



ENGINEERS
AUSTRALIA

Queensland Building Plan

Response from Engineers Australia

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About Engineers Australia

The Institution of Engineers Australia (Engineers Australia) is the not-for-profit 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 is the trusted voice of the profession. We are the global home for engineering professionals renowned as leaders in shaping a sustainable world.

Engineers in the building sector

Engineers Australia represents all engineers, including those who work in the construction sector and therefore integral to the success of the Queensland Building Plan. Nationally there are circa 60,000 engineers involved in the construction and infrastructure sectors from a wide range of disciplines including: civil, structural, mechanical, building services and fire engineers.

Engineers perform many roles from design to construction and certification of the final structures. They work with architects to ensure that chosen materials are fit for purpose and meet Australian Standards. Engineers are essential for considering the design aesthetic and how the structure might affect its surroundings. Energy efficiency is often forgotten in energy security and global warming debates, but is one of the cheapest and most effective ways to reduce energy consumption; engineers are vital to producing the next generation of safe, economical and environmentally-sound structures.

In a wider sense, Engineers Australia has a significant role in ensuring that engineering maintains a high standard of professionalism. Engineers Australia does this by:

- Accrediting all Australian university engineering courses
- Being the largest provider of CPD to the engineering profession
- Operating the largest voluntary register for engineers, the National Engineering Registers (NER), which is a pathway for registration under the Queensland Professional Engineers Act.

Introduction

Engineers Australia thanks the Queensland Government for the opportunity to comment on the Queensland Building Plan.

Engineers are critical in the construction pipeline; from footings and foundations, to design and fire safety, engineers provide the knowledge and advice to ensure the success of our built environment. This can be seen in recent changes in NSW where engineering and engineers are now being used to help with building certification, and in Victoria where the position of the Chief Engineer within Projects Victoria is being installed to assist the Victorian government deliver better outcomes in the built environment; while the ACT Government is currently working with Engineers Australia to establish a similar office.

In providing our feedback on the Queensland Building Plan we note that many of the policy proposals in this current review were covered by Andrew Wallace in his comprehensive 2014 Review of the Building Act 1975 and building certification. We note that Mr Wallace spent considerable time speaking with relevant stakeholders involved in the building and certification space and that a comprehensive set of proposals were put forward by him at that time.

Engineers Australia refers the government back to the Wallace review, and this submission focuses only on areas that may directly affect engineers and engineering in Queensland.

Responses to consultation questions

Introduce a new fourth “inspector” level of building certifier.

Other jurisdictions including NSW¹ and Victoria² use the “fourth” level of inspection within their regulatory framework.

In QLD, the question of introducing a fourth level of building certifier was covered in 2014 during the Wallace Review.³ At that time, the fourth level inspector had “in principle” support from other relevant stakeholders such as the Australian Institute of Building Surveyors (AIBS), the peak body for building surveyors and certifiers.⁴

Wallace suggested that a possible reason for the low numbers of licensed certifiers in Queensland may be related to the lack of an inspector level. As Queensland has not instigated the recommendation of Wallace, this hypothesis cannot be verified. However, it should be noted that in Andrew Lambert’s independent review of the building professionals Act 2005 in 2015, feedback was given that there are fewer people entering becoming certifiers.

While the introduction of a fourth level of certifier may lead to more licenses being issued; it also may not lead to an increase in the number of certifiers over the longer term. General trends in other jurisdictions show a reticence of younger people becoming certifiers, even in states where a fourth level already exists.

Both Wallace and Lambert note that numbers of certifiers are either stagnant or declining, and the pipeline for more certifiers is below a sustainable level.

As building approvals increase over time, as is a norm, the workload will increase for certifiers. Even with the addition of an additional level unless structural reform, and alternative thinking around enticing more people to become certifiers, then the workload capacity issues will remain the same.

Use existing government and industry consultation networks to consider strategies for encouraging more people into the certification profession.

Engineers Australia strongly supports this proposal. The challenge of recruiting more people into the certification profession is not confined to Queensland. As Michael Lambert noted in his independent review of the Building Professionals Act in NSW; the longer term numbers of building certifiers, without targeted and reformed thinking, are projected to drop by between approximately 500 -800⁵ within 10 years in that state.

Similarly, Andrew Wallace noted in his 2014 review for the Queensland Building Construction Commission (QBCC) that the number of certifiers in the profession approaching retirement age is

¹ <http://www.bpb.nsw.gov.au/accreditation-statement-a4-certifiers>

² <http://www.vba.vic.gov.au/practitioners/building-registrations/building-inspector>

³ <http://www.hpw.qld.gov.au/SiteCollectionDocuments/TheWallaceReport.pdf>

⁴ <http://www.hpw.qld.gov.au/SiteCollectionDocuments/TheWallaceReport.pdf>

⁵ Lambert, A 2015 Independent Review of the building professionals act 2005 pp234

around 20 per cent and that the percentage of new graduates and entrants into building certification will fall short of the numbers required to fill the vacancies that will occur from natural attrition such as retirement, and migration..⁶

Feedback to both reviews was that there are structural issues in the certification profession that need focus from the construction sector, industry and from government to increase the pipeline of certifiers and increase capacity.

Government engaging with industry is the most effective method, and this should also include the education sector as industry has noted that the number of university degree courses needs to be examined.

Government and industry also need to find solutions for removing career barriers and therefore attract younger participants in becoming certifiers.

Expanding the pool of professions that can undertake certification work is a live option and one that has industry support⁷ as well as being enacted already in other jurisdictions.

NSW has expanded accreditation to engineers through the Building Professionals Board (BPB) after recommendations from Lambert and the support of the AIBS, this will allow for more certifiers into the system as well as providing longer term results through training.

While introducing civil engineers into the certification system will help to reduce pressure on the pipeline going forward, this is only a medium term solution. Longer term reform of the entry and career trajectories for certifiers is needed to ensure that Queensland continues to have an adequate supply of certifiers to meet demand as the Queensland economy moves forward.

Introducing additional mandatory inspection of fire separation for attached class 1a buildings.

Engineers Australia supports this measure, in principle, and looks forward to working with the QBCC and the Queensland Government to finalise the structure of the amendments and its requirements.

Improving the inspection guidelines for class 2-9 buildings to clarify and better highlight the risks associated with fire separation.

Engineers Australia supports this measure, in principle, and looks forward to working with the QBCC and the Queensland Government to finalise the structure of the amendments and its requirements.

Introduce a requirement for a waterproofing license to be held regardless of the value of waterproofing work.

Engineers Australia supports this measure, in principle, and looks forward to working with the QBCC and the Queensland Government to finalise the structure of the amendments and its requirements.

⁶ <http://www.hpw.qld.gov.au/SiteCollectionDocuments/TheWallaceReport.pdf>

⁷ http://bpb.nsw.gov.au/sites/default/files/public/Archive/BPActReviewDP_Australian%20Institute%20of%20Building%20Surveyors.pdf

Require mandatory accreditation of house energy assessors.

Engineers Australia supports this measure, in principle, and looks forward to working with the QBCC and the Queensland Government to finalise the structure of the amendments and its requirements.

Improving the code of conduct and legislative provisions relating to the code of conduct of certifiers.

Engineers Australia supports this measure and looks forward to working with the QBCC to help establish a new code.

Conflict between working in the public interest and the requirement to receive remuneration from a client causes continual issues for professionals. Relieving this issue is clarity on the definitions of conflict of interest.

Commentary on the issues of ethics and conduct were covered by Wallace in his review.⁸

Professional associations, such as Engineers Australia⁹ carry codes of ethics and codes of conduct that outline how conflicts of interests for their members should be maintained. Additionally, for engineers in Queensland the BPEQ defines under 2.5 of the Codes of Conduct that registrants are to inform clients of any current or potential conflicts of interest¹⁰.

Codes of Conduct and codes of ethics are instruments that need reviewing at regular intervals to ensure that the changing nature of business is matched by public and industry expectations.

The Victorian Building Authority in its review of the current Code of Conduct refers to 'perceived' conflicts of interest¹¹ similar to the BPEQ. The fundamental principle behind this, and other cases of using the term 'perceived' is to ensure transparency to current and existing clients.

For many professionals, working in the public interest is a paramount foundation of their profession. As members of Engineers Australia, engineers commit to practise in accordance with the association's Code of Ethics that are a requirement of the Royal Charter, and accept that they will be held accountable for their conduct under Engineers Australia's disciplinary regulations. As noted earlier in our submission members of Engineers Australia are bound through our Charter to *promote the science and practice of engineering for the benefit of the community*. Similarly, the Queensland Professional Engineers Act ensures that engineers work in the public interest.

Defining consistent and tangible codes of conduct also provide the public with the confidence that the professionals that are engaged are subject to codes that are tangible and enforceable. This, in turn, raises the profile of the profession.

⁸ <http://www.hpw.qld.gov.au/SiteCollectionDocuments/TheWallaceReport.pdf>

⁹ <https://www.engineersaustralia.org.au/sites/default/files/shado/About%20Us/Overview/Governance/codeofethics2010.pdf>

¹⁰ <http://www.bpeq.qld.gov.au/images/documents/Forms/131007%20Code%20of%20Practice%20FINAL-HPW%20updated%20Oct13.pdf>

¹¹ http://www.vba.vic.gov.au/_data/assets/pdf_file/0003/50583/Code-of-Conduct-Protocol_DRAFT.pdf

Improving Continuing Professional Development (CPD) for certifiers, including regular review of CPD schemes and the ability to require specific CPD activities to be completed.

Engineers Australia supports this proposal. CPD is the cornerstone of public confidence in a profession, as it mitigates risk to the consumer through the ongoing achievement of knowledge.

Professional associations, such as Engineers Australia, provides within their rules or regulations CPD requirements on their members to ensure that those members can provide frank and fearless advice based on the most up to date knowledge and study.

For example, Chartered Engineers are required to complete CPD, which is recorded by the member and can be audited by Engineers Australia to ensure that member's learning is current and relevant to their specific pathway.

In a co-regulatory style environment similar to the framework that is instilled with the QBCC, the requirements of CPD are determined by the accreditation body via its membership. This arrangement is supported because the profession and its peak national body are aware of what learning is required overall. However, there is a case for the statutory authority to maintain an oversight of CPD, and in some cases ensure that a set number of hours per year or triennial, for example, are maintained.

The BPEQ requires that all engineers are to maintain 150 hours of CPD over three years to maintain their registration. CPD can be obtained from a number of organisations as well as from the peak national professional association, Engineers Australia.

There are some instances where specific subjects may need to be covered. In some instances, statutory authorities choose to undertake their own CPD seminars or workshops which can be targeted to specific topics that the authority perceives as being necessary.

Yearly audits of registrants' CPD requirements can act as a streamlined way of ensuring that CPD is being adhered to. Audits usually use a random sample to determine whether a consistent approach is being taken by professional associations.

One of the most common issues for maintaining CPD hours is accessibility to learning. As a national body Engineers Australia is acutely aware of the needs of members in regional and remote areas who find it difficult to get to seminars or workshops

Increasing the use of online webinars and online learning will be central to allowing certifiers in regional and rural areas of Queensland to comply with and maintain CPD requirements.

Organisations such as Engineers Australia already provide online platforms for member to gain access to seminars online; additionally, Engineers Australia's Engineers Education Australia (EEA) provides CPD on topics such as the Queensland Professional Engineers Act and the Engineers Australia Codes of Ethics which are accessible at any time.

Increase flexibility and transparency in the licensing and accreditation framework for building certifiers.

In principle Engineers Australia supports the commentary for this proposal, as it in many ways reflects on the submission made by AIBS to the Wallace Review in 2014¹²

Industry bodies such as AIBS set benchmarks at what the profession expects and this ensures that the entry standards to the profession are consistently reviewed and maintained.

Transparent review and appeal processes would ensure that case by case situations are met. It can also provide flexibility to enable those who may not have a specific qualification, but have vast experience, to gain a license. This should be measured through consultation between the QBCC and AIBS to ensure that any expansion or variance is in line with the industry standards.

Rename the Certificate of Classification as a “Certificate of Occupancy” and review its contents

Engineers Australia agrees with this proposal as it clarifies the certificate and brings consistency in terminology with other state and territory jurisdictions.

Non-conforming building products

Engineers Australia broadly agrees with the proposals listed in the discussion paper. We broadly agree with the concept that an independent authority should have leadership in Queensland in the review of building products.

Engineers Australia encourages the appointment of competent persons, such as engineers, in the building and construction process to reduce risk in the use of non-conforming products being used in the construction sector.

The Senior Officers Group (SOG) report on strategies to address risks related to non-conforming building products provided a valuable overview of the complexity of the regulatory framework applicable to building product conformity.

The SOG report noted that “a building certifier/surveyor may accept certification from other parties (e.g. engineers for structural work), but they must be satisfied the person is appropriately qualified to provide the relevant certification.”

The role of the engineer is to enable consumers of engineering services to have confidence to ensure that design, specification and certification work performed by engineers is undertaken by people with the necessary skills and experience.

In Queensland, the *Professional Engineers Act 2002* (Qld) prohibits persons who are not registered from offering or providing professional engineering services. The Board of Professional Engineers of Queensland administers the legislation.

Fully competent engineers hold accredited academic credentials in engineering and then complete a process of professional formation that bridges the gap between academic studies and engineering practice. The time necessary to become an engineer is very long, academic studies

¹² <http://www.hpw.qld.gov.au/SiteCollectionDocuments/TheWallaceReport.pdf>

are specific and highly analytical and the skills of engineering practice are vital to successful outcomes for the individual and society.

Engineers Australia's National Engineering Register (NER) is the uniform national benchmark standard of professionalism in engineering practice. The NER is a compliance benchmark that corresponds to the standards of competence required in legislated systems and identifies individuals who satisfy the following criteria:

- Recognised academic qualifications in engineering.
- Cumulative (five years in the past seven years) and current experience in their chosen area of engineering practice.
- Commitment to and practice of ethical standards in engineering practice.
- Commitment to and practice of an appropriate standard of continuing professional development.
- Have the benefit of professional indemnity insurance and demonstrate that they can maintain this benefit throughout the provision of engineering services.

The NER is a publicly searchable database providing a voluntary national system of registration for the engineering team in both the private and public sectors in Australia.

The NER aims to provide consistency in standards of engineering practice across states and territories and to facilitate any new legislated approaches.

Building practitioners such as engineers have responsibilities to ensure their designs will function correctly and that the appropriate building materials are specified.

Engineers Australia believes that the Queensland system of registering engineers is an important mechanism for ensuring that building designers and product specifiers have the knowledge required to prevent non-conforming building products from being used. Engineers Australia would welcome any opportunity to work with the Queensland Government to advance any new work in addressing risks related to non-conforming building products.



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