

BRIEFING FOR MBIE ON RECOGNISED DAM SAFETY ASSURANCE ENGINEERS

15 January 2019

Summary

- Engineering New Zealand supports a change to the current regime because Dam Safety Regulations for the 'recognised engineer' creates a robust accountability mechanism tied to the Building Act.
- We prefer that the term Dam Safety Auditor be in general usage to describe the 'recognised engineer' because there may be misuse of, and confusion about, the meaning of the term 'recognised engineer.' Dam safety audit capability is not the same thing as a dam design capability and the distinction must be clear at all times.
- For simplicity, clarity and consistency we prefer a single list of Dam Safety Auditors to list the recognised engineers as defined in the [Building Act 2004 s149](#).

Capacity

- There are currently 162 Engineering New Zealand members who are members of the [NZ Society on Large Dams](#), comprising two-thirds of NZSOLD membership. This indicates that there are a sufficient number of engineers potentially capable of and interested in meeting the requirements to become a Dam Safety Auditor or 'recognised engineer' (there were about 50 listed previously).
- The area of risk to be addressed is mostly reservoirs and flood protection dams for which the auditing requirement is unlikely to take more than 2 days. Of course, the work required under the Dam Safety Assurance Programme (DSAP) itself will vary.
- The amount of auditing work may be significantly greater for the most complex structures, such as large hydroelectric dams. The owners of these structures are likely to already be acting responsibly to meet workplace safety, commercial and insurance requirements.
- We suggest that 18 months to 2 years is an appropriate period to phase in a new dam safety assurance regime. Any shorter transition risks there being insufficient time to complete the required work and any longer period risks avoidable delay.

Capability

- [The New Zealand Society on Large Dams](#) (NZSOLD) was founded to advance the technology of dam engineering and support socially and environmentally responsible development and management of water resources. NZSOLD is a technical group of Engineering New Zealand.
- NZSOLD is actively involved with technical, environmental, social, economic, regulatory, and administrative aspects of dams and their safety.
- NZSOLD is the appropriate group to advise on the minimum requirements for a DSAP.
- In general terms, a suitably qualified professional engineer who is a member of NZSOLD in good standing and who passes a suitable professional Dam Safety Auditor training course would likely be competent to be listed as a Dam Safety Auditor or 'recognised engineer.'

- Engineering New Zealand awaits the criteria for a DSAP before we can develop the appropriate criteria to assess for a ‘recognised engineer’ with the competencies to audit a DSAP.

Building (Dam Safety) Regulations 2008 (not enacted)

- We welcome the reintroduction of Building (Dam Safety) Regulations that are similar to the 2008 regulations, but with some changes and updating.
- Section 5(1) “demonstrating that he or she is able to practise competently in the area of dam safety engineering” appears to conflate design and audit. We prefer the term “dam safety engineering assurance” or “dam safety engineering auditing.”
- Section 5(2) appears to provide a reasonable and comprehensive list.
- We consider that a single category is preferable. We see no significant advantage to a ‘Category A’ and ‘Category B’ distinction, and potential for confusion.
- Arguably to complete Full Potential Impact Assessment requires an understanding of the components of a Dam Safety Assurance Programme.
- Any ‘recognised engineer’ should be able to make a Potential Impact Assessment, assess a DSAP and issue an Annual Compliance Certificate.

Chartered professional engineers and chartered membership

- We recommend that the Building Act 2004 section 149 (1) (b) be amended to “is a chartered member of IPENZ (Engineering New Zealand)” or similar.
- This is consistent with international practice and is more accessible for engineers who have been assessed in an equivalent overseas jurisdiction.
- [Chartered membership](#) requires a similar assessment with effectively the same competence standard as CPEng. Both require an annual commitment to the code of ethical conduct.
- Membership requires ongoing professional development instead of a 6-yearly reassessment.
- Engineering New Zealand does not publish practice areas under CPEng because whilst most chartered engineers have one or two practice areas against which they have been assessed, that is not an indication of their ability or otherwise to practice in other areas.
- Any future requirement for an occupational license may not be appropriate for a Dam Safety Auditor or ‘recognised engineer’ as they are not completing design work. Such a requirement could be unduly onerous and significantly restrict the number of Dam Safety Auditors or ‘recognised engineers.’