MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HIKINA WHAKATUTUKI

STRENGTHENING REGISTRATION REQUIREMENTS FOR ENGINEERS

SUMMARY OF STAKEHOLDER FEEDBACK

DECEMBER 2018

NOT GOVERNMENT POLICY

THIS DOCUMENT PROVIDES AN UPDATE ON WORK TO STRENGTHEN THE REGISTRATION REQUIREMENTS FOR ENGINEERS

It sets out:

- the objectives for the review
- a discussion of the problems that have been identified by stakeholders
- a summary of practice in some international jurisdictions
- an indication of the next steps

BACKGROUND TO THE REVIEW

MBIE is reviewing the current system for registration of professional engineers with the aim of reducing the risks to public safety created by substandard engineering work on complex buildings or building projects.

This review responds to recommendations of the Canterbury Earthquakes Royal Commission.

The review aims to:

- better balance the settings of the engineering regime with the risks to public safety
- ensure engineers who are regulated are appropriately skilled and productive
- ensure engineers are held to account for carrying out substandard work

FOUR PROBLEM STATEMENTS WERE IDENTIFIED

MBIE has heard a number of concerns raised by you and other stakeholders.

Concerns raised and analysis of current settings helped develop four problem statements.

There are risks to public safety from engineers carrying out poor quality work

1. **Some people are doing safety-critical engineering work outside of the current occupational regulatory system for engineers**

2. **The assessment of the competency of Chartered Professional Engineers is insufficient**

3. **It is difficult to hold engineers to account for poor quality work**

4. **The regulatory system has few checks and balances to limit poor engineering work**

WHAT WE HEARD....

- There are few formal restrictions on commercial engineering work.
- CPEng is too generic of a qualification. It does not allow engineers to signal to consumers their areas of specialisation.
- The process to attain CPEng is too onerous – considerable time and effort are required for a generic credential that, for the most part, is not required to practice.

PROBLEM STATEMENT....

1

Some people are doing safety-critical engineering work outside of the current occupational regulatory system for engineers

THIS MEANS....

many engineers choose not to become Chartered Professional Engineers (there are around 3,600 CPEng and at least twice as many practicing engineers who could be CPEng but choose not to)

WHAT WE HEARD....

- Engineers can self-select 'work examples' for CPEng assessment which are likely to be final products (ie after review from Building Consent Authorities).
- Some engineers lack understanding of the building regulatory system, the Building Code and the consent system.
- Continuing professional development requirements may be considered too light / generic.
- A CPEng credential does not give a clear signal of competence within a particular specialisation.
- Some CPEng assessors are not applying assessment criteria consistently.

PROBLEM STATEMENT....

2

The assessment of the competency of Chartered Professional Engineers is insufficient

THIS MEANS....

that even if an engineer is a Chartered Professional Engineer there is limited confidence about the type of work they are competent to carry out

WHAT WE HEARD....

- There is an over-reliance on individual engineers self-monitoring competence.
- There is a reluctance to make complaints or share info throughout the sector as the complaints process is administratively heavy and time consuming.
- ENZ has limited powers to investigate and to require information to be shared.
- ENZ has insufficient sanctioning powers.

PROBLEM STATEMENT....

3

It is difficult to hold engineers to account for poor quality work

WHAT WE HEARD....

- A supervising CPEng may sign off work based on limited oversight.
- Some engineers are reluctant to (and therefore don't) monitor or go on site to confirm the quality of design in practice
- Some engineers are reluctant to comment on concerns outside the scope of their contract
- Some have a perception that ENZ is conflicted by being both a membership body and the Registration Authority .
- Some Building Consent Authorities lack the technical expertise to identify gaps/caveats in producer statements.

PROBLEM STATEMENT....

4

The regulatory system has few checks and balances to limit poor engineering work

What are other Countries doing?

Japan

Multi-tier national qualification and licensing system (Kenchikushi) for engineers designing buildings and conducting construction administration.

Buildings over a certain size require a 'Structural Design 1st Class Kenchikushi' to design the building or provide quality assurance.

Canada

National professional qualification for engineers – 'Professional Engineer' – grants the right to practice but regulations differ by province.

British Columbia: has a second tier of licensing - a 'Designated Structural Engineer' is required to undertake the design of high-risk or complex design structures (this can be adopted by individual municipal bodies and a number have).

USA

There are significant legal restrictions on who can carry out various structural design work.

Two-tier licensing system (for structural engineers) which is adminstered at the state level:
- 'Professional Engineer' – requires relevant degree, two formal 8 hour exams, four years qualifying work experience
- 'Structural Engineer' – formal requirements specific to structural engineering.

States with greater seismic activity (California and Hawaii) typically have stricter requirements.

There are a number of countries that have a similar registration system to NZ, including the UK, Australia, Norway, Sweden and the Netherlands. The UK and Australia are also considering stricter requirements for carrying out engineering design work for public safety reasons.

It is more common for seismically active jurisdictions to have restrictions on engineering work, particularly structural engineering.

NEXT STEPS

Legislative change is needed to strengthen the registration requirements for engineers.

The focus now is on developing preferred options for change.

The Minister for Building and Construction has agreed to **public consultation** on policy proposals. This process ensures:

- wider input on issues and options – all building sector participants and consumers will have the opportunity to provide feedback on issues and options
- the incorporation of broader public comment into final policy proposals

Public consultation will be carried out in the first quarter of 2019

Cabinet decisions on changes are scheduled for mid 2019

The legislative process, including Bill introduction, is scheduled for late 2019