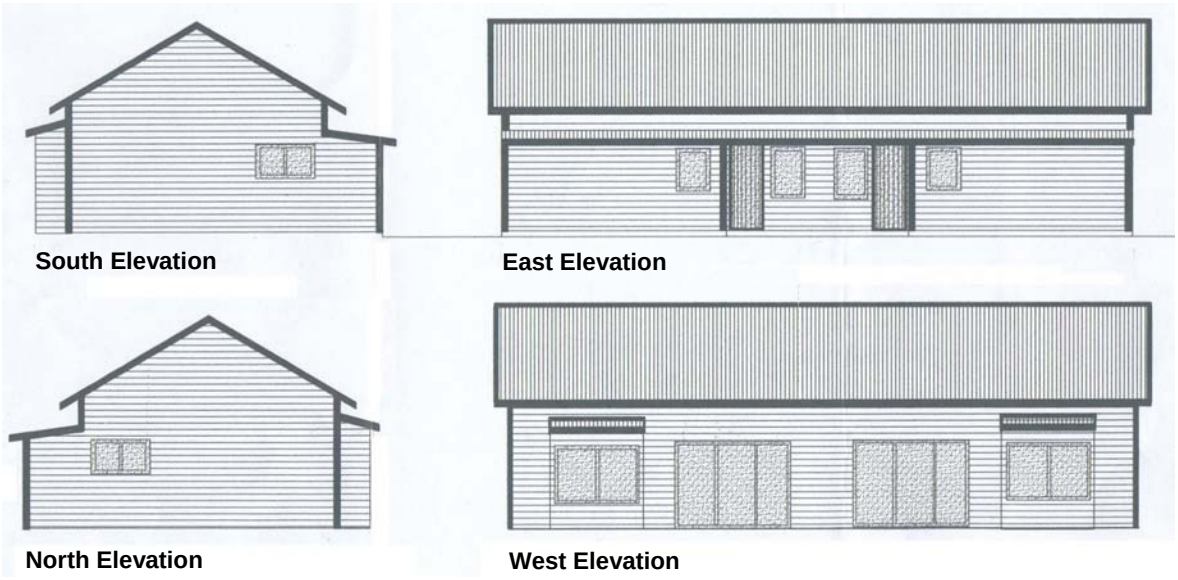

Figure 1: Elevations of the 114m^2 dwelling

1 The matter to be determined

1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004[1] ("the Act") made under due authorisation by me, John Gardiner, Determinations Manager, Department of Building and Housing ("the Department"), for and on behalf of the Chief Executive of that Department. The applicant is the owner, Mr M Kunac ("the applicant"), and the other party is the South Wairarapa District Council ("the territorial authority").

[1] The Building Act 2004 and the Building Code are available from the Department's website at www.dbh.govt.nz.

1.2 The matter to be determined is whether a window and door joinery installation detail, in particular the head flashing detail, complies with the Building Code[2] Clauses E2 "External Moisture" and B2 "Durability".

1.3 In making my decision, I have considered the detail as submitted by the applicant, the manufacturer's details, and those shown in the Acceptable Solution[3] for Clause E2 "External Moisture" (E2/AS1).

2 The building work

2.1 The building work comprises 10 single-story detached dwellings in a flat site to be constructed under the same building consent. One unit is approximately 132 square metres in area, 2 units are approximately 76 square metres, and 7 units are approximately 124 square metres.

2.2 The timber-framed dwellings have pre-finished corrugated steel roofing, compressed fibre-cement weather-board wall cladding, and aluminium joinery. Similar weatherproofing details are used for all units.

3 Submissions

3.1 The applicant made a written submission outlining his view of the matter in dispute and enclosing copies of the manufacturer's detail, the detail given in compliance document E2/AS1, and his head flashing detail as installed.

3.2 The applicant considered that the manufacturer's detail, which requires slots in the weatherboards to accommodate the flashing to each side of the window or door head is not good trade practice. It requires sealant in the slot which could degrade in the weather over time. He also noted that, on direct face fixed cladding, stop-ends to the head flashing were shown as optional in the compliance document E2/AS1.

3.3 The territorial authority did not make a submission in response to the application.

3.4 A copy of the draft determination was issued to the parties for comment on 23 March 2007. The applicant made no response to the draft.

3.5 The territorial authority responded to the draft in a letter to the Department dated 27 March 2007 saying that it accepted the determination. The territorial authority also said:

> The building works in question are 10 accommodation units (all under the one building consent). One unit is approximately 132m^2, 2 units are approximately 76rn^2 and 7 units are approximately 124m^2 . . .
>
> As all the units have been built in the same manner with regards to the flashings the determination should reflect all units under the building consent.

[2] The Building Code is available from the Department's website at www.dbh.govt.nz.
[3] An Acceptable Solution is a prescriptive design solution approved by the Department that provides one way, but not the only way, of complying with the Building Code. The Acceptable Solutions are available from The Department's Website at www.dbh.govt.nz.

I have amended the determination accordingly.

4 Discussion

4.1 These are low risk dwellings, as assessed using the E2/AS1 Risk Matrix, but they are in a high to very high wind zone. No drawings were supplied with the application, but at my request, the applicant subsequently submitted some unscaled drawings showing a section through the 114 square metre dwelling and four elevations. The drawings appeared to show that the windows in the side (long) walls are protected by the eaves but the windows in the two gable ends, with up to 12 board widths distance up to the eaves, receive much less protection and are therefore at a greater risk of moisture entry resulting from a combination of wind and rain.

4.2 The manufacturer's detail and the E2/AS1 details are virtually the same. That is, they show the window head flashing running over the window joinery back to the framing and with additional building wrap from the next board overlap above the window. Any moisture passing through the weatherboard joins would then move down over the building wrap to the flashing then to the building exterior.

4.3 The flashing detail installed by the applicant is not fitted back against the framing and under the building wrap. In the event of moisture ingress any water will find its way into the building framing. This detail could only be considered adequate where the top of the windows are located close to protective eaves.

5 The decision

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

a) the head flashing detail, as installed in the gable ends of the dwellings (typified by the South and North elevations of the 114 square metre house shown in Figure 1) does not comply with the Building Code.

b) the head flashing detail, as installed above windows in the side walls of the dwellings (typified by the East and West elevations of the 114 square metre house shown in Figure 1) does comply with the Building Code.

c) the head flashing detail as installed over the ranch-slider doors (typified by the West elevation of the 114 square metre house shown in Figure 1) does not comply with the Building Code.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 9 July 2007

John Gardiner
Determinations Manager