

# ACT Professional Engineer Registration Scheme 2022

Submission to ACT Government Public Consultation

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## Introduction

Engineers Australia welcomes the opportunity to provide a submission to the Australian Capital Territory (ACT) Government, Environment, Planning and Sustainable Development Directorate (EPSDD) on the Registration Scheme for Professional Engineers Consultation Paper.

Engineers Australia's contribution is designed to assist in delivering a better-performing engineering sector with greater accountability of those involved. Our work is supported by over 110,000 members, including about 3,000 in the ACT. The submission is informed by our ACT-based members who have provided feedback as part of a member-wide consultation process.

Engineers Australia's response includes general recommendations and responses to the consultation questions from our members. We are also looking forward to furthering our professional association-specific feedback with you as you consider the feedback provided by all parties during this phase of the consultation.

## About Engineers Australia

Engineers Australia is the peak member-based professional association for engineers. Established in 1919, Engineers Australia is constituted by Royal Charter to advance the science and practice of engineering for the benefit of the community.

Engineers Australia maintains national professional standards, benchmarked against international norms. As Australia's signatory to the International Engineering Alliance, this includes accreditation of university engineering programs and assessment of competence to practice independently.

Engineers Australia also manages Australia's largest voluntary register for engineers, the National Engineer Register (NER). Given the broad membership coverage and experience we have of the engineering profession, Engineers Australia is well placed to provide informed views to the Australian Capital Territory Government on the Registration of Professional Engineers in the ACT.

## Contact Details

To discuss the contents of this submission further, please contact **Caitlin Buttress**, ACT General Manager, at [ACTRegistration@engineersaustralia.org.au](mailto:ACTRegistration@engineersaustralia.org.au).

## Benefits of Registration

Registration of professional engineers in the ACT is the first step in creating a system to recognise competent engineers and exclude those who are unsuitable to conduct activities required by a competent engineer. There are five key benefits to a registration scheme:

### 1. Improvements to industry and consumer information.

A registration scheme will assist the market by providing a mechanism to consumers and clients of engineering work, to ascertain the competence and experience levels of engineering practitioners.

### 2. Reducing risks to public health and safety and unnecessary costs to economy.

Registration helps to ensure that only those satisfying the following requirements (Australian standards) can provide engineering services:

1. suitable baseline qualifications (that is, an appropriately recognised (Washington Accord) engineering degree),
2. sufficient relevant experience, and
3. demonstrated competencies for independent technical practice (assessed against Engineers Australia's competence elements, which are aligned to international benchmarks), and
4. a demonstrated commitment to ongoing training and professional development

These requirements form the basis for registration on the National Engineering Register as a professional engineer.

Risks to the public resulting from the provision of engineering services by unqualified or incompetent persons have four elements:

- Health: through such things as badly designed or 'sick' buildings (poor air-conditioning, rising damp, low natural light levels).
- Safety: through the collapse or other significant failure of buildings such as was seen in the Opal and Mascot Towers of Sydney in 2018-2019.
- Engineered system performance: sub-standard system function or performance resulting from poor engineering work can result in a wide range of implications ranging from cost and inefficiency through to social implications. Economic: involving financial costs such as design and construction costs, litigation expenses, lost production and rectification costs. The registration of engineering practitioners is designed to reduce these risks.

### 3. Recognition of professional competency.

Businesses and the community expect high standards of practice from engineering practitioners. As with other professionals, engineering practitioners have a high degree of responsibility and liability imposed on them by courts and regulators. A statutory registration scheme would identify those persons whose academic qualifications, cumulative and current experience, competencies and commitment to ethical conduct and continuing professional development are the standard expected of the ordinary skilled person exercising and professing to have that skill.

### 5. Legislative efficiency.

A registration scheme with requirements that match those of other jurisdictions creates legislative efficiency. It is a means of ensuring that both a common standard for engineering practice is in place in all states and territories and that engineers do not have to comply with the different requirements in each jurisdiction.

## Consultation questions

### 1. Do you foresee any concerns with the definition of professional engineering services proposed to be used in the ACT scheme?

Engineers Australia notes that the definition of "senior professional engineer" at p5, is undefined and subject to wide interpretation across all Australian jurisdictions and does foresee concerns with the exclusion of prescriptive standards.

The perceived implication may be that:

- designing to an Australian Standard or TCCS Municipal Infrastructure Technical Specifications (MITS) or the Municipal Infrastructure Standards (MIS) will not be considered a professional engineering service, or
- it may be interpreted that if an engineer is designing to a Standard, registration is not required, or
- TCCS, Icon, and ACTEW may require a higher standard than "ACT registration".

This definition in other jurisdictions has proven to be unclear to many people, but Engineers Australia accepts that clarity is difficult to achieve. We recommend removal of the term "senior professional engineer" and instead use 'a professional engineer competent for independent technical practice'.

Engineers Australia also recommends that the ACT Government should commit to providing an advice service, which allows individual engineers to seek clarity on whether the services being delivered would be considered professional engineering under the Scheme (and if they are working to a prescriptive standard).

It will be important to ensure that this definition remains consistent across jurisdictions to enable mutual recognition wherever possible,

**2. Do you agree that these are the five initial areas of engineering that should be incorporated into the ACT scheme? If not, what areas do you think should be removed or included instead?**

Engineers Australia agrees that the five areas of engineering outlined in the Consultation Document are appropriate for the initial implementation of the Scheme. We would however seek a commitment and proposed timeframes for expansion to other areas of engineering.

Some members that participated in the consultation questioned whether geotechnical engineering should be a separate area. In any case, consistency in definitions of areas of engineering across jurisdictions is vital.

Engineers Australia also encourages further clarity regarding the focus areas of mechanical engineering; particularly whether materials engineering or Building Management Systems (BMS) would be considered a subset – by way of example.

It will be important for the definitions of areas of engineering to be consistent across jurisdictions to provide clarity.

**3. Do you support civil and structural engineering being identified as separate areas of engineering? Do you think structural engineering is more appropriately a sub-set within the area of civil engineering?**

Engineers Australia supports the distinction of civil and structural engineering, given that these are identified as separate Colleges by the Institution. We do note that there are certainly overlaps between the disciplines, which could potentially require civil works to also be signed off by a registered structural engineer if a civil engineer is not assessed as having any structural experience. We note that this is likely to result in some members being registered in both categories.

Further, a Mechanical Engineering foundation qualification can, in certain industries, lead to an individual being competent in the structural area of engineering.

Separate is appropriate; Engineers Australia recommends this approach rather than including structural as a subset within the area of civil engineering. In Victoria's Scheme, structural engineering is included as both a subset and separate area which can cause confusion.

**4. Do you foresee any difficulties with current engineers being able to meet the outlined qualifications, experience and competency eligibility criteria?**

Chartered Professional Engineers (CPEng) on the National Engineering Register (NER) should meet the Scheme's requirements and should automatically be recognised. The NER has appropriate eligibility criteria for a registration scheme and should be considered a benchmark for State and Territory schemes, demonstrating required standards and community expectations for engineers.

Engineers who have taken a career break (for example parental leave or illness) could have difficulty demonstrating the five years' experience within the past ten years. Where instances like this do cause difficulties, the alternative pathways approach outlined can also allow for circumstances to be assessed on an individual basis.

While Engineers Australia supports high benchmarks for engineering professionals, the competency requirements in the ACT Professional Engineer Registration Scheme could be reduced to five (rather than eight) Stage 2 Competency Elements. A consequence of the gap between five and eight elements across jurisdictions is application of Mutual Recognition across borders. It is plausible that engineers seeking registration in the ACT may opt for first registration in other jurisdictions where only five elements are required. This risk is reduced through 'home' state provisions within mutual recognition legislation but should still be considered.

It is recommended that the requirements acknowledge that the naming of undergraduate qualifications (including accredited qualifications) do not always obviously align with a specified

area of engineering. In these cases, the experience and competency assessment should take this into account.

**5. Are there any other qualifications, experience and competency requirements the ACT should consider including in its scheme?**

Engineers Australia recommends that engineers who are already Chartered and/or on the NER should be recognised by Mutual Recognition (with a preference for Automatic). We do not recommend any other particular qualifications, experience or competency requirements to be added to the proposed Scheme.

To ensure that the benefits of registration described above are realised, any proposal to vary the scheme should not diminish the intended and agreed standards. The proposed requirements include internationally benchmarked qualifications (or equivalent), appropriate and relevant experience, assessment against Engineers Australia competence elements for independent practice, and a demonstrated commitment to continuing professional development. These standards are benchmarked against and aligned to internationally agreed International Engineering Alliance (IEA) Graduate Attributes and Professional Competencies.

**6. What alternative pathways should the scheme consider for registration?**

Engineers Australia recommends that any alternative pathways should not be of a lesser standard than that required to be a Chartered Professional Engineer.

The concept of allowing alternative pathways is supported, but only assessment schemes which have qualification equivalence assessments which have been validated as equivalent to either the accepted Australian National Engineer Register or by the International Engineering Alliance. Any alternative pathways should be required to provide independent evidence that the ACT Government's specified benchmarks for qualifications, experience and competency have been assessed.

Mutual Recognition (and Automatic Mutual Recognition) of mandatory registration from other Australian and New Zealand jurisdictions is important. This extends to recognition of assessment under membership schemes of reputable professional engineering bodies where it can be independently demonstrated that the Australian standards are understood, and the applied standards are equivalent to specified Australian standards or IEA standards.

**7. Is the criteria outlined above appropriate for determining whether an applicant is fit to practice as a registered engineer in the ACT?**

The fitness to practice requirements, which are in addition to the qualifications, experience and competency requirements appear largely reasonable. Engineers Australia recommends that proceedings that *have not been concluded* against the applicant should not be considered as this does not apply the principle of natural justice.

The ACT Government may consider removing references to insolvency and bankruptcy; we do not recognise the impacts of this on the ability to register as a Professional Engineer.

The ACT Government may also include identification of applicants that have been refused membership of a professional body or have been assessed by any other assessment entity as not eligible for registration. Applicants should not be allowed to "shop around" until they find an assessment entity willing to approve their assessment of qualifications, experience and competency.

**8. Do you support the proposed approach to assessment entities?**

Assessment of qualifications, experience and competencies requires a demonstrated track record and robust assessment practices that are independently validated to Australian or IEA standards. It is recommended that those involved in reviewing assessment entity applications on behalf of the ACT Government have appropriate knowledge of national and international standards, and against how these can be assessed. Moderation that all assessment entities are assessing to the same standard is important. Similar to other jurisdictions, it is highly recommended that

assessment of non-Washington accord qualifications is undertaken by Engineers Australia as the Australian signatory to the Washington Accord, and the Australian Government's migration skills assessing authority for engineering occupations.

The ACT Government should provide clarity regarding the role of assessment entities in any investigation and disciplinary action required when a complaint is made against a registered engineer. This will need a co-regulatory approach that acknowledges the authority and limitations of each party. This may include how parties can work together to proactively monitor the performance of registered engineers, and investigate complaints brought to their attention within their respective domains.

**9. Do you support the proposed approach to professional indemnity insurance?**

Engineers Australia notes that the proposed approach of separating professional indemnity insurance (PI) from registration eligibility seems appropriate. If it is a requirement of practice, guidance should be provided on what the ACT Government thinks that a registered engineer might consider when determining an appropriate amount of PI insurance.

We support Assessment Entities not considering the matter of PI insurance when considering registration eligibility. PI insurance is a contractual matter that varies between contracts, and over time.

**10. Is there any other information that should be shown on a public register?**

No further information should be shown on a public register. Registered engineers might however like to use the publicly available register as a means of attaining clients. Therefore, the register could, if elected by the registered engineer, show limited contact information in order to allow for this.

**11. How long do you think information about a former registered engineer should be on the public register?**

Engineers Australia recommends that information should be on the public register while practising as a registered engineer, and for period after. Further consideration is required to determine what the period is.

**12. Do you have any views on what the phased introduction should look like?**

If existing engineers on the NER will be recognised under the scheme, the length of time to phase in registration can be reduced. Engineers Australia commends Automatic Mutual Recognition (AMR) to enable day one registration of many engineers.

Engineers Australia supports a phased introduction by area of engineering similar to that in Victoria. Engineers working in the building industry could have earlier phase-in dates than those outside the building industry.

Engineers Australia suggests that registration to all disciplines can open on the same day, with transition dates for when compliance is required by each area of engineering – for example, registration may be open to all areas of engineering in July 2023, but each area of engineering may have a different phase in period before registration was mandatory. This would enable those who may be eligible for registration in more than one area to commence, as well as optimising commencement in that the registration process can be tracked at the pace of the ACT government and the Registrar.

**13. Are there any other comments you would like to make in relation to the proposed scheme?**

An approach to CPD is not advised in the consultation document but should not be less rigorous than Engineers Australia. It is essential the registered engineers remain technically current with a working knowledge of industry acceptable and emerging practice. Engineers Australia's requirements are consistent with international expectations and individuals are audited for compliance.

The term "senior professional engineer" will cause confusion and is unnecessary. Engineers who are senior in age or experience may choose to work under direct supervision of a registered engineer and so won't need to be registered. The term "professional engineer competent for independent technical practice" or similar is more representative of whom is eligible to be registered.

Clear guidance on what will be considered a prescriptive standard will be required.

The ACT Government may consider introducing a non-practicing engineer registration (at reduced registration fee). This may be valuable for those registered engineers who take career breaks but wish to maintain their status while not practising

The proposed Code of Practice should be reviewed against Engineers Australia's Code of Ethics to ensure that a registered engineer is able to comply with both.

Engineers Australia recommends that the Registrar be advised by a Board of Professional Engineers, including the ACT Chief Engineer. A similar model to that of the ACT Architects Board could be considered in implementation or the Board of Professional Engineers Queensland

Finally, Engineers Australia also recommends that consideration is given to how the ACT Registrar can be informed by other regulators, industry and the peak Australian professional body. Alignment across jurisdictions, within the international context, is considered essential. As the Australia representative to the International Engineering Alliance (IEA), Engineers Australia can represent regulators and Australian requirements. Engineers Australia acting in this capacity to maintain and enhance Australian standards for the profession is separate to its potential role as an approved assessment entity.

We look forward to continuing discussions with the ACT Government as they progress developing the Professional Engineer Registration Scheme. Engineers Australia would be pleased to discuss this submission and the Scheme in more detail at any time.



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