

24 July 2019

Better Regulation Division  
Department of Finance, Services and Innovation  
Mckell Building, 2-24 Rawson Place, Sydney NSW 2000

Dear Better Regulation Division

**Building Stronger Foundations Discussion Paper**

Thank you for the opportunity to provide my comments on the Building Stronger Foundations discussion paper. I greatly commend the Department's collaborative approach to engage with the construction industry on this important topic.

Overall, I welcome the increased accountability for all the individuals operating across the entire construction chain from suppliers, designers, builders to maintainers. Although the reform to require Statutory Declaration, i.e. holding an individual accountable is in the right direction, the implementation will likely be ineffective due to commercial conflict of interest.

An example is the BPB Accreditation mandated for Certifiers. Despite the accountability, there continues to be bad actors (a small but disproportionately damaging minority) operating. This is due to the commercial conflict of interest because the livelihood of these individuals depends on providing a favourable outcome for their clients thus increasing the likelihood of being reengaged for the next project. This issue is known and has been highlighted by the Building Professionals Board via "*Improving Certifier Independence*" on 2 October 2018.

Therefore, I believe a key missing layer in this reform is providing greater independence to individuals occupying these critical roles along the construction chain, simultaneously ensuring there is a proportionate cost benefit that reflects the complexities of the projects, and impacts on our society should a major defect materialises.

This can be achieved via the appointment of Independent Verifiers to assess, on behalf of the Building Commissioner the declaration by the designers and builders. This method is currently adopted in State Significant Development, e.g. major infrastructure, and is also partially implemented (structural building design) in Victoria.

I recognise my suggestion here is only the start, and a collaborative approach across the construction industry is needed to work through the details.

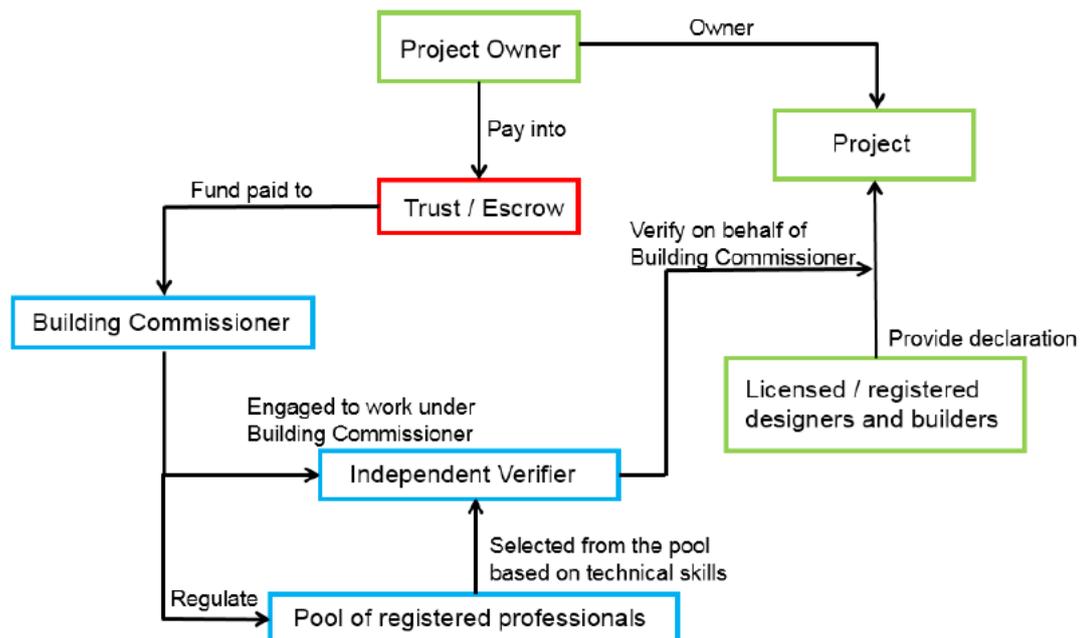
Please see the following for my response to the questions raised, with my suggestions incorporated.

Disclosure: I have contributed to the submissions made by other organisations, and there may be similarities in the comments. All views presented here are my own.

## Independent Verifiers

Although the intent is for greater accountability on individuals operating across the construction chain, if these individuals are directly engaged by the project owner, commercial conflict of interest will exist. These individuals and their companies depend on the owners engaging them for the next project, and therefore there is an intrinsic motivation to obtain a favourable outcome for the project, often counter to the interest of our society.

I outline below my key suggestions to achieve the intended reform in the Discussion Paper. In addition to declarations by the designers and builders, my suggestion adopts the concept of Independent Verifiers to introduce objectivity plus check and balances in the process. This includes:



- 1) Establish a risk ranking matrix that classifies how risky a project is from a societal perspective should there be a failure in the building. For example, a high-rise residential presents a greater risk compared to a low-rise residential. The risk ranking matrix can be related to the Building Code of Australia ensuring there is consistency in the construction process.

This matrix is used to assess the level of involvement for the Independent Verifiers.

- 2) A panel of Independent Verifiers for the respective disciplines are engaged via the Building Commissioner from a pool of registered professionals. To ensure a quality output, the Independent Verifiers will need to be of equal or better qualified than the designers.
- 3) The Independent Verifiers would provide the verification on top of the declaration by the respective designers and builders. Depending on the complexities of the projects, the Independent Verifiers should be more involved, including witness testing and commissioning.
- 4) With a risk ranking matrix, this ensures the more complex projects (riskier and/or with a higher funding) receive a greater attention and that smaller projects (less risky in general but with smaller funding) are not disadvantaged by the requirements.
- 5) The presence of an active panel of Independent Verifiers although will incur a greater cost on the project, in exchange the owner and our society will have a higher confidence and assurance in the quality of the project.

**Q1: What kinds of plans should be signed off and declared by statutory declaration?**

I believe this should include as a minimum plans covering designs that could result in catastrophic failures, e.g. structural collapse or immediate life safety threats, e.g. fire safety. This includes:

- Structural design
- Fire services (automatic fire detection, sprinklers, fire hydrants etc)
- Building services design forming part of the Essential Services (smoke hazard management system, emergency lighting, exit signs, backup power supply for fire safety systems etc).

The plans should be those for construction, and as-built.

**Q2: Could plans be statutorily declared at the CC/CDC stages? If not, why not?**

This could be done by the designers and is a useful mechanism by which the certifier can then use these declarations for the purposes of issuing a CC (Construction Certificate) and CDC (Complying Development Certificate). Plan will however change after this initial issue, particularly under D&C (Design & Construct) contract arrangement, as such, these declarations will not necessarily provide any certainty with regard the final as built condition.

As built certification can only be provided by the contractor/builder along with the designers and sub consultants who have been involved through the construction phase.

**Q3: To what extent should changes to plans be submitted to the regulator?**

Changes that are related to elements that would result in disproportionate / catastrophic consequences including:

- Structural design
- Fire safety and fire services
- Essential services design.

Changes to design will happen continuously through the construction process, particularly when considering a D&C contract, it would be impractical to require statutory declarations for every variation.

Minor changes (cosmetic changes or those determined by the Principal Certifying Authority) should not require submission to the regulator. All the changes to the building when constructed should be captured, with the as-built documentations submitted.

**Q4: Should a statutory declaration accompany all variations to plans or only major variations?**

Only major changes related to the critical elements discussed in Question 3.

**Q5: Are there any obstacles that would prevent a person from submitting a statutory declaration for variations? If so, what are those obstacles?**

Only major changes related to the critical elements discussed in Question 3.

**Q6: What other options could be workable if there are variations to plans?**

No comment

**Q7: How could the modifications process be made simpler and more robust?**

Increased requirements for through construction inspections by all disciplines. This should include more specific requirements for attendance on site, for example for fire engineers there is a requirement to 'sign off' at the end of the construction process but it is not clear whether this requires on site review, therefore implementation of this requirement will vary in extent between individuals.

**Q8: How should plans be provided to, or accessed by, the Building Commissioner?**

I believe a standardised digitally based submission template including the preparation, storage and cataloguing of the design information should be provided. A consistent digital data standard will ensure ease of comparison, management and auditing of the projects as necessary.

Further, the BIM (Building Information Modelling) Model should be submitted to the Building Commissioner on completion of the construction. A federated and consistent BIM Model is a step into the future of how cities and buildings can be managed.

**Q9: What types of documents should 'building designers' provide to the Building Commissioner?**

This includes design drawings, design reports and design specification, followed similarly by the as-built documentations when a project is completed. The submission should include a full digital model / BIM model as noted in Question 8.

**Q10: In what circumstances would it be difficult to document performance solutions and their compliance with the BCA?**

One issue is the lack of qualified individuals able to sign-off on the performance solutions. A sign-off to confirm a design is compliant to a prescriptive standard and a sign-off to confirm a performance solution meets the BCA Performance Requirements is different, with the latter requiring a greater level of competency and experience as the design is from first principle, with no prescriptive guidance.

**Q11: Would a performance solution report be valuable as part of this process? If not, why not?**

Yes, but the value of a performance solution is often dependent on the design process. Good performance solutions are tailored building solutions that have been repeatedly proven highly valuable to the development and most importantly, essential to achieve a sufficient level to comply with the BCA.

To ensure a baseline quality is met, a checklist outlining the process and key items expected in a performance solution report should be mandated.

**Q12: Are there any other methods of documenting performance solutions and their compliance that should be considered?**

For very low risk buildings, simpler forms of performance solution reports may be adopted by fire safety engineers. However in all cases it must be shown that the performance Requirements have been satisfied

**Q13: What would the process for declaring that a building complies with its plans look like?**

I see the process as:

The builder provides an overall declaration that a building has been constructed in accordance with the design. For a large construction project where multiple sub-contractors are on site, all the sub-contractors are to provide a declaration to the main builder. The reform will need to introduce a clear chain of responsibility. Although the builder engages the sub-contractors, ultimately the main builder as the entity with the control and responsibility should have the final accountability.

The designers are to carry out sample inspections and witness tests to check the builders carried out the work in accordance to the design. The designers then provide a declaration confirming based on the sample inspections, the designers have not identified any major deviations from the design. Given the commercial arrangement whereby designers cannot always be onsite, there needs to be a legislative recognition on the limitations the declaration that can be provided by the designers.

Independent Verifiers will provide the additional oversight on behalf of the Building Commissioner for higher risk projects.

**Q14: What kind of role should builders play in declaring final building work?**

The builder is responsible to declare that the construction work has been carried out in accordance with the design. In instances where the builder engages sub-contractors to carry out the work, the final accountability should remain with the builder. This is to minimise the scenario where the liability is passed onto the sub-contractor who has no control over the overall project, or the builder sub-contracting out and discharging the liability to another party.

The sign off process by builders should include inputs from appropriately qualified engineers.

**Q15: Which builders involved in building work should be responsible for signing off on buildings?**

All builders including subcontractors carrying out the work, e.g. in a large Design and Construct (D&C) project. However as mentioned in Q14, the main builder should have the final accountability. Therefore, it is important to ensure there is a robust legislative framework on the chain of responsibility, and the liability between the builder and the sub-contractors / designers should be managed contractually between them and the builder.

**Q16: Are there any circumstances which would make it difficult for builders to declare that buildings are constructed in accordance with their plans? If so, what are those circumstances?**

One scenario is when a builder is responsible for refurbishing / extending an existing building where there would be untouched and unaffected elements in the building. In this instance, the extent of which the builder is responsible for the building needs to be determined.

Separately, the need for the builder to make such a declaration will increase the risk to the builder, thereby adding costs to the project. Therefore, it is critical to adopt a risk-based approach in assessing the extent of a declaration and independent verification required.

**Q17: Are existing licensing regimes appropriate to be accepted as registration for some builders and building designers, such as architects, for the new scheme?**

The current licensing scheme is not adequate. I propose considering the Registered Professional Engineers of Queensland (RPEQ) model where all the designers involved in the construction chain will need to be appropriately qualified and registered.

**Q18: What occupations or specific activities are involved in 'building design' and should be in scope for the registration scheme?**

As per Question 18, I believe the RPEQ model provides a good benchmark. In principle, all the activities that could result in catastrophic failures, e.g. structural collapse or immediate life safety threats, e.g. fire safety should only be carried out by registered individuals.

**Q19: What should be the minimum requirements for a registration scheme?**

I refer to the Engineers Australia pathway to CPEng / NER registration and the RPEQ model.

**Q20: What form of insurance should be mandatory for 'building designers'? Why?**

Professional Indemnity and Public Liability.

**Q21: What kinds of minimum requirements should be prescribed for the insurance policy (for example, value, length of cover, etc.)?**

This should be determined from a risk perspective considering the types of projects. The coverage of insurance is an important topic that needs extensive consultation with the industry and insurance providers to ensure all the competent designers and organisations carrying out the work can be adequately and fairly protected.

**Q22: What skills should be mandatory for 'building designers'?**

I refer to the Engineers Australia pathway to CPEng / NER registration and the RPEQ model.

**Q23: Should specific qualification(s) be required?**

I refer to the Engineers Australia pathway to CPEng / NER registration and the RPEQ model.

**Q24: Should there be other pre-requisites for registration?**

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**Q25: What powers should be provided to the regulator to support and enforce compliance by registered 'building designers'?**

An ability to enforce compliance requirements, including suspending or revoking the license of a designer when breaches are found.

**Q26: Which categories of building practitioners should owe a duty of care?**

For designers, I refer to the Engineers Australia Code of Ethics.

**Q27: What should be the scope of the duty of care? Should it apply to all or certain types of work? If so, which work?**

For designers, I refer to the Engineers Australia Code of Ethics.

**Q28: How will the duty of care operate across the contract chain?**

For designers, I refer to the Engineers Australia Code of Ethics.

**Q29: What types of consumers should be owed a duty of care?**

For designers, I refer to the Engineers Australia Code of Ethics.

**Q30: On what basis should a particular consumer be afforded the protection?**

No comment.

Yours sincerely

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