

# Oral Submission to the Government Administration Select Committee on the Building Bill

## **THE NEW ZEALAND SOCIETY ON LARGE DAMS (NZSOLD)**

12 February 2004

Madam Chairperson

1. My name is Peter Mulvihill. I currently Chair the New Zealand Society on Large Dams (NZSOLD). NZSOLD is a voluntary professional body and a technical group within The Institution of Professional Engineers, New Zealand (IPENZ) and also a member of the International Commission on Large Dams. Our membership is made up of Corporate Members (namely owners), Regional, District and City Councils, consultants, contractors, and a number of individual members and stakeholders. One of the primary objectives of our Society is the promotion of dam safety and we have published the NZSOLD Dam Safety Guidelines, which are widely used by the New Zealand dam industry including the current regulators.
2. My experience in dams stems from my role as Asset Manager for a number of dams located in Central Otago. Other representatives here today are members of our executive, and include Mr Peter Foster a consultant with significant experience in dam engineering and dam safety practices, Mr Ian Walsh also an engineering and risk consultant to the dam industry with significant experience in design and safety evaluation especially in the Otago region, and finally Mr Ken Roberts who is the Dam Safety Team Leader for a major electricity generating company that owns a number of large dams.
3. Our submissions represent the views held by NZSOLD in its capacity as the representative body of the wider dam industry. It should be noted that these submissions do not represent the position of our Regional Council members. Because of the significant impact of this Bill on Regional Councils, and to avoid any conflict of interest, it was agreed early in the process that Regional Councils' should make their own submissions. However we have been in consultation with their representatives throughout the submission process.
4. During the formulation of our position and submissions on the Bill, we have made significant efforts to ensure that the process is transparent and to consult with the wider industry through our members. We have also

sponsored a public symposium in August last year which included a session on this issue.

5. We support the intent of this Bill with respect to clarifying regulatory responsibility for dams, giving regional authorities the responsibility for performing functions under the Bill, requiring compliance schedules for medium and high potential impact dams, and we also advocate emergency action plans for both high and medium potential impact dams.
6. However it should be noted that legislation that directly targets dam safety has never existed in New Zealand. Unlike some other areas addressed by this Bill, we do not consider that there has been systematic failure of the current safety regimes used in the dam industry. We consider that the main focus of this Bill in relation to dams should be to clarify regulatory responsibility for dam safety. Also as far as possible the regulatory model implemented, should accommodate the dam safety regimes and systems already in place and successfully used by the industry. We consider that the role of the regulator should be to ensure that owners have an acceptable dam safety regime in place, and robust ongoing reporting systems.
7. It should be noted that we have specific concerns with some of the wording of the current Bill. For example the Bill appears to prevent a dam owner using trained and experienced in-house staff from undertaking activities such as routine surveillance and maintenance of dams.
8. In addition, we also propose that the need for compliance schedules and warrants of fitness should be waived in situations where dam owners have an independently audited Dam Safety Assurance Programme in place that satisfies recognised international best practice.
9. We also wish to elaborate further on our original submissions regarding Clause 233 to 242 covering dangerous dams. To be consistent with the provisions relating to dangerous buildings we consider that there should be delineation between dams that are dangerous (i.e. in danger of imminent collapse) and those that do not meet current earthquake or flood loading standards. This is also consistent with the current treatment of the building inventory in New Zealand. A detailed copy of our further submission is attached as Appendix A for consideration.
10. Because of the special nature of dams, dam safety regimes currently used internationally and in New Zealand focus on the use of good practice guidelines and risk management techniques and processes, rather than prescriptive standards or codes. Our comments and proposed amendments included in the written submission reflect the special nature of dams, and the presence of many practice guidelines and systems currently operating to address dam safety within the industry. While our overriding objective is to ensure public safety and reduce risks to the downstream environment, we

also wish to avoid the imposition of unnecessary costs and duplication of roles, which would result in overloading of finite expertise resources within the industry.

11. Thank you for taking the time to hear our submission and we welcome any questions.

## Appendix A

### **Clause 233 to Clause 242 Dangerous dams**

#### **The following submission elaborates on our written submissions referenced to the above Clauses.**

1. The dangerous dam classification should not apply to dams that do not present a potential hazard to life or property. (Refer to clause 206 regarding parallel exclusion for low hazard residential buildings).
2. Differentiation should be made between dangers related to immediate or imminent failure likely to occur during the ordinary course of events, versus failure arising from specific infrequent events. (Refer to clause 205, 206 and 207 for parallel differentiation applicable to buildings).
3. Floods should be included alongside earthquakes as infrequent specific events relevant to dam failure.

#### **Discussion of above points.**

1. Our written submission amending clause 233 covers Point 1. We consider the “potential impact classification” categories provide a suitable basis for preventing inappropriate application of this provision.
2. In risk management terms, immediate or imminent likelihood of failure under normal circumstances is quite different from likelihood of failure associated with infrequent specific events. Infrequent events such as a moderate earthquake could well relate to a 1 in 150 year or 1 in 300 year return period event. Such events with their annual probability of occurrence well below 1% cannot be equated to immediate or imminent danger, and we consider that the terminology used should not confuse these differences. If consistency with the approach taken for buildings is to be maintained, we suggest that the terms “earthquake prone” and “flood prone” be applied to dams which have a likelihood of failure under these infrequent events, and the use of the term “dangerous dam” be limited to those facilities with an immediate or imminent likelihood of failure. This approach will allow regulations to be more effectively targeted.
3. The causes of dam failure and building failure are not identical. If failures related to earthquakes are to be singled out, then flood related failures should also be considered. A parallel case for buildings could be wind related failures. Our written submission covers this point.