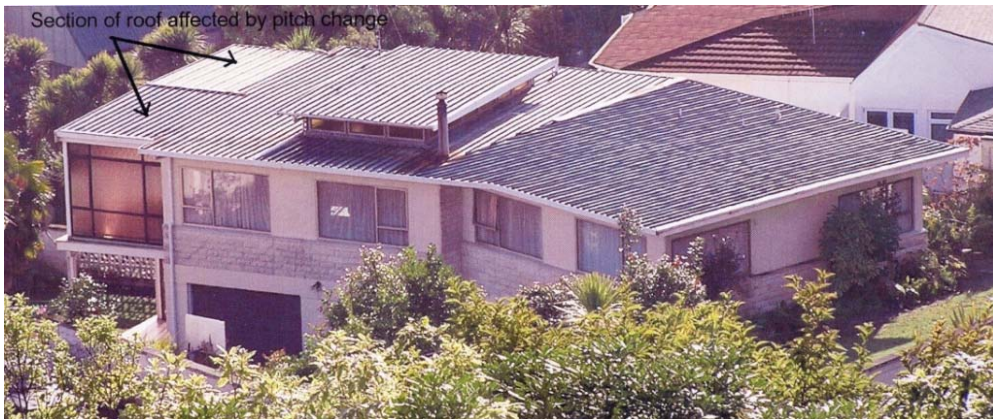


Determination 2008/62

Dispute over a building consent for alterations to a house due to the slope of the roof at 6 The Cliffs, Nelson



1. The matters to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004¹ (“the Act”) made under due authorisation by me, John Gardiner, Manager Determinations, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department. The applicant is the owner, P Johnston and the other party is the Nelson City Council (“the authority”) carrying out its duties and functions as a territorial authority or building consent authority.
- 1.2 The application is in respect of a decision by the authority to refuse to grant a building consent for alterations to an existing house unless changes are made to the design of the proposed roof alterations, on the grounds of its lack of adequate fall.
- 1.3 As the applicant has restricted the matter to be determined to the roof pitch of the proposed alterations, and I have received no information from the authority, this determination is limited to the proposed roof pitch only.
- 1.4 I therefore consider that the matter for determination is whether the roof pitch as proposed for the alterations to the roof of the house (“the roof”) complies with

¹ The Building Act 2004 is available from the Department’s website at www.dbh.govt.nz.

Clause E2 “External Moisture” of the Building Code² (Schedule 1, Building Regulations 1992).

- 1.5 In this determination, unless otherwise stated, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

2. The building

- 2.1 The proposed building work consists of alterations to a 2-storey detached house situated on an excavated sloping site, which is in a high wind zone for the purposes of NZS 3604³. The original house was built in 1973, and is a simple “boomerang” shape with a low pitched gable roof. A number of alterations to the exterior of the house are proposed, which include minor alterations to part of the roof. The new roof plan is shown in Figure 1.

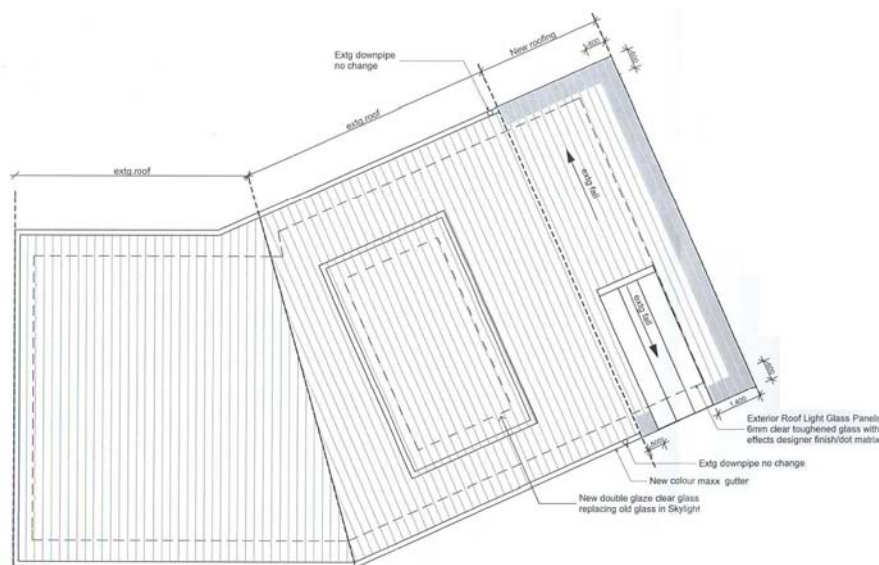


Figure 1: New roof plan (shaded area shows extent of new roof)

2.2 The existing roof

- 2.2.1 The existing roof cladding is trough profile metal at 1° pitch. A central raised section of the roof incorporates clerestory glazing to the four sides of the “lantern light”.
- 2.2.2 The roof has no fabricated central ridge. The roof cladding runs up one side of the roof and down the other in one single length, taking up the change in slope across the ridgeline by elastic bending in the sheet.
- 2.2.3 For about 3.6m at the southern end of the roof, the perimeter of the roof steps back by about 600mm, and on the southeast corner, the roof cladding is replaced with a translucent material that forms a canopy above a deck.

² The Building Code is available from the Department’s website at www.dbh.govt.nz.

³ New Zealand Standard NZS 3604:1999 Timber Framed Buildings

2.3 The proposed roof alterations

- 2.3.1 Either edge of the roof is to be extended by 600mm so as to align with the existing adjacent eaves projections. The roof is also extended to the North West by 600mm.
- 2.3.2 The work involved the replacement of all the metal cladding to this section of the roof. The new cladding will match the existing cladding with respect to material, profile, and pitch.
- 2.3.3 The section of roof above the existing deck will include a new glass skylight, installed at the same pitch as the metal cladding.

3. Background

- 3.1 The applicant is in the process of applying for a building consent for the alteration work to the house.
- 3.2 According to the applicant, the territorial authority requires the altered section of the roof to have a 3° pitch in accordance with the Acceptable Solution⁴ E2/AS1 of the Building Code.
- 3.3 The Department received an application for a determination on 19 May 2008.

4. The submissions

- 4.1 In a letter to the Department dated 15 May 2008, the applicant described the background to the dispute and explained the practical problems that would follow if the authority imposed the increased roof slope to the altered section of roof, noting:

I would like to retain the 1deg pitch to match the rest of the roof. Raising the small section of roof where we wish to undertake only minor changes is costly; it spoils the roof lines and overall look of the modernisation we wish to achieve and nothing practical is gained by it. The house is 35 years old with no history of leakage or problems with its 1deg pitch roof.

The changes affect such a small section of the roof, half of which is over a deck. A 3deg pitch over this section would require a step down to the original roof height with the necessary flashing and sealing. Maintaining the original pitch means no joining of two levels, offering the best situation for water-tightness.

- 4.2 The applicant forwarded copies of:
- the drawings of the proposed alterations
 - photographs of the existing house.
- 4.3 Copies of the submissions and other evidence were provided to each of the parties. Neither party made any further submissions in response to the submission of the other party.
- 4.4 A draft determination was issued to the parties on 10 June 2008. Both parties accepted the draft without comment.

⁴ 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.

5. The legislation

5.1 The relevant section of the Act is:

112 Alterations to existing buildings

- (1) A building consent authority must not grant a building consent for the alteration of an existing building, or part of an existing building, unless the building consent authority is satisfied that, after the alteration, the building will-
- (a) Comply... ..; and
 - (b) continue to comply with the other provisions of the building code to at least the same extent as before the alteration.

5.2 The relevant provisions of the Building Code are:

E2 External moisture

Performance

E2.3.1 Roofs must shed precipitated moisture...

5.3 The relevant sections of the Acceptable Solution E2/AS1 are:

8.5 Profiled Metal Roof Cladding

8.4.5 Roof pitch

For roofs up to 18 metres in length, pitches shall be:

- (c) Trough profile – not less than 3° (1:20).

6. Discussion

6.1 The applicant has submitted that the pitch of the existing roof has demonstrated its performance over the past 35 years, and the area to be altered will match the material and pitch of the original roof. Although the pitch of the roof alterations does not comply with E2/AS1 (refer paragraph 5.3), the applicant maintains that the proposal will comply with the performance requirements of the Building Code for the roof to shed water (refer paragraph 5.2).

6.2 In assessing the proposed roof, the authority appears to be of the opinion that, as the pitch of the roof does not comply with E2/AS1 (refer paragraph 5.3) the proposed roof alterations will not comply with the building code.

6.3 I note that an Acceptable Solution is a prescriptive design solution that provides only one way of complying with the Building Code. The proposed roof pitch does not comply with E2/AS1 and must therefore be considered as an Alternative Solution; entailing an assessment of the roof's likely performance within the context of this house.

6.4 I note that the minimum 3° roof pitch for trough section roofing provided for in E2/AS1 is limited to roofs up to 18 metres in length. The length of fall to each side of this roof is approximately 5 metres.

6.5 In the case of the proposed roof pitch, I make the following observations:

The legislation and the Compliance Documents	The existing and proposed roof
<p>The Act The alterations must continue to comply with the provisions of Clause E2 of the building code to at least the same extent as before the alteration.</p>	<p>The proposed roof will match the material and pitch of the existing roof</p>
<p>Clause E2 The proposed roof must shed precipitated moisture.</p>	<p>The existing roof has demonstrated its ability to shed moisture effectively over 35 years.</p>
<p>E2/AS1 A trough section profiled metal roof shall be a minimum of 3°.</p>	<p>If the roof pitch were to be increased to 3° over part of the roof, it would introduce additional complex junctions between the new roof and the existing roof and walls.</p>

6.6 Taking into account the above observations, I consider that:

- the majority of the new roof cladding is a replacement of the existing cladding. It does not require a building consent as it is considered exempt work under Schedule 1 of the Act, as the replacement cladding uses:
 - comparable materials, or replacement with a comparable component or assembly in the same position, of any component or assembly incorporated or associated with a building . . .
- the area of new roof cladding, that is not a replacement of the existing cladding, is between 5 to 6% of the area of the proposed roof
- the roof alterations proposed for this house are likely to perform at least as well as the existing roof, which has demonstrated its weathertightness performance over 35 years
- half of the area of the new roof cladding is above an open deck
- the new roof cladding does not contain a ridge flashing. The only junctions in the new roof cladding (being those associated with the new skylight) occur over the open deck
- despite the proposed low pitch, maintaining the original roof line will allow junctions to be minimised and simplified, resulting in no significant difference in weathertightness risk from the current situation
- increasing the roof pitch would introduce additional vulnerability to moisture penetration via new complex junctions with the existing roof and walls, and this would increase the weathertightness risk significantly.

6.7 I therefore conclude that the proposed roof pitch will comply with the performance requirements of clause E2 of the Building Code.

6.8 I am therefore of the opinion that, in the circumstances applying to this particular proposal, the authority is incorrect in requiring the roof pitch to comply with E2/AS1.

- 6.9 It is emphasised that each determination is conducted on a case-by-case basis. Accordingly, the fact that a particular roof pitch has been established as being code compliant in relation to a particular building alteration does not necessarily mean that the same roof pitch will be code compliant in another situation.

7. The decision

- 7.1 In accordance with section 188 of the Building Act 2004, I hereby determine that the proposed roof pitch to this building will comply with clause E2 of the Building Code. I accordingly reverse the decision of the authority to refuse to issue the building consent, in respect of the proposed roof pitch only.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 18 July 2008.

John Gardiner
Manager Determinations