

Policy

Dangerous dams, earthquake-prone dams and flood-prone dams



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Introduction

This document sets out the policy on dangerous dams, earthquake-prone dams and flood-prone dams adopted by Auckland Council (the Council) in accordance with Sections 161 and 162 of the Building Act 2004.

The policy states the approach and priorities the Council will take in performing its functions in relation to dangerous dams, earthquake-prone dams and flood-prone dams in the Auckland region, and how the policy will apply to heritage dams.

This policy applies to dams defined in section 7 of the Building Act 2004 (“the Act”) The dam safety provisions in subpart 7 of Part 2 of the Act, apply to:

1. Classifiable dams (defined in regulation 5 of the Building (Dam Safety) Regulations 2022 (“the Regulations”) to be: 4 metres or more in height and storing 20,000 or more cubic metres volume of water or other fluid.
2. Referable dams as defined in the Regulations.¹
3. All dams but only for the purposes of section 133B² (height measurement of dams) and sections 157-158 (measures by a regional authority to avoid immediate danger).

Application of this policy

This policy applies to dams everywhere in the Auckland region, irrespective of the age and intended life of the dam. Some parts of this policy may apply to all dams. Where required by the Act, this policy applies to classifiable dams, which also includes “large dams” as defined in Section 7 of the Act.

The terms ‘dangerous dam’, ‘earthquake-prone dam’ and ‘flood-prone dam’ have the same meaning as provided in section 153, 153A and 153AA of the Act.³

This policy must be read alongside the Building (Dam Safety) Regulations 2022 (“the Regulations”) which defines terms used in the Act in relation to “dangerous dams”, “earthquake-prone” dams” and “flood-prone dams”.⁴

The terms defined in the Act and Regulations are relevant to the meaning and application of this policy. Note that definitions and values in the Regulations may be amended in the future.

The Regulations and the Act can be accessed at www.legislation.govt.nz.⁵

This policy commences on 13 May 2024.

This policy will be reviewed every five years or earlier as required. The policy will remain in effect even when it is due for review or being reviewed.

Principles

The Council will apply the following principles to the exercise of its dangerous dams, earthquake-prone dams and flood-prone dams’ functions under the Building Act.

1. Dam owners have the primary responsibility for identifying, monitoring and reporting on dangerous, earthquake-prone and flood-prone dams and for reducing or removing the risk of harm to people, property and the environment in a timely and effective manner.

¹ The current Regulations do not define a referable dam.

² When measuring the height of the dam under this section, the crest of the dam includes any freeboard – refer Appendix A for the definition.

³ This includes buildings in areas designated under subpart 6B as set out in [Section 153AA](#) of the Building Act 2004.

⁴ [Section 19](#) of the Regulations defines moderate earthquake, moderate flood, earthquake threshold event and flood threshold event.

⁵The Regulations: <https://www.legislation.govt.nz/regulation/public/2022/0133/latest/whole.html> and

The Act: <https://www.legislation.govt.nz/act/public/2004/0072/latest/whole.html>

2. An engineer engaged (by the owner) to provide a certificate for the purposes of [sections 135\(1\)\(b\), 142\(1\)\(b\), or 150\(2\)\(f\)](#) will notify the Council and the owner of the dam if he or she or they believe that the dam is dangerous.
3. The state of all dangerous, earthquake-prone and flood-prone dams (as defined in the Act and the Regulations) must be known (noting that other dam safety provisions in the Act apply to all dams) and this information, if known to the Council, will be made readily available by the Council, to all persons potentially affected by the safety risks of a dangerous, earthquake- prone or flood-prone dam.
4. The dangerous dam, earthquake-prone and flood-prone provisions of the Act give the Council powers to act in situations where a dam does not meet standards and criteria and the owner has not taken appropriate action.

Council's approach to performing these functions

Information on dam status

The Council will keep a register of all dams as required by section 151 of the Act, recording the dangerous, earthquake-prone and flood-prone status of each classifiable dam. The status of a dam (dangerous, earthquake-prone, or flood-prone) will be recorded on the register, as will the dam's heritage status. The Council will develop a monitoring procedure to maintain the register.

Should the Council receive information about a dangerous, earthquake-prone or flood-prone dam in its region, the Council will notify Auckland Emergency Management (AEM).

Where improvements are made to a dam and the Council is satisfied the dam is no longer, dangerous, earthquake-prone or flood-prone, then the register will be updated to reflect the new status and will be available in the LIM.

Working with dam owners

The Regulations require owners of all classifiable dams to know whether their dam is dangerous, earthquake-prone or flood-prone and take the necessary steps, in a timely manner, to comply with the Act and the Regulations. The Act requires dam owners to immediately notify the Council if they have reasonable grounds for believing their dam is dangerous. This applies to dams that are either a high potential impact dam or a medium potential impact dam and are likely to fail in the ordinary course of events, or a "moderate earthquake" or "moderate flood" (as defined in the Regulations).

The Act also requires an engineer (engaged by the owner) to provide a certificate for the purposes of [sections 135\(1\)\(b\), 142\(1\)\(b\), or 150\(2\)\(f\)](#), to notify the Council and the owner of the dam if he or she or they believes that the dam is dangerous.

The Council will work with the owners of identified dangerous dams, earthquake-prone dams and flood-prone dams to develop an action plan (with a mutually agreed approach and timeframes) with the goals of increasing the safety of the dam and eliminating or reducing the risks of the dam to people, property and the environment. It is not realistic to specify a timeframe in this policy for achieving this goal because timeframes will be dictated by the circumstances of each case. When setting a timeframe for action, the Council will consider the state of the dam, and the likelihood and consequences of dam failure.

Directing and taking action

The Council may intervene:

- For dangerous, earthquake-prone and flood-prone dams
 - If the owner of any dam fails to act in accordance with an agreed action plan; or
 - Where there is no agreed action plan; or
 - Where it considers that the agreed action plan requires review or amendment; or
 - Where ownership is not known or is disputed; or
- For all dams, where there is or likely to be immediate danger.

Before exercising any of its powers under Sections 154 to 159 of the Building Act the Council will, unless the circumstances dictate otherwise (such as where there is immediate danger to the safety of persons, property, or the environment), seek to discuss options for action with the owner of the dam, with a view to obtaining from the owner a mutually acceptable formal proposal for reducing or removing the danger. Acceptable actions by the owner may include, one or more of the following:

- Operational changes such as reducing the volume of impounded fluid or completely emptying the reservoir,
- Reconfiguring an existing spillway or creating a new or supplementary spillway so as to limit the maximum impounded volume and/or to safely route flood flows,
- Increased surveillance and monitoring,

- Development of emergency preparedness and response plans,
- Review of the dam safety assurance programme,
- Require the owner to engage a Recognised Engineer to investigate and make recommendations with any report provided to the Council,
- Implementing measures to enable controlled, rapid emptying of the impounded fluid,
- Measures downstream of the dam to mitigate the impact of dam failure,
- Physical works including reconstruction or partial demolition of the dam,
- Decommissioning and/or removal of the dam,
- Other action recommended by the Recognised Engineer.

The whole or part of any agreement between the Council and the dam owner may be formalised in a Notice to Fix issued under section 164 of the Act. If agreement cannot be reached between the Council and the dam owner, the Council may exercise any of its statutory powers in sections 154-159 and 164 of the Act.

The Council will notify potentially affected communities downstream of a dangerous, earthquake-prone or flood-prone dams. The Council will do this by publishing information about any dangerous, earthquake-prone or flood-prone dams in its region.

The Council will also work with the Auckland Civil Defence and Emergency Management (CDEM) Group and where relevant with Lifeline utilities.⁶

The Council may at any time require the dam owner to review a dam safety assurance programme if the dam is an earthquake-prone or flood-prone dam.

In a situation where a dam is regarded to be dangerous by the Council, the Council may:

- Erect a hoarding or fence to prevent people from approaching the dam nearer than is safe.
- Attach a notice on or near the dam (or affected downstream areas) that warns people not to approach.
- Make specific contact with potentially affected property owners and/or occupants.
- Give written notice to the owner requiring work to be carried out on the dam, and within the time stated in the notice to remove or reduce the danger.

In a situation where the Chief Executive of the Council considers that, because of the state of the dam, immediate danger to the safety of persons, property, or the environment is likely, then the Chief Executive of the Council may:

- Cause any action to be taken to that is necessary to remove that danger.
- Recover the costs of taking any action from the dam owner.

Action requiring consent(s)

When building consents are necessary for action to reduce or remove danger required:

- In a notice served by council; or
- In a formal proposal supplied by the dam owner.

The Council will expedite the required consent(s) where practicable.

Dispute of dangerous, earthquake-prone and flood-prone dam classification

The Council will write to and meet with (if requested) an owner of a dam that has been classified as dangerous, earthquake-prone or flood-prone.

Owners will have 20 working days to consider the Council's notification⁷ and provide any information on the performance of the dam that may influence the Council's determination of its classification.

⁶ Lifeline utilities is defined in [Section 4](#) of the Civil Defence Emergency Management Act 2002

⁷ Notification is based on advice received from the dam owner's Certifying Engineer ([Sec.135A](#), Building Act 2004)

The Council, when appropriate, will use engineering specialists to review the information provided by the dam owner at the owner's expense. If the Council is then satisfied that the dam is not dangerous, earthquake-prone, or flood-prone, the status of the dam will be changed, and the owner advised.

However, should the Council still consider a dam dangerous, earthquake-prone, or flood-prone, the dam owner can apply for a 'Determination' pursuant to section 177 of the Act from the Chief Executive of the Department of Building and Housing. The Chief Executive's determination is binding on the Council and the dam owner.

Costs incurred by the dam owner

Where the Council undertakes any assessment of a dam that may be dangerous, earthquake prone or flood prone, the dam owner will pay the actual and reasonable costs of the assessment.

If there is a dispute regarding a dam's dangerous, earthquake prone or flood prone classification, parties will bear their own costs relating to the dispute.

The cost of any work the Council requires a dam owner to carry out on their dam as a result of this policy will be borne by the dam owner. Where the Council carries out work on a dam under sections 154-156 of the Act, the Council will recover costs from the dam owner and if necessary, recover the costs by placing a charge on the land on which the dam is situated.

Council's priorities in performing these functions

The dangerous dams' provisions of the Building Act will be used by the Council as a mechanism to remedy an unsatisfactory situation that has developed in the Auckland region, rather than as a means of responding to "emergencies" that arise in the future. The Council's approach to dangerous dams is therefore tailored toward achieving a reduction in the pre-existing risks whilst still being able to deal with risks that emerge in the future.

Initially, the priority with which the Council will perform these functions will be as follows in which 1 is the highest priority and 5 is the lowest priority.

1. Dams that upon commencement of the Regulations⁵ are regarded as dangerous and/or earthquake-prone and/or flood-prone due to their pre-existing condition (and not an actual change in risk), and do not have a Dam Safety Assurance Programme (DSAP) that complies with the Regulations. This priority would first consider classifiable high potential impact dams followed by medium potential impact dams.
2. Dams that due to deterioration or damage (e.g. reduction in structural integrity), or identification of previously unobserved defects, are regarded as dangerous and/or earthquake-prone and/or flood-prone (i.e. a change in likelihood of failure). This priority would first consider classifiable high potential impact dams followed by medium potential impact dams.
3. Dams that because of new or improved information (or their exposure or their setting e.g. change in assessment of whether the dam constitutes a "moderate flood" or "moderate earthquake" for that site) are regarded as dangerous and/or earthquake-prone and/or flood-prone. This priority would first consider classifiable high potential impact dams followed by medium potential impact dams.
4. Dams that are regarded as dangerous and/or earthquake-prone and/or flood-prone due to their pre-existing condition (and not an actual change in risk) and do have a Dam Safety Assurance Programme that complies with the Regulations. This priority would first consider classifiable high potential impact dams followed by medium potential impact dams.
5. Dams that due to the potential impact classification for the dam increasing from low to medium or high or from medium to high are regarded as dangerous and/or earthquake-prone and/or flood-prone (i.e. a change in consequence of failure). This priority would first consider classifiable high potential impact dams followed by medium potential impact dams.

In all cases, the likelihood and potential impacts of a dam failure would be a factor for determining the priority.

At any time, the Council may also investigate whether a dam is dangerous, earthquake-prone or flood-prone if:

- Complaints are received about a dam, or
- Information received under the Building (Dam Safety) Regulations 2022 highlight areas of concern, or
- The Council becomes concerned about a dam, for example, when processing a resource consent or undertaking monitoring of a body of water.

Newly constructed dams will be subject to the policy once their dam safety assurance programme has been approved under section 143 of the Act.

Note: The Council is required to maintain a register of large dams under section 151 of the Act. When a newly constructed classifiable dam receives a code compliance certificate (CCC), the dam will be added to the register.

Application to heritage dams

For the purposes of this policy, a heritage dam (including associated structures) means a dam that is included on:

- (a) the New Zealand Heritage List/Rārangi Kōrero maintained under section 65 of the Heritage New Zealand Pouhere Taonga Act 2014; or
- (b) the National Historic Landmarks/Ngā Manawhenua o Aotearoa me ōna Kōrero Tūturu list maintained under section 81 of the Heritage New Zealand Pouhere Taonga Act 2014; or
- (c) the Auckland Council Unitary Plan; or
- (d) as defined as historic heritage under Section 2, Resource Management Act or as defined as 'historical or cultural site' under Section 3 of Building Dam Safety Regulations 2022.

Section 4(2)(l) of the Building Act recognises the “need to facilitate the preservation of buildings of significant cultural, historical, or heritage value”.

The Council recognises the need to retain heritage values of the dam itself, but also the need to reduce or remove any risk posed by a heritage dam which has been classified as dangerous, flood-prone or earthquake-prone. When considering heritage dams under this policy, account will be taken of the need to facilitate the preservation of parts of the dams with significant cultural, historical or heritage value.

When dealing with heritage dangerous dams, the Council will seek advice from the Heritage New Zealand/Pouhere Taonga and the council Heritage Unit before any actions are undertaken under sections 153 – 160 of the Act.

The Council may also engage suitably qualified professionals with engineering expertise and heritage expertise to advise and recommend actions. When considering any recommendations, the Council will have regard to the priorities set out in clause 5 of this policy. Copies of all served notices for heritage dangerous dams, earthquake-prone dams and flood-prone dams will be provided to Heritage New Zealand/Pouhere Taonga and the council Heritage Unit.

The Council will record the heritage listing of all dams it is made aware of to be dangerous, earthquake-prone, or flood-prone in its register of dams for inclusion on any relevant Land Information Memorandum.

References

[Building Act 2004](#)

[Building \(Dam Safety\) Regulations 2022](#)

Relevant Sections of the Building Act 2004:

[Section 3 Purpose](#)

[Section 153 Meaning of dangerous dam](#)

[Section 146 Review of dam safety assurance](#)

[153A Meaning of earthquake-prone dam and flood-prone dam](#)

[Section 154 Powers of regional authorities in respect of dangerous dams](#)

[Section 155 Requirement for notice given under section 154](#)

[Section 156 Regional authority may carry out work](#)

[Section 157 Measures to avoid immediate danger](#)

[Section 158 - Regional authority must apply to District Court for confirmation or warrant](#)

[Section 159 - Building work includes decommissioning and demolition of dam](#)

[Section 160 - Power of regional authority not limited](#)

[Section 161 - Regional authority must adopt policy on dangerous dams](#)

[Section 162 - Adoption and review of policy](#)

[Section 177 - Application for determination](#)