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# A new membership pathway for engineers

## Strengthening trust and confidence in your profession

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MARCH 2017

### Purpose of this paper

1. This paper outlines proposed changes to our membership model as part of a broader strategy to raise the standard of professionalism, ethics and competence across the engineering profession in New Zealand.
2. It is intended to provide members with further background on:
  - the implications of the proposed changes on the current Chartered Professional Engineer (CPEng) regime
  - the intentions of the Building and Construction Minister (the Minister) and the Ministry of Business, Innovation and Employment (MBIE) to develop a proposal to strengthen the industry's regulatory licensing regime, and
  - the advice that we are providing to MBIE to inform future licensing options.
3. This paper has been developed by IPENZ recognising its role as Registration Authority under the Chartered Professional Engineers Act.

### Introduction

As members you have told us that you consider it a core role of IPENZ to promote and uphold the reputation and credibility of engineers. For our profession to be active, accountable and credible, we need a modern and relevant membership model that provides clear entry and progression pathways. It needs to be based on professionalism, competence and strong ethical conduct. Our current model does not deliver on this.

In February 2016, the IPENZ Board gave approval in principle to a new membership structure as part of a range of changes aimed at better supporting higher and broader standards of engineering competence and professionalism. After wide consultation, that model, with minor refinements, has now been approved by the Board for implementation from October 2017. This new membership structure will create a simpler, clearer and more inclusive pathway that supports and drives higher levels of professionalism at all stages of membership.

Our intent is to have membership of IPENZ recognised within the profession, across industry (both in New Zealand and internationally) and by the public as a quality mark. This will position our members as trusted professionals who have the backing and oversight of a body that upholds the interests of its members as well as those of the industry and New Zealanders more generally.

Changes to our membership structure cannot be considered in isolation from proposed changes to occupational regulation, which the Minister and MBIE have been signalling for some time. To be truly effective, we think that any regulatory or licensing scheme should be supported by a strong professional membership body which in itself denotes a level of competence and professionalism.

To achieve these aims, IPENZ membership needs to extend to engineers across a range of disciplines including those who are registered under the Chartered Professional Engineers Act 2002 (CPEng Act) and those for whom the current CPEng Act is perceived as 'irrelevant'. We need to be able to draw on the best and brightest from a broad range of engineering disciplines to provide leadership within the profession, as well as providing thought leadership to the society that we serve. Necessarily, a professional body's membership should draw on a wider group of expert professionals than any government licencing regime.

One intention of our revised membership structure is that it be consistent with, and complement, MBIE's proposed introduction of a task-based occupational licensing regime for safety-critical areas of engineering work (initially structural, geotechnical and fire engineering). Indeed, feedback from MBIE has confirmed that it is. To ensure that we keep strengthening our current processes and to help MBIE smooth the transition to task-based licensing, we are proposing to introduce more specific assessments for CPEng engineers seeking to align their practice area with the geotechnical or structural engineering practice fields. We plan to do this by incorporating assessment against the structural and geotechnical engineering Bodies of Knowledge and Skills (BOKS) that are currently under development in conjunction with the Structural Engineering Society New Zealand (SESOC) and the New Zealand Geotechnical Society (NZGS). This will be quickly followed by work with the Society of Fire Protection Engineers to develop the fire safety Body of Knowledge.

## CPEng and occupational licensing

### Regulation for the future - task-based statutory licencing supported by a stronger membership body

When MBIE consulted on proposed changes to the occupational regulation for engineers in 2014-15, we initially advocated for any licensing regime to occur within the CPEng Act through the development of defined classes of registration.

We still consider that there is a strong argument for the introduction of task-based licensing in the building and construction sector for safety critical or specifically defined work. However, we now believe that cannot be effectively achieved through the CPEng Act and such a scheme should replace CPEng, with an engineer's general professional competence and engagement signified by Chartered status conferred by the professional body. An omnibus regulatory regime modelled on the health sector that delegates key standard-setting functions to appropriate professional bodies or boards is a potential licensing model that we are advocating for. This would mean that licenced engineers would need a different identifier.

There are a number of reasons for this. Key among these are:

- The retention of a statutory 'protection of title' regime (the CPEng Act and Rules) alongside task-based licensing and professional body affiliation and recognition would create unnecessary complexity.
- The current CPEng status is not seen as specific or robust enough for certain types of engineering (such as structural or geotechnical). At the same time it's perceived as 'too civil focussed' to be attractive to engineers in other disciplines (as discussed further below). The continuing reassessment is only really relevant for practising engineers.
- A Chartered status within the membership body fits with engineering regimes around the world, global engineering accords and other professional membership bodies. That Chartered status has greater recognition

within a professional body than it does as a regulatory quality mark. And should be separate from a label designed to denote specific and important additional attributes.

- Taken together, a strengthened and broadened professional body membership model and task based licensing will raise the bar across the profession and allow for appropriate government regulation in agreed areas. We think this will enhance the credibility of the profession and increase public trust. It would also avoid public confusion if there was clarity about which engineers have demonstrated competence in specific areas.

While both MBIE and the Minister have signalled an initial focus on the building and construction sector, we believe, and MBIE have agreed in principle, that any statutory licensing regime must be extendable over time to other areas of safety-critical engineering work; for example, design verification under Pressure Equipment, Cranes and Passenger Ropeways (PECPR) regulations, amusement device certification, water supply engineering and electrical engineering design to name a few.

## Why the CPEng Act (and CPEng as a quality mark) is not meeting the needs of a modern profession, or the needs of the regulators or the public

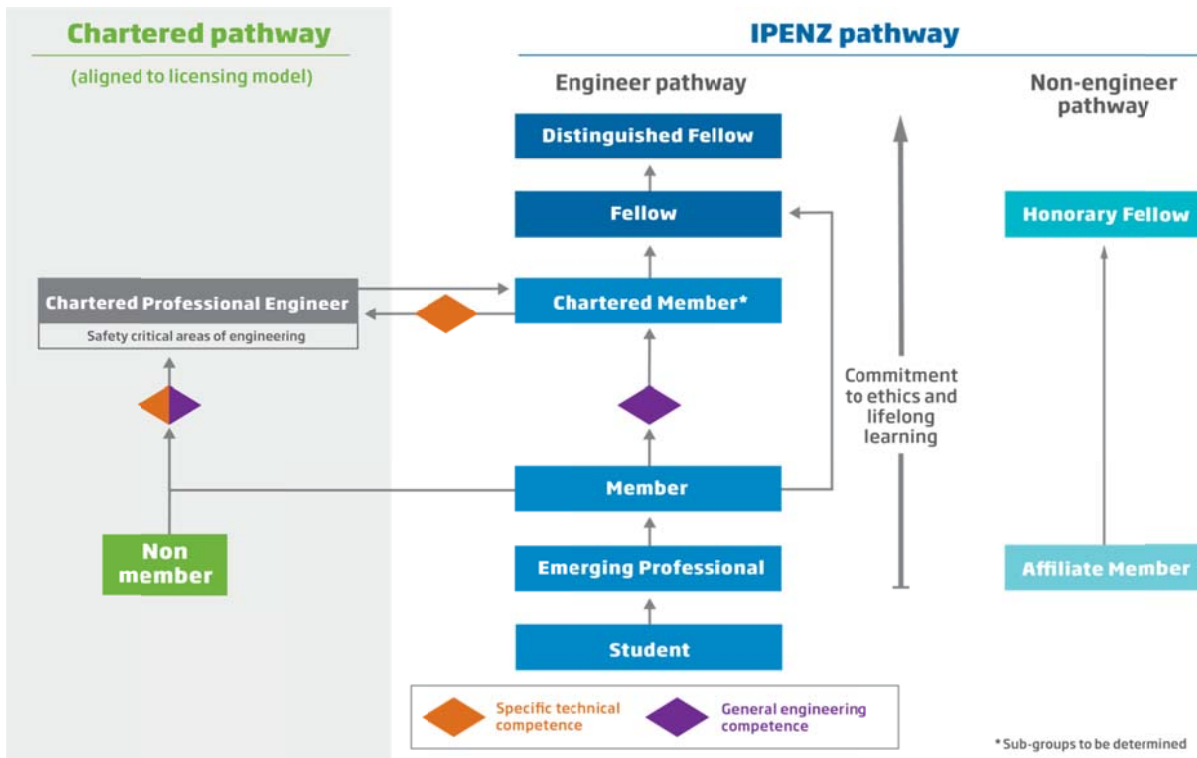
The current CPEng Act and Rules establish CPEng as a voluntary quality mark of current competence for engineers. IPENZ has always actively promoted CPEng to all engineers but this message has not been universally embraced. Currently just 3400 of our 6000 Professional Members and Fellows hold CPEng. This proportion of Chartered Professional Engineers is even lower when considered against the estimated 20,000 professional engineers practising in New Zealand. Over the last two years we have asked the profession why this is. Many engineers have told us the following - repeatedly:

- They perceive that CPEng is focussed on technical engineering design and so is not relevant or appropriate for them.
- They say that increasing use of the CPEng register in a licensing context for consenting-related work in the building and construction sector reinforces a perceived civil engineering bias, and a view that CPEng is only relevant to a select group of engineering disciplines at a particular time in an engineer's career (when they are actually doing technical engineering design).
- Where there is support for CPEng (by structural and civil engineers for whom it has the most relevance), it is not seen even by those engineers as specific or robust enough.
- Many engineers see the re-assessment requirement as onerous. The current re-assessment regime is unique within the engineering profession internationally. While we (and the profession) consider it appropriate in the context of a structured licensing system, we believe that it places an unnecessary burden on the profession (and another barrier to engagement) in the context of a general professional recognition or 'protection of title' framework. In disciplines where there is no compulsion to become CPEng, increasing numbers of engineers see overseas quality marks, such as CEng through a UK institution like the IChemE, as easier to retain than CPEng because there is no reassessment requirement so they opt for that.

Given these factors, the CPEng Act is not proving to be the optimal vehicle for the general professional recognition of engineers across the disciplines and areas of practice that make up engineering in New Zealand. In fact, the current Act may be a barrier to our aspirations to better represent the broader engineering profession in New Zealand. Ultimately, reduced engagement by engineers with their professional body has an adverse effect on the status and standing of the profession in New Zealand and on the quality of engineering services that the profession provides.

## Our new Membership Pathway

The proposed membership model and pathway is set out below. The new model anticipates the potential introduction of a task-based occupational licensing scheme and reflects discussions to date with officials from MBIE and a wide cross section of engineering professionals throughout New Zealand.



Features of our new membership model include:

- A membership-based Chartered brand – ‘Chartered Member’. Chartered Member status will continue to involve an assessment of engineering competence that is aligned with general competence requirements for licensing. It would embrace a common focus on problem solving for society in the technical domain.
- A greater degree of flexibility in assessment for the membership-based Chartered brand, so that it fully embraces engineering leaders, project managers and academics. At the same time, it would continue to align with internationally benchmarked competence standards in support of international recognition and mobility.
- The introduction of an ongoing learning regime for all members rather than any requirement for periodic reassessment.
- Establishing categories of Chartered membership for engineering technologists, engineering technicians and engineering geologists.
- Grand-parenting all existing competence-based members to the new Chartered membership categories -including Professional Member (MIPENZ), Technical Member (TIPENZ) and Associate Member (AIPENZ).
- Establishing a single non-competence-based class of Member, which will be open to those with engineering qualifications and experience aligned with achieving any category of Chartered membership. These would include, for example, engineering geologists with a recognised engineering geology qualification who pledge a commitment to the Code of Ethical Conduct and meet the required professionalism competencies.
- The introduction of an Emerging Professional class to recognise and support recent graduates while they work through an approved (typically 2-3 year) graduate development programme and/or gain the requisite experience to achieve the level of professionalism expected of a non-competence assessed Member.
- Chartered Member status (as with other membership classes) will carry with it the same ethical obligation that currently applies to Chartered Professional Engineers and would be underpinned by an equivalent, membership-based, complaints and disciplinary process. A recent change to the IPENZ Rules means that an engineer cannot

resign their IPENZ membership to escape from their professional accountabilities in the face of a current (or pending) complaint investigation.

- Introducing an annual commitment to professionalism and ethics from all members, along with a commitment to ongoing professional development to ensure that all members keep current.
- Retaining Fellowship as a mark of recognition and esteem.

## Reasons for the title 'Chartered Member' and why we can't wait!

In many professions both here and internationally the title of 'Chartered' has a well-defined and understood meaning. A Chartered professional is a person who has gained a certain level of skill or competence in a particular field of work and has been recognised with a formal credential by the relevant professional body. Chartered has prestige and international currency and is considered a mark of professional competency. It is commonly used by accountants, engineers and scientists.

'Chartered' is the logical choice for an assessed membership class denoting a high level of professionalism and general technical competence. It also provides the requisite international equivalence and recognition.

In New Zealand the CPEng Act frames the use of the Chartered label in a regulatory setting with specific requirements. However, the perception of CPEng being mainly relevant for civil and structural engineers means it hasn't attracted the levels of registrants first anticipated. If New Zealand shifts to a 'licensing of tasks' regulatory regime, we do not consider the Chartered label appropriate in that context. It is not the Act's intention that this title be the preserve of select groups within the profession.

We have thought carefully about whether it would be possible to introduce a 'Chartered Member' grade while the current CPEng Act is in place and we have a Chartered Professional Engineer recognised by statute. We recognise the potential for confusion. However, given that the changes are designed to raise standards generally across the profession and strengthen public trust and confidence, it would be a lost opportunity to delay making the changes that are proposed. On balance, we believe it is possible and preferable to adopt the Chartered Member nomenclature and, if carefully managed, can be accommodated for the following reasons:

- Confusion already exists between CPEng and IPENZ membership.
- There is strong logic for the title 'Chartered Member', because of its recognised status and international currency.
- Alternatives we have looked at such as 'Accredited' or 'Certified' (instead of Chartered Member) are not attractive to the profession, could add further confusion, and wouldn't be sustainable.

## Managing the change and opportunities for strengthening current CPEng requirements for certain practice areas

We are conscious that this change will require a comprehensive programme of member and stakeholder communication.

We are currently developing our communication strategy along with a comprehensive change management plan for all our key stakeholders within the profession and across the wider industry, as well as our international constituents. This will include targeted member communication and education on the new pathway, face-to-face meetings and presentations in all regions, public information sessions and resources for procurers of engineering services and other key stakeholders.

Key communication messages will include:

- Clearly and consistently affirming CPEng as the quality mark that should be relied on by other Regulators seeking assurance of an engineer's current technical competence in a NZ context. We will not be promoting Chartered Membership as equivalent to CPEng for any regulatory or licensing purpose.

- While CPEng would continue to be accessible to all engineers who chose to apply, we will step back from actively promoting CPEng as a general quality mark for all engineers. Instead we would promote our new Chartered Member grade for this purpose.

Within the CPEng assessment regime, we will be working to introduce more specific assessments of engineers seeking to align their practice area with the geotechnical or structural engineering practice fields. Our current thinking is to do this by incorporating assessment against the structural and geotechnical engineering Bodies of Knowledge and Skills (BOKS) that are currently under development in conjunction with SESOC and the NZGS. This will increase the level of assurance to the public and regulators in key safety-critical areas and would also streamline the transition to any licensing regime.

We will also formalise the CPEng (Structural), CPEng (Geotechnical) and CPEng (Fire) designations for engineers who have demonstrated competence against the relevant BOKS.

## Implications for other Registers

### IPENZ national registers of current competence

Consistent with our advocacy for the repeal of the CPEng Act and register, we intend to discontinue national registers of current competence for engineering technologists (Engineering Technology Practitioner register - ETPract), engineering technicians (Certified Engineering Technician register – CertETn) and engineering geologists (Professional Engineering Geologist register – PEngGeol). Engineering professionals currently on any of these registers will be eligible for, and will be offered, automatic recognition within the equivalent category of Chartered membership.

Should areas of safety critical work be identified at any of these levels in future, an appropriate task-based licensing class can be developed.

### International registers

We will also be making changes to eligibility criteria for our international registers - currently International Professional Engineer (IntPE) and International Engineering Technologist (IntET). In order to retain authority to operate New Zealand sections of these registers, we are required to have a mechanism for reviewing the continuing professional development activities of registrants. Up until now, in the absence of a CPD audit model for Members, we have deferred to the CPEng and/or ETPract requirement for reassessment in this regard by making CPEng or ETPract registration a pre-requisite for registration on the IntPE and IntET register respectively. The introduction of an annual commitment to continuing professional development and periodic CPD Practice review (audit) scheme will enable us to align international registration with gaining and maintaining Chartered Membership rather than CPEng or ETPract.

### Registered Engineering Associates

The new membership pathway also provides an option for the ongoing professional recognition of Registered Engineering Associates (REAs) recognised under the Engineering Associates Registration Act 1961. While we have had some initial discussions with the current Chair of the Engineering Associates Registration Board (EARB), we have not yet engaged directly with the EARB on our specific membership model. Previous discussions did, however, highlight difficulties aligning REAs to our current engineering technician register (Certified Engineering Technician - CertETn), given the periodic reassessment obligation that it carries.

Given that, as noted above, we propose to discontinue the existing CertETn register, we would offer REA registrants the opportunity to be grand-parented into the category of Chartered Membership for engineering technicians. Of course this would carry with it an ongoing commitment to the IPENZ Code of Ethical Conduct and continuing professional development.

## Timing and next steps

Our members have asked us to design a clearer, more compelling membership proposition which we believe the new structure will achieve. While the timeframes for changes to the legislative framework and introduction of task-based licensing are not yet clear, we have welcomed an offer by MBIE to work with them to co-design the future regulatory model.

We are determined to provide leadership to the profession and to step up and influence change, rather than wait and react to external pressures. We intend to take the opportunity right now (before any broader regulatory or occupational licencing review) to both introduce a more compelling membership pathway *and* to strengthen the existing CPEng designations for particular areas (such as geotechnical, structural and fire engineering) - both of which would provide a sensible transition into any future regulatory changes.

As outlined above, any confusion in introducing a new Chartered Member class now while we still have Chartered Professional Engineer can be mitigated with clear, compelling communications and proactive engagement with as wide a group of stakeholders as possible. Our members are urging us to create a more robust framework that will generate greater accountability and greater credibility in the eyes of the public. The profession itself has a responsibility to take these steps for the betterment of the profession and New Zealanders.

Transforming IPENZ into a more representative and inclusive organisation is a key strategic priority for the IPENZ Board. We intend to introduce key membership changes from 1 October 2017.