

**Submission
No 18**

PROFESSIONAL ENGINEERS REGISTRATION BILL 2019

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Inquiry into the Professional Engineers Registration Bill 2019 Submission

Dear Committee Members,

I write to lodge a submission to your Inquiry into the proposed Engineer Registration Bill.

I support engineer registration in NSW.

I am a Civil Engineer graduating from the University of Newcastle in 2007. In 2012 I obtained chartered status with Engineers Australia. It was confusing that other engineers did not take further steps in becoming accredited as an engineer after graduation but I soon became aware of the lack of legislation supporting qualified engineers being the reason that graduate engineers would not take this extra step.

I have also moved from Newcastle where I obtained my degree to regional NSW and found that there are many engineering operators who call themselves engineers however have minimal qualifications, some attending 1 to 2 years of TAFE and then calling themselves fully qualified engineers. These particular engineers lack proper professional judgement and understanding. As there is no registration scheme, engineers do not understand the rigour of obtaining full degrees and therefore there is confusion in the industry about what standard of engineering is acceptable to minimise risk to the public. The Bill needs to clearly define that the minimum standard should be a 4 year study full time equivalent degree from a recognised university or training institution as recognised by Engineers Australia when obtaining Chartered Status. Engineers Australia clearly outline the difference between this level of study and the study level obtained from 1 to 2 years of TAFE. This designation identifies the difference between a fully qualified engineer and other professionals that support these engineers in other roles like technologists. These levels should be clearly outlined in the bill to minimise risk to the public, providing a framework for the profession that minimises confusion.

The failures in building construction in Sydney is a result of lack of registration, but this definitely extends into other areas of engineering like roads, bridges, stormwater and flooding to name a few. Doctors have specialist categories and the engineering profession is not different, so buildings and structural engineering is not the only area that needs attention. This is why it is so important that the registration scheme clearly defines levels of registration required for engineers practicing in other areas, like civil engineering. Some guidance can be obtained from the building professionals board levels of accreditation as there are already established accreditation categories for certification of roads, stormwater and subdivisions, to name a few; it is puzzling to me that there are not many engineers following this accreditation scheme. I am now aware that the reason is the lack of legislation.

Insurance is another area that the bill needs to pay close attention to. It can be cumbersome for an engineer to understand the levels of insurance that they actually require to cover themselves and the insurance industries will tend to take advantage of this by increasing their premiums. The Bill needs to set a standard for insurance.

Minimisation of risk can be addressed by requiring a primary and secondary checking engineer on every piece of critical infrastructure. This is a fundamental aspect and requirement when obtaining an engineering degree, however some engineers who have practiced for a long time have forgotten how critical this is. A primary and secondary checking engineer minimises the risk of human error and allows for collaboration and a second opinion when solving engineering problems. This should not be to discourage sole engineering operators, however the bill should encourage engineering

professionals to work together collaboratively in partnerships to engage a fully independent checking engineer.

Registration of engineers in New South Wales is long overdue. Right now, anyone can call themselves an engineer in NSW which is not the case with any other related profession.

Other professions have had licensing and registration regimes in place for many years to guarantee professional standards, protect the profession from unscrupulous and unqualified operators and protect the public. Examples of other professions where this is the case and where it has had an impact on public safety include: architects, builders, electricians, plumbers, doctors, nurses, and there are many others.

When you consider that engineers sit at the apex of the building and construction process – scoping, designing and overseeing the work of other trades and professionals, it underlines how absurd the current situation is. Introducing engineer registration is simply a matter of public-interest and closes a long-time regulatory gap which makes no sense and exposes the public to risks.

I understand why high-profile residential construction failures at Mascot and Opal towers have been the focus in the media, but these crises are indicative of a wider problem that goes well beyond the vertical building sector. Our major projects such as roads, bridges, rail, water & energy projects should not be exposed to unqualified people who can only call themselves engineers because there is no registration system.

There is plenty of evidence that a lack of engineering input is affecting project outcomes. This includes the problem of public safety, but it also blocks innovation and leads to major projects running overtime and over budget. There are several recent examples of public and worker safety being compromised, but there is also a litany of issues with cost overruns and delays attributable to poor scoping of engineering dependent/critical projects.

People deserve to know if they are employing a properly qualified and experienced engineer whether they're building a bridge, an apartment or a new energy generator. And the public deserve to know that the infrastructure and services they use are safe. I urge you to support the Engineer Registration Bill to give the public confidence and workers in the profession the respect they deserve.

Should you wish to discuss my submission further I am available on [REDACTED] or email [REDACTED].

Yours sincerely,

Leon Petrohelos

Chartered Civil Engineer

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