Submission from the Association of Consulting Engineers New Zealand (ACENZ) in response to MBIE's proposed Building System Legislative Reform.

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Representation: I am representing ACENZ and its members.

Preamble: The principles set out in this submission summarise the topics important to a large proportion of ACENZ members. We have also been guided by the feedback gathered through Engineering New Zealand's comprehensive consultation process.

It is essential to recognise that not all members agree on all aspects. Furthermore, many found it challenging to comment on all elements without knowing the detail sitting beneath. An example of this, concerning occupational licensing, is how thresholds for licensing can be established and managed.

About ACENZ:

ACENZ is a firm-based membership association that represents consulting engineering organisations throughout New Zealand. Founded in 1959, we have more than 200 member firms who employ some 13,000 staff.

ACENZ exists to raise the profile of the sector and to assist members in improving their business performance and quality of service delivery for the people of New Zealand.

Notably, engineers within ACENZ member firms carry out the vast majority of life-safety critical design work in commercial, industrial and institutional buildings and a large portion of bespoke designed residential dwellings.

The importance of a firm-based approach:

ACENZ is a critical stakeholder in the building and construction sector and is instrumental in supporting professional liability and the ability to make financial redress resulting from negligent or substandard work by an engineer.

While some engineers work as sole practitioners, the vast majority of engineers who carry out design work that is subject to the Building Act are employed by firms. ACENZ member firms typically:

- have a standard written contract with the client to provide professional services, and
- hold Professional Indemnity insurance policies that can provide financial redress.

Understanding and accounting for that relationship between the engineer and their corporate employer will be vital in any proposed changes in this reform process.

Central to understanding engineering competence and ensuing responsibilities is the fact that on most projects of any significant size, the engineering design work is a collaborative process.

For example, on a significant structural design commission, several individual engineers from the same firm will work on the project. Some may bring specialist expertise to the project, but the result is a measure of their collective competence.

One engineer, on behalf of their colleagues, will sign a Producer Statement. That engineer effectively becomes the engineer of record. It is, therefore, essential to recognise the collaborative nature of the work within a firm and how liability is managed.

1. Building products and methods:

a. Roles and responsibilities

ACENZ welcomes the proposal to clarify the responsibilities of manufacturers, suppliers, designers and builders for building products and building methods.

However, we are somewhat sceptical of the proposed changes because of the lack of take-up in existing and previous 'certified product' schemes. This is particularly relevant for proprietary systems and products.

Clarification of what is meant by "designers of products and proprietary systems" is required because, in most situations, it is not the architect or engineer.

We strongly encourage MBIE to consistently apply the philosophy that all parties involved should take responsibility for their own work. By this we mean:

- Engineers should take responsibility for what they design.
- Manufacturers, suppliers, fabricators and installers should take responsibility for what they supply, construct and install.

For example, steel fabrication involves complex processes, some of which involve proprietary products. These processes include welding, as well as protective and, fire-resistant coatings. It is not reasonable or equitable to expect engineers to certify the work of welders, paint manufacturers, coating applicators and the like.

Owners, Building Consent Authorities (BCAs) and Engineers all need to be able to rely on the quality assurance systems and records of manufacturers, suppliers, fabricators and installers.

Financial redress (warranty) from manufacturers, suppliers, fabricators and installers also needs to be included to reduce joint and several liability for BCAs and engineers.

b. Framework for product certification

ACENZ supports the proposal to strengthen the framework for product certification if it results in owners and BCAs being able to rely directly on product assurance, rather than indirectly via engineers.

c. Off-site manufacture

ACENZ supports, in principle, proposals to simplify consenting for modern methods of construction, including off-site manufacture.

Consenting is probably the most straightforward part, notwithstanding that one design, if compliant for several different locations, needs to be able to cope with differing foundation conditions, seismic loadings, wind loads, snow loads and the like. The economic trade-off between over-design and system efficiency is favourable, in our opinion.

In our opinion, the more significant problem is in demonstrating compliance with the consented design for manufacture or fabrication that occurs remotely from the BCA. BCAs, perhaps not

unreasonably, have historically shown reluctance to accept the liabilities that go with issuing a CCC for a building which they have not been able to inspect during construction.

The challenge will be to create a framework across the BCAs that results in the production of quality assurance records upon which the BCA can rely.

We must emphasise that the framework will fail if it merely attempts to transfer all liability to the engineers who have carried out construction observation and monitoring.

2. Occupational regulation - Licensed building practitioners

ACENZ supports, in principle, the broadening of restricted building work beyond the current residential definitions.

ACENZ does not support limiting restricted building work to high rise and *Importance Level 3* (IL3). All building structures incorporate potential life-safety risks, and the exclusion from the regulation of certain complex and special purpose low-medium rise buildings could result in a significant increase in risk and decrease of quality in that area

It is our view that any move towards broadening of restricted building work beyond the current residential definitions will require significant reform of the relevant trades within the commercial building construction industry. This reform would need to include;

- procurement practices,
- trade training and qualifications, and
- the formation of something akin to trade guilds for effective regulation.

3. Occupational regulation - Engineers

Introduction:

Engineers within ACENZ member firms carry out the vast majority of life-safety critical design work in commercial, industrial and institutional buildings and a large portion of bespoke designed residential dwellings. However, a more significant part of our member firms' work does not relate to the Building Act. We urge that any licensing framework for engineers be particularly mindful of this.

In line with Engineering New Zealand's submission on this matter, there are many parts of MBIE's proposal that we support. However, we do have some significant concerns; they are:

- the high level of uncertainty around how licensing thresholds will be set and work in practice;
- the duplication of process and cost that would arise from having two marks of general technical competence and professionalism – Certified Engineers and Chartered Engineers;
- the potential for fragmentation. Engineers work in both the building and broader infrastructure sectors, as well as in many other industries. It's unclear how the model is sufficiently flexible to be extended to engineers working outside the building and construction sector and to interdependent professions.
- The preservation of international recognition that allows engineers to work in overseas jurisdictions, or allows recognised overseas engineers to work in member firms

We believe that licensing needs to sit alongside robust professional self-regulation, and the licensing framework must be flexible enough to accommodate other engineering disciplines and related professions.

For clarity, licensing should be underpinned by one quality mark recognising professionalism and technical competence (Chartered Engineer). Chartership recognises professionalism and general technical competence in specific areas of practice.

It is crucial that this quality mark for all engineering professionals belongs to the profession. We consider it entirely inappropriate that the government may regulate this.

In our view, engineers should access Chartership through Engineering New Zealand who award this based on internationally recognised standards. We believe the public is best protected if all practising engineers are connected to their profession through a professional body.

Most importantly, we believe that any transition needs to be well planned, executed and communicated if it is to be successful.

ACENZ is committed to working with MBIE to find the right solution for the regulation of engineers. MBIE's proposal has some positive elements but will have some significant negative consequences in its current form. These include generating confusion, duplication and cost.

We request that you take the time to design a robust and sustainable solution that works for all parties, and do this in partnership with the relevant professional organisations.

Other fundamental changes are required:

ACENZ supports efforts to improve quality standards right across the building sector. While we believe the quality of engineering within the building sector is generally high, we agree that improvements are required to achieve consistently reliable engineering output.

To effect the kind of real change we believe MBIE is seeking, ACENZ thinks that the following must also be implemented:

- Mandatory peer review of engineering outputs on a nominated percentage of building consent applications. Such reviews should concentrate on complex and safety-critical aspects of the work.

- All Licensed/Chartered Engineers should be subject to a periodic reassessment of competence, which includes a face-to-face interview by a panel of peers. Furthermore, sitting as a panel member should be a mandatory requirement for all Licensed/Chartered Engineers.

- Introduction of a nationally consistent recording process for substandard engineering work. Such a process would require a peer reviewer or BCA to submit to a national register, instances of significantly substandard work. Such reports would accumulate demerit points and be available to the review panel, potentially leading to early competence reassessment or investigation.

A key to understanding engineering competence and ensuing responsibilities is the realisation that on most projects of any significant size, the engineering design work is a collaborative process. For example, on a significant structural design commission, several individual engineers from the same firm will work on the project. Some may bring specialist expertise to the project, but the result is a measure of their collective competence.

Currently, some of those engineers will be CPEng, and some will be graduates working under supervision, but at the completion of the design, even for the most significant projects, only one engineer will sign the Producer Statement.

That engineer, effectively the engineer of record, must satisfy themselves as to the competence of their colleagues. When considering the framework of a licensing scheme, it is essential to recognise the collaborative nature of the work within a firm and how liability is managed.

With this in mind, we believe the need for licensing relates primarily to those engineers who take responsibility for design work rather than those employees who merely carry out design work on behalf of an engineering firm.

Licensing:

ACENZ supports the licensing of Professional Engineers to regulate who can take responsibility for the engineering design affecting life-safety risk, including risks associated with buildings.

ACENZ understands that MBIE is currently concerned with structural, geotechnical and fire risk associated with buildings, however, any licensing scheme should also be able to regulate engineers who design for other risks such as sanitary, electrical or the air quality within buildings.

Engineers also carry life-safety design responsibilities outside of buildings in areas as diverse as dam stability, amusement devices, water supply and traffic safety. Engineer licensing should, in time, also be applicable in areas outside of the Building Act.

ACENZ does not support limiting restricted work categories to structures which are perceived to be high-risk, such as high-rise and IL3. In effect, all building structural, geotechnical and fire design and construction carry associated life-safety risk. For example, the seismic assessment of a single-storey masonry wall adjacent to a public thoroughfare could have significant life-safety implications if not completed competently.

CPEng has essential elements to consider going forward:

While we recognise that CPEng may not be fit-for-purpose moving forward, ACENZ does not support the view that CPEng has not been serving its purpose. We would suggest that in the absence of mandatory professional regulation, people are trying to make CPEng fulfil a function it wasn't designed for.

We would also suggest the reason that there has not been higher take-up within the wider professional engineering industry is that CPEng currently serves a minimal purpose outside the Building Act and has been ignored or bypassed by locally established systems for some BCAs.

While it can be argued that currently there is no legal restriction on who can take responsibility for safety-critical aspects of building design, the reality is that the vast majority of Building Consent Producer Statements are currently signed by a CPEng and for high-rise and IL3 it is invariably the case.

Consequently, it is ACENZ's view that any licensing framework should adopt central aspects of CPEng, including:

- Requirements for prescribed qualifications, experience and competence in line with the accepted definitions for engineering competence
- Assessment and regular reassessment by peers
- A code of ethics
- A national register that all BCAs, owners and other industry stakeholders can rely on
- Performance feedback, complaints and investigation process that can identify negligent or incompetent work and place restrictions on future practice as appropriate.

Also, a licensing framework should:

- Consider a licensee's working environment. For example, an engineer working in a firm where they have colleagues with diverse experience and competencies may be better equipped to take responsibility for complex work than a sole practitioner
- Require that the licensee's work is covered by Professional Indemnity insurance
- Concerning a Building Consent, the taking of responsibility for life-safety critical design work should be restricted to a Licensed Engineer with appropriate practice areas. Initially, that

would include all primary structural, geotechnical and fire design but other safety-critical aspects of building design could be added.

- Other life-safety critical work such as amusement devices, heavy vehicle tow-bars, boilers, cranes and the like should also, in time, require the involvement of a Licensed Engineer.

Voluntary certification scheme:

As stated above, while we recognise that CPEng may not be fit-for-purpose moving forward, ACENZ does not support the concept of a voluntary certification scheme.

The proposed model means there would be two schemes for recognising an engineer's professionalism and general competence that could act as the base for licensing: government oversight through its certification scheme and self-regulation as an assessed Chartered Engineer through Engineering New Zealand.

Our view is that we don't need two schemes, as it will:

- Result in a duplication of process;
- Significantly increase costs and the effort involved by individuals
- Cause confusion amongst clients and consumers

We believe that licensing needs to sit alongside robust professional self-regulation, and the licensing framework must be flexible enough to accommodate other engineering disciplines and related professions.

For the avoidance of doubt, we believe licensing should be underpinned by one quality mark recognising professionalism and technical competence (Chartered Engineer). Chartership recognises professionalism and technical competence in specific areas of practice.

It is crucial that this quality mark for all engineering professionals belongs to the profession. We consider it entirely inappropriate that the government may regulate this.

In our view, engineers should access Chartership through Engineering New Zealand. We believe the public is best protected if all practising engineers are connected to their profession through a professional body.

Most importantly, we believe that any transition needs to be well planned, executed and communicated if it is to be successful.

4. Risk and liability:

Insurance Products:

ACENZ supports the requirement for residential warranty products, but we believe that it should be compulsory. There should be no opportunity to opt out by buildings owners, except in exceptional circumstances. An opt-out option increases risks for successive owners and increases potential liabilities for third parties, including BCAs and engineers.

With this in mind, we have real concerns as to how a residential warranty scheme could practically include apartment and multiple-unit dwellings; this is because, in such situations, substandard construction can result in substantial claims.

Furthermore, we believe that the provision of such insurance is unlikely to be attractive to the commercial insurance market, and may, therefore, be prohibitively expensive. Consequently, it may be necessary for the government to enter the insurance market to provide sufficient coverage.

BCA Liability Cap:

ACENZ supports the current proposal to leave liability settings for BCAs unchanged. Our rationale is, if BCA liability was capped, it is not currently clear where residual liability would fall. However, in principle, we strongly support the view that liability for building work should appropriately sit with those building practitioners who undertake the work.

We consider that our member firms currently carry a disproportionately high share of liabilities when things go wrong. It should be noted that holding Professional Liability insurance is a condition of ACENZ membership.

However, it is readily apparent that other Building Practitioners, such as designers and builders, often do not have the means to make effective financial redress. If society does demand financial redress for adversely affected consumers, then it is appropriate for the BCA to be the ultimate insurer.

If a cap on BCA liabilities was introduced, it is our view the following measures must be in place:

- Legislated proportionate liability for the entire building industry
- Compulsory home warranty insurance
- Occupational licensing for all building practitioners
- Insurance products, available and compulsory, for all building practitioners

5. Building levy:

Reduction of the levy:

ACENZ does not support reducing the building levy from $2.01 to $1.50 including GST (per $1,000).

While there is currently a surplus which exceeds Treasury best practice guidelines, a substantive pool of funding is necessary to support industry research, the development and updating of Standards, and statistical data gathering.

In particular, New Zealand's Standards framework has been severely neglected, and there seems to be a lack of understanding of the significant public good, which results from a robust, independent and responsive Standards framework.

Our preference would be to see levy funds invested in areas such as this, which have a significant public good component.

Standardisation of the levy threshold:

ACENZ supports standardising the levy threshold at $20,444, as this will reduce confusion about when the levy applies.

Levy spend:

With our commentary above on the rate of the levy in mind, ACENZ supports amending the Building Act to allow MBIE's chief executive to spend the levy for purposes related to broader stewardship responsibilities in the building sector.

We would encourage MBIE to give significant consideration to the development and maintenance of Standards as part of a strategic investment approach for the sector.

6. Offences, penalties and public notification:

Penalties:

ACENZ acknowledges that some form of financial penalty is a necessary adjunct to offences under the Building Act.

We take no view on the appropriateness of the changes proposed to the quantum of these penalties. However, we note that when a problem arises, commercial litigation often follows, and so the financial penalty framework should give significant consideration to this.

Public notification:

ACENZ agrees that public notification under the Building Act should no longer be required in newspapers. We also agree that publication on the internet and in the New Zealand Gazette should be deemed sufficient.