



General Practitioners December 2020 Newsletter

Welcome to our newsletter to members.

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Message from the Chair

Hi all.

As we draw towards the close of our second full calendar year, we have a membership approaching 200 and a healthy program of webinars being offered. The committee has a range of activities in mind for 2021. Besides the webinar series we have been in discussions with SESOC to host a breakout room at next year's conference. Now that travel inside NZ is freeing up, we are hopeful that we can visit the regions and talk with you directly. Zoom is all very well, but sometimes it is good to sit in the same room and chat face to face.

2020 has been a year that I will be pleased to see the back of and from my discussions with various people that seems to be a common view. In spite of the challenges, it appears that NZ has managed to dodge some of the very serious health and economic problems that beset the world.

One of the big challenges facing the engineering Community and in particular, general practitioners, is the Chartership review currently underway. Elsewhere in the newsletter you will find a link to the Engineering NZ discussion document and a questionnaire to seek out engineer's views. Please take a little time to fill this out. We need to make our voice heard as the policy is being set for the next 20 to 30 years. The outcomes will affect the way we practice and potentially our livelihoods as well as the engineering outcomes for our community.

The EGP SIG (special interest group) is also intending to put in a collective submission and we are looking for people to join the steering group to work on that over the break. The submissions close on the 21st of January and there is much to discuss. Please email me to join the group if you are interested, we will be meeting via Zoom this coming week.

Lastly, thank you for your support so far and enjoy the summer break – it is well deserved for all of us and, I think vital to recharge for the year ahead.

Merry Christmas and a Happy New Year.

Pete van Grinsven

The EGP One Question Survey

This issue we are asking Engineering General Practitioners:

How has COVID-19 affected your income so far?

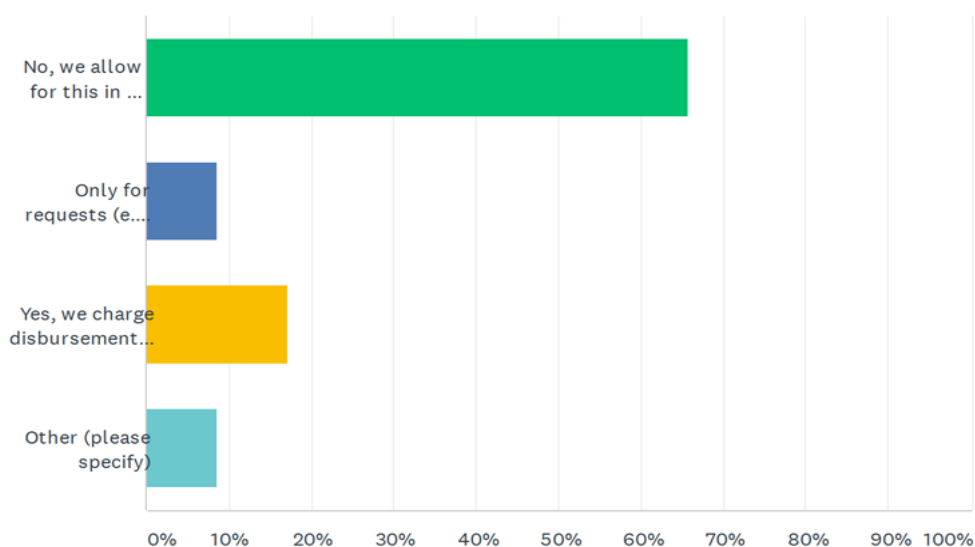
- a) Negatively
- b) Positively
- c) It's about the same

[Take Survey](#)

In the last issue we asked if your company charges extra for disbursements (printing, stationery, computer software etc)? Here are the results:

Q1 Does your company charge extra for disbursements (printing, stationery, computer software etc)?

Answered: 35 Skipped: 0



ANSWER CHOICES	RESPONSES	
No, we allow for this in our hourly rate	65.71%	23
Only for requests (e.g. extra sets of drawings)	8.57%	3
Yes, we charge disbursements on all jobs	17.14%	6
Other (please specify)	8.57%	3
TOTAL		35

#	OTHER (PLEASE SPECIFY)	DATE
1	We charge disbursements on some projects and items	9/10/2020 5:27 PM
2	Since I am in a rural area with large distances I charge all driving time [in both directions] at my full normal hourly rate. But I don't charge/km [too fiddly, when I'm already getting my full hourly rate].	9/9/2020 9:42 AM
3	No, generally don't have these disbursements	9/8/2020 8:54 AM

Safety by Design – What is the Risk?

Craig McGhie, Chartered Member of Engineering New Zealand

As 2020 draws to a close, the naming of the thirteen parties for prosecution for the Whakaari white island eruption, by Work Safe, is a timely reminder that we need to be aware of the safety risks in our work environment and that we follow good operational safety and safety by design practices. As engineers, safety by design is often regarded as inherent in our design process by simply meeting the design codes and standards that we are required to adhere to. However, it is imperative that we consciously assess and identify safety risks and consequences that may be present in the construction, use and possible decommissioning of the structures that we design. Steps to remove or mitigate these risks should be undertaken on all designs.

In brief, Section 39 of New Zealand Health and Safety at Work Act 2015 requires designers to; so far as reasonably practicable, ensure that structures are designed to be without risk to the health and safety of persons for the whole life cycle of the structure. This includes those persons constructing, using and demolishing and disposing of the structure. Therefore safety responsibility does not pertain only to the construction phase (site safety), nor end once the construction is completed. There is also a requirement under the Act for the designer to undertake calculations, analysis, testing and examination or investigations as necessary to ensure the design achieves the safety requirements and communicate the design outcomes with all stakeholders.

Many Engineering General Practitioners are from small firms or sole practitioners that work on small scale projects and quickly move from one project to another. This sometimes-frantic work environment can mean that safety by design, while seemingly inherent in what we do, may not be given the due consideration that it requires or deserves. Some larger organisations have risk workshops at the start of each major project and periodically throughout the design and construction phase, with a 'lessons learned' workshop at the end of the project. While this approach may be sound for large firms and large budget projects, it is not always practicable for quick turnaround small projects with small design teams typical of Engineering General Practitioners. Notwithstanding this, there remains responsibilities under the Health and Safety at Work Act that must be followed. It is therefore prudent that Engineering General

Practitioners have some form of Safety by Design process, that allows risk and consequences pertaining to structures we design to be considered, assessed, and dealt with in the appropriate manner. The process, which could be as simple as a check sheet, should ideally be well documented and communicated with stakeholders.

There have been many changes to the Building Codes, Standards and engineering good practice over the last 8 years resulting from the lessons learnt from the Christchurch earthquakes and other failures, with a lot of new information for Engineers to absorb and implement into their design practices. The safety by design requirements of Health and Safety at Work Act 2015 were also introduced in this period and it is imperative that they too be incorporated into our engineering design practice. Therefore, with a focus on the technical learnings, do we find time for safety? If not, then there is no time like the present!

On a personal note, I worked on a project many years ago which had an unfortunate accident that resulted in one fatality and one person with serious injury. Although not responsible for the accident and not part of the Work Safe investigation, from a personal point of view, as part of the project team, I can assure you that it is far better to be assessing and eliminating safety risks before an event, rather than reflecting on what might have been and what could have done differently with the design after the fact.

Safety by Design requires a proactive approach with good systems and communication but doesn't necessarily need to be complicated or onerous. Engineering General Practitioners have both a legal and ethical obligation to ensure that our designs are safe and documented accordingly. In light of past events, as we begin a New Year, it may be a good time to review our design practices and improve our safety by design procedures.

Changes to Standards and NZ Building Codes

Gordon Hughes, Fellow of Engineering New Zealand



The upper shelf contains the New Zealand Standards from 1900 used until the mid-1970's. The Standards covered nonspecific and specific design and included Fire, Light Timber framed Buildings, Masonry not requiring specific design, Chimneys and Fireplaces, Design Loads, Timber, Masonry, Steel, Concrete including for storage of liquids and Farm Buildings requiring specific design.

The lower shelf contains the New Zealand Building Code Handbook and standards used by the writer, excluding Australian Standards for Lifting devices and Cranes. The developments since the 1970's have seen much larger comprehensive and prescriptive standards and codes.

Some questions to think about

1. Have the more detailed codes led to better quality buildings?
2. Are the designs better?
3. Do the more detailed codes and standards lead to 'Cookbook' designs?
4. Why are there so many reported defective buildings such as the Southland Stadium, CTV Building, Masterton Buildings, Harrington Street Parking Building at Tauranga, High Street Building in Christchurch, ANZ Albany, Statistics House and BNZ Wellington to name a few as well as others known by the writer in light of comprehensive and extensive codes and standards

Editor's note: We hope to delve into this topic in more detail in 2021. You can start a conversation on this or any other topic by joining our Slack workspace. Sign up here, from any device: https://join.slack.com/t/egp-sig-nz/shared_invite/zt-etc0r7b4-yD4sYNSXvbDZdxzccEGmQw

Design Guides and Spreadsheets

A design guide for *Residential Portal Frames – An Engineer's Perspective*, written by Martin Pratchett, has been released and can be found on the Engineering New Zealand website from the link below:

https://d2rjvl4n5h2b61.cloudfront.net/media/documents/ResidentialPortalFrames_Sep2020_Final.pdf

The guide highlights key design elements that can be overlooked as well as a worked example of an easy-to-follow design procedure for portal frames in residential design.

CPEng Review Submission

Help us to have our voices heard. As a group we are proposing to raise the standards of CPEng with changes to the assessment and reassessment processes. We are hoping to put through the steering group submissions by January. Please either submit your proposals to Engineering New Zealand through the link below or send through your comments this week to Pete van Grinsven petevang@xtra.co.nz if you would like it to be part of the steering group submission. The draft document for consultation can be found here: https://d2rjvl4n5h2b61.cloudfront.net/media/documents/CPEng_Review_discussion_document_FINAL_TSQir8N.pdf

To make an individual submission, use the following link:

<https://www.engineeringnz.org/engineer-tools/cpeng-review/>

Continuing Professional Development

Coming up this Wednesday, 9th December is another popular free webinar *Lessons Learnt from 2020*. To register go to <https://www.engineeringnz.org/courses-events/event/lessons-to-be-learnt-series-1/>