



## Determination 2018/043

# Regarding the authority's refusal to accept a building consent application for a new building at 141 Old Rotokohu Road, Karangahake, Paeroa



### Summary

This determination considers the authority's refusal to accept a building consent application. The determination considers whether sufficient information was provided to the authority as required by section 45 of the Building Act.

## 1. The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004<sup>1</sup> ("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.
- 1.2 The parties to the determination are:
  - the owners of the site, H and B Jackson, who applied for this determination ("the applicants"), H Jackson is also the designer ("the designer")
  - Hauraki District Council ("the authority"), carrying out its duties as a territorial authority or building consent authority.
- 1.3 This determination arises from the authority's refusal to accept a building consent application, as the proposed building was outside the scope of the Acceptable Solution E2/AS1<sup>2</sup>. The refusal arose because the authority was not satisfied it had enough information to accept the building consent application and was of the view

<sup>1</sup> The Building Act, Building Code, compliance documents, past determinations and guidance documents issued by the Ministry are all available at [www.building.govt.nz](http://www.building.govt.nz) or by contacting the Ministry on 0800 242 243.

<sup>2</sup> Acceptable Solution for Clause E2 External moisture.

the proposed building work would not comply with Clause E2 External moisture<sup>3</sup> of the Building Code (First Schedule, Building Regulations 1992).

- 1.4 The matter to be determined<sup>4</sup> is therefore whether the authority correctly exercised its power of decision by refusing to accept the building consent application. In deciding this matter, I must consider whether sufficient information was provided to the authority under section 45 of the Act.
- 1.5 In making my decision, I have considered the submissions of the parties and the other evidence in this matter.
- 1.6 I have included relevant sections of the Act in Appendix B.

## 2. The building work

- 2.1 The proposed building is located on a site on the side of a steep slope, in a wind zone categorised as ‘Very High’ under NZS 3604:2011<sup>5</sup>.
- 2.2 The proposed timber and steel framed building is built over five levels. The building is proposed to have a timber pile foundation and a timber floor structure to each level.
- 2.3 The roofs will be constructed from timber rafters. The second and third floor roofs are clad with tiles and solar panels. The fifth floor roof is proposed to be clad with a membrane. Parapets are proposed to the fifth floor roof and the third level membrane deck.
- 2.4 A carport is proposed abutting the south side of the building on the third floor. The carport’s structure consists of timber poles connected to timber rafters, which are clad with a membrane and shingles over a plywood substrate.
- 2.5 The areas higher than 10m are highlighted on each elevation in Appendix A. It is noted that the areas of the building that exceed 10m in height<sup>6</sup> are limited to particular elevations (namely the north-east elevation and part of the north-west elevation).

## 3. Background

- 3.1 On 18 December 2017 the designer submitted a building consent application to the authority.
- 3.2 The parties then corresponded for several months about the application and its supporting documentation. I have included a table of the correspondence between the parties below (in summary).

**Table 1: Correspondence**

Date	Event
19 December 2017	The authority sent an email to the designer noting the building is outside the scope of E2/AS1 paragraph 1.1. The building consent application would not be accepted until an alternative solution was provided. It outlined the content the alternative solution would need to consider, ranging from wall underlays to roofing (see paragraph 5.2.2). The authority stated the evidence to support the alternative solution could come in the form of

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

<sup>4</sup> Under sections 177(1)(b) and 177(2)(a) of the Act.

<sup>5</sup> New Zealand NZS 3604:2011 Timber framed buildings.

<sup>6</sup> The scope of E2/AS1 is limited to construction 10m or less.

Date	Event
	either: <ul style="list-style-type: none"> <li>• an expert opinion</li> <li>• a Verification method – E3/VM1<sup>7</sup></li> <li>• a Determination</li> </ul>
20 December 2017	The designer raised queries regarding the risk matrix score and the alternative solution. She noted the manufacturers had reviewed the building details and their feedback was incorporated into the design. She also queried whether providing approval from the cladding and rigid air barrier suppliers (“the manufacturers”) would be adequate.
20 December 2017	The authority stated the BRANZ appraisals provided with the application were limited to E2/AS1 paragraph 1.1. Any proposal outside that scope would require specific design.
30 January 2018	The designer supplied the following amended documents to the authority: <ul style="list-style-type: none"> <li>• amended drawings</li> <li>• revised product literature for the claddings</li> <li>• “Cladding PS1<sup>[8]</sup> &amp; Assessment”.</li> </ul>
1 February 2018	The authority informed the designer the provided documentation was not enough to demonstrate compliance with Clause E2. It reiterated the building work is subject to specific design and either “expert opinion”, “Verification method – E3/VM1” or a “Determination” would need to be supplied for the “consent to be accepted in”.
2 February 2018	The designer responded to the authority. The cladding engineers she had contacted specialised in high-rise buildings with commercial cladding systems. The designer then approached the manufacturers as she believed their opinions were appropriate expert opinion. All manufacturers considered the details adequate and standard installation procedures could be used. The main contractor and stone veneer manufacturer would provide PS3s <sup>9</sup> upon completion.  The designer alternatively queried if it would be acceptable for the design to be reviewed by a registered architect in regard to weathertightness.
6 February 2018	The authority responded it considered an expert opinion had to be provided by someone competent in weathertightness design.  It considered the building outside the scope of the current BRANZ appraisal certificates for the stone veneer cladding and the rigid air barrier. The testing carried out for the appraisal certificates is carried out by an “expert with a qualification in weather tightness and building science”. The authority stated this level of competency is required for the design of the external envelope.  The authority also advised it considered the PS3 from the cladding supplier and builder would “not be enough”.
16 February 2018	The designer provided a letter outlining her level of competency in regard to weathertightness design and detailing.
18 February 2018	The authority reiterated its earlier statements regarding an alternative solution.

<sup>7</sup> I note there is no current Verification Method for Clause E3, and further Clause E3 relates to internal moisture and not external moisture.

<sup>8</sup> Producer statement Design – forms that

<sup>9</sup> Producer statement Construction - forms commonly used as a certificate of completion of building work

Date	Event
	<p>It stated the cladding manufacturers should seek comment from BRANZ or another expert with the same credibility regarding the proposed use because the product's proposed use was outside the scope of the appraisals.</p> <p>It did not consider the approval from the manufacturers without supporting evidence demonstrated compliance with the Building Code.</p>
17 March 2018	The designer responded with a revised design (due to a change in rigid air barrier supplier) and provided an "E2 Summary of Alternative Solution". The alternative solution is discussed in paragraph 5.2.
20 March 2018	The authority responded to the designer the information provided "[d]oes not meet any of the compliance paths available". It noted a determination is a compliance path it would accept.
20 March 2018	The designer queried if a review carried out by a cladding specialist would be adequate as evidence the building would comply with Clause E2 as an alternative solution.
20 March 2018	The authority accepted the designer's proposal for a review by a cladding specialist as evidence of compliance with Clause E2.
27 March 2018	The authority confirmed the outstanding information was the alternative solution for Clause E2 and then the building consent would be accepted in for processing.

3.3 The Ministry received an application for a determination on 28 March 2018.

## 4. The submissions

4.1 The applicants included a submission with their application that stated the following (in summary):

- The proposed building is less than 10m above the directly adjacent ground level. The cladding appraisals and manufacturer's standard detailing are still applicable in this project.
- The structure of the building has been designed by a structural engineer as it is outside the scope of NZS 3604. While the wind zone is 'Very High', the building has been designed to an Extra High wind zone, to address any issues regarding structural movement.
- The flashings are designed to the 'Extra High' wind zone requirements of E2/AS1 to mitigate any increase in wind speed from the increased building height.
- The detailing and documentation provided in the building consent application establishes the proposed building will comply with Clause E2 as an alternative solution. Instead of considering the compliance of the alternative solution, the authority sought to have the design reviewed by an expert or have the cladding suppliers have their products re-evaluated by BRANZ to cover the additional scope.

4.2 The applicants provided copies of the following documents:

- building consent application, including drawings, information about how the proposed building complies with Clause E2 as an alternative solution, specification, and engineering calculations
  - correspondence between the parties.
- 4.3 On 10 April 2018 the authority acknowledged the determination application and chose to not make a submission. The authority provided a copy of the correspondence between the parties.
- 4.4 A draft determination was issued to the parties for comment on 20 June 2018.
- 4.5 On 25 June 2018 the applicants accepted the draft determination subject to non-contentious amendments. The applicants sought for the determination to make a decision on the compliance of the alternative solution, and provide clarity regarding the use of expert opinions.
- 4.6 On 26 June 2018 the authority also accepted the draft determination subject to non-contentious amendments. The authority provided the following comments (in summary):
- The designer proposed a peer review in an email dated 17 March 2018. (I note the authority requested an expert opinion, and when provided with the designer’s credentials did not accept her as an expert.)
  - The authority did not intend to limit the designer’s alternative solution options. The options were made to explain the rationale behind the request for supporting information.
  - Requesting an expert’s opinion when the building has a risk score over 20 is not unreasonable. The BRANZ appraisals limit the application of the certificates, and the “authority is not a testing facility to make changes to appraisal certificates”. The authority does not consider manufacturers as competent in regard to Clause E2 External moisture. There was no information provided by the designer or manufacturers regarding the scope of the appraisal certificates. Therefore, the authority cannot rely on the BRANZ appraisal when the products are proposed to be used outside the scope.
  - It considered section 49 has not been met by the application, and that has not been addressed in this determination. (I have not considered section 49 because the assessment required under section 45 is different from section 49 under the Building Act.)

## 5. Discussion

### 5.1 The refusal to accept the building consent application

#### 5.1.1 Section 45 of the Act states:

- 45 How to apply for a building consent
- (1) An application for a building consent must—
- (a) be in the prescribed form; and
  - (b) be accompanied by plans and specification that are –
    - (i) required by regulations made under section 402; or
    - (ii) if the regulations do not so require, required by a building consent authority; and

- (c) contain or be accompanied by any other information that the building consent authority reasonably requires; and

...

- 5.1.2 The Act provides for an authority to set reasonable requirements for the documentation that accompanies applications for building consents. An authority is entitled to set minimum requirements to ensure a comprehensive building consent application for the proposed building work is provided. These requirements are to ensure the building consent application clearly demonstrates and documents how Building Code compliance is to be achieved.
- 5.1.3 The Ministry has issued guidance<sup>10</sup> under section 175 that described the minimum documentation that should be supplied with an application to demonstrate compliance with relevant clauses of the Building Code (“the Ministry’s guidance”).
- 5.1.4 The authority refused to accept the application for a building consent because it did not believe comprehensive information had been provided regarding how the proposed building complied with Clause E2 as an alternative solution.
- 5.1.5 I have not considered whether the proposed building falls within the scope of E2/AS1 because the design has been proposed as an alternative solution.
- 5.1.6 In order to consider the authority’s decision to refuse to accept the building consent application, I have considered the information required by the authority under section 45(1)(c). The authority stated once the additional information was received the building consent application would be accepted, and so the requirement of section 45 would be met.
- 5.1.7 The authority can, under section 45(1)(c), request any information it “reasonably requires”. However, the requirement of section 45 is not in regard to Building Code compliance, but whether the building consent application contains comprehensive information for the authority to be able to make a decision on Building Code compliance of the application under section 49.
- 5.1.8 Further, section 48 provides for the authority to request further reasonable information it deems necessary to establish Building Code compliance once an application has been accepted.
- 5.1.9 In this case, the building consent application explained and detailed the construction of the building to show how it complied with Clause E2 as an alternative solution (see Table 2 paragraph 5.2.2). The designer provided the technical product information for the roof claddings, wall claddings, and rigid air barrier. The wall cladding manufacturers provided confirmation they had no concerns regarding the proposed detailing or the products use outside the scope of E2/AS1.
- 5.1.10 However, the authority did not accept that the information provided by the designer was a valid alternative solution. The authority continued to request additional information, such as the cladding manufacturers providing a statement from BRANZ (or a similar expert) in regard to the use of the claddings outside the appraisals’ scope.
- 5.1.11 I consider it incorrect for the authority to limit the designer’s options for demonstrating compliance of the alternative solution. Section 14D of the Act specifies it is the designer who is responsible for ensuring building work complies with the Building Code, and therefore at the designer’s discretion to decide how to

<sup>10</sup> *Guide to applying for a building consent (residential buildings)* <https://www.building.govt.nz/assets/Uploads/projects-and-consents/guide-to-applying-for-a-building-consent.pdf> (Second edition, October 2010)

- demonstrate the proposed building work complies with Clause E2 as an alternative solution.
- 5.1.12 The Ministry has provided guidance<sup>11</sup> regarding the documentation that could be provided to demonstrate compliance of an alternative solution (“the alternative solution guidance”). The alternative solution guidance notes an application proposing an alternative solution should outline the scope of the project, identify the relevant Building Code clauses, and provide evidence of compliance.
- 5.1.13 Of the options provided by the authority in its email dated 19 December 2017, I note only an ‘expert opinion’, is a method listed in the alternative solution guidance (noted as “expert evidence”) that may be used to establish Building Code compliance. The remaining two options are considered “deemed-to-comply” methods under section 19. That section lists methods of compliance a building consent authority must accept, which includes Verification Methods and determinations. These methods are not means of demonstrating an alternative solution’s compliance.
- 5.1.14 In regard to the authority’s request for an expert opinion, I note the design of the building follows the principles of E2/AS1<sup>12</sup>. While the building is outside the scope of E2/AS1 (refer appendix B.3), individual walls do not exceed 3-storeys in height, and the wind speed is Very High. I do not consider the design to be of a certain scope or risk that is outside the ability of the authority to assess whether the building work will comply with the Building Code. E2/AS1 is a useful comparison for assessing compliance of aspects of this design.
- 5.1.15 I also consider the requirement for comment from BRANZ (or a similar expert) was not a reasonable request from the authority. While a designer may elect to use BRANZ to establish compliance, a BRANZ review should not have been a requirement. I consider in this circumstance the manufacturers’ reviews and statements were appropriate ways of establishing compliance. The manufacturers will grant warranties for the use of their products in a design outside the scope of the appraisals.
- 5.1.16 BRANZ appraisals are a way for manufacturers to provide evidence about expected performance within a certain scope that their products comply with the Building Code. It allows for a product to be specified in a building without requiring the manufacturer’s input every time, if the use is within the scope of the appraisal. The appraisals can be provided to an authority as evidence of compliance with the Building Code, without needing to request information from the manufacturer, each time a product is specified, to provide evidence of compliance.

## **5.2 Did the building consent application meet the requirements of section 45?**

- 5.2.1 The authority provided a list of building elements required to demonstrate how the proposed design complies with Clause E2 as an alternative solution. As I have already outlined, the test of compliance with the Building Code is associated with the decision to grant a building consent under section 49, rather than the decision to accept an application under section 45. I have considered whether the application (information and accompanying drawings) contained sufficient information to satisfy the requirements of section 45.

<sup>11</sup> <https://www.building.govt.nz/building-code-compliance/how-the-building-code-works/different-ways-to-comply/alternative-solutions/>

<sup>12</sup> The building’s design follows the principles of deflection, drainage, drying and durability.

5.2.2 The following table summarises the information provided by the applicants.

**Table 2**

Information requested by the authority	Information provided by the applicant
Wall underlay	<ul style="list-style-type: none"> <li>• The rigid air barrier will be installed with proprietary tape at all joints.</li> <li>• Rigid air barrier has been tested to winds exceeding those in Extra High wind zones and buildings outside the scope of NZS 3604.</li> <li>• The rigid air barrier has been treated to H3.2 CCA<sup>13</sup>.</li> <li>• The product technical statement for the rigid air barrier was provided.</li> </ul>
Substrates supporting claddings	<ul style="list-style-type: none"> <li>• The stone veneer cladding will be installed over fibre-cement sheets that are both part of the BRANZ appraised cladding system.</li> <li>• The shingles will be installed over a substrate that also has a BRANZ appraisal.</li> <li>• The membrane roof will be supported at a minimum by 17mm H3 plywood.</li> <li>• Stone tile substrate technical specification was provided.</li> </ul>
Flashings	<ul style="list-style-type: none"> <li>• Ridge flashings have 200mm each side, which exceed the Very High wind zone requirements in E2/AS1.</li> <li>• 90mm barge flashings are proposed, which exceed the Very High wind zone requirements in E2/AS1.</li> </ul>
Windows	<ul style="list-style-type: none"> <li>• The building's wind zone has been calculated by the structural engineer to be 'Very High'.</li> <li>• The drawings specify the window joinery.</li> <li>• Double glazing is noted in accordance with NZS 4223<sup>14</sup>.</li> </ul>
Window junction between cladding and window	<ul style="list-style-type: none"> <li>• Stone veneer cladding window joinery sill, head and jamb details provided.</li> <li>• Fibre-cement cladding window sill, jamb and head joinery details are provided.</li> </ul>
Wall cladding	<ul style="list-style-type: none"> <li>• Stone veneer cladding's BRANZ appraisal and the technical information was provided.</li> <li>• Stone veneer cladding internal corner detail was provided.</li> <li>• Detail provided for where the stone cladding and sheet cladding abut at an internal corner.</li> <li>• Both stone veneer cladding and fibre-cement sheet claddings are installed over 20mm cavities over H3.1<sup>15</sup> battens.</li> <li>• Inter-storey cladding junction detail is designed in accordance with E2/AS1.</li> <li>• Walls above the roofs drain through a vermin proof cavity closure as per E2/AS1.</li> <li>• The wind speed for the site is below the maximum wind speed stated in the Product Technical Statement for the stone veneer cladding.</li> <li>• Ventilated wall cavities terminate above the horizontal drainage joint.</li> <li>• Pipe penetration detail for both claddings was provided.</li> <li>• External corner detail was provided.</li> </ul>

<sup>13</sup> Timber treatment Hazard Class H3.2 Copper chrome arsenate

<sup>14</sup> New Zealand Standard NZS 4223.3:2016 Glazing in buildings

<sup>15</sup> Timber treatment Hazard Class H3.1

Information requested by the authority	Information provided by the applicant
	<ul style="list-style-type: none"> <li>• Relevant manufacturers' details were provided.</li> <li>• Fibre-cement sheet cladding manufacturer's letter stating the manufacturer had reviewed the plans and did "not see any issues" provided the cladding was installed as per the installation details was provided.</li> <li>• The stone veneer cladding manufacturer's letter confirming it will issue a PS3 upon completion was also provided.</li> <li>• BRANZ appraisal provided for the stone veneer cladding.</li> </ul>
Roof cladding	<ul style="list-style-type: none"> <li>• Technical product information provided for the shingles.</li> <li>• Valley detail is in accordance with the manufacturer's specifications.</li> <li>• Membrane cladding to parapet junction detail was provided.</li> <li>• Scupper detail provided for the fifth floor roof.</li> <li>• Shingle clad roofs shed rain to external gutters, sized in accordance with E1/AS1<sup>16</sup>.</li> <li>• 30° pitch will aid the water runoff.</li> <li>• Parallel apron and apron detail where the roof meets the wall claddings.</li> <li>• Roof underlay has been specified in accordance with the manufacturer's documentation.</li> <li>• Provided relevant manufacturers' details.</li> <li>• Provided the CodeMark certificate for the membrane roofing and decking material.</li> </ul>
Cladding penetrations	<ul style="list-style-type: none"> <li>• Roof pipe penetration detail provided.</li> <li>• Detail provided showing how the brackets will support the solar panel fixing.</li> <li>• PVC pipe detail provided.</li> <li>• Membrane roof penetration construction is described and detailed.</li> <li>• Tower parapet details provided.</li> <li>• Chimney flashing detail provided.</li> </ul>

5.2.3 Taking into consideration the information provided by the designer, I am of the view that the drawings clearly outline the areas where the alternative solution applied. The evidence provided is site-specific, has been reviewed by the relevant manufacturers' and explains how the building was designed using the "4Ds" approach<sup>17</sup> (deflection, drainage, drying, and durability) to weathertightness design. I note the designer identified the functional requirement Clause E2.2 as the applicable Building Code Clause, when in fact Clauses E2.3.1 and E2.3.2 are the relevant performance requirements, however the intent of the alternative solution is clear.

5.2.4 The requirement of section 45 is not whether the building work complies with the Building Code but whether there is enough information within the building consent application for the authority to make a decision under section 49. I am of the view the building consent application satisfies the test under section 45. The information provided is in line with the Ministry's guidance on demonstrating compliance of alternative solutions, and sufficient information has been provided.

<sup>16</sup> E1 Surface water Acceptable Solution

<sup>17</sup> *External moisture- An Introduction to weathertightness design principles* (Department of Building and Housing) <https://www.building.govt.nz/assets/Uploads/building-code-compliance/e-moisture/e2-external-moisture/weathertight-design-principles/external-moisture-an-introduction.pdf>

- 5.2.5 I provide the following comments as guidance for the parties regarding section 49. The building consent application included detailed drawings, the BRANZ appraisal certificates, and statements from the manufacturers regarding compliance with Clause E2. The authority can look to the BRANZ appraisal certificates combined with the manufacturers' reviews and statements to establish compliance with Clause E2.
- 5.2.6 The limitation on the scope of construction covered by E2/AS1 reflects the increased risk when the height of the building increases. When the height of a building increases, wind speed and wind pressure act differently on the cladding and cavities, and there is the increased exposure to the weather and additional structural considerations when cladding a taller building.
- 5.2.7 Some Acceptable Solutions are conservative and cover the worst case, so they may be modified in less extreme cases and the resulting alternative solution will still comply with the Building Code. In this instance, the designer has compensated for the fact the building is over the height limitation and mitigated the design by incorporating drained cavities, oversized flashing, and had the documentation reviewed by the product manufacturers. I consider the differences between a proposal that satisfies E2/AS1 and the proposed building work are not so significant that it is beyond the authority to make a decision, on reasonable grounds, on the evidence supplied by the applicants.

### **5.3 Conclusion**

- 5.3.1 In conclusion, I consider the proposed alternative solution contained comprehensive information to meet the requirement of section 45 of the Act.
- 5.3.2 I have not assessed the Building Code compliance of the proposal once the application has been accepted, because the authority can request under section 48 clarification or additional information if required.

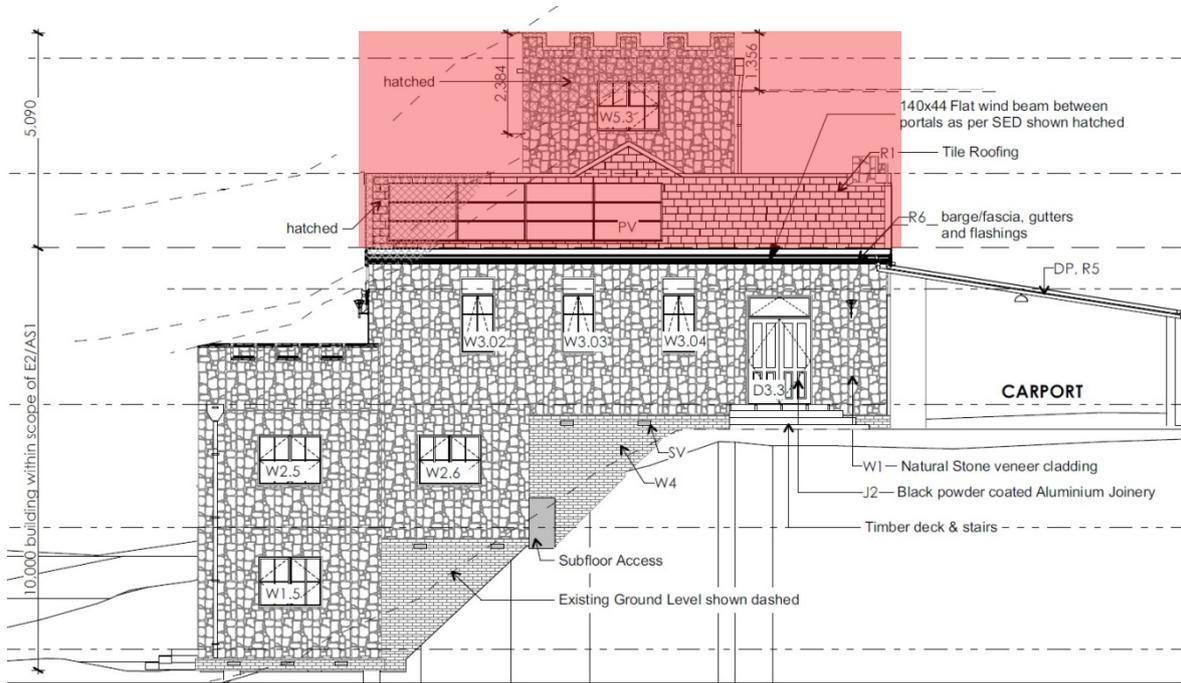
## **6. The decision**

- 6.1 In accordance with section 188 of the Building Act 2004, I hereby determine the authority was incorrect to refuse to accept the building consent application.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 7 September 2018.

Katie Gordon  
**Manager Determinations**

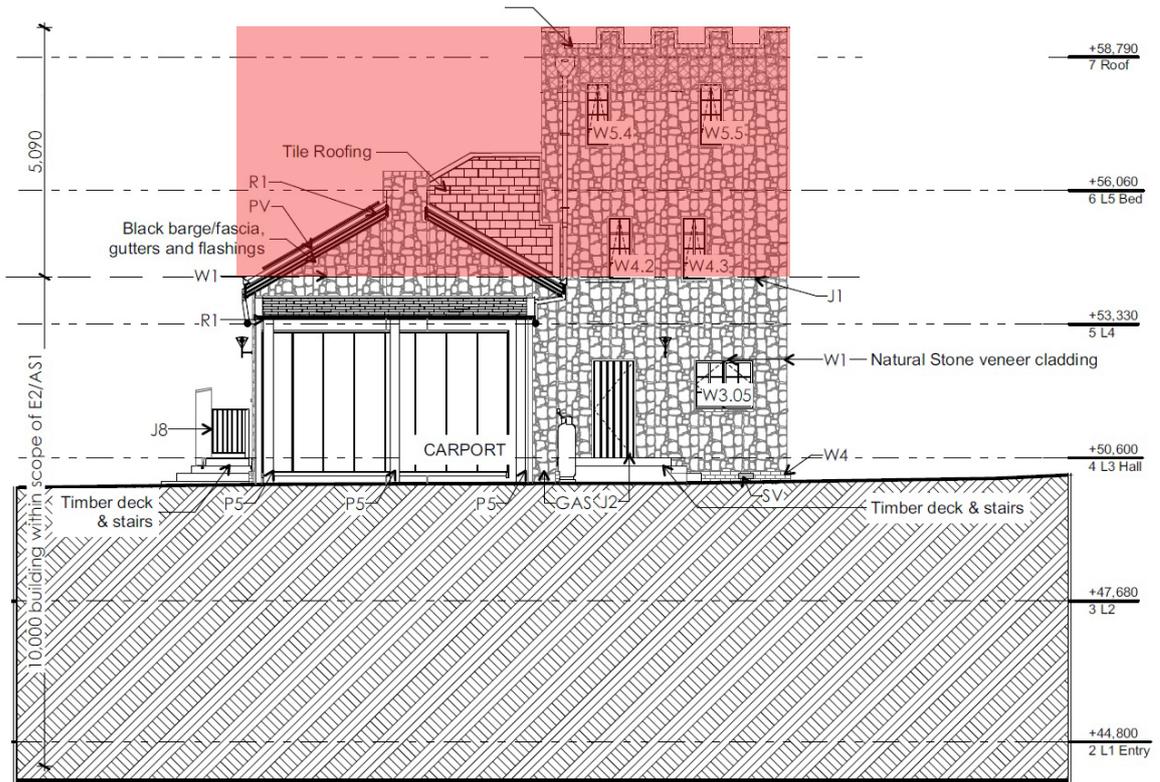
# Appendix A - Elevations of the proposed building



**North-West elevation (not to scale)**



**North-East elevation (not to scale)**



South-West elevation (not to scale)



South-East elevation (not to scale)

## Appendix B – Relevant sections of the legislation and the Acceptable Solution E2/AS1

B.1 Sections of the Building Act referred to in this determination:

### 19 How compliance with building code is established

- (1) A building consent authority must accept any or all of the following as establishing compliance with the building code:
- (a) compliance with regulations referred to in section 20;
  - (b) compliance with an acceptable solution;
  - (ba) compliance with a verification method;
  - (c) a determination to that effect made by the chief executive under subpart 1 of Part 3;
  - (ca) a current national multiple-use approval issued under section 30F, if every relevant condition in that national multiple-use approval is met;
  - (d) a current product certificate issued under section 269, if every relevant condition in that product certificate is met;
  - (e) to the extent that compliance with a requirement imposed by regulations made under the Electricity Act 1992 or the Gas Act 1992 is compliance with any particular provisions of the building code, a certificate issued under any of those regulations to the effect that any energy work complies with those requirements.

### 48 Processing application for building consent

- (1) After receiving an application for a building consent that complies with section 45, a building consent authority must, within the time limit specified in subsection (1A),—
- (a) grant the application; or
  - (b) refuse the application.
- ...
- (2) A building consent authority may, within the period specified in subsection (1A), require further reasonable information in respect of the application, and, if it does so, the period is suspended until it receives that information.

### 49 Grant of building consent

- (1) A building consent authority must grant a building consent if it is satisfied on reasonable grounds that the provisions of the building code would be met if the building work were properly completed in accordance with the plans and specifications that accompanied the application.

B.2 The relevant performance requirements from Clause E2:

**E2.3.1** Roofs must shed precipitated moisture. In locations subject to snowfalls, roofs must also shed melted snow.

**E2.3.2** Roofs and exterior walls must prevent the penetration of water that could cause undue dampness, damage to building elements, or both.

### B.3 The Scope of the Acceptable Solution for Clause E2, E2/AS1 says:

#### **1.0 Scope**

This Acceptable Solution covers the weathertightness of the building envelope. Notes shown under 'COMMENT', occurring throughout this document are for guidance purposes only and do not form part of this Acceptable Solution.

#### **1.1 Construction included**

The scope of this Acceptable Solution is limited to the materials, products and processes contained herein, for buildings within the scope of NZS 3604, and:

- a) Up to 3 storeys with a height measured from lowest ground level adjacent to the building to the highest point of the roof (except for chimneys, aerials and the like) of 10 m or less, and
- b) With floor plan area limited only by seismic and structural control joints, and
- c) External walls that are vertical, and roofs that are 60° or less above the horizontal. Where buildings are based on NZS 3604, but require specific engineering design input, the framing shall be of at least equivalent stiffness to the framing provisions of NZS 3604.

#### **COMMENT:**

The floor plan limitations of NZS 3604 may be exceeded up to the point that specific design is required to accommodate seismic or wind movement. Beyond that point, specific design is required to demonstrate compliance with Clause E2 of the Building Code. Claddings also required to perform as bracing must comply with NZS 3604. Where a drained cavity is used, specific testing can be used to demonstrate that a cladding on cavity battens can provide the required bracing resistance.