Policy & Advocacy report 2023

Practice Standard for Professional Engineers Submission

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ENGINEERS
AUSTRALIA

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Practice Standard for Professional Engineers Submission

Engineers Australia
11 National Circuit, Barton ACT 2600
Tel: +61 2 6270 6555
Email: policy@engineersaustralia.org.au

engineersaustralia.org.au

Executive Summary

Engineers Australia supports the work of the New South Wales (NSW) Government to reform the building industry in NSW, and to implement the recommendations of the Building Confidence Report.

In 2020, NSW enacted registration and regulation of professional engineers in the *Design and Building Practitioners Act*. However, some of the provisions in the *Design and Building Practitioners Act* were built on assumptions that lead to over-complicated processes for certification, rectification and redress. The Regulations, Code of Practice and now draft Practice Standard for Professional Engineers have been drafted on the underlying assumption that all professional engineers in NSW work as sole-trader consulting engineers on limited classes of buildings.

Engineers Australia is concerned that this approach is not in the best interests of NSW or professional engineers who live and work in this state. There are areas of key concern that Engineers Australia recommend be addressed before this Practice Standard is published and the new obligations contained within are enforced by the regulator as a condition of registration for engineers. If these concerns are not addressed, it will make it more difficult and unattractive for engineers to do professional engineering work in NSW.

Engineers Australia's main areas of concern are:

1. Inconsistency in regulation of engineering work across the country.
2. The introduction of obligations labelled fit for purpose.
3. The lack of clarity around the insurance requirements for engineers.
4. The details of a requirement for Independent Third-Party Review (ITPR).
5. The details of a requirement for on-site inspections.

This interim response to the Practice Standard for Professional Engineers is informed by these concerns and preliminary member feedback. Engineers Australia is currently seeking advice and input from its broader member base on the details proposed in the Practice Standard for Professional Engineers and the detailed questions posed in the Regulatory Impact Statement. It should also be read in conjunction with Engineers Australia's submissions to the NSW Government on Mandating Decennial Liability Insurance and Licensing Proposals. Engineers Australia will provide more detailed comments on the questions posed in the Regulatory Impact Statement when we have considered the detailed feedback from our members.

Recommendations

Engineers Australia recommends that the NSW Government make it clear that the draft Practice Standard applies only to consulting engineers working on limited classes of buildings. The drafting of the Practice Standard should be amended to:

1) Distinguish between the roles and capacities of individual employee engineers and the businesses that employ them.
2) Distinguish between:
   a) Existing legal obligations (insurance, duty of care, Code of Practice, etc.)
   b) New legal obligations that are given effect through the Practice Standard and
   c) What is informative or advisory material.
3) Remove obligations on employee engineers to comply with agreements to which they are not a party. i.e., insurance, duty of care
4) Avoid wording or requirements (e.g., compliance with the NCC) that will prevent engineers in NSW from doing professional engineering work on projects or processes in other jurisdictions.
5) Avoid wording (e.g., Fit for Purpose) that may trigger insurance exclusions or limit insurance cover with the unintended consequences of limiting what professional engineering work can be done in NSW.
6) Introduce obligations for on-site inspections and Independent third-party reviews through the appropriate legislative instruments i.e., *Environmental Planning and Assessment Act* or Building Bill.

Engineers Australia urges the NSW Government to work with other states and territories on nationally consistent regulations that will help to improve building outcomes for all. This includes bringing competency assessments for engineers into line with national and international standards and the requirements in other states and territories.

Introduction

Engineers Australia supports the efforts of the NSW Government to reform the building industry in NSW and to implement the recommendations of the Building Confidence Report.

Engineers Australia is the peak body of the engineering profession with representation from a vast array of engineering disciplines. We are constituted by Royal Charter and our mission is to advance the science and practice of engineering for the benefit of the communities in which we live. Engineers Australia is the collective voice of over 115,000 members across Australia with approximately 25,000 in NSW alone.

In 2020, NSW enacted registration and regulation of professional engineers in the *Design and Building Practitioners Act*. However, some of the provisions in the *Design and Building Practitioners Act* were built on assumptions that lead to over-complicated processes for certification, rectification and redress. The Regulations, Code of Practice and now Practice Standard for Professional Engineers have been drafted on the underlying assumption that all professional engineers in NSW work as sole-trader consulting engineers on limited classes of buildings.

Engineers Australia has significant concerns that this approach is not in the best interests of NSW or the professional engineers who live and work there.

The inherent assumption by NSW that all professional engineers work as sole-trader consultants in the building industry leads to unintended outcomes that are apparent in this Practice Standard including:

- Ignoring the difference between consulting engineering businesses which enter into contracts and take out insurance and their employees who do not.
- Placing legal liability and insurance obligations on individual employees rather than the employing business, making it harder and more expensive for consumers to get redress for faulty work.
- Placing practice obligations such as contract provisions, site inspections or third-party reviews on individual employees which they have no power to implement.
- Limiting professional engineering work in NSW to only those forms of consulting work for which Professional Indemnity Insurance (PII) is available.

Engineers Australia has raised these concerns previously with the NSW Government. This interim response to the Practice Standard for Professional Engineers is informed by these concerns and preliminary member feedback. Engineers Australia is currently seeking advice and input from its broader member base on the details proposed in the Practice Standard for Professional Engineers and the detailed questions posed in the Regulatory Impact Statement. This interim response should also be read in conjunction with Engineers Australia's submissions to the NSW Government on Mandating Decennial Liability Insurance and Licensing Proposals. Engineers Australia will provide more detailed comments on the questions posed in the Regulatory Impact Statement when we have considered the detailed feedback from our members.

Basis of the Practice Standard

Inconsistent regulation of engineering work

Inconsistency and fragmentation in regulation can cause problems in the implementation phase of schemes including unjustified compliance burden and cost, impediments to information sharing and national initiatives, and confusion about roles and responsibilities. National consistency, therefore, should be one of the primary goals of building regulation and engineer registration.

Engineers Australia strongly supports the consistent legislation to register professional engineers in Queensland, Victoria and the ACT and the adoption of similar legislation by other states and territories to deliver a nationally consistent registration framework. Whilst the established Professional Engineers Acts have slight variations, the move towards legislative consistency is advancing.

NSW enacted registration of professional engineers in Part 5 of the *Design and Building Practitioners Act 2020*. While this has the key definitions and scope to register professional engineers in all areas of engineering from the Queensland Act, it is contained in building industry legislation and has significant variations from the nationally consistent model in Queensland, Victoria and the ACT.

Engineers Australia is concerned that this approach is not in the best interests of NSW or professional engineers who live and work there. By adopting a nationally consistent approach, NSW has an opportunity to rectify many of the issues affecting its current registration scheme such as:

- Not fully identifying the differences between consulting engineering businesses which enter into contracts and take out insurance and their employees who do not.
- Placing legal liability and insurance obligations on individual employees rather than the employing business, potentially making it more difficult and more expensive for consumers to get redress for faulty work.
- Limiting professional engineering work in NSW to only those forms of consulting work for which Professional Indemnity Insurance is available.
- Inconsistent competency assessments of engineers that are not in line with national and international standards and the requirements in other states and territories. This means that engineers who are registered in NSW, will not be able to benefit from streamlined registration in other states and territories as they move to nationally consistent schemes. Instead, they will have to undergo another assessment process including a competency assessment, in these jurisdictions.

Allocating responsibility

The *Design and Building Practitioners Act* currently does not distinguish between individual employees or members of a design team and the employer or team leader responsible for the overall work. The Act requires declarations from each individual for their individual component of the design work but not from the employer or team leader who ensures the individual components work effectively together. This focus on the individual, which ignores the pivotal role of the businesses that actually undertake, contract and take financial responsibility for work, is an over-simplified assumption that leads to overcomplicated processes for certification, rectification and redress.

Engineers Australia is concerned that the Practice Standard increases burdens on individual engineers in areas where they are not best placed to manage, control, or minimise the impact of risk. Many of the proposals in the Practice Standard are unclear as to whether obligations are placed on the party contracted to do the engineering work or on the individual professional engineer working for the party contracted to do the work. In some cases, this may be the same but in a majority of cases these are two separate parties, and the Practice Standard can only apply to the individual. It is recommended that NSW Government re-evaluate who is best placed to deal with risks in buildings. NSW must clarify what an individual employee engineer is responsible for and what the contracted engineering company is responsible for. Examples of this in the Practice Standard include:

- In section 2.2 “A fit for purpose obligation requires that professional engineering work must be capable of being used for the intended purpose for which the professional engineer was contracted.”
- Section 6.1 “Where a registered Professional Engineer has been engaged as an independent third-party peer reviewer….”

In both these instances, the professional engineer subject to the Practice Standard is usually not the individual who is contracted, it is the company that the engineer works for who is contracted.

Recommendations

1) NSW Government to work with other states and territories on nationally consistent regulations that will help to improve building outcomes for all.
2) NSW to bring competency assessments for engineers into line with national and international standards and the requirements in other states and territories.
3) Distinguish between the roles and capacities of individual employee engineers and the businesses that employ them.

General duties of an engineer

Code of practice

Section 2.1 describes an existing obligation to comply with the Code of Practice set out in Schedule 4 of the Design and Building Practitioners Regulations. It should be marked as informative and not form part of the Practice Standard.

Fit for purpose

Section 2.2 headed “Fit for Purpose” could be misleading and/or misrepresented. Engineers Australia is concerned about the legal and insurance interpretations of this fit for purpose obligation and the consequences it may have on individual employee engineers.

"Fit for purpose" is a general term that can be given specific meaning in legislation, contracts or standards. There are specific provisions in Australian Consumer Law which exempt engineering and architectural services from fitness for purpose obligations [1]. It is not clear whether the Engineering Practice Standard is intended to modify those provisions, but Engineers Australia does not support changes to Australian Consumer Law.

Professional engineers are subject to the common law standard of care, where the professional must ‘*exercise due care, skill and diligence as a reasonably competent professional*.’ Unlike a fit for purpose guarantee, breach of the common law standard of care is within the professional’s control.

Operative requirements

The operative requirement of the fit for purpose obligation in the Practice Standard, is that each individual employee engineer must:

1. Ensure that designs comply with the requirements of the NCC, and,
2. Comply with the design brief that forms part of their contract of engagement.
3. Attend sites as necessary to see that work is being carried out in accordance with design.
4. Ensure that designs must be complete and ready for use for the stated purpose.

These obligations are described in the heading as “Fit for Purpose” but there is no provision that defines it, or states when it applies. From context it appears to reflect the suite of contractual and statutory elements set out in the table that do not require any provision in the Practice Standard to have effect. Engineers Australia is concerned by these specific requirements because:

[1] Competition and consumer Act 2010 (Cth) section 61 (4)

- The requirement to comply with the NCC may not be workable when designing buildings for other countries or in circumstances where the NCC does not apply.
- The assumption that each individual engineer is party to a contract of engagement that includes a design brief is a gross simplification and would not apply outside of consulting engineering.
- The expectation to attend sites takes no account of what is appropriate under the individual engineer's employment, the location of the site, or who has control of the site. It is not uncommon for a design engineer to handover a design to a site-based engineer to ensure work is properly carried out.
- An individual, employee engineer may only provide part of the design done by a team and may be required to provide outputs that are not complete or ready to be used for a purpose stated in a contract with the employer.

Professional Indemnity Insurance implications

It is common for Professional Indemnity Insurance (PII) policies to exclude failure to meet contractual obligations, including "fit for purpose" obligations. The requirement in the *Design and Building Practitioners Act* that engineers may only do professional engineering work if it is covered by PII may mean that engineers cannot do work that is subject to an uninsured "fit for purpose" obligation. There is no certainty that such cover will become or remain available. This puts a handbrake on professional engineering work in NSW and means consumers will have little chance of recovering their losses from insurance.

New South Wales should continue to implement the *Design and Building Practitioners Act* and to draft the Practice Standard **without** new obligations labelled fit for purpose.

Duty of care

Section 2.3 describes an existing statutory duty of care in Part 4 of the Design and Building Practitioners Regulations. It should be marked as informative and not form part of the Practice Standard.

Engineers Australia is concerned about the legal interpretation of the statutory duty of care as it has been applied in the recent NSW Supreme Court decisions of:

- Goodwin Street Developments Pty Ltd atf Jesmond Unit Trust v DSD Builders Pty Ltd (in liq) [2022] NSWSC 624 (19 May 2022);
- Boulus Constructions Pty Ltd v Warrumbungle Shire Council (No 2) [2022] NSWSC 1368 (12 October 2022);
- The Owners of Strata Plan No 84674 v Pafburn Pty Ltd [2023] NSWSC 116 (23 February 2023)

These decisions confirm that:

1. The statutory duty of care applies to individuals, including employees, and not just the contracting party.
2. An award of damages can be made against the individual employee.
3. A defendant business is able to join its employees and subcontractors and thus increase the cost of making a claim while reducing its liability for the work of its employees.
4. The duty of care and liability for damages applies in respect of all buildings and not just the limited classes to which professional engineer registration currently applies.
5. The duty of care and liability for damages attaches to the employee for all work done for all previous employers, regardless of whether they are still in business or maintain insurance.

Engineers Australia believes that some of these outcomes were not intended by the legislation and that this obligation makes it unattractive to do engineering work in NSW for employee engineers.

Engineers Australia is aware that holistic review of PII requirements is being done by NSW government and is keen to be a part of the process to ensure that outcomes for both consumers and engineers are fair and just.

Insurance

Section 2.4 describes an existing requirement in Part 3 of the *Design and Building Practitioners Act*. It should be marked as informative and not form part of the Practice Standard.

Engineers Australia supports requiring practitioners to be covered by adequate insurance but the requirements in the *Design and Building Practitioners Act* are built on assumptions that require over-complicated processes.

This has created many issues for NSW engineers including:

1. Engineers are not trained in insurance risk assessment and interpretation of insurance policies and may struggle to make the assessments of adequacy of insurance required under Section 33 of the *Design and Building Practitioners Act* or the proposals in the Building Bill. Engineers need to be able to rely on the advice provided by their employer, insurance and commercial professionals.
2. It is inefficient and prone to conflicting interpretations to require each individual employee engineer to carry out and record the assessment of a single PII policy taken out by the employing business. These may be a standard policy offered by a single insurer to multiple businesses and individual engineers may not have access to all information about their employer's insurance arrangements. More centralised assessment of PII adequacy by people trained in insurance risk assessment is more efficient and reliable.
3. The Design and Building Practitioners Regulations were used to prohibit the Secretary from registering bodies corporate, with the practical effect that only individuals have been registered as professional engineers. This applies the insurance provisions to each individual registered professional engineer rather than to businesses such as partnerships or corporations. PII cover is usually taken out by businesses and not individual employees. Competent and ethical engineers still have an obligation to ensure that the work they do is covered by insurance, but the liability should fall on the contracted party rather than an individual engineer.
4. The PII market for professionals in the building sector is volatile, with underwriters adding exclusions to policies to reduce exposure, raising premiums to maintain margins, refusing cover or leaving the market completely. The *Design Building Practitioners Act* and associated regulations and standards introduce new statutory obligations on engineers which are not covered by current insurance providers. New insurance products may be needed to cover engineer's liabilities.

Engineers Australia strongly supports the NSW Government prescribing the 'adequate' insurance requirements for professional engineering businesses.

Guidance for engineers/engineering businesses

NSW has given very limited guidance on what levels of cover, deductibles, exclusions or which policy wordings give adequate protection to the engineering business, the individual engineer or consumers.

There must be further guidance given to how engineers can:

- Identify and demonstrate the adequacy of their insurance cover.
- Keep adequate written records specifying how they determined that a policy provides adequate levels of indemnity cover; or
- Provide a self-assessment tool or similar for engineers to use.

This guidance must be comprehensive and practical and, accommodate all engineers from those working in large corporations to sole operators. Consideration must be given to the resources available to each of these different types of engineers and what is reasonably practical for them to do to determine the adequacy of their PII. Preferably, this assessment would be undertaken by insurance experts.

Engineers Australia is willing to work with the NSW government to develop this insurance guidance for engineers so that all engineers can understand their insurance obligations under the DBP Act.

Recommendations

1) Distinguish between:
   a) Existing legal obligations (insurance, duty of care, Code of Practice, etc.)
   b) New legal obligations that are given effect through the Practice Standard and
   c) What is informative or advisory material.
2) Remove obligations on employee engineers to comply with agreements to which they are not a party. i.e., insurance, duty of care
3) Avoid wording or requirements (e.g., compliance with the NCC) that will prevent engineers in NSW from doing professional engineering work on projects or processes in other jurisdictions;
4) Avoid wording (e.g., Fit for Purpose) that may trigger insurance exclusions or limit insurance cover with the unintended consequences of limiting what professional engineering work can be done in NSW.

Construction phase obligations

On-site inspections by a professional engineer

Engineers Australia acknowledges the importance on-site inspections have in improving building quality outcomes and supports the mandating of on-site inspections by a professional engineer. On-site inspections are integral to ensuring the safety, quality, and compliance of engineering projects.

An Engineering Practice Standard that applies to individual engineers is not a suitable vehicle to introduce requirements for mandatory site inspections. The obligation to arrange and facilitate such inspections must be placed on the owner or builder who has control over the site or contractual power to require access. This may be done with amendments to the *Environmental Planning and Assessment Act* and regulations or through the proposed Building Bill. The Practice Standard may then have provisions on how an individual engineer required to carry out an inspection should carry out that work.

The expectation to attend sites and conduct inspections as necessary to see that work is being carried out in accordance with designs must also consider what is appropriate under the individual engineer's employment. It is not uncommon for a design engineer to handover a design to a site-based engineer to ensure work is properly carried out. There should obligation for on-site inspection of all engineering systems on buildings of sufficient complexity, but this should not necessarily be the responsibility of an individual design engineer.

Engineers Australia also highlights the need to distinguish between an individual inspection or test which has a clear outcome that the element inspected or tested does or does not comply, and a broad assessment of whether an engineering system is satisfactory, based on sample testing, quality assurance processes and the like.

Recommendations

1) Introduce obligations for on-site inspections through the appropriate legislative instruments i.e., *Environmental Planning and Assessment* Act or Building Bill.

Independent third-party review obligations

Engineers Australia supports the introduction of mandatory independent third-party review for engineering designs on high-risk or complex building projects and acknowledges its role in improving building quality outcomes. Independent reviews by qualified experts provide an additional layer of scrutiny, reducing the likelihood of errors or oversights that could compromise the integrity and safety of the buildings.

As with Site Inspections, above, an Engineering Practice Standard that applies to individual engineers is not a suitable vehicle to introduce requirements for third party reviews. The obligation to arrange and facilitate such reviews must be placed on the employer or engineer of record, or on the owner or certifier. The Practice Standard may have provisions on how an individual engineer required to carry out a third-party review should carry out that work.

Engineers Australia supports the use of the 'building complexity' definition as defined in the 2022 edition of the National Construction Code (NCC) as a baseline to identify high-risk or complex buildings. The NCC's criteria for determining building complexity can provide an objective and standardized measure to assess which projects warrant mandatory independent third-party review. This approach ensures consistency and clarity when determining the level of scrutiny required for each project.

There are no current provisions in the *Environmental Planning and Assessment Act* or Regulations that would require the certifier to assess the risk, require an independent third-party review, or to take into account the independent third-party review before issuing a construction certificate. Such provisions are outside the scope of an Engineering Practice Standard and some amendments to the *Environmental Planning and Assessment Act* and Regulations to trigger the process as envisaged by the ABCB.

Engineers Australia favours the view that the applicant of a construction certificate should identify as soon as possible whether the nature and complexity of a building requires an independent third-party review and engage a reviewer with a view that the completed design documents submitted to the certifier when appointed would include the relevant certificates of design compliance from independent third-party reviews. The certifier could accept or reject these certificates. The alternative of waiting for the applicant to appoint a certifier and for the certifier to appoint or approve the independent third-party reviewer before the review took place is not preferred.

Recommendations

1) Introduce obligations for Independent third-party reviews through the appropriate legislative instruments i.e., *Environmental Planning and Assessment* Act or Building Bill

Conclusion

The Practice Standard for Professional Engineers has been drafted on underlying assumptions carried over from the *Design and Building Practitioners Act* and subsequent legislation. There are areas of key concern that Engineers Australia recommend be addressed before this Practice Standard is published and the new obligations contained within are enforced by the regulator as a condition of registration for engineers. If these concerns are not addressed, it will make it more difficult and unattractive for engineers to do professional engineering work in NSW.

Engineers Australia recommends that the NSW government should make it clear that the draft Practice Standard applies only to consulting engineers working on limited classes of buildings. The drafting of the Practice Standard should be amended to:

1) Distinguish between the roles and capacities of individual employee engineers and the businesses that employ them.
2) Distinguish between:
    a) Existing legal obligations (insurance, duty of care, Code of Practice, etc.)
    b) New legal obligations that are given effect through the Practice Standard and
    c) What is informative or advisory material.
3) Remove obligations on employee engineers to comply with agreements to which they are not a party. i.e., insurance, duty of care
4) Avoid wording or requirements (e.g., compliance with the NCC) that will prevent engineers in NSW from doing professional engineering work on projects or processes in other jurisdictions;
5) Avoid wording (e.g., Fit for Purpose) that may trigger insurance exclusions or limit insurance cover with the unintended consequences of limiting what professional engineering work can be done in NSW.
6) Introduce obligations for on-site inspections and Independent third-party reviews through the appropriate legislative instruments i.e., *Environmental Planning and Assessment* Act or Building Bill

Engineers Australia urges the NSW Government to work with other states and territories on nationally consistent regulations that will help to improve building outcomes for all. This includes bringing competency assessments for engineers into line with national and international standards and the requirements in other states and territories.

Questions

Application of the Practice Standard for Professional Engineers

1. Do you propose any changes to the definition of 'professional engineering work'?

As mentioned in above in "Inconsistent regulation of engineering work", the NSW Government approach to the registration and regulation of professional engineers is based too narrowly on building consulting work. Limiting the application of engineering work to class 2, 3 and 9c buildings moves NSW away emerging, nationally consistent, engineering registration schemes.

Engineers Australia strongly advocates moving professional engineer registration in NSW to a separate Professional Engineers Registration Act on the Queensland, Victoria and ACT model to provide a seamless registration process in the major east-coast economies.

Insurance

2. Do you support the current insurance approach requiring 'adequate cover'? Why or why not?

Refer above section "Insurance".

3. Do you think mandatory insurance requirements should be prescribed? If so, what should be prescribed?

Engineers Australia strongly supports the NSW Government prescribing the insurance requirements for professional engineering businesses. A self-assessment tool or guidance of what constitutes adequate insurance must be developed and given to engineers. Engineers Australia does not believe that mandatory insurance requirements should be prescribed as a condition of registration for an individual engineer.

4. What alternative approaches to ensuring Professional Engineers and other regulated practitioners under the DBP Act could be considered in providing confidence of an adequate remedy to non-compliant work by practitioners?

Decennial liability insurance is a good alternative to provide consumers with confidence of an adequate remedy to non-compliant work by practitioners.

Engineers Australia welcomes the proposal by the NSW Government to introduce a form of Decennial Liability Insurance (DLI) for class 2 buildings in New South Wales and supports the establishment of a mandatory DLI requirement after an acceptable transition period.

Engineers Australia believes that DLI is a good alternative approach to relying on an engineer's PII to provide confidence to consumers of adequate remedy to non-compliant work by professional engineers. For further details of Engineers Australia's views on DLI please see Engineers Australia's Mandating Decennial Liability Insurance submission.

Design must be Fit for Purpose

5. Do you support the introduction of the 'fit for purpose' obligation for Professional Engineers carrying out design work? Why or why not?

See above section "Fit for Purpose".

6. Do you support the proposed criteria for 'fit for purpose'? If no, what changes would you propose (either adding, removing or enhancing criteria proposed)?

See above section "Fit for Purpose".

7. What other measures could be utilised to ensure that designs prepared by Professional Engineers are fit for purpose?

Engineers Australia does not support the inclusion of the obligations labelled fit for purpose in the current draft of the Practice Standard. If NSW is looking to improve the standard and quality of engineering work in the building sector, Engineers Australia's proposal for an Engineer of Record for each engineering system in a building would be a good place to start. Please see Engineers Australia's Mandating Decennial

Liability Insurance submission or Engineers Australia's document: Building Confidence: How to use engineers to improve building and construction.

Competency Assessment

An engineering qualification provides the underpinning knowledge that allows a graduate to commence practising under supervision. This is followed by formative experience where underpinning engineering knowledge evolves to competence to practice engineering independently. Engineers Australia strongly recommends anyone undertaking engineering work should be competent to do so to reduce the risks to public health, safety, welfare, and economic loss. Without the requirement to demonstrate competence, an individual could demonstrate having the 'experience' even if their work has been plagued with errors.

The knowledge and skills requirements described in pathway 1 of the NSW Design and Building Practitioners Regulations are only considered at the qualification level and do not specify competency standards for registration eligibility as recommended in the Engineers Australian minimum requirements for registration fact sheet. These minimum requirements ensure consistency and alignment with national and international standards.

Engineers Australia strongly recommends that a competence assessment for independent practice is introduced for each pathway and that the competency standard to be met is specified according to the national standard.

For further details please see Engineers Australia's submission on NSW Building Bill 2023 - Licensing Proposals.

Minimum Standards for Design Work

8. Do you support the introduction of design obligations on Professional Engineers? Why or why not?

Not all engineers are design engineers. As mentioned throughout the document, NSW legislation assumes all engineers work as work as sole-trader consulting design engineers on limited classes of buildings. This is not the case in many circumstances.

9. Do you think additional obligations are required in the design phase to ensure higher quality of designs? If so, what?

Engineers Australia proposes the inclusion of an Engineer of Record for all building projects of sufficient complexity. An Engineer of Record, for each engineering system within a building, oversees the design, construction, and commissioning of the system. This provides a sign-off to the owner that the system is free of defects and will work effectively. This replicates the traditional consultant role used by long-term building owners to control quality in the more complex building industry of today. This role provides the continuity lost when developers sell apartments on practical completion. A certificate from an Engineer of Record can be relied on by subsequent owners, insurers and building regulators to give assurance that each system is properly designed, constructed and commissioned.

For more information on an Engineer of Record please see Engineers Australia's document: Building Confidence: How to use engineers to improve building and construction.

10. Do you think additional requirements are necessary to ensure consumers receive the information they need from Professional Engineers undertaking work on their behalf?

This is an obligation for engineering businesses.

Independent Third-Party Review

11. Do you support introducing mandatory independent third-party review for engineering designs on high risk or complex building projects?

See above section "Independent Third-Party Review".

12. Do you support making the developer responsible for seeking third party review when required? If no, who do you think should be held responsible?

See above section "Independent Third-Party Review".

13. Do you support the use of the 'building complexity' definition in the NCC as a baseline to identify high-risk or complex buildings? Why or why not?

See above section "Independent Third-Party Review".

14. How could we better define what 'high-risk' work is to complement the use of 'building complexity' as a measure to ensure independent third-party review is proportionate to the risk of the work?

The NCC building complexity definition is a good baseline to work off, but other factors could be considered in the risk assessment such as:

a) Project Type and Complexity: Tailored inspection schedules for different project types, sizes, and complexities will ensure appropriate levels of oversight.
b) Safety-Critical Milestones: Inspections should be mandatory at crucial project stages, especially those involving safety-critical components.
c) Risk Assessment: A thorough risk assessment will help identify high-risk areas that require more frequent inspections.
d) Regulatory Requirements: The inspection schedules should align with relevant legal and regulatory requirements.
e) Lessons Learned: Incorporating insights from previous projects can enhance the effectiveness of inspection schedules.

15. Do you think performance solutions should be subject to independent third-party reviews? Why or why not?

This is a consideration where over-simplified assumptions can lead to over-complicated processes. Much routine engineering work on buildings is of a performance nature and does not justify formal independent review to manage risk.

16. This proposal is currently limited to introducing mandatory third-party review of engineering designs. Do you think there is a need for expert review of other types of design work?

See above section "Independent Third-Party Review".

17. Do you support the proposed obligations for Professional Engineers when undertaking independent third-party review, as set out in the draft Practice Standard?

See above section "Independent Third-Party Review".

18. What additional obligations or guidance could be created for other practitioners to ensure that the work of a Professional Engineer undertaking independent third-party review enhances the compliance, safety and resilience of the relevant building (for example, changes to the Certifier Practice Standard)?

See above section "Independent Third-Party Review".

Carrying out On-Site Inspections

19. Do you support the introduction of a positive obligation on Professional Engineers to carry out on-site inspections? Why or why not?

See above section "On site inspections".

20. The proposed Practice Standard allows that a Professional Engineer is permitted to use their experience and expertise to determine sufficient inspections for a project. Do you support this approach?

See above section "On site inspections".

21. What guidance would support Professional Engineers to make informed decisions regarding the number of inspections for a project?

See above section "On site inspections".

22. If the proposed Practice Standard were to include mandatory inspection schedules for Professional Engineers instead, would you support this approach? If yes, what criteria would you suggest for when an inspection should take place?

See above section "On site inspections".

Additional Obligations for Specific Registrations and Specific Engineering Work

23. Are there any further obligations that should be introduced for specific classes of Professional Engineer? If so, what are they and why? Please be specific on what further obligations you consider necessary, the desired outcome sought and your views on how it could be prescribed.

Given the technical nature of the specific obligations for specific areas of engineering work, Engineers Australia has approached its members experts and technical colleges. Given the short turnaround time on this consultation, Engineers Australia is unable to give detailed comments on these specific requirements at this time, however we are willing to work with NSW going forward to develop these obligations.

Engineers Australia strongly recommends anyone undertaking engineering work should be competent to do so to reduce the risks to public health, safety, welfare, and economic loss. Without the requirement to demonstrate competence, an individual could demonstrate having the 'experience' even if their work has been plagued with errors.

Engineers Australia strongly recommends that a competence assessment for independent practice is introduced for each pathway and that the competency standard to be met is specified according to the national standard.

For further details please see Engineers Australia's submission on NSW Building Bill 2023 - Licensing Proposals.

24. Are there any further obligations that should be introduced for engineering work on specific building parts? If so, what are they and why?

See response to question 23.

25. Should any of the proposed additional obligations set out in Chapter 8 of the proposed Practice Standard that should be removed? If so, what are they and why?

See response to question 23.


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