



Determination 2013/081

Regarding the issue of a building consent subject to a section 73 notice for a house on land subject to inundation at 2 Quarry Ridge, Napier

1. The matter 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 and Assurance, 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 building, B and L Smith (“the applicants”), acting through a legal adviser (“the applicants’ legal adviser”)
 - Napier City Council (“the authority”), carrying out its duties as a territorial authority or a building consent authority.
- 1.3 This determination arises from the authority’s decision to issue a building consent for the construction of a proposed house (“the house”) subject to a section 73 notice on the grounds that the land on which the house is to be built is subject to flooding (inundation).
- 1.4 The matter to be determined² is therefore whether the authority correctly exercised its powers in issuing the building consent under section 72 of the Act making it subject to a section 73 notice. In making this decision I must consider
 - whether the proposed building work complies with the Building Code³ (First Schedule, Building Regulations 1992) in respect of inundation; and
 - whether the land is subject to a natural hazard such that the building consent should be subject to a notification under section 73.
- 1.5 In making my decision, 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.
- 1.6 The relevant sections of the Act and the Building Code are set out in Appendix A. Appendix B sets out a decision tree showing the process to be followed when considering building sites subject to hazards.

¹ The Building Act, Building Code, Compliance documents, past determinations and guidance documents issued by the Ministry are all available at www.dbh.govt.nz or by contacting the Ministry on 0800 242 243.

² Under sections 177(1)(b) and 177(2)(a) of the Act.

³ In this determination, unless otherwise stated, references are to sections of the Act and references to clauses are references to the Building Code

2. The building work

- 2.1 In the interests of clarity, I note that in this determination where site or building levels are expressed as a RL, these levels are related to the contour heights established by the builder, who is a Licenced Building Practitioner (“the LBP”), for the local land areas. I have taken the boundary to Puketitiri Road as nominal west.
- 2.2 The building work in question consists of a proposed single-storey house with an attached garage that is to be situated near the centre of a 0.5844 Ha property (“the property”). The northern section of the property slopes away from the house and the southern part of the property slopes down towards the house.
- 2.3 A 1200mm wide x 300mm deep vee-drain is constructed along the west boundary between the property and the road. A second vee-drain is shown on plans dated 15 March 2013 running north to south to the east of the proposed house at the toe of a hill at the east boundary (see figure 1 below).

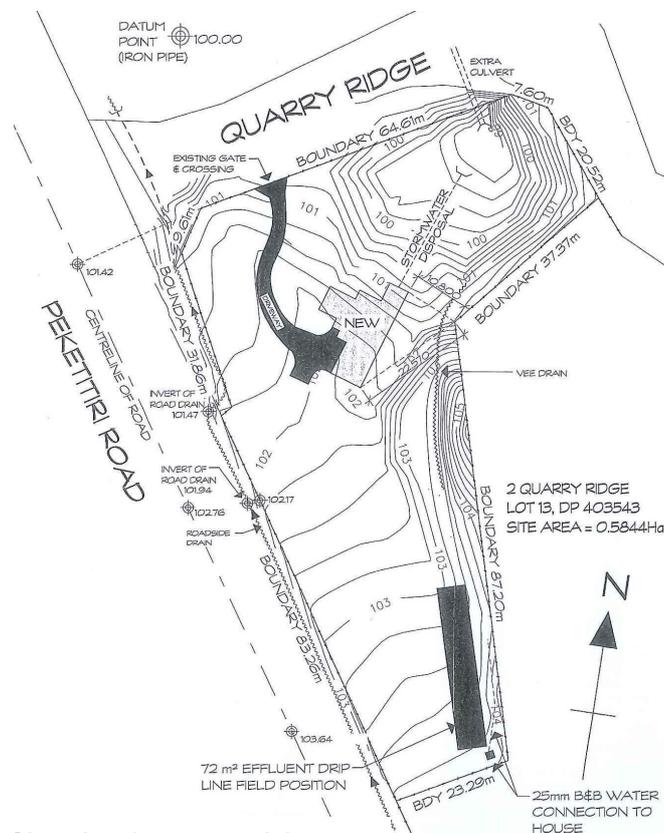


Figure 1: Site plan (not to scale)

- 2.4 The proposed house is timber-framed and built on a concrete slab with thickened perimeters. The external walls are generally finished with vertical corrugated pre-finished metal cladding and the roof is clad with steel pre-finished roofing. The building is of a simple shape in plan and form and its area occupies only a small portion of the property.
- 2.5 The finished floor level of the house base slab is to be set at the 102.70 RL, with the adjacent ground levels ranging from RLs 101.97 to 102.8. The property as a whole is generally located between the 101.0 and 104.0 RLs.

3. Background

- 3.1 The authority emailed the applicants on 30 August 2012, referring to a site visit undertaken by an officer of the authority who had calculated the 'return period' for various rainfall events. For a 50-year period the flow depth was shown as 275mm and for a 100-year period the depth was 300mm. The authority noted that it had a standard requirement for a 300mm freeboard above the 50-year depth. Taking into account some variations to the calculations, the authority accepted that 200mm was an adequate freeboard addition; this would give a minimum floor level of 475mm above the ground level. However, allowing for uncertainties, the authority considered that the floor level should be set at 500mm above the ground level. The authority also attached copies of the calculations made by its officer.
- 3.2 It appears that the LBP applied for building consent for construction of the house at some time in March 2013.
- 3.3 In a letter to the LBP dated 2 April 2013, the authority noted that there was a secondary flow path for stormwater between one end of the house and the adjacent roadway. The authority advised this was likely to be inundated by 'relatively fast-flowing water in significant adverse weather conditions'. Accordingly the authority considered it essential that no structures were to be built or areas planted in the flow path area, and it was also recommended that the property upstream be landscaped to divert overland water flows away from the proposed house.
- 3.4 On 9 April 2013 the authority wrote to the applicants notifying them that the consent was 'due to be issued' and that the property had been identified as subject to inundation. The authority provided information on section 73 of the Act and stated that an entry would be made on the certificate of title.
- 3.5 In a letter to the applicants' legal adviser dated 15 April 2013, the authority noted that
- In this instance [the authority] has identified that the land on which the building work is to be carried out is subject or likely to be subject to inundation (including flooding, overland flow, storm surge, tidal effects, and ponding) and is advising your clients of our intention to meet our obligations under sections 71 to 73 of the Building Act.
- 3.6 Correspondence ensued between the authority and the applicants' legal adviser. The applicants' legal adviser sought clarification as to whether the consent was being granted under section 71(2) of the Act, in which case notification and an entry on the certificate of title is not required. The applicants' legal adviser also sought more detail in respect of the particulars that identify the natural hazard.
- 3.7 On 6 May 2013 the authority wrote to the applicants' legal adviser, stating that the only thing that was preventing the issue of a building consent was the dispute regarding the application of a section 73 notice. While the authority was of the opinion that there was no requirement under the Act to provide the level of detail requested by the adviser, it was happy to supply further information on request. The authority attached resource consent details and an 'indicative flow path' and relevant correspondence in regard to the stormwater overland flow.
- 3.8 The authority and the applicants' legal adviser continued to correspond about the ramifications of issuing the consent under section 72 and about the wording that

would appear on the certificate of title. On 27 May 2013 the authority confirmed that the consent would be issued under section 72 with a condition of the consent being notification under section 73, and on 7 June 2013 the authority advised that the consent application had been granted and on payment of the relevant fee it would be issued.

- 3.9 In a letter to the authority dated 19 June 2013, the applicants' legal adviser noted that if the authority was satisfied that adequate provision had been made to protect the land, building work, and other property, then the consent should be issued under section 71(2). The adviser noted that the house site had been relocated and the foundations enhanced and floor level elevated and that for the purposes of section 71(2) this was adequate provision to protect the house.
- 3.10 On 28 June 2013 the authority responded to the applicants' legal adviser, noting that its view remained the same and that the authority's policy meant that the consent would be refused if payment of the fee was not received within 30 days of invoicing. On 1 July 2013 the applicants' legal adviser responded that the applicants would uplift the building consent on the understanding that a determination would be sought on the matter of the section 73 notification.
- 3.11 On 3 July 2013 the authority issued the building consent (No. 130207) with a notation on the consent and in the conditions to the consent that:

[The authority] must notify the consent to the Registrar-General of Land and the Registrar-General of Land must record, as an entry on the Certificate of Title to the land on which the building work is carried out: * That a Building Consent has been granted under Section 72 of the Building Act 2004 and * The land on which the building work is to be carried out is subject or is likely to be subject to inundation.

- 3.12 The Ministry received an application for a determination on 2 August 2013.

4. The submissions

- 4.1 In a submission to the Ministry dated 30 July 2013, the applicants submitted that the authority had not accurately identified the hazard that it considered applied to the house. The applicants required the authority to define the hazard in question more precisely. The applicants referred to the requirement in section 73(3) that the notification by the authority to the Registrar-General of Land 'must identify the natural hazard concerned', and under section 74(1)(b)(ii) the Registrar-General must record as an entry on the certificate of title 'particulars that identify the natural hazard concerned'. The applicants' view was that the authority's notification of the natural hazard as "inundation" was inadequate and did not comply with the requirements of the Act. The applicants considered that information about the nature of the hazard, its frequency and the extent of the land that may be affected was required.
- 4.2 The applicants provided copies of
- the computer freehold register pertaining to the property
 - some extracts from the Act
 - correspondence from the authority.

- 4.3 The authority did not make a formal submission but provided copies of relevant documentation including
- some of the consent application plans, including a ‘site location layout’
 - a contour map of the property catchment boundary
 - a contour map of part of the property showing the indicative flow path established by the authority
 - a readout of the flow calculations made by the authority
 - correspondence with the applicants, the applicants’ legal adviser, and the LBP.
- 4.4 A draft determination was issued to the parties for comment on 7 November 2013.
- 4.5 The authority accepted the draft determination without further comment in a response received on 13 November 2013.
- 4.6 The applicants’ legal adviser responded in letters dated 12 and 14 November 2013. The applicants did not accept the draft determination and submitted (in summary):
- The application for determination was not whether or not the section 73 notification should have been made, but rather the requirements of the notification to include “particulars” and that the applicants consider that the use of “inundation” on its own is insufficient and misleading; to be useful to persons with an interest or considering acquiring an interest in the property the particulars should record detailed and accurate information.
 - If the hazard only affects part of the property, that should be identified in the notification along with the frequency.
 - The property cannot be said to be subject to inundation as
 - only a part of the land may be affected, only under certain conditions and at certain times, and only for a limited duration
 - the wording of section 71(2) combined with the fact that the authority has issued a building consent demonstrates that the authority is satisfied that adequate provision has been or will be made to protect the land or building work from the ‘ natural hazard or hazards’.

5. The expert’s report

- 5.1 As described in paragraph 1.5, I engaged the services of a firm of consulting engineers, to assist me. The expert examined the relevant documentation and produced a report dated 11 October 2013. This report was reviewed by a chartered professional engineer and was forwarded to the parties on 15 October 2013.
- 5.2 The expert described the processes that had been undertaken to analyse the various conclusions that were reached. As part of this analysis, the expert set out the following table that summarised the anticipated runoff onto the property:

Table 2-1 Summary of Runoff

	Rainfall Intensity	Catchment Runoff Flow for 3 hr. time of conc. [38.5ha: whole catchment]	Flow through open drains [DRAIN CAPACITY]	Flow across property-sheet flow	Depth of flow above the top of open drains	Velocity of total flow
UNITS	mm/hr.	m ³ /s	m ³ /s	m ³ /s	m	m/s
5 year	17	0.545	0.545	0	0	1.518
10 year	21.5	0.690	0.558	0.132	0.027	1.080
50 year	29	0.930	0.558	0.373	0.051	1.065
100 year	40	1.283	0.558	0.726	0.076	1.138

- 5.3 I summarise below what I consider to be the salient conclusions reached by the expert based on the analysis he has undertaken.
- 5.4 The expert confirmed that there would be a flow of water overtopping the existing side drains in significant rain events, causing surface water to flow across the property. The relative floor level and ground levels of the property were described and these were as I have set out in paragraph 2.5.
- 5.5 A 5-year storm event as analysed in terms of the details set out in paragraph 2.5 would be contained within the open drains. However, any storm event above this annual exceedance probability (“AEP”) flood event might cause runoff from the catchment to flow above the open drains onto the property and the adjacent Puketitiri Road.
- 5.6 The expert was of the opinion that surface water would flow through the flow path indicated by the authority (see paragraph 3.3 and figure 1) once the water reached the top of the drains.
- 5.7 Referring to the Table that is set out in paragraph 5.2, the expert stated that the water depths as described were those commencing from the top of the open drain at a RL of 102.17. The expert also stated that he did not agree with the authority’s calculations for the depth of water flows across the property for the 50-year AEP event.
- 5.8 According to the expert, for the 50-year AEP event the flow depth would be some 50mm above the 102.17 RL, giving a top level of 102.22 RL. For the 100-year AEP event the flow depth would be 76mm above the 102.17 RL, giving a top level of 102.24 RL
- 5.9 The expert calculated that in the 50-year AEP event, the 50mm inundation above the open drain capacity would last for 4.3 hours and for the 100-year AEP event the 76mm inundation above the open drain capacity would last for 7 hours.

6. Discussion

6.1 The code-compliance of the building

- 6.1.1 Before sections 71, 72, and 73 can be considered, I must first establish whether the proposed house would comply with the Building Code assuming that it was constructed on land not subject to inundation.
- 6.1.2 As the authority has issued a building consent it appears to be satisfied that the house would comply with the requirements of the Building Code.
- 6.1.3 From the calculations provided by the expert, the top water level in a 50-year AEP event, that is, an event having a 2% probability of occurring annually is at the 102.22 RL. The finished floor level of the house is to be set at the 102.70 RL, which is 480mm above the flood level. Accordingly, I accept that floodwater is not expected to inundate the house and that the house complies with Clause E1.3.2 whether or not it is constructed on land subject to inundation.
- 6.1.4 As set out in paragraph 3.3, the authority has a standard requirement for a 300mm freeboard to be established above the 50-year AEP event depth. I note that the proposed floor level is well above this requirement, and also that as recommended by the authority the floor level is 500mm above the ground level.

6.2 Section 71: Is the land subject to a natural hazard?

- 6.2.1 Based on the evidence provided to me, I have accepted that the proposed house is code-compliant. In order to consider the authority's exercise its powers in issuing a building consent with a notification under section 73, I have to consider whether, in terms of section 71(1)(a), the land on which the proposed house is to be constructed is subject (or is likely to be subject) to inundation and whether, in terms of section 71(1)(b), the building work is likely to accelerate, worsen, or result in a natural hazard on that land or any other property .
- 6.2.2 As set out in paragraph 5.2, the expert is of the opinion that for the 50-year AEP event the site would receive a maximum 50mm deep flow for a period of 4.3 hours with a flow rate of over 1.065 m/s, and for the 100-year AEP event a maximum 76mm deep flow for a period of 7 hours with a flow rate of 1.138 m/s. The expert also accepts that the runoff from these events will drain onto the adjacent Puketitri Road.
- 6.2.3 Based on the contours established by the LBP, the 102.22 RL flood waters from a 50-year AEP event and the 102.24 RL flood waters from a 100-year AEP event would cover the building site and all of the property to the north, northwest, and northeast of the house. This would mean that some 50% of the property would be affected by flooding from either of these two events.
- 6.2.4 Section 7 provides that the term 'natural hazard' has the meaning given to it by section 71. Section 71(3)(a) to (e) defines a natural hazard by the event occurring (in this case inundation) but does not give an indication of the extent of that event. My reasons for concluding that section 71 requires an assessment of whether the effect of

a natural hazard will be more than minimal or trivial are in line with the Court of Appeal decision in *Logan v Auckland City Council*⁴.

- 6.2.5 In summary, the Court of Appeal's comments made it clear that some judgment is required in determining when land will be subject to a natural hazard, that the provisions do not require the elimination of all inundation, and that such judgments involve 'a sensible assessment involving considerations of fact and degree'.
- 6.2.6 However, in the current situation, I must take into account the depth of flood water produced by the 50 and 100-year AEP events, the duration of the flooding, the rate of flow, and the extent of the property affected by the flooding. All of these considerations lead me to the opinion that in this case, the effects of the natural hazard of inundation will not be minimal or trivial and that the land is likely to be subject to a natural hazard.
- 6.2.8 Therefore, I take the view that the building site, as well as the property as a whole, is subject to inundation as defined in section 71(3)(d) (in this case flooding). As such, it falls within the ambit of section 71(1)(a). Therefore, unless the requirements of section 72 apply, the authority must refuse to grant a building consent.

6.3 Section 72

- 6.3.1 I have not been provided with any evidence that section 72(a) does not apply to the building work relating to the house. Accordingly, I am of the opinion that the house will not accelerate, worsen or result in a natural hazard on the land on which the building work is to be carried out or any other property.
- 6.3.2 As I have already decided that the property is subject to inundation, then it follows that section 72(b) applies.
- 6.3.3 As I have concluded in previous determinations⁵, a literal application of section 72(c) would be contrary to the scheme and purpose of the Act in respect of land subject to natural hazards. In these cases I have taken the view that section 72(c) is not to be read as preventing a territorial authority from granting a building consent for work that complies with the Building Code. I am still in agreement with these conclusions.
- 6.3.4 Taking into account my decisions set out in paragraph 6.3, I am of the opinion that the authority was correct in granting a building consent under section 72 of the Act.

6.4 Hazard notification

- 6.4.1 I accept the applicants' observation that the natural hazard of inundation covers a wide range of effects from flooding to overland flow, storm surge, tidal effect and ponding, and that some of these effects may be very different in their severity or duration. I also note that the obligation of the Registrar-General to include an entry on the certificate of title of the particulars that identify a natural hazard is an obligation of the Registrar-General and not a matter on which I can make a determination.
- 6.4.2 However, in order for the Registrar-General to be able to carry out the requirements of section 73(1)(b)(ii) an authority must provide sufficient information in the notification under section 73(3) that identifies the natural hazard concerned.

⁴ CA243/99, 9 March 2000.

⁵ See Determination 2008/082: Building consent for a storage shed on land subject to inundation.

In this case, I agree with the applicants that something more than a reference to “inundation” was required in the notification to the Registrar-General. It would seem that as a minimum the notification should identify the nature of the natural hazard, which in this case is an overland flow of water.

6.4.3 I do not consider it is necessary for the authority to provide any further detail on the nature of that overland flow such as its frequency, duration, depth, velocity or the extent of the property that may be affected. The purpose of the notification is to alert anyone dealing with the property that it is subject to a natural hazard. If a person wants to know about the nature and extent of the natural hazard they can carry out their own investigations or seek further information from the relevant authority. The nature and extent of a natural hazard and how it affects a particular property will change over time and I do not consider it would be helpful to have such detailed information recorded on the title and unable to be changed. For example, in respect of this property, any changes to the drainage above the property or changes on the property that affect the flow path will change the nature and extent of the natural hazard and its effect on the property.

6.4.4 An adequate identification of the natural hazard will serve its purpose if it identifies the natural hazard with sufficient specificity to inform a person of the type of natural hazard, but leave the person to carry out their own investigations if they wish to know more about the exact frequency, duration, depth, velocity of that hazard or the extent of the property that may be affected.

7. The Decision

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

- the proposed building work complies with the relevant provisions of the Building Code in respect of inundation, and
- I confirm the authority’s exercise of its powers in issuing the building consent under section 72 of the Act making it subject to a section 73 notice, but modify the condition on the building consent to refer to the natural hazard as an overland flow of water.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 23 December 2013.

John Gardiner
Manager Determinations and Assurance

Appendix A: The legislation

A.1 The relevant sections of the Act are:

71 Building on land subject to natural hazards

- (1) A building consent authority must refuse to grant a building consent for construction of a building, or major alterations to a building, if –
 - (a) the land on which the building work is to be carried out is subject or is likely to be subject to 1 or more natural hazards: or
 - (b) the building work is likely to accelerate, worsen or result in a natural hazard on that land or any other property.
- (2) Subsection (1) does not apply if the building consent authority is satisfied that adequate provision has been or will be made to –
 - (a) protect the land, building work, or other property referred to in that subsection from the natural hazard or hazards; or
 - (b) restore any damage to that land or other property as a result of the building work.
- (3) In this section and sections 72 to 74, natural hazard means any of the following:
 - (d) inundation:

72 Building consent for building on land subject to natural hazards must be granted in certain cases

Despite section 71, a building consent authority must grant a building consent if the building consent authority considers that-

- (a) the building work to which an application for a building consent relates will not accelerate, worsen, or result in a natural hazard on the land on which the building work is to be carried out or any other property; and
- (b) the land is subject or is likely to be subject to 1 or more natural hazards: and
- (c) it is reasonable to grant a waiver or modification of the building code in respect to the natural hazard concerned.

73 Conditions on building consents granted under section 72

- (1) A building consent authority that grants a building consent under section 72 must include, as a condition of the consent, that the building consent authority will, on issuing the consent, notify the consent to,—
 - (c) . . . the Registrar-General of Land.

A.2 The relevant provisions of the Building Code are:

PERFORMANCE

E1.3.1 Except as otherwise required under the Resource Management Act 1991 for the protection of other property, surface water, resulting from an event having a 10 percent probability of occurring annually and which is collected or concentrated by buildings or sitework, shall be disposed of in a way that avoids the likelihood of damage or nuisance to other property.

E1.3.2 Surface water, resulting from an event having a 2 percent probability of occurring annually, shall not enter buildings.

Performance E1.3.2 shall apply only to housing, communal residential and communal non-residential buildings.

Appendix B: Decision tree in relation to building sites subject to hazards

