



## **ANNUAL REPORT**

**BY THE**

**CHARTERED PROFESSIONAL ENGINEERS COUNCIL**

**ON THE**

**PERFORMANCE OF THE REGISTRATION AUTHORITY**

**FOR THE PERIOD**

**1 JANUARY TO 31 DECEMBER 2018**

# CPEC

Chartered Professional Engineers Council  
Kāhui Kaiwetepanga Ngaio Whaimana

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## 1 INTRODUCTION

This report is the assessment by the Chartered Professional Engineers Council (the Council) of the Registration Authority's (RA) performance and exercise of its functions and powers pursuant to Section 53 of the Chartered Professional Engineers of New Zealand Act 2002 ('the Act'), for the period 1 January to 31 December 2018.

The RA is the Institution of Professional Engineers New Zealand Incorporated, trading as Engineering New Zealand (EngNZ).

The RA's functions are defined in S39 of the Act and include to:

- (a) make, and always have rules relating to chartered professional engineers, prepared and approved in accordance with the Act;
- (b) register persons, issue registration certificates, assess continued registration;
- (c) keep and maintain the register of chartered professional engineers;
- (d) receive, investigate and hear complaints about, inquire into the conduct of, and discipline chartered professional engineers in accordance with the Act.

Section 52 of the Act requires the RA to report to the Council on the operations of the RA and the chartered professional engineer register for a 12-month period ending on the preceding 31 December.

As part of its review and appeal functions under S45 of the Act, the Council continues to invite the RA to each quarterly Council meeting to:

- present and discuss reports on assessments and complaints,
- monitor the time taken for the hearing of complaints,
- consider the outcomes of appeals,
- maintain dialogue on the Act and the Rules<sup>1</sup>, as currently worded, regarding their efficiency, appropriateness and scope for amendment.

## 2 REGISTRATION AUTHORITY'S ANNUAL REPORT

The RA has provided the Council with its annual report for the period 1 January to 31 December 2018. The report provides both quantitative and qualitative information on activities performed by the RA and records the work undertaken by the RA in fulfilling its obligations under the Act.

A copy of the RA's 2018 annual report is submitted to the Minister with this report.

The report provides a strategic overview of the RA, commentary and information on the following topics:

- **Professional Standards:** Advocacy and assistance relating to the design of a future licensing model for safety-critical engineering work; the development of bodies of knowledge and skills (BOKS) for geotechnical and structural engineers; the continued development of BOKS for fire protection engineers and work to integrate the BOKS into the 2019 chartered professional engineer assessments; and a new customer relationship management system (a top priority for 2019).

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<sup>1</sup> Chartered Professional Engineers of New Zealand Rules (No. 2) 2002 ('the Rules')

- **Assessment Process:** Growth in chartered professional engineer registrants to 3780 by the end of 2018; the addition of an academic practice field; recruitment of 62 new Practice Area Assessors - 42 of whom were women; and refinements to Knowledge Assessment through the development of a 'desktop qualification review' process.
- **Greater Christchurch Claims Resolution Service:** Assistance to Government in the establishment of a free brokering service for residential homeowners in Christchurch who need assistance to achieve resolution of their outstanding insurance claim; and the establishment of an expert engineering panel consisting of chartered professional engineers to assist the Greater Christchurch Claims Resolution Service with claims resolutions.
- **Competence Assessment:** Generally positive feedback from a relatively small number of respondents to a survey of candidates for competence assessment; an increase in the median completion time of assessments compared with 2017 and with the RA's target; approval of 313 initial registration applications with 11 declined; approval of 319 applications for continued registration with 11 declined; 349 continued registration assessments still under consideration at year end; 46 successful applications for chartered professional engineer under mutual recognition schemes; one appeal against the RA's decision from an unsuccessful applicant for continued registration where concern is acknowledged regarding the time that has elapsed since the appeal was lodged; a description of the 2018 competency assessment board; assessor workload ; proposed assessor training and the proposed integration of the BOKS in 2019.
- **Register Trends:** An increase in the number of first time assessments and a reduction in the number of continued registration assessments relative to 2017; a continuing increase in the total number of chartered professional engineer registrants to 3780; commentary on the historically low representation of women on the register but some encouraging progress towards a 2021 target under the diversity agenda; the age profile showing over 4% of registrants in the 70-89 age bracket. Some changes to the practice field proportions, including an increase in the number of structural registrants by approximately 4% over the year; geographical distribution predictably showing Auckland with significantly higher numbers than other centres followed by Canterbury, then Wellington.
- **Other Chartered Professional Engineer-Based or Related Quality Marks:** Commentary on the small number of Design Verifiers including reference to discussion with WorkSafe over low volumes of certification work in some areas and an intention to review current regulations during 2019; active liaison being maintained by the RA with Engineers Australia and the re-signing of a revised Admission Pathways Agreement with the Engineering Council (UK); establishment of the Diversity Agenda with NZIA and ACENZ and the development of a resource kit of tools and development of information designed to understand and implement diversity initiatives within Engineering workplaces.
- **Complaints and Disciplinary Activity:** Commentary on the complaints process and improvement initiatives, with data on the closed concerns/complaints themes and trends, confirming the effectiveness of the new measures in terms of earlier resolution and the avoidance of the full compliance/appeal process in several cases.
- **Complaints Snapshot:** Data on complaints received by the RA relating to the actions of chartered professional engineers and the competence assessment process, including commentary on an Own Motion Inquiry based on the RA's views of its responsibility to investigate individuals but also recognise system and sector-wide factors.
- **Case Studies:** Three case studies resolved through various stages of the complaints resolution process, presented to illustrate the RA's approach to complaints.
- **Appendix 1:** Chartered Professional Engineer Fees for 2018
- **Appendix 2:** Summary of fee income and costs incurred in 2018.

### 3 REPORTING REQUIRED BY THE ACT

The RA's reporting requirements are set out in the S52(2) of the Act and the responses are summarised below.

- (a) the number of chartered professional engineers at the end of the 12-month period **(3,780)**; and
- (b) the number of persons whom the RA registered **(313)**<sup>2</sup> and the number whom the RA declined to register **(11)** during the 12-month period; and
- (c) the number of persons whose registration was removed **(142)**, suspended **(94)** or placed in abeyance **(39)** during the 12-month period; and
- (d) the number of persons against whom the RA made a disciplinary order **(0)**<sup>3</sup> during the 12-month period; and
- (e) the amount of the charge or charges payable in relation to registration or the issue of a registration certificate **(no change)** during the 12-month period; and
- (f) any other information that the Council reasonably requires.

The RA's report addresses the requirements of S52(2) (a) to (c) under Register Trends, (d) under Complaints Snapshot and (e) in Appendix 1 & 2.

### 4 RULES FOR CHARTERED PROFESSIONAL ENGINEER STANDARDS

No changes were made to the Chartered Professional Engineers Rules in 2018.

### 5 THE COMPETENCE ASSESSMENT PROCESS

The RA's 2017 report predicted just over 740 total assessments for 2018.

The total number of assessments processed (654) was significantly lower than the number predicted, and whilst slightly higher than (624) in 2017, it remained lower than the previous 3 years (704 in 2016, 701 in 2015, and 1167 in 2014).

At the commencement of the year there were 129 initial registration applications and 163 applications for re-assessment in progress from the 2017 period.

During the year 324 initial registrations were processed, 313 approved and 11 declined. Of these 44 applicants and approvals were female.

46 applications were assessed under a mutual recognition schemes, 8 via the Trans-Tasman Mutual Recognition Act and 38 through mutual recognition from other recognised jurisdictions.

During the year 330 applications for re-assessment for continuing registration were processed, 319 were approved and 11 declined.

The year closed with 349 re-assessments still being processed. The number of re-assessments being processed at the year close was more than double the number (163) of the last period.

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<sup>2</sup> First registered

<sup>3</sup> Two of the three disciplinary hearings were pending at the end of 2018, the other was dismissed by the disciplinary committee.

In 2017 the assessment processing times were significantly reduced<sup>4</sup> by the introduction of a more streamlined system, which resulted in the RA meeting its target of 84 days for average processing times. In 2018 the median number of days required to process an application increased to 91 & 87 days for initial and continuing registration, respectively.

The total number of lead assessors in 2018 was 19<sup>5</sup>, the same as 2017. The RA has plans to further extend the lead assessor pool in early 2019.

The RA attributes the decrease in re-assessments to the impact in workload associated with the increase in first time assessments and a decrease in the number of lead assessors available in the latter half of 2018<sup>6</sup>.

The RA increased its pool of practice area assessors to 428 (374 in 2017 and 295 in 2016). 42 female practice area assessors were recruited in 2018, bringing the total of female practice area assessors to 62. This boosts the percentage of female assessors to 14.5%, which is above the current percentage of female chartered professional engineers (9.2%).

The RA has plans for continued engagement with assessors including workshops for current lead assessors and training sessions for new lead assessors in early 2019.

The RA developed and implemented a desktop qualification review process to expedite the knowledge assessment for candidates who are likely to meet the requirements of the Washington accord equivalent through formal qualifications.

The RA predicts 1100 total assessments for 2019, 350 first time assessments and 750 re-assessments.

The Council remains confident the RA is maintaining a credible and robust competency assessment system that fulfils its obligations under the Act.

The Council is pleased to note the RA's efforts for continually identifying and addressing shortfalls in the process, which in 2018 saw an increase in practice area assessor recruitment, and improvements to the desktop qualification process.

Whilst the Council remains concerned about the gender imbalance within the engineering profession, it is pleased to see the increase in female first time assessments which accounted for 14% of the approved first-time assessment applicants, and the recruitment of an additional 42 practice area assessors.

## **6 REGISTER TRENDS**

The RA's report provides quantitative information and qualitative commentary on the trending number of chartered professional engineers, age distribution, gender breakdown, fields of engineering practice and geographical distribution of registrants.

The number of chartered professional engineer registrants continues to steadily increase.

The 2018 diversity drive by the RA, resulted in an increase in females applying for first time assessment in 2018 (14% of first time assessments), and whilst 9 of the 61-female chartered professional engineers due for re-assessment chose to resign in 2018, the percentage of female chartered professional engineers increased from 8.9 to 9.2% during the year.

The top four fields of engineering practice continue to be civil, structural, management and environmental. The field of academic was added in 2018. The geographical distribution of chartered professional engineers

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<sup>4</sup> 2017 average processing times were 81 days for initial registration applications and 64 days for continued registration

<sup>5</sup> Lead assessors include contract and EngNZ staff lead assessors

<sup>6</sup> Decrease in availability due to extended leave or ill-health.

continues to be dominated by Auckland at 35.9%, followed by Canterbury at 16.4% and Wellington at 11.8%, with an increase of 26 chartered professional engineers in Auckland, 1 in Canterbury and no change in Wellington. 9.2% of chartered professional engineers are either overseas or not affiliated to a NZ Branch.

## **7 OTHER CHARTERED PROFESSIONAL ENGINEER - BASED OR RELATED QUALITY MARKS**

The RA continues to manage the register for Design Verifiers (pressure equipment, cranes and passenger ropeways). There was a significant decrease of 8 certifiers from 24 in 2017 to 16 in 2018. The RA continue to discuss the low levels of design verifiers with WorkSafe, who intend to review current regulations in 2019.

EngNZ continues to maintain close relationships with other similar professional bodies throughout the international engineering community. Active liaison is maintained with Engineers Australia. A revised Admission Pathway Agreement with the Engineering Council (UK) was signed during the year.

## **8 COMPLAINTS & DISCIPLINARY ACTIVITY**

The RA has continued to educate the public<sup>7</sup>, the chartered professional engineer community<sup>8</sup> and the RA's Investigating and Disciplinary Committee Chairs<sup>9</sup> on the management of complaints and has continued to code complaints to enable them to track trends and themes and to communicate these findings to the wider profession.

There was a slight increase in the number of concerns (43) received by the RA in 2018. With the number closed (36) being similar to 2017.

Three disciplinary hearings took place in 2018. One was dismissed, the others were pending at the close of the reporting period.

Four RA decisions were appealed to this Council in 2018. One related to a 2017 decision; the remaining three were from the 2018 period. The Council upheld one appeal and declined three<sup>10</sup>.

The RA appealed one Council appeal decision to the District Court. The RA did not disagree with the Council's finding, but disagreed with the wording of the decision and the precedent they considered this wording may set. The RA appeal was dropped following the issuing of an addendum to the decision by Council.

Council considers that the complaint process is working well. However, as noted in previous reports the process is complex and has multiple stages. This leads to a lengthy period of time from when complaints are received until they are resolved. This is further extended if the outcome is appealed at any of the stages.

## **9 COMPLAINTS STATISTICS AND TRENDS**

Of the 36 concerns closed, 44%(16) were resolved via the early resolution process, 42%(15) were dismissed by an adjudicator, 11%(4) were dismissed by an investigating committee and 3% (1) was dismissed by a disciplinary committee.

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<sup>7</sup> RA website – Engineering concerns: for the public

<sup>8</sup> RA website – Engineering concerns: for engineers – toolkit for dealing with concerns)

<sup>9</sup> Guidance handbook for Investigating and Disciplinary Committee Chairs

<sup>10</sup> One Council decision was made in 2019.

The categorisation of complaints indicates design competence (75%) and ethics (25%) as the two primary factors, with structural engineering (92%) being the main field of practice involved in concerns / complaints.

This is in keeping with the appeals considered by the Council. Of the four appeals of 2018 considered by the Council, 75%(3) related to design competence, 25%(1) to site observation competence, with 75%(3) having structural engineering, and 25%(1) having civil engineering as the main field of practice.

The 2016 EngNZ Own Motion Inquiry into engineering design of six buildings in Masterton continued during this reporting period, with an expected completion in 2019. The inquiry is investigating the individuals, and the system which they are a part of. Whilst the RA's responsibility under the Act is limited to investigating matters relating to individual chartered professional engineers, the Council agrees with and supports this broader system and sector review.

## **10 RELATED ACTIVITIES WHICH MAY IMPACT ON CHARTERED PROFESSIONAL ENGINEERS**

### **10.1 Chartered Professional Engineer /Chartered Member**

In late 2017, EngNZ implemented a new membership pathway which sits alongside the chartered professional engineer register. Council voiced its concern and commented in its 2016 and 2017 reports on the possible confusion that could arise between the status of an EngNZ "Chartered Member" and a "Chartered Professional Engineer".

The RA reports that the candidate survey has highlighted the need for the RA and EngNZ to continue to work on addressing the confusion between chartered professional engineer registration and the chartered membership of EngNZ with Engineers.

The Council remains concerned over the possible confusion, which it considers is not limited to the confusion within EngNZ members or chartered professional engineer candidates but could extend to the general public. The Council considers in addition to the continuation of work on addressing the confusion within the Engineering sector, considerably more work is likely to be needed to address the confusion within the greater community.

The changes made by EngNZ are consistent with the wider proposed changes to the professional licensing regime initiated by the Ministry. The Council understands that the licensing changes are still a number of years away. Therefore, any potential confusion will exist for this period.

### **10.2 Greater Christchurch Claims Resolution Service**

In 2018 EngNZ supported the establishment of the Greater Christchurch Claims Resolution Service (GCCRS), launched in October 2018. The GCCRS is a MBIE led free brokering service established to assist Christchurch residential homeowners with resolution of outstanding insurance claims.

EngNZ administer the Christchurch earthquake expert engineering panel, a panel of structural and geotechnical chartered professional engineer technical experts and facilitators who assist the GCCRS.

Council considers this to be a positive process that should reduce the number of complaints arising from earthquake resolution engineering advice, and hence also appeals to this Council, of which there have been several in recent years.

## **11 THE COUNCIL'S PERSPECTIVE ON THE REGISTRATION AUTHORITY'S PERFORMANCE**

The Council considers that the RA is performing well in the following areas:

- Having a robust competency assessment and re-assessment process;

- In obtaining and considering candidate feedback (by survey), albeit with a relatively low response rate;
- Recognising engineers practising in critical and/or emerging practice fields by the addition in 2018 of an “academic” practice field with further additions proposed for 2019;
- The continuing increase in the total number of chartered professional engineers (**3780**). An increase of 4.7% (170) since the last period;
- Continuing to increase the number of practice area assessors (428), including an increase in female assessors from 20 to 62 in 2018;
- Streamlining the knowledge assessment portion for chartered professional engineer candidates applying with Washington Accord equivalents by the introduction of a desktop qualification review;
- Continuing to streamline the complaints process;
- Raising the standard of the chartered professional engineer qualification, by the development and proposed 2019 incorporation of the Bodies of Knowledge and Skills (BOKS) for geotechnical and structural practice fields, with further work being undertaken in the fire engineering practice field.

As discussed frequently with both the RA and the Ministry, the Council stresses that initiatives such as this are applicable to the wider engineering spectrum, as highlighted by the issues raised with the water supply contamination in Havelock North in mid-2016.

- The establishment of an expert engineering panel for GCCRS utilising chartered professional engineers

The Council sees scope for further improvements in the following areas:

- Reducing processing times for chartered professional engineer assessments, supported by regular and effective forecasting of demand and availability of trained assessors.
- Continuing training and publicity to maximise understanding of the membership pathways and minimise confusion between chartered professional engineer and chartered member status.

The RA has reported a net deficit of \$81K for 2018 compared with a 2017 surplus of \$174K. This has been largely attributed to the write-off of the member / registration database and rising salaries and overheads. The current and cumulative deficit is effectively being carried by EngNZ.

## **12 SUMMARY**

The Council considers that the RA is continuing to perform well with a culture of continued improvement evidenced in the areas that the Council observes.

It is pleasing to see the increase in chartered professional engineers registered, and the increase in females both on the register and involved within the assessment process.

Of concern is the significant volume of re-assessment processing yet to be completed at the end of the reporting period and the reversal in application processing times, and how this will be addressed in 2019, given the significantly higher assessment volume also predicted for 2019. The Council will continue to track assessment times with the RA with a view to getting processing times back on target.

Whilst the 2018 assessments do not reflect a decline in assessment numbers, the Council will continue to observe and review the impact of the new EngNZ Chartered Member membership on the Chartered Professional Engineers register. The Council will continue to communicate with the RA regarding the minimisation of the general public’s potential confusion between the “branding” of registered chartered professional engineer and EngNZ membership.

The relationship between the RA and the Council is seen as strong and positive. The Council's role is made considerably easier and more effective with the open and constructive communication that exists between the two parties.

Dated: 30 May 2019

A handwritten signature in black ink, appearing to read 'Jon Williams', with a stylized flourish at the end.

**Chairperson: Jon Williams**

**COUNCIL MEMBERS:**

Ross Tanner (Deputy Chair)  
Sandra Hardie  
Chris Harrison  
Rebecca Knott  
Sue Simons  
Alan Winwood

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