

# G17 Dam Safety Processes

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## 1. INTRODUCTION

This guidance document provides procedures for the dam safety processes in Part 2, Subpart 7 of the Building Act. These are non-Building Consent Authority functions. These procedures are not yet operational. They will be changed once the regulations on “referable dams” have been finalised.

The commencement date of the Building (Dam Safety) Regulations 2008 is 1 July 2015.

Refer also to ORC’s Policy on Dangerous Dams (last revised 2011) and the document M00 Managing ORC’s Dam Responsibilities in relation to the context for the dam safety processes. Refer also to G01 for the definitions of “dam” and “appurtenant structures”.

## 2. SITUATIONS OF IMMEDIATE DANGER

ORC has powers under section 157 of the Act in situations of immediate danger. Those powers exist now and are not dependent on the commencement of the regulations (see above). The powers apply to dams of any size and regardless of when the dam was built.

Particular care is needed in deciding whether to exercise these powers. Decisions must be made in accordance with Council approved delegations.

The following issues and actions should be considered.

1. Determine who the owner is and establish a line of communication with them. Ensure they understand that the onus is on them (the owner) to remedy the situation. Encourage them to engage their own expert advice.
2. Determine whether the dam has an EAP. Check Objective (see section 3 of this Guide). Ask the owner to verify that any EAP held by ORC is the currently operative version.
3. Inform the territorial authority. Consider doing so through Civil Defence and Emergency Management personnel.
4. Arrange for ORC to receive technical advice. Consider consultants on ORC’s Register of Consultants. Put them on standby. Ask them what information they will require.
5. Collate as-built and other information (e.g. building consent documentation) that might be required by an expert engineer.

6. Brief field observers of the particular observations they should make and to whom they should report. Ensure they have the necessary delegations and warrants.
7. Check that staff health and safety is managed and that staff know they are not to put themselves in danger.
8. Check the weather forecast. Inform the Duty Flood Manager of the situation and ask to be kept informed of changes in the forecast.
9. Assess the consequences of uncontrolled release from the dam.
10. Identify options for reducing the hazard including dewatering and engineered alterations and the implications and risks of each.
11. Consider whether it would be better to exercise powers under the RMA.

### 3. EMERGENCY ACTION PLANS

Recent experience in Australia has highlighted the value of Emergency Action Plans for dams and the importance of responding agencies, such as ORC, being able to readily access the Plan during a potential or actual dam safety incident. EAPs are not mandatory under New Zealand law but some owners voluntarily prepare such Plans, as recommended in the New Zealand Dam Safety Guidelines published by the New Zealand Society on Large Dams (NZSOLD), and provide a copy to ORC. Some EAPs and dam break inundation maps are provided to ORC as conditions of resource consents. Regardless of how ORC comes into possession of a Plan or a dam break assessment or inundation map ORC staff must have a clear understanding at all times of what information ORC holds for which dams and can readily access the current version. For these reasons the following procedures shall be followed by ORC:

1. The format and content of EAPs should comply with the NZSOLD Guidelines;
2. EAPs shall include the contact details for the ORC Emergency Management Coordinator (cellphone) and the ORC Duty Flood Manager (cellphone) and the ORC Dunedin office (landline);
3. An electronic copy of each EAP or dam break assessment shall be saved into the "CDEM/Response/Dam EAPs" part of Objective with an alias to the relevant "DS" folder in the Building Consent Authority part of Objective and, when relevant (e.g. the information is a condition of a resource consent), the "RMA" part of Objective. Superseded electronic copies shall be retained in Objective, and renamed such that it is clear they are not current;
4. The dam owner shall be requested to provide dam break inundation maps as a spatial file compatible with ORC's GIS;
5. The dam break inundation map shall be added to the ORC's Dam Break Inundation Maps GIS layer (i.e. the composite map for Otago) with appropriate metadata (source, date received etc);
6. Each EAP and dam break assessment shall be registered in the Dam Emergency Action Plan Register contained within the "CDEM/Response/Dam EAPs" part of Objective. This ensures that during a dam safety incident we can quickly establish whether the dam has an EAP;
7. Accela (which is used as ORC's Register of Dams) shall identify whether each dam in the register has an EAP and/or dam break inundation map and shall provide an electronic link to the Plan and maps within Objective and GIS;
8. One hard copy of the EAP or dam break assessment shall be shelved in the Dunedin office Library (in the space dedicated for these Plans). For dams in Central Otago and Queenstown-Lakes District a hard copy shall also be shelved in the Alexandra office. Superseded copies shall have the cover page marked "superseded" and shall be archived at the Dunedin office;

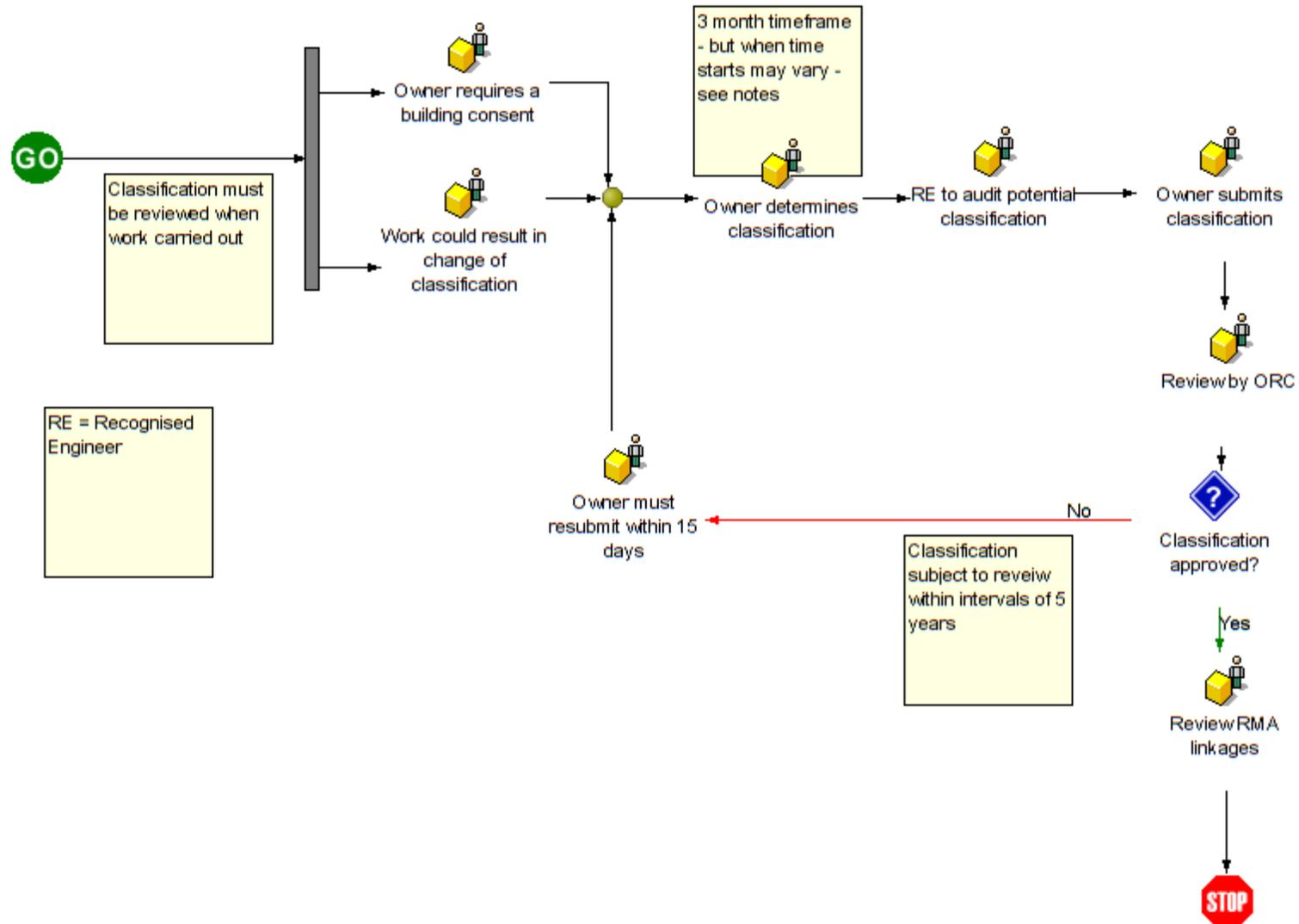
9. The Emergency Management Co-ordinator, Manager Environmental Services and Director Engineering, Hazards and Science shall be informed each time that a new or updated EAP or dam break assessment is received by ORC.

#### 4. POTENTIAL IMPACT CLASSIFICATION (PIC)

It is the responsibility for owners to submit a Dam Classification Certificate in accordance with the Building (Dam Safety) Regulations 2008 containing a PIC and other details. This process includes their actions. This process should be read in conjunction with ORC's Policy on Dangerous Dams.

##### Process: Classification of Dams

Relevant Process: P16: Classification of Dams  
 Relevant Stage(s): All  
 Related Process: P01 Building Consent, P02 Evidence of Compliance Process (as the need for a classification change may arise following the issue of a Building Consent – refer Section 139(2) of the Act)  
 Primary Role(s): Manager Environmental Data and Planning



Key stages are detailed below.

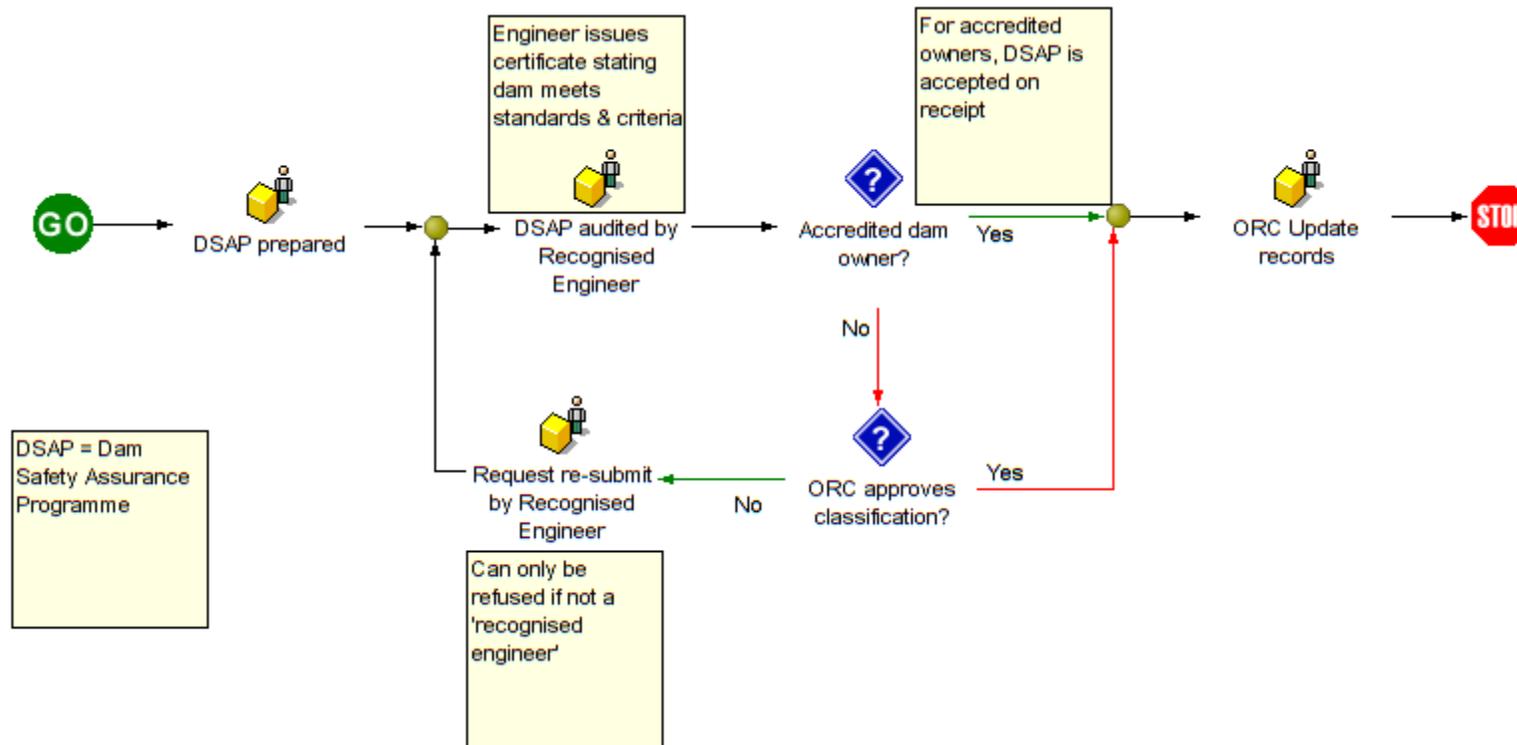
Stages	Notes	Record created
Owner requires a Building Consent/Work could result in change in classification (Section 139(2))	Every five years the dam owner must review the dam's PIC. In addition if there is a building consent or building work that could result in a change to the potential impact of a failure of the dam on persons, property, or the environment then there needs to be an updated PIC.	Correspondence if initiated by Compliance Monitoring follow-up on 5-year anniversary; or correspondence if identified as required during building consent processes.
RE to authorise Dam Classification Certificate	This is a Recognised Engineer acting on behalf of the owner.	N/A
Owner submits Dam Classification Certificate	Can be treated as correspondence or included in material submitted with building consent or evidence of compliance.	Correspondence, linked to original Dam Consent. Updated Dam Register (Accela) that Dam Classification Certificate has been provided.
Review by ORC	This is only to ascertain that the Dam Classification Certificate has been approved (signature is the evidence) by a Recognised Engineer.	Dam Register update with PIC and other dam details. Bring-up for next review.
Review RMA Linkages	Where a PIC changes the Consent Officer may investigate the implications.	Dam Register for any actions arising.

## 5. DAM SAFETY ASSURANCE PROGRAMME

Under the Building Act 2004 ORC can only refuse a Dam Safety Assurance Programme (DSAP) on the grounds that it has not been issued with a certificate by a Recognised Engineer.

### Process: Dam Safety Assurance Programme

Relevant Process: P14: Dam Safety Assurance Programme  
 Relevant Stage(s): All  
 Related Process: P01 Building Consent, P03: Compliance Certification  
 Primary Role(s): Manager Environmental Data and Planning



## 6. DANGEROUS DAMS

This process should be read in conjunction with ORC's Policy on Dangerous Dams (current version is 2011). This process flow highlights in more detail the potential outcomes of an inquiry relating to a dangerous dam e.g. the various instances where ORC may step in if the dam owner has not carried out a certain phase. Decisions must be made in accordance with Council Delegations (refer Report 2013/1194, A581730).

### Process: Dangerous Dams

Relevant Process: P15: Dangerous Dams  
Relevant Stage(s): All  
Related Process: P09 Notice to Fix and Enforcement  
Primary Role(s): Manager Environmental Services

