



**Otago
Regional
Council**

S161 BUILDING ACT 2004

**POLICY ON
DANGEROUS DAMS, EARTHQUAKE-PRONE
DAMS AND FLOOD-PRONE DAMS**

2023



**Otago
Regional
Council**

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1. Introduction

This document sets out the policy on dangerous dams, earthquake-prone dams and flood-prone dams adopted by the Otago Regional Council (“the Council”) in accordance with [Section 161](#) and [Section 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 Otago 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, including this policy apply to:

1. Classifiable dams (defined in [Regulation 5](#) of the Building (Dam Safety) Regulations 2022 (“the Regulations”) to be either:
 - a. 4 or more metres high and storing 20,000 or more cubic metres volume of water or other fluid; or
 - b. 1 or more metres high and storing 40,000 or more cubic metres volume of water or other fluid.
2. Referable dams as defined in the Regulations¹.

Only [Section 133B](#)² (height measurement of dams) and [Section 157](#) and [Section 158](#) (measures by a regional authority to avoid immediate danger) apply to all other dams.

2. Application of this policy

This policy applies to dams everywhere in Otago, and 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](#), and [Section 153A](#) and of the Act.

This policy must be read alongside the Regulations which defines terms used in the Act in relation to “dangerous dams”, “earthquake-prone dams” and “flood-prone dams”.³

The Regulations and the Act can be accessed at www.legislation.govt.nz ⁴:

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 Section 19 of the Regulations defines moderate earthquake, moderate flood, earthquake threshold event and flood threshold event.

⁴ <https://www.legislation.govt.nz/regulation/public/2022/0133/latest/whole.html#LMS489207> and https://www.legislation.govt.nz/act/public/2004/0072/latest/whole.html?search=ts_act%40bill%40regulation%40deemedreg_building+act+2004_resel_25_a&p=1#whole

Under [Section 153AA](#) of the Act, if a dangerous dam is located in an area that has been affected by an emergency ([Subpart 6B](#) of the Act), this policy and other provisions of the Act continue to apply but only in relation to:

- a) action taken or notices issued under [Section 154](#) of the Act;
- b) work carried out under [Section 156](#) of the Act; or
- c) if a warrant is issued under [Section 157](#) of the Act.

This policy commences on 13 May 2024.

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

3. 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, reviewing 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.
2. A suitably qualified and experienced engineer engaged (by the owner⁵) to provide a certificate for the purposes of [Section 135\(1\)\(b\)](#), [Section 142\(1\)\(b\)](#), or [Section 150\(2\)\(f\)](#) must notify the Council and the owner of the dam, in writing, and within 5 working days, 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. Council's approach to performing its functions

4.1 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 Council will develop a monitoring procedure to maintain the register and inclusion of information on the relevant property file.

Should the Council receive information about a dangerous, earthquake-prone and flood-prone dam in its regional boundary, the Council will notify the chief executive of the Ministry of Business, Innovation, and Employment, relevant territorial authority and the Otago Civil Defence and Emergency Management Group.

⁵ Note: where costs will fall for this is not a matter of discussion under this policy.

4.2 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 that they will 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) who provides a certificate for the purposes of [Section 135\(1\)\(b\)](#), [Section 142\(1\)\(b\)](#), or [Section 150\(2\)\(f\)](#), to notify Council and the owner of the dam if he or she or they believes that the dam is dangerous. The notice must be provided in writing and be given within 5 working days after the engineer forms their belief.

The Council will work with the owners of identified dangerous dams, earthquake-prone dams and flood-prone dams to develop an action plan (with 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.

4.3 Directing and taking action

The Council may exercise the powers outlined below:

- For dangerous, earthquake-prone and flood-prone dams
 - If the owner of any dam is not acting 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 a risk of immediate danger.

Before exercising any of its powers under [Section 154](#), [Section 155](#), [Section 156](#), [Section 157](#), [Section 158](#) and [Section 159](#) of the 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 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 dam specialist 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.

The whole or part of any proposal by the dam owner may be incorporated as a requirement in a Notice to Fix issued by the Council under [Section 164](#) of the Act. If no action is taken by the owner to address the danger the Council may exercise any of its statutory powers in [Section 154](#), [Section 155](#), [Section 156](#), [Section 157](#), [Section 158](#), [Section 159](#) and [Section 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 Otago Civil Defence Emergency Management Group.

The Council may at any time require the dam owner to review a Dam Safety Assurance Programme (DSAP) if the dam is an earthquake-prone or flood-prone dam.

In a situation where a dam is dangerous, 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.
- 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.

5. Council's priorities in performing these functions

The Council's approach to dangerous, earthquake-prone or flood-prone dams is tailored toward achieving a reduction in the pre-existing risk whilst still being able to deal with risks that emerge in the future.

The priorities will be as follows in which 1 is the highest priority and 3 is the lowest priority.

1. To minimise the risk to public safety at all times;
2. To minimise the risk to damage or loss of property.
3. To minimise the risk to the environment

6. Application to heritage dams

For the purposes of this policy, a heritage dam means a dam that is included on:

- (a) the New Zealand Heritage List/Rārangī 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.

[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 heritage value.

When dealing with heritage dangerous dams and/or earthquake-prone dams and/or flood-prone dams, the Council will seek advice from the Heritage New Zealand/Pouhere Taonga and the relevant territorial authority (if appropriate) before any actions are undertaken by the regional authority under [Section 153](#), [Section 154](#), [Section 155](#), [Section 156](#), [Section 157](#), [Section 158](#), [Section 159](#) and [Section 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.

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