# Recommendations of Greater Wellington Regional Council on Submissions on the Proposed Dangerous Dam Policy

## **Submission 1: Upper Hutt City Council**

#### 1a. Decision Requested In Submissions

The policy should recognise that a dam owner may not necessarily be the landowner.

## 1b. Recommended Policy Changes

In section 2.7, amend the first paragraph as follows:

Whilst most dams will be the direct responsibility of the owner of the land on which they are located, there will be cases where the dam owner is not the same as the land owner. Where the dam owner and landowner are different Greater Wellington will deal primarily with the dam owner and will make every effort to keep the landowner informed.

There may also be circumstances where a landowner will claim that they 'inherited' the dam, and were not responsible for either its construction or its maintenance. It is likely however, that there will be few cases where a landowner could claim that they purchased the land in circumstances where they could not reasonably have known there was a dam on the property.

#### 1c. Reasons for the Decision

Recognising that a dam owner may not necessarily be the land owner provides clarity for those dam owners who are in this situation.

# Proposed Recommendations of Greater Wellington Regional Council on Submissions on the Proposed Dangerous Dam Policy

# **Submission 2: Karori Wildlife Sanctuary**

#### 1a. Decision Requested In Submissions

It is not clear how the assessment of a dangerous dam is made.

## 1b. Recommended Policy Changes

In Section 2.4 amend the second paragraph as follows

Once regulations that prescribe the standards and criteria used in section 153 are Gazetted, Greater Wellington will use those definitions to determine if dam meets the specific dangerous dam criteria. Greater Wellington officers and technical specialists will use "The New Zealand Dam Safety Guidelines (2000)", or any subsequent update or recognised replacement for that guideline, for guidance in determining if a dam is dangerous.

#### 1c. Reasons for the Decision

Clarification of second paragraph makes it clear that Greater Wellington officers and technical specialists will determine whether a dam meets the specific dangerous dam criteria.

The compilation of a list of "potentially dangerous dams" needs to be done carefully to avoid unnecessary alarm, while clearly needing to identify dams at risk.

## 2b. Recommended Policy Changes

In Section 2.2, amend first and second paragraph as follows:

There is a continuum of approaches that regional authorities can adopt for the identification of dangerous dams. These range from a totally passive approach where the regional authority acts only when a potentially dangerous dam has been brought to its attention, to the proactive comprehensive inspection of all potentially dangerous dams in its region.

Greater Wellington will compile a list of potentially dangerous dams requiring safety assessment over time in response to owners providing information/dam classifications and complying with the dam safety assurance process and in response to complaints or relevant information. Those dams requiring safety assessment will be followed up with an investigation by Council officers assisted, as considered appropriate, by technical specialists to establish the nature of the danger or the state of the dam.

#### 2c. Reasons for the Decision

Use of the term 'potentially dangerous dams' implies another category of dam that was not envisaged by the Act. Replacing the term with 'dams requiring safety assessment' avoids the implication that a dam has been judged to be dangerous while it is undergoing an assessment to determine whether in fact it meets the dangerous dam criteria set by the Act and regulations.

.

# Proposed Recommendations of Greater Wellington Regional Council on Submissions on the Proposed Dangerous Dam Policy

**Submission 3: Capacity** 

#### 1a. Decision Requested In Submissions

Capacity requested the definition of dangerous dam be reviewed as a dam that leaks, does not necessarily mean the dam is dangerous. The leakage would need to have the potential to cause the dam to collapse. It requires an opinion from a dam engineering specialist to determine whether this is the case.

## 1b. Recommended Policy Changes

Section 1.4, Definition of dangerous dams

No policy change.

#### 1c. Reasons for the Decision

The definition of a dangerous dam is defined by the Act. Greater Wellington's proposed policy must reflect the definitions in the Act. Regulations, yet to be finalised, are likely to provide guidance or define leakage in the context of a dangerous dam.

# Proposed Recommendations of Greater Wellington Regional Council on Submissions on the Proposed Dangerous Dam Policy

# **Submission 4: New Zealand Society on Large Dams**

## 1a. Decision Requested In Submissions

Amend the text throughout the policy to ensure consistent use of terminology in relation to the Potential Impact Classification of Dams.

## 1b. Recommended Policy Changes

No changes required.

#### 1c. Reasons for the Decision

Policy has been checked to ensure consistency of Potential Impact Classification terminology and no changes are required.

Seek to modify the text of Section 1.1 so it better illustrates the relationship the Building Act has with the construction, and safe operation of dams.

# 2b. Recommended Policy Changes

No changes required.

#### 2c. Reasons for the Decision

Section 1.1 comes directly from the Building Act.

To avoid uncertainty, provide additional text that clarifies the definition of a 'dangerous dam', and that acknowledges for a dam to be dangerous it must first have a High or Medium Potential Impact Classification.

## 3b. Recommended Policy Changes

Section 1.4

No change required.

#### 3c. Reasons for the Decision

The way the definition of dangerous dam is written in the policy already reflects that a dam must first have a high or medium impact classification before it is considered to be dangerous or not.

Include text to state the policy will be reviewed in the event of a change to the relevant sections of the Building Act, and on changes to regulation being gazetted.

## 4b. Recommended Policy Changes

In Section 1.5 amend the first paragraph as follows

Greater Wellington will follow the special consultative procedure set out in section 83 of the Local Government Act 2002 when developing and adopting this policy, and will have regard to any relevant principles in the Building Act 2004. This policy will be reviewed every five years and in the event of any significant changes to relevant sections of the Act.

#### 4c. Reasons for the Decision

Future changes to the Act may mean the policy becomes inconsistent. It will, therefore, be necessary to review the policy.

Remove the first paragraph of section 2.1. The dams referred to in are well designed and built, and their safety is managed by a responsible owner, under a Dam Safety Assurance Programme.

#### 5b. Recommended Policy Changes

In Section 2.1 amend the first paragraph as follows

In the Wellington Region there are <u>likely to be</u> approximately 34 dams that—are eaptured by may meet the Building Act 2004 definition of dam. In the main, these dams are earth dams and are used for a variety of purposes including water supply, flood control, hydro electric generation, irrigation, farm stock supply and recreation. Only those dams that have a medium or high potential impact will be assessed as to whether they meet the criteria for a dangerous dam.

#### 5c. Reasons for the Decision

Section 2.1 provides background information on the dams and the hydrological/geological setting of the Wellington Region. The recommended changes clarify that not all dams in the region are dangerous.

Include text in the policy approach to state the scope of the Building Act section concerned with Dam Safety, and specifically state the purpose of the dangerous dams policy within that framework.

## 6b. Recommended Policy Changes

In Section 2.1 amend the fourth paragraph as follows

The dangerous dam provisions of the Act are part of a wider section dealing with dam safety. This policy reflects the Council's determination to reduce the risk of dam failure over time in a way that is acceptable in social and economic terms to its ratepayers.

#### 6c. Reasons for the Decision

The addition to section 2.1 clarifies that the dangerous dam policy is only part of a section concerning dam safety within the Building Act and states the scope of the dangerous dam provisions.

Replace the term 'potentially dangerous dams' with 'dams requiring safety assessment'.

## 7b. Recommended Policy Changes

In Section 2.2 amend first and second paragraphs as follows (same as for Submission 2: Karori Wildlife Sanctuary)

There is a continuum of approaches that regional authorities can adopt for the identification of dangerous dams. These range from a totally passive approach where the regional authority acts only when a potentially dangerous dam has been brought to its attention, to the proactive comprehensive inspection of all potentially dangerous dams in its region.

Greater Wellington will compile a list of potentially dangerous dams requiring safety assessment over time in response to owners providing information / dam classifications and complying with the dam safety assurance process, and in response to complaints or relevant information. Those dams assessed as potentially dangerous requiring safety assessments will be followed up with an investigation by Council Officers assisted, as considered appropriate, by technical specialists to establish the nature of the danger or the state of the dam.

#### •

#### 7c. Reasons for the Decision

Use of the term 'potentially dangerous dams' implies another category of dam that was not envisaged by the Act. Replacing the term with 'dams requiring safety assessment' avoids the implication that a dam has been judged to be dangerous while it is undergoing an assessment to determine whether in fact it meets the dangerous dam criteria set by the Act and regulations.

Adopt separate lists for 'dams requiring safety assessment' and dangerous dams.

## 8b. Recommended Policy Changes

In Section 2.2 amend the third paragraph as follows

A list of certified dangerous dams will be collated according to the results of the assessments. Once the safety assessments/investigations have been undertaken, those dams that meeting the definition of a dangerous dam as defined by the Act and Regulations will be entered into the dangerous dam register. This list register will categorise the identified dangerous dams according to the following:

#### 8c. Reasons for the Decision

The changes recommended above and in Recommendation 7 clarify that two lists will be complied; one list for dams requiring safety assessment, and one for dams that have been identified as meeting the dangerous dam criteria.

Add the following sentence to the end of paragraph two, section 2.2

'The purpose of this action is to determine whether a dam meets the specific criteria for a dangerous dam".

## 9b. Recommended Policy Changes

In Section 2.2 amend the second paragraph as follows

No change required.

#### 9c. Reasons for the Decision

The changes in Recommendations 7b and 8b above negate the need to add the requested sentence.

Include text to clarify how the Council will make the determination that a dam is dangerous.

## 10b. Recommended Policy Changes

In Section 2.4 amend the second paragraph as follows (same as for Submission 2: Karori Wildlife Sanctuary)

Once regulations that prescribe the standards and criteria used in section 153 are Gazetted, Greater Wellington will use those definitions to determine if dam meets the specific dangerous dam criteria. Greater Wellington officers and technical specialists will use "The New Zealand Dam Safety Guidelines (2000)", or any subsequent update or recognised replacement for that guideline, for guidance in determining if a dam is dangerous.

#### 10c. Reasons for the Decision

Clarification of the second paragraph makes it clear that Greater Wellington officers and technical specialists will determine whether a dam meets the specific dangerous dam criteria.

The policy does not include a step in which the Council makes a determination that a dam is no longer classified as dangerous once actions have been undertaken to reduce or remove the danger. Include text to clarify how this determination will be made.

#### 11b. Recommended Policy Changes

Add new section 2.5.10

#### 2.5.10 Removal of a dam from Dangerous Dam Register

Once a dam owner has undertaken and completed work, to reduce or remove the danger, in accordance with sections 2.5.4 or 2.6, Greater Wellington officers and technical specialists will reassess the dam according to the dangerous dam criteria defined in the Act and Regulations. If the work undertaken by the dam has reduced or removed the danger to such an extent that the dam no longer meets the criteria of a dangerous dam, the dam will be removed from the dangerous dam register. Greater Wellington officers and technical specialists will use "The New Zealand Dam Safety Guidelines (2000)", or any subsequent update or recognised replacement for that guideline, for guidance in determining if a dam is dangerous.

#### 11c. Reasons for the Decision

The addition of a new section provides for dams being removed from the Dangerous Dam Register once they have been assessed as no longer meeting the dangerous dam criteria. This step was missing from the proposed policy.

Revise categorisation to differentiate between those dangerous dams that may fail in the normal course of events and those that may fail in a moderate flood or earthquake. We suggest:-

Category 1 – Medium and High PIC Dams which are likely to collapse during the ordinary course of events

Category 2 - Medium and High PIC Dams which are likely to collapse in a moderate flood

**Category 3 -** Medium and High PIC Dams which are likely to collapse in a moderate earthquake.

A sub-classification of each category would be to specify if the dam has a heritage classification.

## 12b. Recommended Policy Changes

In Section 2.2.1 amend category list as follows

#### **Proposed Categorisation**

Category 1 – high potential impact dams. Medium and High potential impact category dams which are likely to collapse during the ordinary course of events

Category 2 - medium potential impact dams High potential impact category dams which are likely to collapse in a moderate flood or moderate earthquake.

Category 3 - high or medium impact dams with a heritage classification under the local territorial authority's District Plan or Historic Places Trust register. Medium potential impact category dams which are likely to collapse in a moderate earthquake.

#### 12c. Reasons for the Decision

Those dams which would *fail in the normal course of events*, and those which would fail in a specific periodic event such as *moderate flood or earthquake* differ significantly in risk. Categorising the dams according to risk will allow Council to concentrate on those dams that pose the greatest risk first.

A special category for heritage dams has been removed from the recommended categorisation. Section 2.12 of the policy outlines how heritage dams will be dealt with. Heritage dams will fall in the one of the three categories proposed.

Add text to Section 2.5 that identifies what powers Regional Councils have to compel parties to provide site access and documentation etc.

#### 13b. Recommended Policy Changes

Add new section 2.5.11

#### **Site Access**

Where a dam owner will not allow a council officer to enter a dam site for the purpose of determining whether the dam meets the specific dangerous dam criteria, the council officer may enter under the provisions of section 222 of the Building Act 2004 and section 5 of the Building Amendment Act 2005.

Add Sections 222 – 238 of the Building Act to Appendix 1 – Relevant Legislation

#### 13c. Reasons for the Decision

The policy did not identify how council officers would gain access to a dam, if the owner prevented access. The Building Act 2004 does not provide powers for the council to compel dam owners to supply documentation in respect of dangerous dams. However, a dam owner must submit a Dam Safety Assurance Programme and it is an offence under section 140 of the Building Act 2004 not to do so. Information in the Dam Safety Assurance Programme is likely to be of use when assessing whether a dam meets the dangerous dam criteria.

Provide additional text in sections 2.5.3 and 2.5.4 outlining that Greater Wellington will advise informed or notified parties when the danger has been removed.

## 14b. Recommended Policy Changes

Add further content to new Section 2.5.10 (see recommendation 11b)

Once a dam has been removed from the Dangerous Dam Register notices will be sent to those parties initially contacted under sections 2.5.3 and 2.5.4, informing them that the dam is no longer on the Dangerous Dam Register.

#### 14c. Reasons for the Decision

The addition of a new section provides for information to be disseminated to all parties once a dam has been removed from the Dangerous Dam Register. This step was missing from the proposed policy.

Amend the first sentence of Section 2.5.4 as follows: "Where the Council has confirmed that a dam is dangerous in accordance with the specified criteria..."

## 15b. Recommended Policy Changes

Section 2.5

On being satisfied that a dam <u>is dangerous</u> meets the specific dangerous dam criteria, Greater Wellington will:....

#### 15c. Reasons for the Decision

Amending the sentence provides the dam owner with certainty that the status of their dam will be confirmed against the specific criteria for a dangerous dam outlined in the Building Act 2004. The amended wording is also consistent with other sections of the policy.

Amend the fourth paragraph of Section 2.5.4 to clarify what parties would be an example of someone having an interest in the land on which the dam sits.

## 16b. Recommended Policy Changes

In Section 2.5.4 amend the fourth paragraph as follows

Greater Wellington will ensure that copies of notices are sent to the owner of the dam, the landowner if different from the dam owner, any occupier and any party with an interest in the land on which the dam sits (as defined by section 155 (2) of the Act) and the relevant Territorial Authority. If appropriate, Greater Wellington will notify potentially affected communities downstream of the dam.

#### 16c. Reasons for the Decision

The recommendation provides further clarification as to who copies of the notice will be sent to.

Replace text in Section 2.5.5 – "a dam break analysis may be required". With "if a dam break study is not available as part of an owners Dam Safety Assurance Programme, it will be necessary to provide one."

#### 17b. Recommended Policy Changes

In Section 2.5.5 amend the text as follows

A dam-break analysis may be required. If a dam break study is not available as part of an owners Dam Safety Assurance Programme, (or if the Dam Safety Assurance programme is not yet complete) it may be necessary to provide one. If requested by Greater Wellington this will be provided by the owner at the owner's expense within the time frame defined by Greater Wellington in the request.

#### 17c. Reasons for the Decision

Owners of dams that are classified as high or medium potential impact are required to have to have an approved Dam Safety Assurance Programme (DSAP) and submit it to the Regional Council. Part of the DSAP would contain the results of a dam break study that will assist Regional Councils in determining whether a dam meets the dangerous dam criteria.

Bring Section 2.6 forward in the policy, so that it immediately follows the section dealing with identification of dangerous dams.

## 18b. Recommended Policy Changes

Renumber Section 2.6 to Section 2.2A

#### 18c. Reasons for the Decision

Bringing Section 2.6 forward in the policy document will help establish, early on in the policy, the consultative approach greater Wellington will initially take when dealing with dam owners.

The bulleted information in Section 2.9 to be kept on file should include:

- Status of actions set out in risk reduction plan
- Status and verification that the danger has been reduced or removed to the satisfaction of Greater Wellington
- A statement to confirm that the dam is no longer considered dangerous.

## 19b. Recommended Policy Changes

In Section 2.9 amend the text as follows

Greater Wellington will keep a register of all dangerous dams, noting the status of requirements for improvement or the results of improvement, as applicable. In addition, the following information will be placed The following information will be kept on file for each dangerous dam:

- The address, <u>map reference</u> and legal description of the dam and the land which supports it;
- Whether the dam has a heritage listing;
- A statement that the dam is considered to be dangerous; and
- A copy of all Notices issued under section 2.5 (if applicable);
- A copy the formal proposal agreed under section 2.2A (if applicable)
- The date by which strengthening or demolition is required actions to reduce or remove the danger are to be carried out(if known);
- The status of actions set out in the Notice or formal proposal list above;
- The status and verification that the danger has been reduced or removed to the satisfaction of Greater Wellington; and
- A statement to confirm that the dam is no longer considered dangerous.

This information will be kept on file indefinitely.

#### 19c. Reasons for the Decision

The bulleted list of information to be kept on file did not include any tracking of the reduction or removal of dangers. It is essential to store this information and record updates.

# Recommendations of Greater Wellington Regional Council on Submissions on the Proposed Dangerous Dam Policy

## **Submission 5: Genesis Energy**

#### 1a. Decision Requested In Submissions

Requests that all regional authorities implement their Dangerous Dam Policies in a consistent manner.

## 1b. Recommended Policy Changes

No changes required.

#### 1c. Reasons for the Decision

Regional Councils across the country have been working collectively to develop the Dangerous Dam Policy, however, it is likely there will be small regional differences, especially as a result of hearings.

Requests that Genesis have an additional chance to provide comments on the Policy if the final regulations (currently being set by the Department of Building and Housing) raise new issues or change interpretations.

## 2b. Recommended Policy Changes

No changes required.

#### 2c. Reasons for the Decision

Greater Wellington's Dangerous Dam Policy may be reviewed, if necessary, once the regulations are gazetted. If the Policy is reviewed, it will be undertaken in accordance with the special consultative procedure set out in section 83 of the Local Government Act 2002, which requires public consultation.