



General Practitioners December 2023 Newsletter

Welcome to the final newsletter for 2023.

It has been a year of ups and downs for the industry with uncertainty before, during and after the elections, which has had the industry on a go-slow, particularly in the residential sector, as could be seen in limited jobs available as well as in the property market. At least with a now set government and some indication of what to expect for the country in the near future, the market seems to slowly be picking up again, good news for engineers.

This quarter's newsletter we have a few great articles and helpful links that might interest our readers. We have 2 good lessons learned as well as an introduction to a new site that strives to help engineers learn from mistakes in a effort to improve the industry. We have a few clarifying pieces on Verification methods vs Alternative solutions, what attempts are being made with regulating Consents through BCAs and some useful advice regarding peer reviews.

Don't forget to share your photos of any interesting jobs you have done for others to view on Slack, or submission can be emailed to general.practitioners@engineeringnz.org. Also, **I would like to encourage you all to submit your lessons learned for inclusion in our upcoming newsletters.** This is anonymous and a great tool to help other engineers to not repeat the same mistakes. We are also asking for you to submit photos that you think best describe Engineering General Practice, so that we can showcase exactly what we as EGPs do.

Tamlyn Adams, Editor

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Message from the Chair

Kia ora members.

As another busy year comes to an end, more than ever I am looking forward to getting stuck into the events and challenges that we have lined up for 2024.

With a number of high-profile cases in the structural field of Engineering over the last few years and the recent change of our nations leadership to one who do not appear to view the new Occupational Regulation bill as high of a priority as the previous government, I see no reason to back down on our tireless efforts to improve quality and professionalism across the board.

Hopefully you all had a chance to tune in to our latest webinar and hear about the work that Martin Pratchett is doing at Engineering New Zealand and take the time to have a look at the ever increasing number of useful guidelines, tools and resources that he has been working to compile.

These tools are great resources for us to refer to and take heed of lessons to be learnt from these events. The resources in the Engineer Tools section are very useful, both as a place to start, or to use as refresher tools to make sure you're up to date and on the right track, thus strengthening our professional practice.

The effort that Martin puts in to connect the Engineering profession with consenting authorities and other parties we need to work with in our profession is supported wholeheartedly by the EGP as we believe that open and collaborative communication is key and my hope is that by the end of 2024 we will have doubled the number of member connect groups that meet around the country.

As this is my first term as Chair of a committee that I have been part of for over 3 years, I am overloaded with ideas and optimism for what I believe are some great things that the EGP SIG can achieve next year alongside the other groups we collaborate with (SESOC, NZGS etc.). Our committee are meeting together at Engineering New Zealand in Wellington on the 15 February for a strategy session to work through our plan for more advocating and connecting general practice engineers over the coming year. If there is anything that you would like to see us work on, please contact us via the Engineering New Zealand [Tech Groups](#) email and let us know your thoughts.

Wishing you a safe and enjoyable holiday, surrounded by the people that you most want to spend your time with, wherever you may be.

Kelly Pilkington

Chair

The EGP One Question Survey

This issue, we are asking Engineering General Practitioners:

Trying to get a better gauge on our readers, it would be interesting to see what size companies you work in.

- I'm a sole practitioner
- I work in a small firm of 12 engineers or less
- I am employed in a larger firm

**CLICK TO TAKE THE
SURVEY**

In the last issue we asked:

Site visits are now allowed to be made virtually by many Councils. A video copy of the visit can be recorded if needed and made available at a later date. Are you comfortable with virtual visits?

ANSWER CHOICES	RESPONSES
Yes its no problem and saves on travel time and costs	12.82%
No I don't trust the camera operator	15.38%
Only on very simple inspections	71.79%

Interesting to see that a similar percentage were for and were against the visits, but with majority only happy for virtual visits on simple inspections. If you have any questions that you would like to ask, please feel free to send them to us through the [Tech Groups](#) email and we can add it to the next newsletter.

Learning Opportunities – Have you Heard About CROSS-AUS?

The biggest opportunities to learn from are not when things go right, but when they go wrong. The best way to learn from your mistakes is to recognise what went wrong and how you (and others) can avoid making the same mistake again.

In addition to our regular learning opportunities, we would also like to highlight a useful institution, if you are not aware of it, called Collaborative Reporting for Safer Structures Australasia (CROSS-AUS). CROSS publish safety information they have received in a n effort to help professionals make structures safer. Have a look at the latest articles published below.

Click on the links below to read some anonymous Learning Opportunities submitted by two different contributors:

1. [Request a piling methodology from Contractor before they are established on site](#)
2. [Engineering New Zealand Learning form Disciplinary Decisions – Collapse of the Southland Stadium Roof](#)
3. [CROSS reports on:](#)
 - Incorrect software use for wind loads on solar panels
 - Risk of failure of untested vibration isolators
 - Underpinning using screw piles
 - Installation of epoxy resin adhesive for reinforcing anchor bars.

Do you have a learning opportunity that would be of interest to your fellow EGP members, please submit your examples for others to learn from? Download the Learning Opportunities form [here](#) and send it to egp.sig.anonymous@gmail.com

EGP Slack Channel Update

Nick Calvert

The EGPSIG Slack channel provides a useful forum for technical discussion. The committee recommends that all our members are active on the slack channel. Follow this [link](#) to sign up and install the EGP Slack Channel. If you have any issues or questions regarding the Slack channel, feel free to email your questions to tech.groups@engineeringnz.org.

Since last update the Slack channel has been busy with membership increasing and regular contributors growing nicely. We now have Daniel Moroder from the Timber Design Society (TDS) as a contributor so that he can post directly on timber related items. Recent discussion topics include:

- Totara Heartwood cladding durability discussion
- Discussion regarding the design of pneumatic reservoirs
- Sawcuts in waffle slabs, are they needed and how to remove if the client requests
- Horizontally (cold) jointed concrete beams for composite actions
- How to design a new shop unit in a block of shops without assessing (or strengthening) the entire block
- Residential driveway design requirements relating to Auckland Council requirements
- Discussion on non-standard contract conditions (following the CEAS advisory on University of Canterbury contract conditions)
- Discussions on how to assess specific details for hollow-core floors
- Approach for designing capping beams for barrier pile walls
- Steel durability for already installed beams
- Gluing of plywood diaphragms
- Imported steel and the steel grade to use.

Missed any topics of interest to you, have a look back on the Slack Channel to see what was discussed.

Do you have any interesting photos from your EGP jobs, share them on the EGP-Photos Channel on Slack. Great to see what we are working on out there.

We ask all members to continue to be active on the Slack channel because the more activity, the more beneficial the content is for everyone. If you missed out on any of these, go have a look at the discussions and feel free to add your input.

Warehouse Review Findings Report

Engineering New Zealand investigation

Following the Masterton Building inquiry, where the integrity of 6 buildings in Masterton, designed by the same engineering firm were questioned and referred to the disciplinary committee, Engineering New Zealand commissioned a review of 20 warehouses across New Zealand to determine if poor design issues such as those observed in the Masterton buildings were seen elsewhere.

The results of the Warehouse Review suggest issues relating to poor design and internal quality control seen in the Masterton buildings are not isolated. Some design engineers are incorrectly designing or leaving out critical details in their design of warehouses.

As a result of this review, Engineering New Zealand will partner with collaborating technical societies and other relevant organisations to provide guidance for better engineering practice as it relates to warehouse design.

This article provides initial guidance that engineers should be considering with warehouse designs.

[View Article](#)

The Masterton disciplinary decision is expected to be released in February/March 2024. Also, in late 2024, Engineering New Zealand will be launching the third part of the project, where they anonymise the warehouses and provide details of what the engineer did well and what could be improved. EGP will publish these in our Newsletter when they are released, so keep a look out for them.

A Clarification on Verification Methods and Alternative Solutions

Tamlyn Adams

It has recently come to my attention that there is some confusion around the updating/superseding of codes and which are relevant/current, in particular the latest timber code NZS1720. Do we have to use the latest timber code NZS1720 and has NZS3603 been superseded, as it has been a year since NZS1720 was released?

Although the general rule is that it will be a year for a new standard to be written into legislation and that it gives you that time to become familiar with the new standard without changing over cold turkey, the standard will only become legal and be considered a Verification Method when that standard is cited in the New Zealand Building code. Until then it is classed as an Alternative Solution.

The latest timber code also contains a few errors and typos and is looking to undergo a bit of a makeover. So before you run off to purchase the latest timber standard, just note that using the existing standard is still current and in fact considered a Verification Method.

The EGP are looking to draw up a comparison between the old and new Timber codes. To highlight the changes and how they could affect us. This will done in collaboration with TDS in 2024, using the EGP webinars.

PS2 Peer Reviews – Some Thoughts and Advice

Opinion piece -- Tamlyn Adams

I have been involved with a few peer reviews both being a reviewer and being reviewed. There are certain things that I have noticed that I would like to share, as a smooth peer review process avoids time and cost implications as well as frustrations.

The best advice I can give, is to engage with the peer reviewer early. Find out from your Client at the start of the project if they are wanting to engage a peer reviewer. This is not always possible as it may be a request after the design has already been completed, but always worth asking the question. Through early engagement you can lay out your design philosophy, load factors and methodologies that you will be using. This can save a lot of time and heartache if the peer reviewer does not agree with any of the options you are using.

We have had instances where we have reached stalemates where we did not agree with what reviewers wanted. Engineering judgement seems to be a big factor with this. These instances have resulted in either a new peer reviewer being appointed or having to go with a much more conservative design that costs our Clients money, just to get a resolution and PS2 sign off. I have noticed that some peer reviewers work by the book with no allowance for engineering judgement. The use of the asset, its location and other factors that engineers will need to assess when undertaking a design should be considered by the peer reviewer. If possible, these decisions are best made early in the design and to be agreed on by both parties.

When undertaking a peer review for another company, we have had instances where the design company refused to provide their calculations and provided their Design Features Report, covering only their assumptions and their drawings. We were advised that we needed to undertake an independent review and that their calculations were **proprietary**, and we were not allowed to see them. We ended up back analysing the structure based on the drawings provided; not how a peer review is supposed to be undertaken. This resulted in a significant amount of additional work, which luckily the Client was willing to pay for. It is a good idea when pricing to undertake a Peer Review, to discuss with the design company, what they are going to provide for the review.

Lastly, remember to always be professional. Others may not share your opinion; it does not necessarily mean theirs is wrong. Be reasonable and open minded, you might even learn some things. You are not criticizing their work and you should aim to work together to find a solution that is best for the Client at the end of the day.

Engineering New Zealand's Work with the Building Consent Authorities

Martin Pratchett – Engineering New Zealand

Engineering New Zealand are currently working on two projects regarding Building Consent Authorities (BCAs) to try improve the consenting process. BCAs receive building consent applications from engineers with varying backgrounds and design office practices. There are currently 67 BCAs in

New Zealand that provide building consents and they each develop their own requirements to satisfy themselves on 'reasonable grounds' that a building meets the requirement of the Building Code. The direct consequence of the lack of consistency throughout the system contributes to the varying quality and completeness of consent documentation.

The two work programmes currently underway are:

- The Structural Building Consent project - Engineering New Zealand, in collaboration with the Engineering General Practitioners Group (EGP), Structural Engineering Society New Zealand (SESOC), and Building Consent Authorities (BCAs) throughout New Zealand, are producing a guideline, templates, and examples to be used by engineers when submitting designs for building consent applications. Having a common standard of design documentation submitted for consent makes it easier to understand, review, and approve. It should reduce the number of RFIs issued by BCAs, increase efficiency and productivity, and decrease friction between clients, engineers, and regulatory bodies.
- The 'sniff test' training programme for BCAs. We're training BCAs nationwide on common issues to look out for and how to spot design items that may need further review in the submitted documents. Doing so increases the likelihood of mistakes being caught before they are consented and built. At the same time, we are building a training programme for engineers about common mistakes and how to spot and making avoid them. We will provide the training free to Engineering New Zealand members. Expect to see that start in 2024.

Also, in case you missed the webinar on Quality Issues in the Building Consents System covering:

- Why this report and why now?
- Roles and responsibilities
- What does good look like?
- What is next?

[Watch Here](#)

Upcoming EGP and Engineering New Zealand Webinars

The EGP has recently been rolling out a few great webinars for our members with a few other exciting ones lined up. Hopefully you saw our last webinar for the year where Martin Pratchett from EngNZ outlined the projects that he has been working on and what to look forward to. We have yet to announce our webinars for the new year, so keep an eye out for them. Refer to the Engineering New Zealand website for a full list of upcoming webinars:

Date	Webinar/Event
19/01/2023	Keeping Chartered

If you haven't seen them yet, you can catch up on the Timber Design Societies webinars recorded below:

Watch Here

As a voluntary committee, we want to bring you quality content to support your work as a General Practitioner and we hope you'll join us for our next webinar. If you have ideas for future webinar topics, please get in touch, we would love to hear from you.

If you missed any of the previous EGP webinars, you can watch it through the link below:

Watch Here

One suggestion is to do a series on the fundamentals of designs most commonly carried out by EGP engineers; such as timber pole retaining walls, earthquake analysis, the new timber codes, basic concrete beam design and maybe an overview of on-site wastewater management options.

Is there a gap in your knowledge that you would like filled? Send us an email with your suggestions to tech.groups@engineeringnz.org.