

SUBMISSION - MBIE PROPOSAL ON REGULATING ENGINEERS

24 May 2019

INTRODUCTION

This submission is made on behalf of Engineering New Zealand Transportation Group NZ (TG). The National Committee members have compiled this submission and have not had the opportunity to seek feedback from TG members at this stage. Our usual process is to distribute for comment prior to lodging a submission.

TRANSPORTATION GROUP NZ

Transportation Group NZ is a Technical Interest Group with approximately 1,200 members in total. Membership is made up of transportation, traffic engineering, and planning professionals working in central government, local government, academia and the private sector.

BACKGROUND

The Ministry of Business, Innovation and Employment (MBIE) has released a proposal outlining a new regulatory system for engineers. This proposal replaces CPEng with a certification of general engineering competence and licensing for safety-critical engineering work. This system would be independently governed and accountable to the Minister.

KEY POINTS OF OUR SUBMISSION

1. Although we understand the complexity of defining certain activities safety critical the current scope does not include areas of engineering that also have the potential to save lives. We consider that defining some engineering activities as safety critical implies other engineering activities are not. We would support a process to improve accountability of transportation engineers involved in safety-critical decisions.
2. We question whether the licensing is best undertaken by a Government Department. We should be no different than other professional bodies who are entrusted with the regulation, certifying and disciplining of their members.

SUBMISSION DETAIL

The MBIE definition of the 'building sector' is very narrow and there are areas of engineering activity that are no less 'safety critical' than those deemed 'safety critical' by MBIE, whose definition excludes transport infrastructure (bridges, roads, railways, etc.).

Engineers play a major role in the design and operation of transport infrastructure. The number of people suffering death or serious injury in NZ each year, as a result of accidents on transport infrastructure, far exceed the number of people suffering death or serious injury each year as a result of buildings (e.g. the CTV building) failing. In 2017, the number of deaths and injuries on roads in NZ was 378 and 14,039 respectively, with the social cost to NZ being \$4.8 billion.

Better transport infrastructure design and operation might well be perceived as offering little scope for improving the safety of New Zealanders, because in-depth investigations of road crashes have revealed that human factors are involved in c.94% of crashes. This statistic is commonly interpreted as indicating that only c.6% of crashes are amenable to reduction or prevention via better transport infrastructure design and operation. However, this interpretation is not correct, as those in-depth investigations of road crashes have also revealed that road environment factors and vehicle factors are involved in c.27% and c.9% of

crashes, respectively. The percentages do not sum to 100% because c.30% of crashes involve more than one type of factor. Only c.66% of road crashes involve only human factors, so the scope for improving road safety via improvements to road and vehicle design/maintenance is much larger than commonly thought. Even crashes deemed to be solely the result of a human error have system design influences, particularly in road crashes where design has a strong influence on a road's speed environment, and the survivability of those speeds when a road user makes an inevitable but unintentional error.

A substantial proportion of decisions relating to transport design and operation are made in a 'multi-disciplinary environment'. Decisions can be affected by 'political factors', with safety being compromised. If safety is to become the paramount consideration (the apparent purpose of specifying some activities as 'safety critical'), then it would be appropriate for safety to be a paramount concern in the design of transport, especially given the increase in importance attached to road safety by the Government.

There is a well-established process for safety auditing in NZ. The safety of New Zealanders could be enhanced considerably by increasing the importance attached to safety audits and adopting the recommendations of safety auditors. This would reduce the scope for transport design and operation decisions that compromise safety substantially. Safety auditing of transport design and operation matters should be treated as a 'safety critical' activity, with safety auditors having to be well qualified and licensed. The client/road controlling authority representative signing of the decisions that result from a safety audit should also be licensed as often the final decision is not aligned with the auditor's recommendation.

The MBIE proposal assumes that the licensing of people to undertake safety critical activities is best done by a Government Department or Agency. However recent experience with the NZTA regulating who can perform what might be considered 'safety critical' activities (e.g. the certification of heavy vehicles, the issuing of Warrants and Certificates of Fitness) casts real doubt on the validity of this assumption.

We should be no different than other professional bodies (e.g. NZ Law Society, Medical Council of NZ) who are entrusted with the regulation, certifying and disciplining of their members. Noting that this is all enshrined in suitable Government legislation with sufficient checks and balances in place (e.g. involvement of lay-people in review committees).

Thank you for your consideration. For more information please contact:

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