

# Determination 2024/055

**An authority's decision to refuse to grant a building consent for dam upgrade works under section 71**

**1 Stancombe Road, Flat Bush, Auckland**

## **Summary**

This determination considers an authority's decision to refuse to grant a building consent for upgrade works to a dam under section 71 of the Building Act 2004. This matter turns on whether the threshold in section 71(1) is met.

In this determination, unless otherwise stated, references to “section” are to sections of the Building Act 2004 (“the Act”) and references to “clause” 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](http://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](http://www.building.govt.nz).

## 1. The matter to be determined

- 1.1. This is a determination made under due authorisation by me, Andrew Eames, Principal Advisor Determinations, Ministry of Business, Innovation and Employment (“the Ministry”), for and on behalf of the Chief Executive of the Ministry.<sup>1</sup>
- 1.2. The parties to the determination are:
  - 1.2.1. Auckland Council (“the owner”), the applicant for this determination and the registered owner of 1 Stancombe Road (“the owner’s property”)
  - 1.2.2. Waikato Regional Council (“the authority”) carrying out its duties as a regional or building consent authority.<sup>2</sup>
- 1.3. This determination arises from a dispute between the parties over the authority’s decision to refuse to grant building consent for upgrade works to a dam.
- 1.4. The authority considers that it must, under section 71, refuse to grant building consent for the upgrade works. It provides a broad set of reasons for this view, including that the works are projected to increase inundation on a neighbouring property, specifically, 21 Laidlaw Way (“the neighbouring property”), at some point between a “100-year and 500-year ARI<sup>3</sup> event”.<sup>4</sup>
- 1.5. However, the owner considers that the authority cannot refuse consent for the upgrade works under section 71.<sup>5</sup>
- 1.6. The matter to be determined, under section 177(1)(b) and (2)(a), is the authority’s proposed decision to refuse to grant a building consent under section 71. In making this determination, I consider whether:

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<sup>1</sup> The Building Act 2004, section 185(1)(a) provides the Chief Executive of the Ministry with the power to make determinations.

<sup>2</sup> In 2009, by way of a deed of transfer, Auckland Council transferred all of its building consent authority functions relating to *large dams* (together with a number of specified non-building consent functions) to Waikato Regional Council.

<sup>3</sup> The phrase ‘annual recurrence interval’ or ARI is the average number of years that is predicted will pass before an event of a given magnitude occurs.

<sup>4</sup> See paragraphs 4.17 to 4.36 below for a summary of the authority’s submissions.

<sup>5</sup> See paragraphs 4.3 to 4.16 below for a summary of the owner’s submissions.

- 1.6.1 for the purposes of section 71(1)(a), the land on which the upgrade works are to be carried out is subject or likely to be subject to a natural hazard, and
- 1.6.2 for the purposes of section 71(1)(b), the upgrade works are likely to accelerate, worsen, or result in a natural hazard on the land or other property.

## 2. The building work

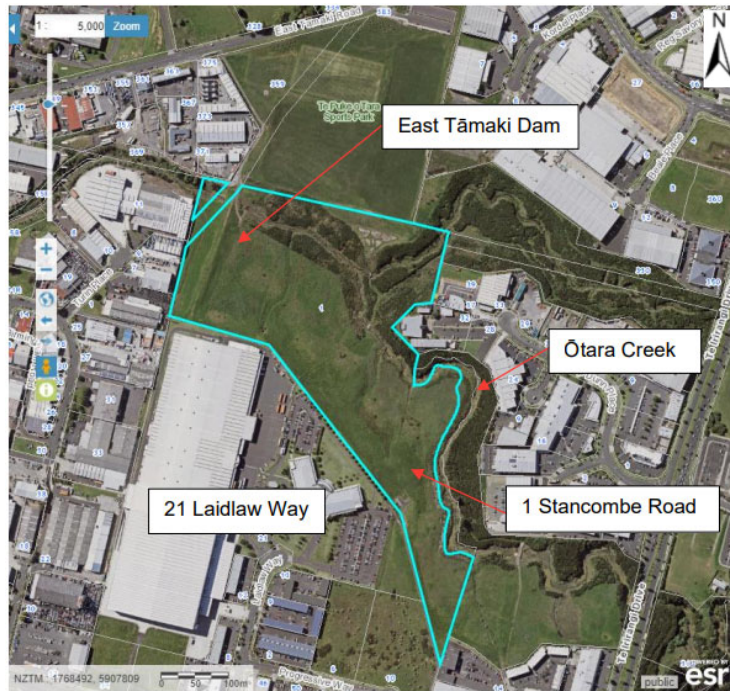
- 2.1 The owner's property is an open space site located within an urban semi-industrial area. The East Tāmaki Dam ("the dam") is located on the property and comprises of engineered materials to the northwest, and undeveloped land, to the east and southeast, which act as a reservoir for the dam.<sup>6</sup> In normal conditions, the Ōtara Creek flows over the property, from east to west, and through an embankment via two culverts. During a flood event, water is impounded temporarily behind the embankment within the reservoir of the dam. The impounded water is discharged by the dam at a controlled rate except where its design limit is exceeded.
- 2.2 The dam was constructed in 1998. According to the owner, it was:

...originally designed and constructed to attenuate stormwater to reduce the downstream peak flows for rainfall events up to the 1% AEP<sup>7</sup> event through detention of the inflows and discharge via the culvert outlet. Larger inflow events and potential culvert blockage were provided for by overtopping flow, as well as outflanking flow under more extreme events.
- 2.3 The proposed project for which the building consent is requested is, according to the owner, "a spillway upgrade to ensure the dam meets the current 2015 NZSOLD [Dam Safety Guidelines] and ensure the attenuation of downstream peak flow for the 1% AEP event".

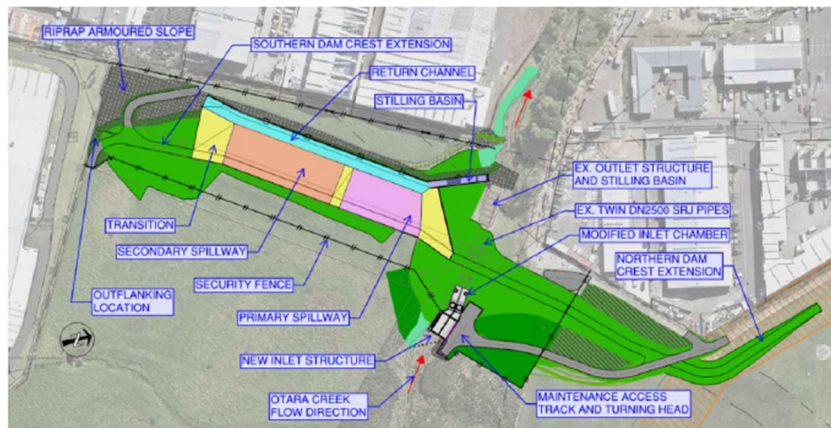
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<sup>6</sup> This is referred to by the owner as being a "flood detention dam".

<sup>7</sup> The phrase 'annual exceedance probability' or AEP is used to describe the probability of a flow of a certain size occurring in any river or stream. It is the probability of a certain size of flow occurring in a single year. For example, a 1% AEP event is a flood flow which has a 1 percent chance of happening in any one year.



**Figure 1. Location and layout of the owner’s property**



**Figure 2. Proposed dam upgrade works**

### 3. Background

- 3.1 On 15 June 2023, the owner applied for a building consent.
- 3.2 The authority reviewed the building consent application, and advised the owner of its view that it must refuse the consent under section 71 unless amendments were made to the application. The owner disagreed with this view.

- 3.3 The parties subsequently discussed this issue but have been unable to resolve their differing views.

## 4. Submissions

### Points which are not in dispute between the parties

- 4.1 There appears to be no dispute between the parties that:
- 4.1.1 the proposed upgrade works require a building consent
  - 4.1.2 the proposed upgrade works are ‘major alterations’ for the purposes of section 71
  - 4.1.3 the neighbouring property is ‘other property’ for the purposes of section 71
  - 4.1.4 the proposed upgrade works do not trigger the threshold in sections 71(1)(b) in relation to:
    - the land where the building work is to be carried out
    - any ‘other property’ except for the neighbouring property.
- 4.2 Further, there is no dispute between the parties that section 71(1) provides a statutory risk threshold which, if triggered, requires further natural hazard provisions to be applied to the building consent application. They disagree, however, whether the threshold is triggered by the proposed upgrade works and, if it is, whether adequate provision will be made for the purposes of section 71(2).

### The owner’s submission

- 4.3 The owner submits:
- ...the [authority] cannot refuse consent under section 71(1) as neither of the criteria in section 71(1) are met:
    - ...the [proposed upgrade works] are not on land which is subject to, or likely to be subject to, inundation (section 71(1)(a)); and
    - ...the [proposed upgrade works] are not likely to accelerate, worsen, or result in inundation on the land or any other property.
- 4.4 The owner says that “there is difficulty in applying section 71(1)(a) to dams nationally.”
- 4.5 Despite those difficulties, it submits that section 71(1)(a) does not or should not apply in relation to the proposed upgrade works because:

- 4.5.1 the hazard identified is minor or trivial and, therefore, not a 'natural hazard' for the purposes of section 71(1)(a)
- 4.5.2 there is "floodgates policy reason" for section 71(1)(a) to not apply to dams.

4.6 In relation to the "floodgates policy reason", the owner says:

...if this dam is considered to be bound by 71(1)(a) such that building consent for a necessary upgrade to benefit the surrounding area cannot occur then many, or all, dam projects seeking building consent throughout New Zealand will need to expressly provide for the exceptions in section 71(2). In practical terms, this will severely constrain the consent process for dams. The very nature of a dam is to retain water and therefore cause inundation of land.

4.7 The owner goes on to submit that the criteria in section 71(1)(b) is not met because:

...the additional inundation at [the neighbouring property] does not meet the definition of 'natural hazard' within section 71(1)(b) of the Act [, or]

...[the] potential increase in inundation at [the neighbouring property] does not meet [the threshold of 'likely' in section 71(1)(b), or]

...as the [proposed upgrade works] meet the building code requirements, consistent with Determination 2013/022, it cannot be said that the [proposed upgrade works] fall within section 71(1)(b).

4.8 In respect of its first line of reasoning, the owner says:

...The worsening of the existing potential for inundation is very minor, being a maximum increase of 160mm in an unlikely 0.2% AEP event at a single property at [the neighbouring property], when that property would be otherwise subject to up to 1.02m inundation under existing conditions; and

...the worsening of existing potential for inundation is confined to one building (the administration building). In practical terms, it is not clear that the [proposed upgrade works] will actually result in additional flooding for that building.

4.9 In respect of its second line of reasoning, the owner says that the proposed upgrade works:

...[are] configured to reduce upstream flood levels and downstream flows to **below** existing (pre-dam upgrade) during the 1% AEP event in both the maximum probable development (MPD) and MPD + climate change scenarios<sup>[8]</sup>.

...will result in **reduced** risk of inundation of all land surrounding the Dam, other than the [neighbouring] property ... At [the neighbouring property], inundation will be

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<sup>8</sup> I understand from a design report regarding the upgrade works, which were produced for the owner (the "owner's report"), that this reference to "climate change" is an allowance for a rise in temperature of 2.1 degrees to 2090 that was used in the Flat Bush Flood Hazard Mapping (FHM) (April 2015).

reduced in a 1% Annual Exceedance Probability (AEP) event; but increased to approximately 160mm in a 0.2% AEP event.

...a 1% AEP event is the appropriate measurement to determine whether the flooding effects on another property accelerate or worsen a natural hazard, and given this, there is not an acceleration or worsening of a natural hazard on any other property...

#### 4.10 In respect of its third line of reasoning, the owner notes:

Section 18 of the Act means that if the proposed building works meets the requirements of the building code, then under this section, section 71(1)(b) cannot impose a more restrictive standard.

#### 4.11 The owner goes on to submit:

Even if the [proposed upgrade works] fall within section 71(1), the BCA cannot refuse consent as:

...section 71(2) applies as adequate provision has been or will be made to protect the land, building work and other property; and

...section 72 does not apply.

#### 4.12 In relation to section 71(2), the owner submits:

As set out in the application, the potential natural hazard is the risk to the Dam arising from the 1% AEP flood and associated downstream inundation risk. The Dam upgrade works have been designed in accordance with the NZSOLD 2015 guidelines for the Probable Maximum Flood (PMF), which is well in excess of a 1% AEP flood detention design event.

...This outcome is provided for by increasing freeboard of the unreinforced areas of the earth dam to be well above the Probable Maximum Flood elevation, converting the existing erosion prone spillway from grass to reinforced concrete, armouring the true left of the Dam so that it is not subject to erosion if outflanked through [the neighbouring property], armouring the toe of the Dam with reinforced concrete, and extending the true right of the Dam into the adjacent park area so that it is no longer outflanked on this side. The works to upgrade the Dam would therefore not be at risk during the 1% flood event from the inundation natural hazard.

...Accordingly, it is submitted that, adequate provision has been made and [the authority] cannot refuse to grant consent under section 71 of the Act.

#### 4.13 The owner submits, however, that during review of the building consent application, the authority noted that outflanking water flow runs through the neighbouring property and questioned whether future modification on that property would affect dam safety. The owner accepts the dam is likely to be outflanked during 0.2% AEP events or during 0.5% AEP events under the “future climate change scenario”.

- 4.14 Following the concern raised by the authority, the owner proposed a design change<sup>9</sup> with “two key additions”:

Firstly ground improvement or a buried retaining structure approximately 2m deep, along the property boundary between the [owner’s property] and [the neighbouring property]. This protects the end of the embankment formation against any scour that might occur in [the neighbouring property] in the event of outflanking. This would also protect against any future modification of ground levels at [the neighbouring property] (however unlikely).

...Secondly it is proposed to replace some of the rock armouring around the end of the embankment with reinforced concrete. This was to respond to the concern that excavation required to place a 1.4 m depth of rip rap armour would encroach on the dam core fill zone.

- 4.15 The owner anticipates that this design change will ensure that the design of the upgrade works will meeting the Building Code and, “...accordingly no building code compliance issues arise.”
- 4.16 In relation to section 72, the owner submits it is not triggered in this case, because:

...section 71(1) is not engaged, and

...in any event, adequate provision is made under section 71(2).

### **The authority’s submission**

- 4.17 In its submission, the authority acknowledges issues with the application of section 71(1)(a) to dams.
- 4.18 Regardless of those issues, it says that both subsections (a) and (b) of section 71(1) apply in this case.
- 4.19 With respect to paragraph (a) of section 71(1), the authority submits:

The Site on which the proposed building work will be undertaken is identified in the Auckland Council’s flood hazard maps as being subject to flooding in a 1% AEP event...

... Accordingly, on the face of it, s 71(1)(a) applies to the [proposed upgrade works] as the land intimately connected with the building work is subject to a natural hazard...

- 4.20 With respect to paragraph (b) of section 71(1), the authority submits:

[the upgrade works will] result in increased bypass flow and inundation over [the neighbouring property] in a [0.2% AEP event] ...

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<sup>9</sup> The owner submits that this design “has been developed” and “once design detailing has been completed, the revised design drawings will be submitted to the [authority].”



...the [owner] accepts that the [upgrade works] will result in an acceleration, or worsening, of the natural hazard on other property prior to and during a 0.2% AEP event. This, in the [authority's view] is sufficient to trigger the application of section 71(1)(b).

4.21 The authority is concerned that the owner “has relied upon the 1% AEP threshold that has been taken from case law, guidance and determinations relating to the interpretation of s 71(1)(a) of the Act – as opposed to s 71(1)(b).” The authority’s view is that “the 1% AEP threshold may not be the appropriate threshold to assess risk to other, privately owned property”.

4.22 The authority submits:

...the term ‘likely’ as it is used in s 71(1)(b) does not necessarily have the same meaning as in s 71(1)(a) given the different context and purpose of each subsection.

4.23 The authority notes there is no case law, determinations or guidance that interprets ‘likely’ in the context of section 71(1)(b) as having the same meaning as in section 71(1)(a).

4.24 The authority also submits that:

...the rationale for using a 1% AEP event as the appropriate test for s 71(1)(a) is to avoid applying the natural hazard provisions to land with only a de minimis probability of being impacted by a natural hazard. By way of comparison, s 71(1)(b) is concerned with whether there is likelihood that building work will result in a worsening, or creation, of a hazard – not with the level of risk itself.

4.25 Given the authority’s position that both paragraph (a) and (b) of section 71(1) are triggered, it provided submissions in relation to section 71(2) and whether, for the purposes of that section, ‘adequate provision’ has been or will be made in this case.

4.26 The authority accepts that adequate provision will be made to protect the proposed building work from inundation. The authority notes a range of measures, included as part of the upgrade works, which protect the proposed building work from inundation. These are: increasing the freeboard of the unreinforced areas of the earth dam to above the probable maximum flood (PMF) elevation;<sup>10</sup> converting the existing erosion prone spillway from grass to reinforced concrete; armouring the true left of the dam so that it is not subject to erosion if outflanked through the neighbouring property; armouring the toe of the dam with reinforced concrete; and extending the true right of the dam so that it is not outflanked.

4.27 The authority considers, for the purposes of section 71(2)(a), that adequate provision has not or will not be made to protect “the land on which the dam is situated” or the neighbouring property.

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<sup>10</sup> The PMF elevation being, RL 17.65m.

4.28 The authority notes an earlier determination<sup>11</sup> which says:

The conditions under section 71(2)(a) are for protection of land *and* the building work, *and* (where the circumstances mean it is relevant) other property. In regard to the condition requiring protection of other property, this condition is only required to be met in relation to section 71(1)(b) where the building work is likely to accelerate, worsen, or result in a natural hazard on any other property (i.e. the ‘other property referred to’ in section 71(1)).

4.29 With respect to ‘the land’, the authority submits:

...the [dam upgrade works] will not change the existing hazard. While it is accepted that the elimination or removal of the hazard is not required,<sup>12</sup> this does not absolve [the owner] from making adequate provision to protect the land if they are looking to utilise the exception in s 71(2)(a) ...

...on the face of it and on a strict interpretation of the subsection the risk to the balance of the land which is intimately connected to the building work will remain.<sup>[13]</sup>

4.30 With respect to ‘other property’, the authority submits:

...[it] cannot be satisfied that adequate provision has been, or will be made to protect other property as:

- i. The [upgrade works] will result in increased bypass flow and inundation over the [neighbouring property] in an event that is less than 0.2% AEP, but more than a 1% AEP;
- ii. The [neighbouring property] will be impacted by a flood hazard should water overflow the heightened crest of the spillway; and
- iii. Whilst the [owner] has taken steps to protect the Dam from flood risk<sup>14</sup>, the [authority] is not aware of the [owner] taking or proposing any positive steps<sup>15</sup> to protect the [neighbouring property] from the hazard, including in an event greater than a 1% AEP event.

4.31 Further, the authority notes an earlier determination<sup>16</sup> which says:

...compliance with the Building Code must be accepted as being “adequate provision” to protect building work (and also protect other property where that is the objective of the clause concerned).

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<sup>11</sup> Determination 2017/048.

<sup>12</sup> *Logan v Auckland City Council* (2000) 4 NZ ConvC 193, 184.

<sup>13</sup> I note that the authority expresses concern with respect to applying section 71(2)(a) to land associated with the construction or alteration of a dam.

<sup>14</sup> Legal submissions on behalf of Auckland Council 14 February 2023 [sic] at [40].

<sup>15</sup> Determination 2017/048.

<sup>16</sup> Determination 2015/018.

4.32 The authority has concerns about relying on this finding in the context of building consent applications relating to dams, particularly a large, 'high potential impact dam'<sup>17</sup> such as the one in question, given:

...in this instance building work compliant with the Building Code on the [owner's] land would not in any way protect the other property (specifically, the [neighbouring property]) from the inundation hazard and/or scour damage (and may make it worse in certain events prior to and beyond a 0.2% AEP event);

...the Building Code imposes a lower threshold of a 1 in 10-year event for damage caused to other property from surface water;<sup>18</sup>

...the significant factual differences between [this earlier determination], which primarily [involves a residential property], and a large dam;<sup>19</sup>

...the potential consequences for other property downstream of the dam (although not the adjacent property) should the flood risk eventuate, with High PIC dams having the potential for the loss of two or more lives.<sup>20</sup>

4.33 In relation to section 71(2)(b), the authority says, "[it] is not aware of any provision proposed to restore damage to the land or other property (held in private ownership) as a result of the [upgrade works]."

4.34 The authority concludes it is not satisfied that either of the exceptions in section 71(2) apply.

4.35 The authority acknowledges one further exception to section 71(1), that being section 72. However, the authority says that in these circumstances building consent cannot be granted under section 72 because it is not satisfied that the dam upgrade works will not worsen the hazard on other property (in particular, the neighbouring property), given:

...The term 'likely' is not used in s 72(a) of the Act. Instead, it is a question of whether the building work *will* accelerate, worsen or result in a natural hazard on other property.

...The [upgrade works] will worsen the hazard on other property, specifically increasing inundation on the [neighbouring property] by 160mm in a 0.2% AEP event (according to the [owner's] submissions) ...

4.36 For the reasons given above, the authority says it must, according to section 71(1), refuse building consent for the upgrade works.

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<sup>17</sup> High potential impact dam, according the Act, means a dam that has been classified under section 134B as having high potential impact.

<sup>18</sup> Building Code, CI E1.3.1.

<sup>19</sup> For instance, ... Determination 2007/110 involved a dwelling with a detached carport.

<sup>20</sup> Building (Dam Safety) Regulations 2022, s 9 and Schedule 2, Table 2.

## 5. Discussion

5.1 The matter for determination is the authority's decision, under section 71, to propose to refuse to grant a building consent for the proposed upgrade works at the owner's property.

5.2 Section 71(1) provides:

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.

5.3 The owner submits that the natural hazard provisions are not applicable because neither paragraph (a) nor (b) in section 71(1) applies in these circumstances. Therefore, the statutory threshold in section 71(1) is not triggered and the natural hazard provisions must be put aside.

5.4 Contrary to the owner's view, the authority submits that both paragraph (a) and (b) of section 71(1) apply. Therefore, the statutory threshold is triggered, and the natural hazard provisions that follow section 71(1) must be considered.

5.5 Previous determinations have accepted that the statutory threshold in section 71(1) is triggered if the conditions are met in one or the other of the paragraphs (ie, in paragraph (a) or (b)), or as set out in both.<sup>21</sup> If the threshold is triggered, the Act provides that the authority concerned must – *in the first instance* – refuse building consent.<sup>22</sup>

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<sup>21</sup> For example, Determination 2024/025. I also note paragraph 26 in *Logan v Auckland City Council* (2000) 4 NZ ConvC 193, 184 (CA), which considered the application of similar provisions in the former Building Act which was enacted in 1991.

<sup>22</sup> The Act, however, goes on to provide two ways for this requirement – to refuse building consent – to be put aside. The first way enables building consent to be granted in the normal manner. This is where the 'adequate provision' as set out in section 71(2) has or will be made. Where the building consent applicant is unable or unwilling to make 'adequate provision', then section 72 provides a second, exceptional way for the consent to be granted.

**The land subject or is likely subject to a natural hazard**

- 5.6 First, I consider whether the test in paragraph (a) of section 71(1) is met.
- 5.7 In relation to paragraph (a), the authority notes that, “The Site on which the [upgrade works] will be undertaken is identified in the [owner’s] flood hazard maps as being subject to flooding in a 1% AEP event...”.<sup>23</sup> The authority goes on to submit that, “...on the face of it, s71(1)(a) applies to the [upgrade works] as the land intimately connected with the building work is subject to a natural hazard.” The owner, however, submits that the test in section 71(1)(a) is not met.<sup>24</sup>
- 5.8 I am of the view the purpose of section 71(1)(a) is to ensure the specified hazards in section 71(3) are considered whenever building consent is sought. Building work which is subject to any of these hazards must not be granted building consent unless certain statutory requirements are met.
- 5.9 I note that the hazard identified is inundation caused by storm events, and that “inundation (including flooding, overland flow, storm surge, tidal effects, and ponding)” is one of the instances specified in section 71(3) to be a ‘natural hazard’ for the purposes of the Act.
- 5.10 The dam is public infrastructure which has the purpose of protecting properties downstream from flooding. Within the owner’s property the dam comprises of engineered materials and an area of undeveloped land. The undeveloped land is upstream of the engineered materials. During storm events, that area of land temporarily functions as a reservoir, detaining storm water arriving from the catchment above. At those times the dam discharges stormwater downstream at a controlled rate.<sup>25</sup> By doing so, the dam manages water that would otherwise inundate downstream properties.
- 5.11 I understand the purpose of the upgrade works, “is to ensure the dam meets the current NZSOLD Dam Safety Guidelines<sup>[26]</sup> while also ensuring the attenuation of downstream peak flow for the 1% AEP event in line with previous Resource Consent

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<sup>23</sup> The authority refers to a flood hazard map which is accessible on the owner’s ‘flood viewer’ webpage: <https://experience.arcgis.com/experience/cbde7f2134404f4d90adce5396a0a630/page/Flood-Hazard-Map/>. I understand the ‘flood plain’ overlay for the owner’s property is derived from the Flat Bush FHM model (July 2015) which is a 1% AEP storm with allowances for ‘maximum probable development’ (MPD) and a 2.1-degree temperature rise to 2100. I understand the ‘flood prone area’ for the owner’s property is derived from the owner’s LiDAR data, flown in 2016-2017, (and not based on hydraulic modelling) which maps a 1% AEP storm with allowances for ‘maximum permitted development’ and 2.1-degree temperature rise to 2100.

<sup>24</sup> See paragraphs 4.5 and 4.6 above for the owner’s reasoning.

<sup>25</sup> The dam controls storm water to a point (ie, its design limit). Beyond that point uncontrolled water will be released from the dam (for example, where the detention capacity of the dam is fully utilised and uncontrolled overspill occurs).

<sup>26</sup> The owner refers to the 2015 NZSOLD Dam Safety Guidelines. I note, however, that there is a newer set of guidelines which were published in 2023.

conditions.” In effect, the works will increase the resilience of the dam so it can manage flood events of a magnitude greater than it can presently.

- 5.12 In this case it is difficult to disassociate the site of the proposed building work from the entire parcel of land within the boundaries of the owner’s property.<sup>27</sup> The upgrade works will be undertaken on the north-eastern part of the property.<sup>28</sup> Those works, however, will affect the operation of the reservoir, which makes up the remainder of the property. That being so, I consider that the ‘land’ for the purposes of section 71(1)(a) in this case is the entire property.
- 5.13 In the 1% AEP event most of the property will be inundated by water. Notably, this is by design. The dam, which is public infrastructure, has been constructed to detain stormwater in order to provide flood protection to properties downstream. Inundation of the land by stormwater is integral to the design of this flood detention dam. In this particular set of circumstances, further consideration regarding ‘inundation’ for the purposes of section 71(1)(a) would lead to a situation where the building consent for this important piece of flood control infrastructure would need to be refused and would unduly constrain the consenting of building work contemplated by the Act.<sup>29</sup> Given the unique context, I consider the land at the property should not be considered, for the purposes of section 71(1)(a), “subject or likely to be subject to” the natural hazard of inundation. Importantly, this finding relates only to ‘inundation’ as specified in section 71(3) and not to any other specified natural hazards and relates only to a very specific situation where the application of the provisions would constrain this type of flood control system.
- 5.14 Based on the reasoning above, I am *not* satisfied the land on which the dam upgrade works are to be carried out is subject or likely to be subject to a natural hazard. Therefore, I find that the test in paragraph (a) of section 71(1) is not met.

**The building work is likely to accelerate, worsen or result in a natural hazard**

- 5.15 I now consider whether paragraph (b) of section 71(1) is met.
- 5.16 The authority submits that section 71(1)(b) is triggered in this particular set of circumstances. The owner, however, submits that it is not.<sup>30</sup>
- 5.17 First, I consider whether, for the purposes of section 71(1)(b), the dam upgrade works are likely to accelerate, worsen or result in a natural hazard on *other property*.

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<sup>27</sup> See *Auckland City Council v Logan* HC Auckland AP 77/99, 1 October 1999 at [40].

<sup>28</sup> See Figure 2 above. Some of the upgrade works extend onto adjacent properties also belonging to the owner. The works also include construction of a bund to protect an existing wastewater pump station which is separately located further upstream on the owner’s property.

<sup>29</sup> The Act provides for the consenting of dams, including ‘large dams’, and for the regulation of dam safety.

<sup>30</sup> See paragraphs 4.7 to 4.10 above for the owner’s reasoning.

- 5.18 The authority notes that the upgrade works will result in an increase of inundation at the neighbouring property during a 0.2% AEP event, or a 0.5% AEP event “under the future climate change scenario or under a culvert blockage with the current hydrological conditions.” In its view, this triggers section 71(1)(b).
- 5.19 The owner acknowledges that the works will increase inundation on the neighbouring property by approximately 160mm during a 0.2% AEP event. It submits, however, that events less frequent than the 1% AEP event do not meet the threshold of ‘likely’ for the purposes of section 71(1)(b). The owner notes that the upgrade works will reduce inundation at the neighbouring property during a 1% AEP event and, therefore, it considers section 71(1)(b) is not triggered.<sup>31</sup>
- 5.20 No cases or determinations have considered an interpretation of the word ‘likely’ for section 71(1)(b) or its predecessor, section 36(1)(b) of the Building Act 1991 (the “former Act”).
- 5.21 Determination 2008/082 discusses section 71(1) in general terms and noted that the word ‘likely’ occurs in both section 71(1)(a) and (b).<sup>32</sup> That determination refers to earlier cases which interpreted ‘likely’ in relation to section 64 of the former Act. Of those cases, one interpreted ‘likely’ as meaning “a reasonable consequence or could well happen”<sup>33</sup> and another as “a reasonable probability ... or that having regard to the circumstances of the case it could well happen”.<sup>34</sup>
- 5.22 In these circumstances I consider it appropriate to interpret ‘likely’ in section 71(1)(b) using the same interpretation as was applied in Determination 2008/082 for section 71(1)(a). I note that paragraphs (a) and (b) of section 71(1) form two limbs within the same section and are closely related in terms of their overarching purpose (that being a statutory threshold which determine whether the natural hazard provisions apply in any given circumstances).
- 5.23 In Determination 2008/082, it was resolved that the equivalent of a 1% AEP event “could well happen” and, therefore, was ‘likely’ for the purposes of section 71(1)(a). It is important to highlight, however, that it did so by considering the probability of that event occurring during a 50-year period.<sup>35</sup> I consider it appropriate that, for the purposes of the Act’s natural hazard provisions, the building work to this dam is also considered over a 50-year lifetime<sup>36</sup>.

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<sup>31</sup> The owner provides further reasons for why section 71(1)(b) is not triggered. For those reasons see paragraphs 4.7 to 4.10 above.

<sup>32</sup> See paragraph 6.2.2 of Determination 2008/082.

<sup>33</sup> *Auckland CC v Weldon Properties Ltd*, DC Auckland NP2627/95, [1996] DCR 635 at page 21.

<sup>34</sup> *Rotorua DC v Rua Developments Ltd*, DC Rotorua NP1327/97 at page 21.

<sup>35</sup> The greater the period applied to an event, the greater the probability that event will occur. For example, during a one-year period there is a 1 in 100 chance that a 1% AEP event will occur, whereas during a 10-year period there is a 1 in 10 chance that a 1% AEP event will occur.

<sup>36</sup> While many dams will be designed to operate for much longer than this, Clause B2.3.1 provides for building elements to perform for “the life of the building, being not less than 50 years”. This timeframe is also referenced in section 113 of the Act. I have taken these as context for placing the lifetime of the building at 50 years for the purposes of the Act and the natural hazard provisions.

- 5.24 I consider it appropriate in this determination to use the 1% AEP event over the life of the building work to determine whether the proposed building work is likely to accelerate, worsen or result in a natural hazard on the neighbouring property.
- 5.25 I consider that events which fall below the 1% AEP threshold have a less than reasonable probability of occurring and, therefore, are not considered 'likely' for the purposes of section 71(1)(b).
- 5.26 Based on the modelling submitted by the owner, I understand that the building work will reduce inundation at the neighbouring property in a 1% AEP event. Further, I note that owner's report indicates that the upgrade works will not increase inundation at any other property in the event of a 1% AEP and in any events of a higher frequency.
- 5.27 On that basis, I am *not* satisfied that, for the purposes of section 71(1)(b), the dam upgrade works are likely to accelerate, worsen or result in a natural hazard on 'other property'.
- 5.28 Now, I consider whether, for the purposes of section 71(1)(b), the dam upgrade works are likely to accelerate, worsen or result in a natural hazard on '*the land*' (the owner's property).
- 5.29 As noted above, the purpose of the dam is to provide flood protection for properties downstream by temporarily detaining water during storm events. The upgrade works will increase the resilience of the dam so it can safely manage flood events of a magnitude greater than it can presently. Any stormwater impounded by the upgraded dam will be controlled up until an event somewhere between a 1 in 10,000 AEP (ie, a 0.01% AEP event) and the 'probable maximum flood' for that site (which is an event that is less frequent than the 1 in 10,000 event).<sup>37</sup>
- 5.30 It is only during these extreme events that water impounded by the dam will be uncontrolled and could constitute a hazard. Such events are not 'likely' for the purposes of section 71(1)(b). That being so, the upgrade works cannot be considered likely to accelerate, worsen, or result in a 'natural hazard' in the form of 'inundation' on the owner's property.
- 5.31 Based on the reasoning above, I consider that the dam upgrade works will *neither* accelerate, worsen or result in a natural hazard on 'the land' nor any 'other property' for the purposes of section 71(1)(b). Therefore, I find that the test in paragraph (b) of section 71(1) is not met.

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<sup>37</sup> During events less frequent than the 1% AEP event, the dam will allow a portion of the peak flow to safely bypass the dam in a controlled manner. At some point beyond a 1 in 10,000 AEP event, the dam will start to release uncontrolled water.



## 6. Conclusion

- 6.1 I have found that the tests for paragraphs (a) and (b) of section 71(1) are not met. That being so, the statutory threshold in section 71(1) is not triggered, and the authority must put the natural hazard provisions aside and consider the building consent application in the normal manner.
- 6.2 I conclude, therefore, that section 71 does not provide for the authority to refuse to grant building consent for the proposed building work.

## 7. Decision

- 7.1 In accordance with section 188 of the Building Act 2004, I determine that the authority does not have grounds under section 71 to refuse to grant building consent for the proposed dam upgrade works and I reverse its decision.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 3 October 2024.



**Andrew Eames**

**Principal Advisor Determinations**