

EGP Group Newsletter – April 2025

Note from the Chair

A lot has happened since the last newsletter was sent out in October and you will see that this issue is jam-packed. The news links and slack channel topics touched on in this issue cover areas ranging from legal and regulatory issues to design updates and guidance for better engineering.

Engineering New Zealand have been busy developing guidelines and templates to help us all with the non-technical aspects of engineering including various templates for Quality Assurance, Assessing Projects taking into account project risks and fees as well as some guidance on AI tools to use to help us out with everyday tasks. If you haven't had a chance yet, I would definitely recommend that you [check these out](#).

The committee has been busy working behind the scenes on a couple of major projects, presentations for the SESOC conference and our software webinar series.

We have submitted 4 papers to present an EGP perspective on New Zealand Residential Construction – Engineering realities. These cover the Legal Considerations for House Engineering, Foundations, Climate Change and The Role of the EGP Engineer. It would be great to see your support at the conference in Wellington this June.

For the webinar series on structural analysis software we did a survey of our members and looked at the top 2 software packages most used by the survey respondents. The aim is to look at software that can easily be adopted and used for simple problems with affordable price and license options suitable for small business. In an effort to help members choose which software would be more appropriate for the EGP-type work that they do, we have compiled a model problem that both providers can present as a live demonstration.

As I write this, we are soon to say goodbye to the New Zealand summer season of public holidays and start gearing up for the winter run of non-stop 5 day weeks between June and October.

So take care of yourselves and look out for each other

Kelly

SIG-EGP Chair

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Interesting news

1. MBIE Axes Small Business Support Unit

In a recent move reflecting cost-cutting and shifting governmental priorities, MBIE has announced the closure of its Small Business Support Unit. This change could significantly impact many small engineering firms that rely on MBIE support for growth and regulatory guidance. More details [here](#).

2. Proposed Law changes

Ensure you're up to date with the latest regulatory changes affecting employment law and Health and Safety. These new rules have implications for managing your staff, contracts, and workplace compliance. Get fully informed [here](#).

3. Determinations Spotlight – Masonry Retaining Walls and Fire Compliance

Determination 2025/007 involving a masonry retaining wall highlights the importance of ensuring designs account for potential impacts on neighbouring structures. This is an important read for those involved in designing and consenting retaining structures.

Review the complete determination [here](#).

4. Using Dry Pack Under Steel Portal Frames

When placing steel structures, specifying "dry pack" grout under portal frame bases can lead to structural concerns. The draft SESOC Design Guide, by John Scarry, identifies limitations and potential problems of using dry pack, highlighting the need for high-quality non-shrink grout to ensure structural integrity. For detailed guidance, see the paper [here](#) (Vol.22, No.2, September 2009).

5. Building a Strong Engineering Culture

A robust and resilient engineering culture has a significant impact on project outcomes and professional satisfaction, but how do you implement it? An article by CAA outlines essential cultural foundations every small practice can adopt to ensure ongoing excellence in engineering practice. Read more [here](#).

6. New Guidance: MBIE's Resilient Homes for Flood-Prone Areas

MBIE has released new guidance to support the design and construction of resilient infrastructure against increasing flood risks associated with climate change—essential reading for engineers involved in residential projects. Access the guidance document [here](#).

7. Low-Damage Seismic Design

B1 is aimed at preserving life, but low-damage seismic design is rapidly gaining momentum as the best practice for seismic resilience. MBIE's recently updated resources provide an entry point to understanding low-damage design techniques, which are increasingly relevant for both commercial and residential projects. Explore the guide [here](#).

8. Worth Trying – Can AI sound human and be useful?

An interesting diversion from your usual work, explore the cutting edge of AI technology with voice generation techniques reaching new levels of realism. It may help you brainstorm or work through ideas if you're working in isolation. Give it a listen [here](#).

9. QA system for projects

Engineers must be able to identify, assess, and manage engineering risk. However, understanding how to do so and developing a system can be challenging and costly. Engineering New Zealand has released a system for its members to use. It's lightweight and easy to understand. You can access it [here](#).

Quick survey

1. What specific practice notes, tools, or examples would be most valuable to you in your residential engineering work?
2. Are there any grey areas in residential design that you would like EGP to investigate and provide clarity on?
3. What key resources or information would help you *'get it right first time'* in your residential engineering projects?
4. What are the top three challenges you face in your day-to-day work as an EGP in the residential sector?
5. Do you have any other ideas you want EGP to look into?

Take the survey [here](#).

Slack channel discussions

The Slack channel has been busy so far this year. It's great to see that we have an engaged community of engineers who can seek and receive advice in a safe, constructive, and collaborative environment.

1. Structural Design and Software Queries

- Accounting for gravity loads on steeply sloped roofs in structural software.
- Queries regarding lateral loading and pile embedment depths (NZS 3604 clarity issues).
- Designing slender sign structures (AS/NZS 1170.2).

2. Professional and Regulatory Issues

- Concerns about wording and implied liability in subdivision consent forms (NZS4404 Schedule 1A).
- Appropriateness of mechanical engineers carrying out structural designs and certifications.
- Challenges regarding liability when issuing PS4 certificates many years after construction completion.

3. Cross-Border & International Standards

- New Zealand engineers providing structural design and certification in Australia (New South Wales).
- Compliance queries regarding overseas-manufactured equipment that meets New Zealand structural standards (NZS 3404 ductility requirements).

3. Practical Construction Issues and Site Queries

- Anchor pile detailing at building corners and practical limitations.
- Durability considerations for galvanised steel pipes underground.
- Issues arising from inadequate council inspection practices, particularly in the areas of reinforcement placement and starter-bar location in block walls.

4. Foundation and Geotechnical Considerations

- Design challenges underpinning residential foundations on peat soils, liquefaction, and releveling practices.
- Requesting recommendations for small, specialist geotechnical investigation companies near Whanganui.
- Discussions on the Hvorslev method for soakage testing suitability and council adoption.

4. Fire Design and Compliance

- Queries and practical advice regarding the performance of precast panels attached to steel portal frame buildings during fires.
- Compliance discussion related to fire resistance and concrete-filled columns.

5. Documentation, Liability, and Certification

- Issues arising from clients requesting PS4 certificates several years after construction completion and associated liability considerations.
- Liability concerns with the wording on Schedule 1A (NZS4404) forms when involvement is limited.
- Structural inspections via video call (PS4), including remote inspection viability and professional liability considerations.

5. Residential Renovations and Geotechnical Challenges

- Discussion around releveling older houses with foundation damage due to peat layers, liquefaction potential, and underpinning methods.
- Durability and moisture management concerns in villa renovations when plasterboard bracing is installed without adequate moisture protection.

6. Structural Steel Fabrication and Council Consent Processes

- Auckland-based fabricators advocating shifting structural steel fabrication compliance responsibility away from engineers (PS4) towards certified fabricators directly.

6. Professional Development and Networking Opportunities

- Notices and invitations for Canterbury Structural Group meetings, North Shore Auckland engineering meetups, and CPD seminars covering structural awards, seismic strengthening, and precast concrete wall designs.

6. Professional Certification and Liability Issues

- Concerns regarding wording in Schedule 1A (NZS 4404) forms and implications for engineer liability in subdivision design.
- Managing client requests for PS4 certification years after project completion, implications for extending professional liability.

Upcoming webinars

Two webinars are coming up on the use of structural analysis software.

On 23 April, Ben James of SpaceGass will discuss that product, and on 11 June, Tony Stuart of Compusoft will present on SAP2000. Both speakers will demonstrate an identical problem and include commentary on section libraries, deflected shapes, foundation design, and code checks to material standards such as NZS 3404, 3101, 3603, etc.

Coffee Groups

Several coffee groups are being held around the country. We currently have coffee groups running in the following locations:

- Auckland North/Rodney
 - Plant Barn Café
 - Cnr Main Highway and East Coast Road
 - Silverdale
 - 10am First Friday of the month
-
- Auckland North Shore
 - Constellation Cafe,
 - Constellation Drive,
 - Rosedale, Auckland
 - 10am Second Friday of the month
-
- Napier
 - Invercargill

If your area isn't listed, please contact EGP at the address below, and we will either set one up for you or connect you with other like-minded individuals.

Contact us:

EGP Group

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Stay safe, informed, and compliant.

Engineering General Practitioners Group | April 2025