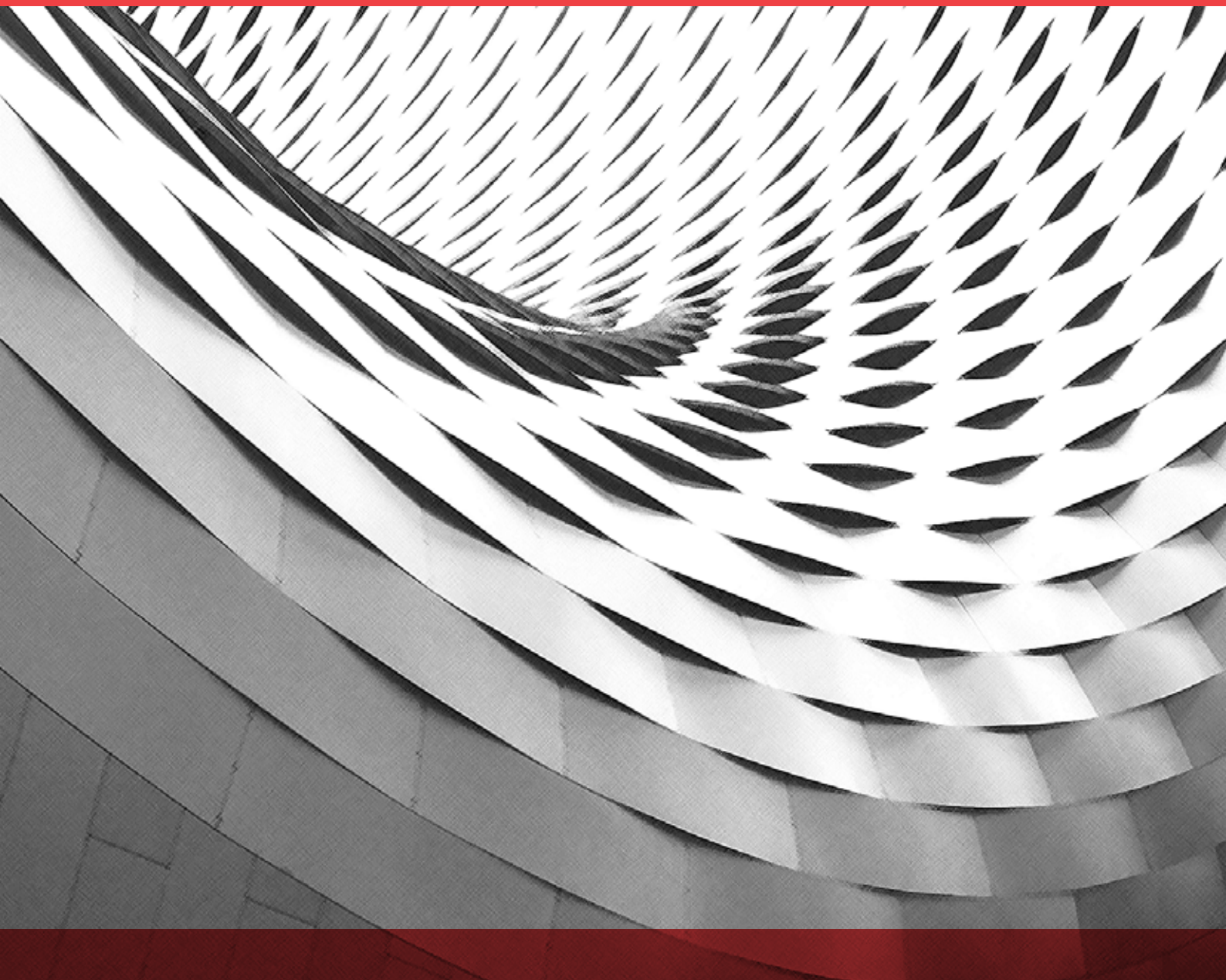
REGISTRATION AUTHORITY
FOR CHARTERED PROFESSIONAL ENGINEERS

2020 Annual Report



Annual Report of the Registration Authority to the Chartered Professional Engineers Council pursuant to section 52 of the Chartered Professional Engineers of New Zealand Act 2002

1 January – 31 December 2020

Under the Chartered Professional Engineers of New Zealand Act 2002, the Registration Authority reports to the Chartered Professional Engineers Council each year on its administration of the Register of Chartered Professional Engineers. This report covers the 18th year of operation of the Chartered Professional Engineers (CPEng) Register.

The Registration Authority under the Chartered Professional Engineers of New Zealand Act 2002 is the Institution of Professional Engineers New Zealand (trading as Engineering New Zealand Te Ao Rangahau).

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1 January – 31 December 2020

Overview

System review

A key strategic priority for the Registration Authority during 2020 was the commencing of a formal review of the CPEng quality mark.

In 2019, the Ministry of Business, Innovation and Employment (MBIE) released a proposal outlining a new regulatory system for engineers. This proposed replacing CPEng with a certification of general engineering competence and licensing for safety-critical engineering work. This work did not progress ahead of the 2020 election and will be picked up again in 2021.

We know that CPEng is not providing sufficient assurance to the public of engineers' competence. We are aware that any broad regulatory change will take time. In 2020 the Registration Authority decided that rather than wait any longer for regulatory change, we would work to improve what's under our control now.

In November 2020, after a careful internal review that included substantial engagement with a range of key stakeholders, we released a discussion document proposing options for improving CPEng. Feedback on the consultation closed in January 2021 and final proposals for change will be developed for implementation.

In addition to our own review of the CPEng system, we have continued in parallel to liaise with MBIE about their wider review of occupational regulation for engineers, which we now understand they intend to progress during 2021.

Key activities

- Advising, leading and consulting with the profession on the CPEng Review.
- The launch of a new Customer relationship Management (CRM) system for the organisation, including an updated ongoing assessment portal through which all CPEng assessments are managed.
- Liaison with technical groups in the development of a triage approach to reassessment.
- Continuing our work to increase the proportion of female Chartered Professional Engineers.

Highlights

- Increasing the number of CPEngs from 3879 to 4010.
- Completion of 421 assessments for admission to the CPEng register (253 in 2019).
- The re-introduction of assessment rounds with specific submission dates and target processing timeframes for initial registration applications.
- 58% of complaints resolved through the early resolution process and 13% through disciplinary hearings.
- The continued development of Engineering New Zealand's diversity programme which saw the launch of the Diversity Agenda Accord.

Challenges

2020 saw continuing resourcing pressure being placed on CPEng assessment and complaint investigation functions. As the number of CPEng registrants continues to grow, reassessment workloads continue to gradually increase, while 2020 also saw a surge in demand for initial registration. In addition to ongoing efforts to recruit additional assessor resource, several strategies were introduced to ease resourcing pressure and reduce assessment processing times. While this led to an increase in the number of assessments completed and reductions in median processing times, resourcing constraints and backlogs of reassessment applications remain and will require ongoing and renewed focus in 2021.

The Registration Authority ended the financial year with a net financial deficit of $425,843.00 on CPEng related activities.(Appendix 2). This reflects an operating environment in which rising costs have not been matched by any increase in registration fees, which have not been revised since 2015. In recent years, any review of fees has been deferred because of pending changes to occupational regulation (2018/19) and the Covid-19 pandemic (2020). While fees have failed to keep pace with increasing costs over this period, ongoing uncertainty about the future of CPEng is likely to make it difficult to proceed with a review of fees in 2021.

CPEng Review

The Registration Authority completed an end-to-end review of the CPEng system in 2020. The key goal for the Registration Authority is to maintain a robust and unambiguous framework that works for all engineering professionals and for the public. One that works for any engineering discipline, is internationally recognised, and sits within a regulatory framework that is effective, transparent, maintains standards, responds to risk, and holds engineers to account when things go wrong. One that makes "Chartered" synonymous with engineering quality.

The findings of our review and draft proposals for strengthening the CPEng system were shared with, and received support from, both MBIE and CPEC before a finalised document was publicised for consultation in November.

Our review identified 18 proposals for change. They include:

» Focusing on CPEng as the professional engineer's quality mark and making it relevant for all disciplines.
» Introducing specific CPEng assessments for some disciplines (incorporating assessment against Bodies of Knowledge and Skills (BOKS) developed in collaboration with technical groups), leading to registration classes that provide assurance that engineers can perform specific work.
» Fixing the relationship between CPEng and Chartered Membership to realise our vision to have an unambiguous Chartered mark that engineering professionals in each engineering occupational group can aspire to.
» Streamlining the assessment process using clear gates to proceed to the next step.
» Moving from standardised periodic reassessment for all to a more targeted, risk-based reassessment based on robust audit processes.
» Making the complaints and disciplinary process more robust and streamlined.
» Make CPEng sufficiently inclusive so that professional engineers from all disciplines can aspire to this quality mark.
» More explicitly tying CPEng to Engineering New Zealand membership. Feedback from the consultation will be compiled before any next steps are determined in 2021.

Strategic Priorities for 2021

Priorities for the Registration Authority for 2021 include:

» Responding to the findings from the CPEng Consultation.
» Working with CPEC to introduce new regulations or the CPEC levy so that it is more flexible.
» Working with CPEC and MBIE to address the Registration Authority deficit.
» Addressing current assessment resourcing constraints and associated backlog of re-assessments and open complaints.
» Developing a robust assessor recruitment process.
» Increased systemisation with our CRM.

Competence Assessment

Applications for Admission

As noted above, 2020 saw a strong surge in demand for initial registration assessments. At the end of 2020 we had completed 421 first time assessments, more than at any time since the initial register implementation phase in 2003/04. This placed significant additional demands on the assessment process and impacted our ability to clear the backlog of re-assessment applications as we use the same pool of assessors. The surge in initial application numbers is highlighted in Table 2.

A contributing factor in this increase is the re-introduction of specific assessment rounds or application deadlines through the year, which seems to have helped engineers to prioritise completion of their application. The assessment rounds also created some processing efficiencies, which assisted in the processing of higher volumes of applications. Applicants were also able to direct time to their assessment submissions through the Lockdowns and our use of videoconferencing for assessment interviews assisted with the processing the increased volume of applications.

Strong attendance numbers at chartered assessment information workshops and the volume of applications already in the system at the end of 2020 suggest that demand for initial competence assessments will continue to increase in 2021.

Continued Registration Assessments

We began 2020 with a backlog of reassessment applications to process and implemented several processing refinements during the year which improved the efficiency of the reassessment process:

- The reporting format was streamlined to reduce reporting timeframes for assessors.
- Ongoing improvements to the initial application validation process lifted the quality of re-assessment submissions, reducing the need for assessors to seek further information.

Two types of triaging process were introduced to better focus assessment effort:

- General triage: All applications were passed through a general triage process which saw all applications reviewed against a series of risk factors. Registrants that did not trigger any high-risk criteria were re-assessed by a one-person assessment panel.
- Technical triage panel for structural re-assessments: In addition to the general triage of applications, we piloted a technical triage panel for structural engineering registrants.

As registrant numbers have gradually increased, the current reassessment model has placed an increasing assessment workload on the profession. We currently require nearly 10% of CPEngs to volunteer as assessors and complete three assessments a year to keep pace with the current assessment workload.

Our initiatives to streamline the reassessment process this year helped us to process reassessment applications more efficiently, but the unexpected increase in initial assessment applications delayed addressing the backlog of reassessment applications

Candidate satisfaction

A 15-question survey is distributed to all candidates who go through the assessment process. The results shown below summarise overall satisfaction with the assessment process and the relative importance of CPEng to applicants. While the survey response rate is relatively low (10%), it is considered to provide a reasonable representation of candidates' views.

Levels of satisfaction measured in the 2020 respondents remain broadly consistent with previous years. This reflects well on assessment staff, who have been able to manage candidate expectations in the face of processing time delays.

As noted above, the ongoing confusion between CPEng and Chartered Member is something that we are seeking to address as part of the CPEng review. Engineering New Zealand created Chartered Member on the understanding that the Government would soon repeal CPEng and replace it with a new system of regulation that Chartered Member would complement. While we knew having CPEng and Chartered Member operating together would be confusing, our vision was that this would be temporary: Chartered Member would become the quality mark for the profession once CPEng was repealed.

Figure 1: *Survey response – overall, the assessment process was...*

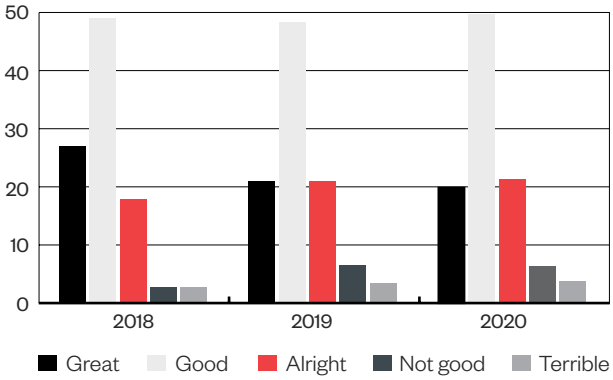


Figure 2: *Survey response – the quality mark of CPEng is important to my role as an engineer*

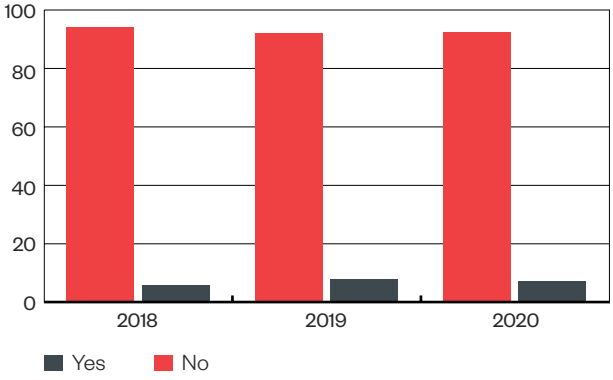
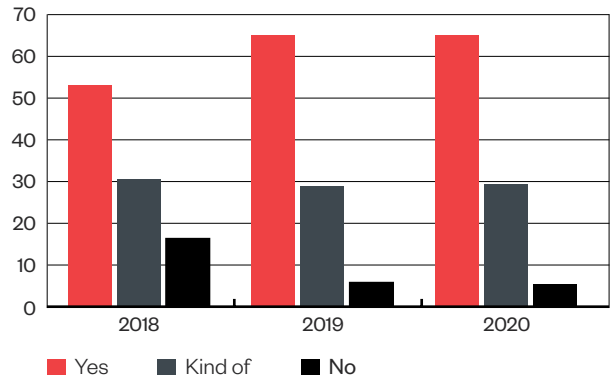


Figure 3: *Survey response – I understand the similarities and differences of Chartered Member and Chartered Professional*



Competency Assessment Board

The Competency Assessment Board (CAB) met monthly during the reporting period (except for January where there was no meeting) to consider recommendations from Assessment Panels. Most of the meetings were held by teleconference in response to the new way of working during the COVID-19 lockdowns.

The CAB welcomed new members Brady Cosgrove, Dominique Tharandt and Matt Harris (Governing Board Representative). The CAB also said farewell and thank you to Hamish Denize in March whose third two-year term on the Board concluded and Simone French who left due to other commitments.

The members of the CAB in 2020 were:

- **Stewart Hobbs:** reappointed in 2019 for two years and appointed Chair for two years – term expires March 2021
- **Hamish Denize:** reappointed in 2018 for two years, term expired March 2020
- **Simone French:** appointed in 2018 for two years, term expired March 2020
- **Don Tate:** reappointed in 2019 for two years, term expires March 2021
- **Kathryn Ward:** reappointed in 2019 for two years, term expires March 2021
- **Branko Veljanovski:** reappointed in 2019 for two years, term expires March 2021
- **Sisira Jayantha:** appointed in 2019 for two years, term expires March 2021
- **Matt Harris:** Governing Board representative appointed as board representative in 2020 for one year, term expires March 2021
- **Daniel Kennett:** appointed in 2020 for two years, term expires March 2022
- **Sina Cotter-Tait:** appointed in 2020 for two years, term expires March 2022
- **Brady Cosgrove:** appointed in 2020 for two years, term expires March 2022
- **Dominique Tharandt:** appointed in 2020 for two years, term expires March 2022

CAB Members are Chartered Professional Engineers with extensive experience in, and knowledge of, professional engineering. In appointing members, the Registration Authority also looks for candidates with experience in competency assessments and quality assurance of competency assessments. Consideration has also been given to geographical representation.

Number of Assessors

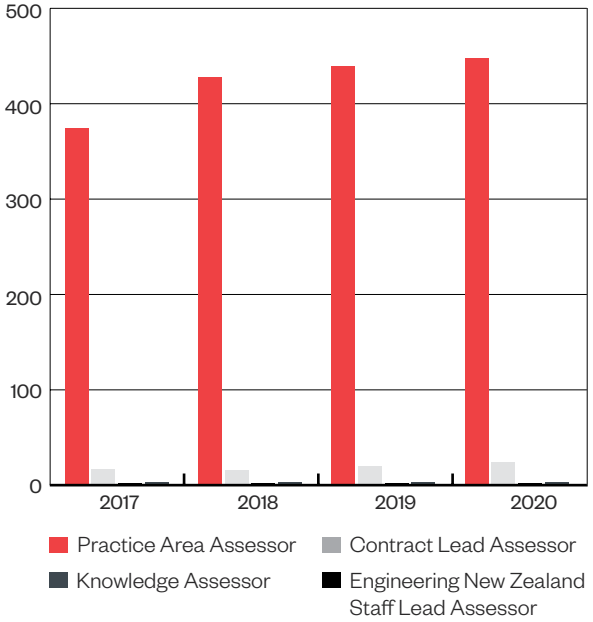
The assessment workload during 2020 was greater than the previous year in part due to the large number of unfinished reassessments from 2019, the introduction of a new CRM mid-way through the year and the impact of COVID- 19. However, the implementation of a triage approach to reassessments, the recruitment of additional Practice Area Assessors and Lead Assessors and the scheduling of rounds for first time assessments saw an increase in the number of assessments completed. At the conclusion of the reporting period, we had completed more assessments when compared to the previous assessment total of the preceding six years. A highlight of 2020 was the almost 50% increase on the number of first-time assessments completed in 2019.

The COVID pandemic and delays in implementing a CRM also impacted the recruitment and training of new assessors. Prior to the pandemic we had recruited an additional 12 Practice Area Assessors (PAA) and approached suitable candidates to gauge their interest in volunteering.

During the lockdowns, the Lead Assessor Electronic Forum worked as a touchpoint to share questions around the assessment process and procedures and helped build and maintain consistency.

Given projections of future assessment demand, recruitment of additional lead and practice area assessors will be an area of particular focus in 2021.

Figure 4: *Summary of assessor numbers as at end of 2020*



Register/Assessment Trends

Table 1 provides a summary of key registration and assessment statistics, including those required by section 52(2) of the Act

***Table 1:** Registration Statistics*

Registration Statistics for	2017	2018	2019	2020
(A) Chartered Professional Engineers at the end of the reporting period (see figure 4 for longer-term-trend)	3,610	3,780	3,879	4010
(B) Applicants (first) registered during the reporting period	242	313	247	398
(C) Applicants (first) registered via mutual recognition (subset of B)	43	46	31	31
(D) Applicants declined registration during the reporting period	6	11	6	23
(E)Total Assessments for Admission completed (B+D) - (see Figure 5 for longer-term trend)	248	324	253	421
(F) Assessment for Admission pass rate	97.6%	96.5%	97.5%	95%
(G) Continued Registration Assessments completed (See figure 5 for longer term trend)	376	330	507	587
(H) Registrants resigned or removed during the reporting period (see note 1)	107	142	153	79*
(I)Registrants suspended during the reporting period	62	94	133	117
(J) Registrants placed in abeyance during the reporting period	31	39	48	36
Median Processing times				
Assessments for Admission	81 days	92 days	120 days	101 days
Continued Registration Assessment	68 days	99 days	160 days	147 days

* This number is markedly lower than previous years and may be due to registrants holding on to CPEng because of the competitive drivers from the COVID lockdowns.

Note 1: Reasons for removal from the register can include:

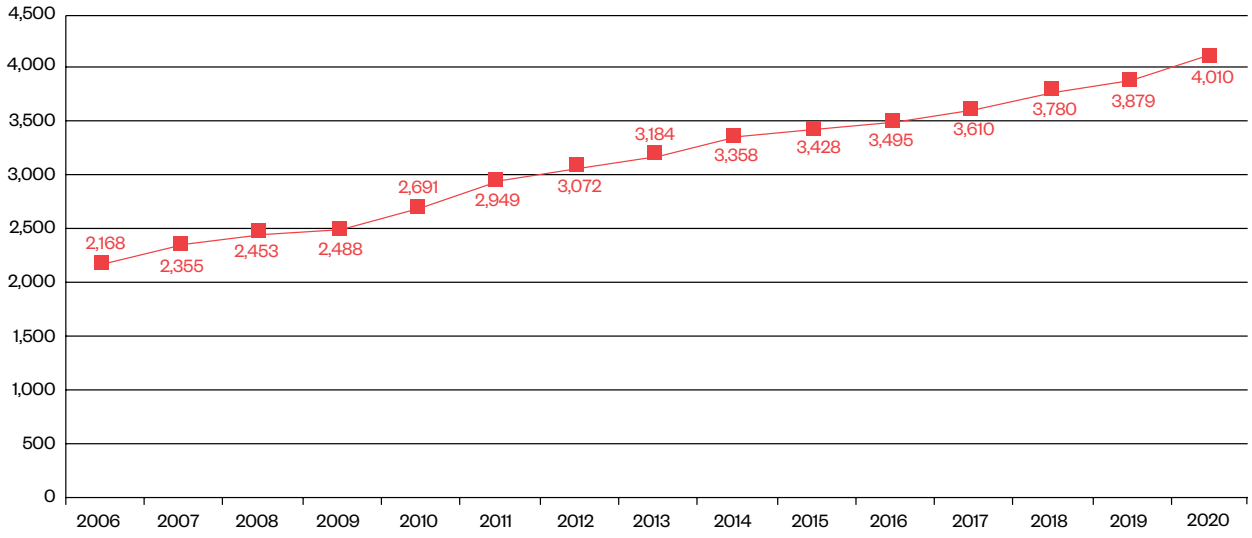
» resignation
» death
» Registration Authority action due to non-payment of fees, inability to meet the standard for continued registration or disciplinary action.

The number of registrants who resigned or were removed from the register during a year includes registrants whose registration was already in suspension at the beginning of that year.

Overall registration numbers

The overall number of CPEng registrants continues to increase steadily.

Figure 5: *Number of CPEng Registrants*



Assessment numbers

Figure 6: *Number of assessments processed*

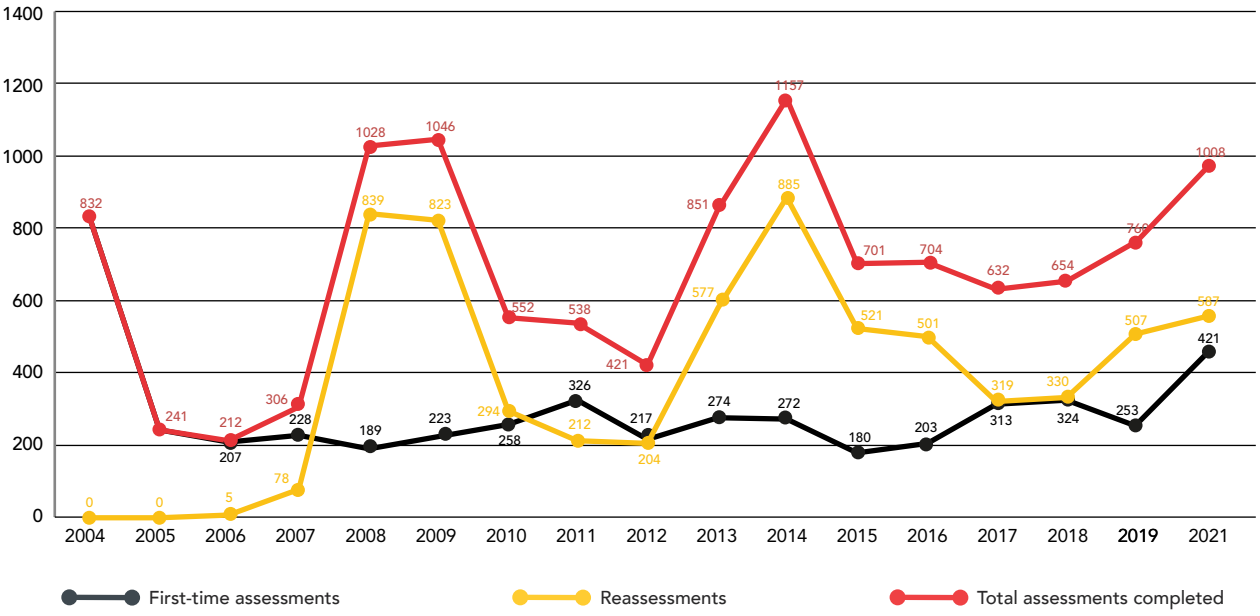


Figure 7 shows the success of the scheduled assessment rounds and an upshot for the COVID Lockdowns in the 60% increase in the number of first-time assessments completed. The number of reassessments also bested the previous year and the total number of completed assessments was the highest number completed since 2014.

CPEng registration under mutual recognition

Of the 31 engineers who successfully applied for CPEng under mutual recognition schemes in 2020, five came via the Trans-Tasman Mutual Recognition Act (TTMRA) and 26 came through mutual recognition from other jurisdictions.

The Registration Authority continues to apply the policy developed in 2004 for handling applications for CPEng from Registered Professional Engineers Queensland (RPEQ) in compliance with the TTMRA. The same principles are applied to those who have attained registration in other jurisdictions requiring an equivalent level of competence to CPEng.

Assessment processing times

The goal for the Registration Authority is to complete first-time assessments within 84 days. The first time Assessments conducted through our previous database between January 2020 to October 2020 were taking an average of 108 days to complete. Our reassessments during the same averaged at 153 days. In our previous annual reports, we have reported on the median process times. In 2020 we had a median of 101 days for first time assessments and 147 days for reassessments as captured in Table 1.

The average process times show a gradual increase on the target completion times. The year-on-year growth of our completion times can be attributed to peak assessment years (793 for 2019) and the compounding backlogs of previous years. The introduction of the triage process, our new system, a recruitment marketing drive, and further collaboration with our PDPs will assist bring the completion times closer to our target.

Assessment pass rates

The pass rates for CPEng remain high with a 95% success pass rate a measure over the last three years. This is in part due to the nature of the assessment. By the time an applicant has submitted their assessment they have had the benefit of the guidance we provide through our presentations and our strong recommendation that they share their portfolios with mentors that have become chartered previously. Our validation process also assists discriminate between good and poor submissions and our practice of returning poor submissions back to applicants for an applicant's improvement before progressing to an assessment panel contributes to the pass rate. As the assessment is competency based an applicant must be able to demonstrate their ability to undertake complex engineering activities and solve complex engineering problems in alignment with the minimum standard. Applicants may at times be advised to withdraw their assessment if the assessment panel believed the applicant would benefit from more time in a professional engineering environment. Alternatively, applicants may also request to withdraw their assessment on their own accord. In these cases, the applicant's assessment report will not be progressed to the Competence Assessment Board and therefore not captured as either a successful or unsuccessful result.

Age distribution and gender breakdown

Increasing the representation of women in the engineering profession is a critical issue, but one that requires a sustained, multi-faceted approach. The Diversity Agenda is Engineering New Zealand's key leadership initiative for the profession and has over 160 firms committed to driving change: https://www.diversityagenda.org. During the year the Diversity Agenda was enhanced by the launch of the Diversity Agenda Accord - which has drawn formal commitments from CEs and business owners to diversity objectives and targets.

Engineering New Zealand's work on the Diversity Agenda and Accord helps the Registration Authority achieve its wider targets for diversity across CPEng.

In 2018 the Registration Authority set a goal of increasing the number of women represented on the register by 20% in 2021. To attain this, we needed to have 400 women registered as CPEng. At the end of the reporting period, we had 412 women recognised as CPEng.

Beyond that, Engineering New Zealand's innovative Schools programme https://wonderproject.nz/ has a particular focus on engaging with young people, particularly girls, Maori and Pasifika to shift perceptions about STEM subjects and the impact that engineers can have on society, which again also has positive flow on effects for the CPEng register.

Figure 9 shows a distributed age profile of CPEngs. Engineers tend to follow wider workforce trends of working longer, with 4.8 percent of registrants working and contributing to the profession in the 70-89 age bracket.

Figure 7: *Gender (binary) breakdown of CPeng registrants*

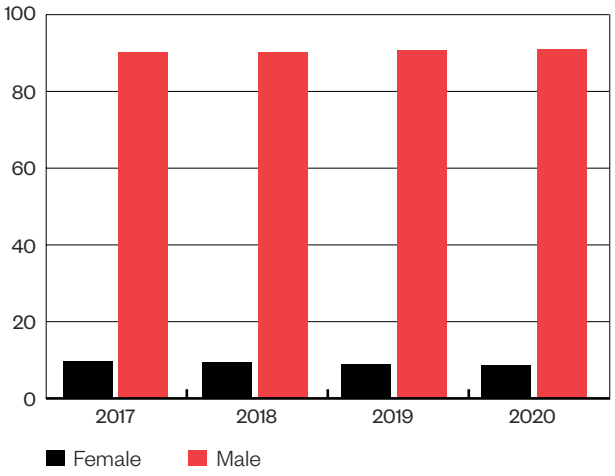
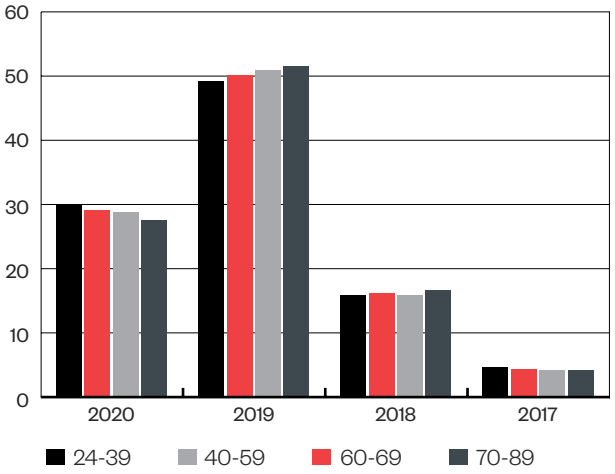


Figure 8: *Breakdown of CPEng registrants by age*



Fields of engineering practice

Candidates self-declare one or two practice fields they consider their practice area best aligns with as part of their portfolio of evidence for either their first-time assessment or reassessment.

While many engineers have more than one practice field, we are providing assessors and candidates with guidance that having more than one practice field is an exception.

The information in Table 2 provides the number of current registrants in a practice field and answers the question of "How many (or what percentage) of CPEng align within a certain discipline of engineering?". Please note totaling the number of registrants across all fields will exceed the total number of current CPEng registrants.

Table 2: *Distribution of CPEng registrants by practice field*

Practice field	2017	2018	2019	2020	Movement in registration numbers between 2019 and 2020	2020 ranking
Civil	1471	1,439	1427	1505	78	1
Structural	1154	1,199	1258	1402	144	2
Management	590	562	520	499	-21	3
Geotechnical	314	337	354	392	38	4
Environmental	414	392	382	380	-2	5
Transportation	331	323	311	352	41	6
Mechanical	298	298	285	306	21	7
Electrical	238	248	241	277	37	8
Building Services	155	160	187	224	37	9
Industrial	120	116	113	119	6	10
Fire	85	91	93	97	4	11
Water	0	0	2	48	46	12
Chemical	32	37	31	35	4	13
Petroleum	35	36	34	33	-1	14
Information	23	21	20	17	-3	15
Aerospace	13	12	11	11	0	16
Mining	9	8	6	6	-0	17
Bio	3	2	0	1	1	18
Academic	0	5	6	1	-5	19
Mechatronics*	0	0	0	0	0	20
Software*	0	0	0	0	0	21

Geographical distribution

Table 3 shows the geographical distribution of CPEng registrants that are also members of Engineering New Zealand Te Ao Rangahau. The challenge for any engineers practising overseas will be their ability to demonstrate (depending on their practice area) that they are 'still able to' comprehend and apply knowledge of accepted principles underpinning widely applied good practice for professional engineering specific to New Zealand when undertaking reassessments. Throughout 2020 the ability to conduct assessments and reassessments using on-line videoconferencing was a distinct advantage for engineers overseas as well as locally during the Lockdowns.

Table 3: *Geographical distribution of CPEng registrants*

Engineering New Zealand branch					
Year	2017	2018	2019	2020	%%
Northland	60	64	60	68	2
Auckland	1332	1358	1,390	1558	37
Waikato-Bay of Plenty – Hamilton	221	216	225	248	6
Waikato-Bay of Plenty – Tauranga	122	117	123	136	3
East Coast	6	4	4	6	0.1
Taranaki	74	78	76	79	2
Hawkes Bay	73	78	67	75	2
Whanganui	11	11	11	11	0.4
Manawatu	46	44	42	42	1
Wellington	439	439	430	464	11
Nelson-Marlborough	86	79	80	88	2
West Coast	11	10	11	12	0.5
Canterbury	619	618	645	742	18
South Canterbury	14	13	12	15	0.5
Otago	25	120	117	128	3
Southland	42	23	19	21	0.5
United Kingdom	25	39	46	47	1
No branch*	319	351	200	200	5
CPEng Non-members**	0	118	321	227	5
TOTAL	3610	3780	3,879	4167***	100%

*CPEng/Engineering New Zealand members overseas (outside of the UK) or not affiliated to a New Zealand branch

**Registered CPEng who are not Engineering New Zealand members and therefore not members of a branch

***The 2020 total includes those CPEng on voluntary hold (4), in abeyance (36) and suspended (117).

Complaints and Disciplinary Activity

In 2020 the disruptions of the Covid pandemic, combined with a high number of complex complaints progressing through the formal complaints process, and an increasing backlog of complaints carried over from previous years, put pressure on our system. A focus of 2021 will be putting resources and measures in place to clear this backlog and ensure the complaints function remains efficient, robust and credible.

One upside of the Covid disruptions was that it encouraged us all to consider new ways of working. We held our first virtual disciplinary hearings in 2020, using Microsoft Teams – these were successful, and we are continuing to offer this option as a cost-effective alternative to hearings in person. Hearings in person will remain available (in the absence of further lockdowns) where the parties or the Disciplinary Committee prefer them.

Profession's capability for resolving complaints

We continue to promote use of our Managing Complaints toolkit as a resource for engineers to assist them with complaints resolution. In 2020 Architectural Designers New Zealand asked our permission to adapt our toolkit as a resource for their members, with attribution to us. This reflects well on the strength of this resource as a tool for professional self-regulation.

Also in 2020 we presented a webinar for Engineering New Zealand members and CPEng registrants on the complaints process, including the nature of complaints received, advice on avoiding complaints from arising, and managing them well if they do. This was well-attended and we intend to repeat this in 2021.

Decision maker capability

We continue to work closely with our decision-makers to ensure robust, fair and proportional decision-making. At the end of 2020 we had eight Investigating Committee Chairs and three Disciplinary Committee Chairs. We appointed John Snook CMEngNZ as a new Investigating Committee Chair and Deane McNulty CPEng FEngNZ as a new Disciplinary Committee Chair in 2020. John and Deane are highly respected engineers and bring significant mana to these roles.

The credibility of our decision-makers, and the robustness of our process, is reflected in the low numbers of appeals to CPEC arising from complaints decisions. No appeals against the Registration Authority's complaints decisions were upheld by CPEC in 2020.

Learning from complaints

The legal team continues to include a column in every issue of Engineering New Zealand's quarterly EG magazine, building on case studies and emerging legal issues, and we regularly contribute to Engineering New Zealand's newsletter Discover. Articles about complaints and disciplinary decisions consistently attract high readership figures.

In 2020 the Registration Authority met with representatives from several building consent authorities to discuss issues arising from engineering during the building consent process. We are developing these connections so that we can keep appraised of trends and themes and use these to further educate our members working in that space. As in previous years, we continue to see a large number of complaints arising from the structural residential sector and have managed several complaints about engineers signing off unconsented work.

Complaints Snapshot

Concerns/complaints received

The Registration Authority received 44 concerns/complaints about Chartered Professional Engineers during the 2020 calendar year. This is three more than in 2019 and one more than in 2018. The majority of concerns and complaints come from engineers' private clients, but we have had a steady number from building consent authorities and other regulators such as Waka Kotahi NZ Transport Agency.

We are obliged to respond to all complaints we receive. Part of our initial enquiry and investigation process involves determining whether the Registration Authority has jurisdiction to formally investigate the complaint. We are regularly contacted by clients wishing to dispute invoices or seek compensation from engineers where a contract has soured. These enquiries are not included in our complaints statistics, but are usually received on at least a weekly basis. We set clear boundaries and manage complainants' expectations by explaining our role and powers – that we only have the jurisdiction granted to us under the Act and Rules, including to investigate whether there has been a breach of the Code of Ethical Conduct or a failure to meet the competency standards – we do not have the power to resolve commercial disputes and encouraging complainants who are seeking financial outcomes to consider other options, such as the Disputes Tribunal. We have observed that complainants who come to our process with financial goals at front of mind are often dissatisfied with the eventual outcome.

Concerns/complaints closed

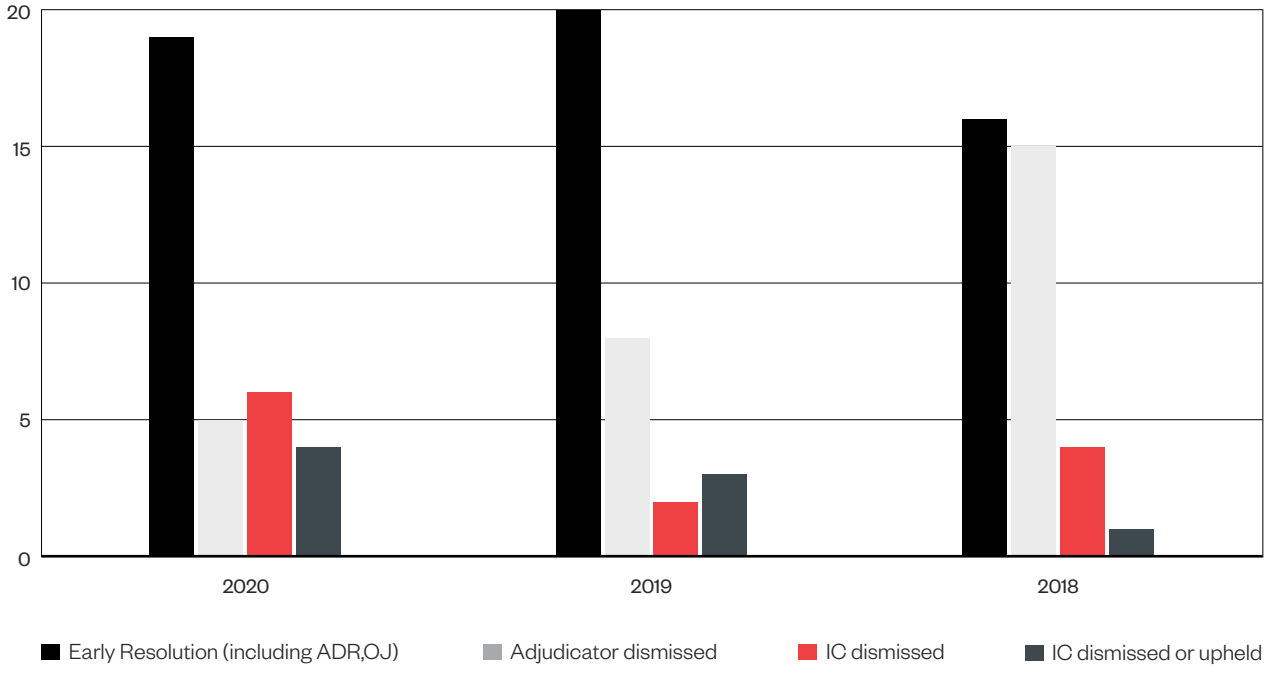
Concerns raised with the Registration Authority first undergo a Triage Assessment. The purpose of the Triage Assessment is to gather preliminary information about the concerns to ascertain jurisdiction, and to decide whether to offer the parties the option of early resolution (for example, alternative dispute resolution such as mediation, or an educational approach).

If early resolution is not an appropriate option given the nature of the concerns, or the parties do not agree to early resolution, the matter proceeds as a complaint to be considered in accordance with the formal complaints and disciplinary process set out in the Chartered Professional Engineers of New Zealand Act and Rules.

The complaints process has three decision-making stages: adjudication, investigating committee and disciplinary committee. A complaint may be dismissed at any of these three stages, but can only be upheld by a disciplinary committee.

Thirty-four concerns and complaints about Chartered Professional Engineers were closed in the 2020 calendar year – one more than in 2019. This includes concerns/complaints received during and before 2020. As we had seen in 2019, a higher number of complaints open during 2019 and 2020 have progressed through to the Investigating and Disciplinary Committee stages, which inherently leads to longer timeframes in resolving these complaints. We have recruited a third Disciplinary Committee Chair in 2020, and a focus of 2021 is ensuring the team is sufficiently resourced to manage the heavy complaints workload.

Figure 9: *Manner of resolution of complaints files*



The table above shows the manner of resolution for these concerns/complaints. Comparable with recent years, more than half were resolved through early resolution.

Four Disciplinary Committee decisions were upheld in 2020. At the end of 2020 there were eight complaints currently being considered by Disciplinary Committees (this includes five related to the Masterton Building Inquiry), and 10 being considered by Investigating Committees.

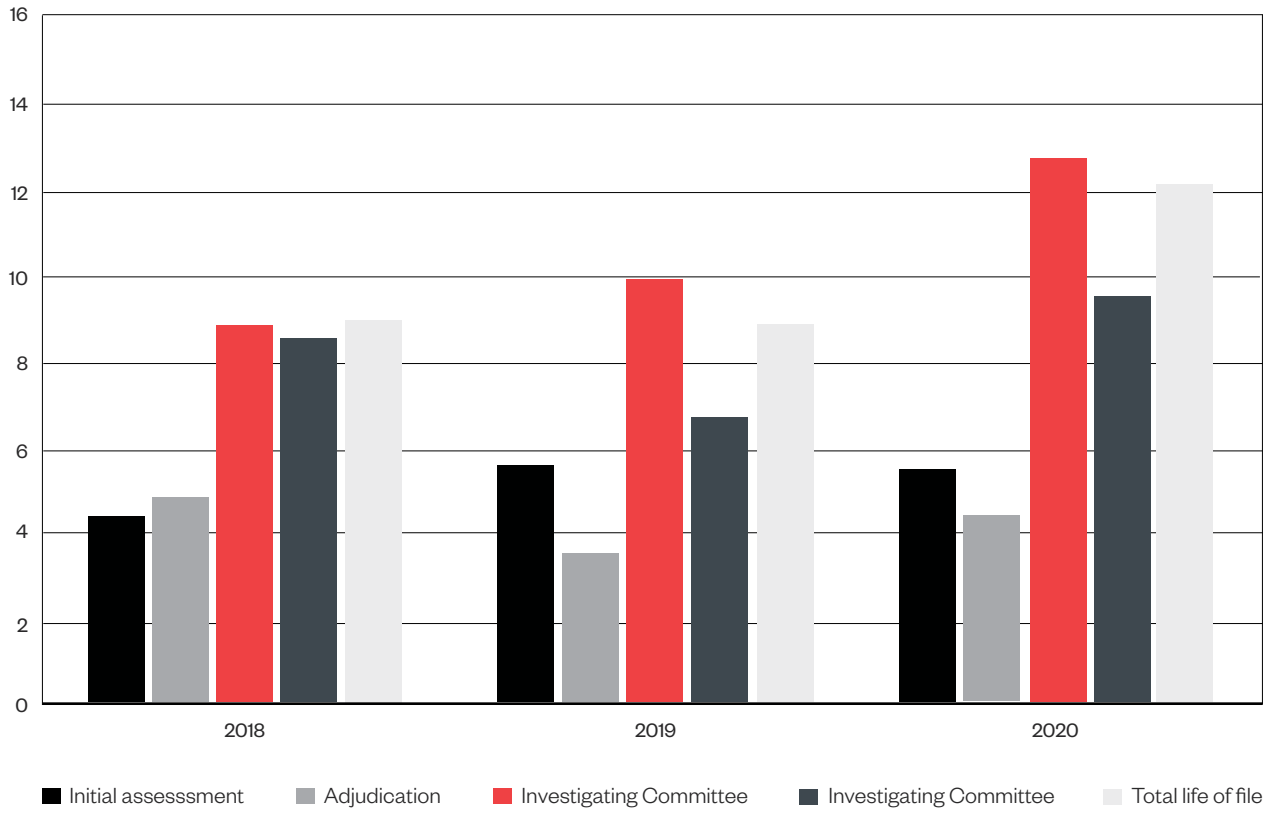
Duration of complaints

Concerns closed through early resolution took, on average, 6 months to resolve. Complaints that proceeded through the formal process took, on average, 24.5 months to resolve. The duration of complaints varies due to factors including:

- the technical complexity of the subject matter
- the responsiveness and engagement of the parties
- the availability of decision-makers and expert advisors
- time spent exploring the possibility of early resolution
- the complaints team's case load.

The complaints team is currently experiencing a heavy case load, which has led to delays during 2020. The year was also disrupted due to Covid. In addition, there has been a trend over the last few years of closing fewer files each year than we receive. A focus for 2021 is ensuring we have enough resource on the team, and measures in place to clear this backlog, which remains difficult due to the Registration Authority already operating at deficit. It is also timely for us to review our processes – the complaints process was overhauled in 2016 with great results, and now that it is well-embedded, we can identify areas for further improvement. This may include putting additional parameters around our early resolution process, and reviewing how we engage with parties during investigations, to avoid lengthy delays due to lack of responsiveness.

Figure 10: *Duration of cases*



Themes and trends

The 34 concerns/complaints closed in 2020 have been categorised according to the key issues (as identified from the letter of complaint) and the practice field of the engineer involved.

Key issues

In line with previous years, issues of competency and the adequacy of engineering design or assessment remain the most common source of complaints. Also in line with previous years, a significant number of complaints also arise from concerns about professionalism and ethical conduct. This includes complaints about conflicts of interest, client care, and the attitude and response of engineers when disputes arise. Almost all complaints include an element of relationship breakdown between the parties.

Our early resolution process continues to be an asset in responding to complaints where the key issue is relationship or communication-based, as opposed to complaints that raise significant competence or safety concerns. In 2020 we strengthened our early resolution process by introducing a checklist of the factors considered by the Registration Authority in assessing whether a case is suitable for early resolution. This includes whether there are any potential safety or public interest factors, the willingness of the parties to engage with the process, and whether early resolution meets the objectives of the complaints process, including building trust and confidence in the engineering profession. These factors have always been applied in early resolution, but formalising them in a checklist adds an additional layer of strength to the process.

* Note, numbers do not always match total number of complaints closed, as some encompass both ethical and competence key issues

Practice fields

Consistent with previous years, most complaints we receive are about structural engineers. We perceive this as being largely due to the nature of their work, as opposed to the quality of engineers practising in this industry. Structural engineers often have more direct and frequent contact with their clients, who are usually members of the public.

Figure 11: *Practice fields relating to complaints files*

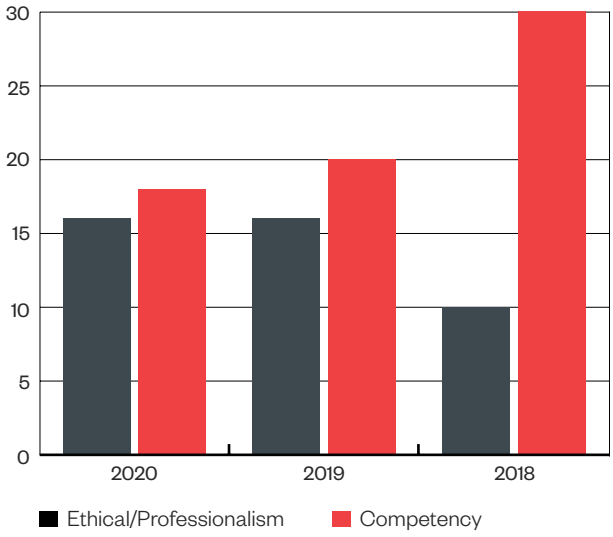
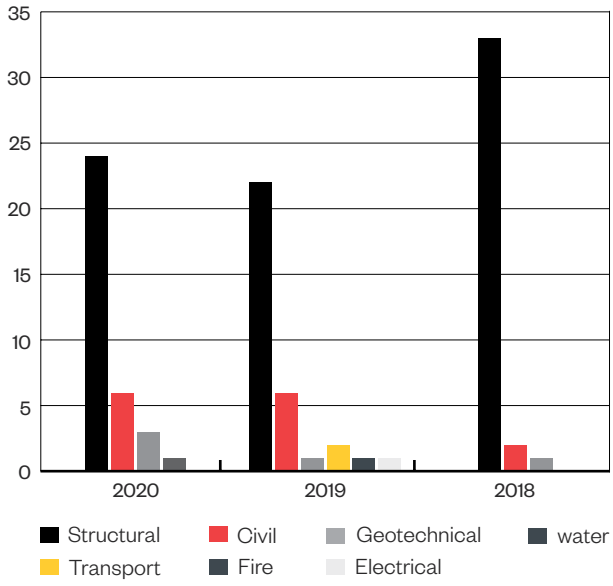


Figure 12: *Key issues of complaints files*



GCCRS and CEIT

In 2018 the Government approached Engineering New Zealand to assist with setting up its new Greater Christchurch Claims Resolution Service (GCCRS). The service has been operating since October 2018, as a free case management service for residential homeowners in Christchurch who need assistance to resolve their outstanding insurance claims.

Following consultation with engineers, homeowners, lawyers and insurers, we established an expert engineering panel to assist the GCCRS with claims resolution. The panel offers peer review and expert advice. In addition, Engineering New Zealand established a service to facilitate between engineers who have different opinions on earthquake damage and reinstatement. The facilitators are senior engineers specifically trained in facilitation and mediation techniques. The panel and facilitation service were launched on 18 December 2018.

The services of the panel were extended to the Canterbury Earthquake Insurance Tribunal when it was established in 2019. Up to the end of 2020, Engineering New Zealand had received 285 referrals to the panel. Feedback on the service continues to be positive.

The Panel's work is a direct response to what the Registration Authority have seen through complaints and has contributed to the successful resolution of some long-standing disputes between homeowners and insurance companies. We are extremely proud of the Panel's work in this area.

Engineering New Zealand and the Registration Authority continue to work with engineers in Christchurch to improve the quality of engineering service delivery in the earthquake response space. This includes:

- providing clear information to engineers and homeowners on the role of engineers;
- how to engage an engineer; and
- what engineers need to know when carrying out these types of assessments.

As part of this, Engineering New Zealand developed a template letter of engagement that members of the public can use to engage an engineer to undertake an assessment of earthquake damage to their home.

Own motion inquiry and systems report

In December 2016, the Registration Authority commenced an Own Motion Inquiry into the engineering design of six buildings in Masterton.

As well as investigating the individual engineers responsible for the buildings' design, the inquiry has brought to the surface many issues relating to the system in which engineers operate – from issues with individual engineers repeating mistakes, better exchange of information on problems that have arisen, a better standard of peer review, through to quality assurance initiatives across the system. We are developing a report to help understand issues affecting engineers working in the building industry, and what can be done to avoid mistakes being repeated in the future. Although our decision to produce this report was motivated by the own motion investigations, we are also drawing on recurring themes and lessons learned from other complaints. It is important to us that the report is not a finger-pointing exercise or simply a showcase of the problems in the industry – it's important that we identify clear and actionable recommendations for addressing the issues we are identifying. We will be seeking expert input to ensure our recommendations are practical, realistic and make an impact.

We reported last year that we had hoped the systems report and the outcome of the own motion investigations, would be finalised in 2020, but this has been delayed. The own motion investigations are now reaching the final stages and we hope to have an outcome from these by mid-2021, with the systems report expected to be completed by the end of the year.

Case studies

The following three case studies show how complaints are being resolved through our complaints process. These case studies paint a picture of our approach to complaints, working with the parties to achieve resolution that is proportional and fair, which in turn helps to rebuild trust and confidence in the profession.

CASE STUDY ONE
Upheld by Disciplinary Committee

A Whanganui District Council employee (acting in his personal capacity) laid a complaint against David Mulholland CMEngNZ CPEng, regarding his competence as a geotechnical engineer following several peer reviews of Mr Mulholland's work on three properties. The complaint was that Mr Mulholland acted incompetently in that he: conducted insufficient geotechnical investigations and analyses, improperly relied on unsuitable third-party reports, and was unwilling to take on advice of peers. Mr Mulholland did not accept that there were deficiencies in his work.

The Committee upheld the complaint and found that Mr Mulholland failed to meet the standard of competence required of a Chartered Professional Engineer and a reasonable Chartered Member of Engineering New Zealand.

"Mr Mulholland's approach to, and reliance upon, 'construction observation' to deliver a safely engineered and compliant design solution in these cases does not represent good engineering practice.

We accept engineers draw from their professional experience when preparing a solution for their client. However, this should form only part of an engineer's analysis. Analysis should be informed by relevant evidence and supported by applicable standards, guidelines, and regulatory compliance documents. This is at the core of good professional engineering practice."

The Committee made an order for 50% costs, censured Mr Mulholland, and imposed a $2500 fine.
The Disciplinary Committee also ordered that Mr Mulholland should be named, and the decision published, together with a press release.

CASE STUDY TWO
Dismissed by Investigating Committee

A Christchurch homeowner complained about the services provided by two engineers engaged to assess the homeowner's property following the Canterbury earthquakes. The complainant considered the engineers' assessment was incorrect, inconsistent with other assessments carried out, and was not supported by methodology or data. The homeowner also considered the remedial solution proposed was unworkable.

In dismissing the complaint, the Investigating Committee noted there were shortfalls in the engineers' reporting and subsequent recommendations, which led to significant misunderstanding and confusion. However, there were mitigating factors that led the investigating committee to consider that the shortfalls in the engineers' conduct were insufficiently grave to warrant further investigation. It was relevant that the engineers were working in the post-earthquake environment under significant pressure, at a time when a large volume of assessments were being carried out. There was a lack of a clear brief and expectations around the work and how the homeowner's insurance claim was handled. The Investigating Committee noted the work Engineering New Zealand has taken in the intervening years to support engineers in Canterbury, including the expert panel, template letter of engagement and template reporting framework.

CASE STUDY THREE
Early resolution

An engineer undertook an initial seismic assessment (ISA) on a property for the complainants, as part of the complainants' due diligence when they considered purchasing the property. The complainants did not proceed with the purchase. The engineer subsequently bought the property through their company. The complainants were concerned that the engineer may have breached the Code of Ethical Conduct obligation to manage conflicts of interest, by not informing them of the engineer's intention to buy the property. There was no indication the engineer's ISA was incorrect or misleading, and the engineer said their engagement with the complainants had ended and the complainants had advised the engineer they no longer intended to buy the property.

The parties agreed to resolve the matter through early resolution, by way of an educational letter from the Registration Authority's Chief Executive, reminding the engineer of their obligation to manage conflicts of interest. It would have been preferable, the Registration Authority said, if the engineer had disclosed their intention to buy the property to the complainants before doing so.

Appendix 1

CPEng Fees for 2020 (unchanged since 2015)

Initial registration

Charge or rebate	Amount (excl. GST)
	($)
Registration application charge	3,253
less any of the following rebates that apply:	
if there is no engineering knowledge assessment	1,175
if there is no interactive assessment	270
for each assessor (if any) who is not remunerated for an assessment during which there is an interactive assessment	513
for each assessor (if any) who is not remunerated for an assessment during which there is no interactive assessment	378
for applicants exempted under rule 9(2) from having to provide certain information, if the assessment panel uses only a single interactive assessment	350

Registration certificates

Charge	Amount (excl. GST)
	($)
Registration certificate charge for a certificate issued for 1 year commencing 1 January	460
Registration certificate charge for each calendar month, or part of a calendar month, for which a certificate is issued if issued for less than 1 year	40

Continued registration

Charge or rebate	Amount (excl. GST)
	($)
Further interactive assessment charge	640
less the following rebate if it applies:	
for each assessor (if any) who is not remunerated for the further interactive assessment	225

Review of registration decision procedures

Charge	Amount (excl. GST)
	($)
Charge for review of decision procedures	1,000

Voluntary abeyance

Charge	Amount (excl. GST)
	($)
Charge for each 12-month period of abeyance	289

Appendix 2

Summary of Fee Income and Costs Incurred 2020

CPENG Annual Summary

Summary of fee income and costs incurred	**2020**	**2019**
	$	**$**
Revenue from annual CPEng fees, fines and admission applications	**2,129,555**	**1,902,788**
Less:		
Operational costs	1,023,799	892,233
Professional standards costs	1,081,256	890,649
Complaints and litigation costs	450,333	315,630
Total Expenditure	**2,555,389**	**2,098,512**
Net Deficit	**(425,834)**	**(195,724)**
Carry forward loss	**-$1,732,165**	**-$1,306,331**

Notes:

All figures are for the year ended 30 September 2020 and are taken from the IPENZ audited accounts and associated management reporting.

Operational costs are an allocation of costs based on the relative membership numbers.

Professional standards costs are based on a direct allocation of costs associated with CPEng professional standards activity.

Complaints and litigation costs are the direct costs associated with receiving and processing complaints and costs associated with individual hearings.

There is a carried-forward deficit of $1,732,165 after this year's result.

REGISTRATION AUTHORITY
FOR CHARTERED PROFESSIONAL ENGINEERS

engineering new zealand

The Registration Authority under the Chartered Professional Engineers of New Zealand Act 2002 is the Institution of Professional Engineers New Zealand (trading as Engineering New Zealand).

2020/06