

**New Zealand Geotechnical Society Inc
CHAIR'S REPORT FOR THE 2020/2021 FINANCIAL YEAR**

(01 October 2021 to 30 September 2021)

27 September 2021

Introduction

In my Chair's report last year I noted that 2020 had been a most unusual year, with a global pandemic halting travel and having significant impact on work and personal life for most of our members. This year has been different, but in many ways equally challenging.

The disruptions that we experienced last year have continued throughout the year. The curtailment of travel and meetings has meant abrupt changes to our plans for technical talks, working groups, committee meetings and our symposium.

Despite this, I am pleased to report that we are in a healthy financial position with a successful programme of work that I believe is fulfilling our core role. This role is defined in the aims of the Society:

- To advance the education and application of soil mechanics, rock mechanics and engineering geology among engineers and scientists.
- To advance the practice and application of these disciplines in engineering.
- To implement the statutes of the respective international societies in so far as they are applicable in New Zealand.
- To ensure that the learning achieved through the above objectives is passed on to the public as is appropriate.

In response to the challenging environment we have re-scheduled events, moving many online or delaying those that can't be delivered this way. We have continued to develop guidance documents remotely and provided feedback to national bodies including Engineering New Zealand and MBIE, and have continued to produce NZ Geomechanics News with high quality content.

The National Management Committee and Branch Coordinators have put a great deal of time and energy into the running of the society and for this I extend my heartfelt thanks to them all. Our regional representatives and Young Geotechnical Professionals team provide a particularly important role in extending the reach and impact of the NZGS into the grass-roots level of our industry. It is these groups that form the heart of the NZGS and without them we could achieve little.

The remainder of this document provides a brief overview of the note-worthy activities of the NZGS during the past twelve months.

AGM outline

In our AGM this year we will be addressing the following key issues:

1. Confirming the minutes of the 2020 AGM
2. Receiving the Chair's report (this document)
3. Receiving the Treasurer's report
4. Confirming the appointment of the new Management Committee
5. Confirming the proposed changes to the rules of the NZGS

2021/2022 NZGS Management Committee

Our committee is elected on a cycle to broadly match our financial calendar, which runs from 1 October to 30 September. We normally hold our elections over July and August and appoint the new management committee at our AGM in September ready for the next financial year.

Because of a quirk in our constitution, five positions became available on the NZGS management committee this year. This risked causing significant loss of institutional knowledge, and our proposed amendments to the rules should prevent this issue occurring in future years (see later in this report for more details). The election process to fill these vacant positions was run between June and August 2019. In summary, the 2021/2021 NZGS national management committee is to be as follows (note that roles will evolve over the term):

Elected NZGS Management Committee:

Name	Primary NZGS Committee Role(s)	Employer	Home Town
Eleni Gkeli	Chair BCTRAG - NZGS Representative	Stantec	Wellington
Jen Smith	Treasurer & Vice chair Climate Change Conference	Tonkin & Taylor	Auckland
Rolando Orense	Awards & Honours Officer Webinars	University of Auckland	Auckland
Emilia Stocks	Short Course and Speaker coordinator International Speaker coordinator	Tonkin & Taylor	Wellington
Ayoub Rimam	NZ Geotechnical Database lead	ENGEO	Wellington
Richard Justice	Slope Stability Module lead Local branch coordinator	ENGEO	Christchurch

Ex-officio management committee members (including International Society Liaisons):

Name	Role	Employer	Home Town
Doug Johnson	Australasian Vice-president, IAEG	Tonkin & Taylor	Auckland
Paul Horrey	NZ Liaison, ISRM	Beca	Christchurch

Name	Role	Employer	Home Town
Phillip Robins	Australasian Vice-president, ISSMGE	Beca	Wellington
Ross Roberts	Immediate Past-Chair NZGS Rep - Module Finalisation Project Soil Description Guideline Review Chair NZ Ground Investigation Specification update editor	Auckland Council	Auckland

Co-opted NZGS Management Committee Members:

Name	Role	Employer	Home Town
Gabriele Chiaro	NZ Geomechanics News Editor	University of Canterbury	Christchurch
Helen Hendrickson	YGP Liaison	Tonkin & Taylor	Auckland
Olivia Gill	NZGS Website Manager	CMW	Auckland

In addition to our management committee, the following individuals have been appointed by the committee in support roles.

Name	Role	Employer	Home Town
Teresa Roetman	Management Secretary	Self employed	Auckland
Camilla Gibbons	NZ Geomechanics News Co-editor	Aurecon	Christchurch
Sally Fullam	NZ Geomechanics News designer	Self employed	Auckland
Ali Tasalloti	NZ Geomechanics News web editor	University of Canterbury	Christchurch
Rick Wentz	NZGS representative on National Seismic Hazard Model Technical Advisory Group	Wentz Pacific	Napier
Andreas Giannakogiorgos	NZGS representative on National Seismic Hazard Model Technical Advisory Group	Miyamoto	Wellington
Ananth Balachandra	NZGS representative on Earthquake Geotechnical Engineering Modules Group	Tonkin & Taylor	Auckland
Miles Buob	YGP training module development	Aurecon	Tauranga
Sarah Barrett	YGP IAEG representative	Beca	Tauranga
Nima Taghipouran	YGP ISSMGE representative	WSP	Dunedin
Romy Ridl	YGP ISRM representative	University of Canterbury	Christchurch

This year marks the last year for Tony Fairclough on the NZGS management committee, as his two-year term as Immediate Past Chair comes to an end. Tony has been on the committee for over a decade, and invested many thousands of hours of his own time to make the NZGS a success. In his time as Chair he regularly spend two days a week on top of his day job working on NZGS business, and we would not be in such a strong position without his tireless efforts.

On behalf of the management committee, and the NZGS membership, I would like to extend my sincere gratitude to Tony for the huge amount of hard work he has put into the NZGS over so many years.

Proposed rule changes

As with all incorporated societies, the NZGS activities are limited by the Incorporated Societies Act and the rules the society adopts for itself.

The Incorporated Societies Act 1908 s6 requires that the rules cover, among other things:

- the society's objects (aims)
- how a person becomes and stops being a member
- how general meetings are called and held, and how voting is to take place at these meetings
- how the society's officers are appointed
- the control and investment of the society's funds, and the society's powers (if any) to borrow money
- how the rules can be changed.
- As well as covering the matters required by the Act, the rules can also include any other provisions, so long as they're not inconsistent with the Act and other laws.
- How our rules can be changed

Our rules are reviewed and updated as required. The rules were last amended at the 2017 AGM, and are available on the NZGS website. The process for updating the rules is defined in the rules themselves, and is repeated below:

Alteration to the Rules of the Society may be recommended by a majority vote of an Annual General Meeting or a Special General Meeting. The notice of motion for alteration of the Rules shall be given to the Management Secretary not less than one calendar month prior to the meeting. The Management Committee may, at its discretion, require a ballot of Members to ratify any particular Rule alteration recommended at an Annual General Meeting or Special General Meeting.

The current committee has identified some flaws with our rules which make management of the society more complicated or less transparent than it should be. These proposed changes have been developed and endorsed by the management committee, and were circulated to members on 6

August 2021 in the form of ‘tracked-changes’ document showing all the proposed amendments. At the time of writing no feedback has been received. The key changes that we are proposing include:

- Old-fashioned or confusing wording has been simplified or brought up-to-date.
- Election process amended so that we don’t have years where the entire committee ends their term at the same time (which could result in significant loss of institutional knowledge).
- Clarifying how the Chair and Vice-Chair are elected from the management committee.
- Clarified the role of the International Society Vice Presidents and their local NZ based representatives.
- Formalised the role of the paid Management Secretary.

Highlights of the past year

NZGS Symposium

The 21st NZGS Symposium was held at the Dunedin Conference Centre in March, after a six-month delay caused by the pandemic. The event was a great success with quality technical talks, fantastic keynotes beamed in from around the world, and many opportunities to socialise. The organising committee did an incredible job, and our thanks go to them all.

- Eleni Gkeli (Convenor)
- Philip Robins
- Ayoub Riman
- Christopher Sandoval
- Nathan Schumaker
- Helen Hendrickson
- Doug Mason

Occupational regulation

In response to the Royal Commission of Inquiry into Building Failure Caused by the Canterbury Earthquakes, the Ministry of Business, Innovation and Employment (MBIE) reviewed the occupational regulation of engineers in 2013 and 2014. Since then, progress has been disappointing with several rounds of consultation undertaken by MBIE and Engineering New Zealand and little sign of a conclusion. Despite this I encourage all our members to engage with MBIE this time around. It is understandable that there will be some ‘consultation fatigue’ after such a drawn-out process. However, the latest proposal from MBIE which are currently out for consultation do appear to be the start of genuine change and may well signal that progress is finally being made.

NZGS is prepared a strong submission, and feedback from MBIE is reassuring – they have heard our feedback and seem to agree with many of our key points:

- We urged MBIE to proceed with pace, and start to implement improvements.

- We supported the intent to licence geotechnical engineers for high-risk work, and highlighted the need for engineering geologists to be considered alongside geotechnical engineers as having a parallel role in managing the risks.
- We highlighted the work already undertaken by NZGS to develop a Body of Knowledge and Skills, and promoted the use of this in any future licencing regime.

Earthquake Geotechnical Engineering Modules

We have worked closely with Engineering NZ and MBIE to finalise the Earthquake Geotechnical Engineering modules. These were originally published in “preliminary draft” form and are now ready for final publication (due in November). After significant effort we are very pleased to see all six modules ready for publication, despite earlier concern that the updated hazard information in Module 1 could have de-railed the publication.

Young Professionals activities

Our Young Professionals’ Group is going from strength to strength under the stewardship of Helen Hendrickson. She has received great support from Miles Buob who is leading the development of a series of short training modules aimed at helping new graduates with implementing their university learning into professional practice.

We have also appointed three Young Professionals to support our linkages with the three international societies that we represent in New Zealand. They will report to the committee through Helen, and work closely with our Australasian Vice Presidents for each of the international societies. These new representatives are:

- Sarah Barrett to represent IAEG
- Nima Taghipouran to represent ISSMGE
- Romy Ridl to represent ISRM

Despite the disruptions of the year, we were able to hold mini-symposia in Christchurch, Wellington and Auckland.

Piling specification

In 2019 a Panel of Experts was jointly appointed by the SESOC and NZGS National Management Committees to review and update the Auckland Structural Group (ASG) “Piling Specification” document. The last version of the document (Rev G) was issued on 12 March 2002.

The Project Panel of Experts issued “Revision 1 – Final Draft for Public Comment” version of the SESOC/NZGS Piling Specification for feedback in March, and this feedback has now incorporated that into the document. The finished document will be of huge value to the industry and New Zealand as a whole.

The core team working on this project is Tony Fairclough (Tonkin & Taylor), Andy Dodds (Arup), Tessa Beetham (Aurecon), Paul Berriman (Brian Perry), Ryan Clarke (Dunning Thornton), Lian Ching Oh (Ground Anchorages), James Harrison (Fulton Hogan), Gil Johnson (Fulton Hogan), Andrew Langbein (Tonkin & Taylor), Martin Larisch (Jacobs), Malcolm McWhannell (Heron Construction), Rob

Presland (Holmes Consulting), Nicola Ridgley (BECA), Michael Robinson (BECA) and Nick Warmby (March Construction).

NZS 4431 update

This project is for a complete revision and update of the existing New Zealand Standard NZS 4431:1989.

NZS 4431:1989 Code of Practice for Earth Fill for Residential Development describes practices to be adopted in the planning, execution, inspection and control of earth fills for residential sub-divisional developments in order to minimise damage being sustained by buildings and services through subsequent ground movements.

Although under the management of Standards New Zealand, this project has been led by NZGS members. The draft standard has, after nine months of hard work, been completed and is being prepared for public consultation.

Alongside this standard will sit a template earthworks specification. This will not be part of the standard, so will not be branded Standards NZ. We anticipate that this will be developed by the committee that created the standard and presented to NZGS to publish.

The core team working on this project is Ross Roberts (Auckland Council), William Gray (WSP), Tony Kao (MBIE), Tim Farrant (Christchurch City Council), Guy Forrest (Goodmans), Chris Massey (GNS Science), Barbara Rouse (Heritage NZ), Sally Hargraves (Terra Firma), Tony Fairclough (Tonkin & Taylor), Simon Barber (Jennian Homes), Mark Stringer (University of Canterbury), Ali Shokri (University of Waikato) and Andrew Rose (Kainga Ora).

Ground anchors guideline

In response to concerns about the design of ground anchors in New Zealand, a panel of experts has been working on developing new guidelines for NZ practice. The primary objectives of the proposed guideline include:

- Creation of a user-friendly guideline applicable to a wide range of projects
- Set appropriate standards for good practice in the design and construction of ground anchors
- Focus primarily on ground anchors, with some discussion of the differences between ground anchors and soil nails

This has been noticed by the metro group of Building Consent Authorities who are strongly supportive and are investigating how they can work with NZGS to accelerate this project. Our thanks go to the team working on this project, Katy Cottingham (Beca), Robert Hillier (Tonkin & Taylor), Pathmanathan Brabhakaran (WSP), Lars Schmidt (Holmes), David Sharp (Grouting Services), Tim Pervan (Heron Construction), Greg Saul (WSP), Nima Taghipouran (WSP), Stuart Finlan (Waka Kotahi), Ian McPherson (Aurecon), Jethro Neeson (RDCL).

Auckland Christmas mini-symposium

The Auckland branch once again hosted their fantastic hybrid technical/social event of the year, with great success.

Speaker program

Travel restrictions imposed as a result of the COVID-19 pandemic have significantly reduced our ability to bring international experts to New Zealand, and for local speakers to present in person. Despite this we have had a successful series of talks presented in person and online.

Speaker	Title	Locations	Dates
David Buxton	Let the terrain do the talking – Understanding Northland Landscapes from Aerial Photos and LiDAR Terrain Models	Online	1 Sep 2021
Dr Chris Phillips	Structural Tree Root Research in New Zealand: Some of what we know from 60 years of effort	Online	19 Aug 2021
John King and Ryan Milligan	The (R)Evolution of Monitoring	Online	1 July 2021
Dr Rolando Orense	Liquefaction Assessment of Natural Pumiceous Deposits	Tauranga Hamilton	16 June 2021 17 June 2021
Dr Mark Stringer	Separation of pumice from soil mixtures	Tauranga Hamilton Christchurch	25 May 2021 26 May 2021 1 June 2021
Phil Glassey	Updating The Subsurface Geology of South Dunedin	Dunedin	18 March 2021
Kyle Bland and Dougal Townsend	GNS Urban mapping in South Auckland: Geology and Geomorphology	Online	17 March 2021
Dick Beetham	Reflecting on the Ruahihi & Wheao canal failures (1981 and 1982)	Online	25 Feb 2021
Alison Thompson, Ross Roberts & John Scott	Good Quality Geotechnical Investigations to Achieve Compliance	Whangarei	22 Feb 2021
Dr Robert Pyke	Limitations of Simplified Methods for Estimating Seismic Settlements	Online	11 Feb 2021
Dr Chris Massey	Regional-scale landslide tools for New Zealand	Online	26 Jan 2021
Dr Liam Wotherspoon	Regional Geotechnical and Geophysical Site Characterisation across New Zealand	Online	14 Dec 2020
Marlena Prentice	The Transition from the CVZ to the TVZ	Tauranga	8 Dec 2020

Speaker	Title	Locations	Dates
Phaedra Upton	The Southern Alps of New Zealand: An Integrated Picture of an Evolving Plate Boundary	Tauranga	14 Nov 2020
Phaedra Upton	2020 Hochstetter Lecture: How Tectonic & Surface Processes Interact to Shape the Landscape	Tauranga	5 Nov 2020
Eric Ewe	Passive Rockfall Protection Structures in NZ - Christchurch and Kaikoura	Nelson	3 Nov 2020
W.Morgan NeSmith	Drilled Displacement Piles/Elements for Liquefaction Mitigation	Online	28 Oct 2020
Christchurch City Council, Engineering Services Team	Building Compliance Technical Forum	Christchurch	21 Oct 2020
James Molloy	A selection of interesting work in the Otago area	Dunedin	15 Oct 2020
Fred Baynes	Guidelines for the Development and Application of Engineering Geological Models on Projects	Online	7 Oct 2020

Our thanks go to the speakers who gave a series of excellent talks in sometimes challenging circumstances, and to our local branch coordinators without whom this fantastic series of events would have been impossible.

Geomechanics News

Geomechanics News continues to go from strength to strength, and is one of the highlights of the NZGS year. Don Macfarlane and Gabriele Chiaro have continued their great work as the NZ Geomechanics News editorial team, with Gabriele representing them both at committee meetings. Camilla Gibbons has joined the team and will be taking over from Don as he hands over the reins in the next six months.

The NZGS Management Committee widely acknowledges the NZ Geomechanics News editor is one of the most important and demanding roles in our organisation. Our magazine is the public face of our society and as such it must be a high quality and professional publication. It is also the subject of unmovable deadlines which require the highest levels of organisation, project management and diplomacy to ensure timely release. These factors all combine to necessitate that the editor of our bi-annual bulletin, and all of the supporting team, must be of the highest calibre.

I extend my sincere thanks to Don and Gabriele, and their supporting team which includes Sally Fullam and Teresa Roetman, for the hundreds of hours of effort which they exert into the co-ordination and production of our society's magazine.

Plans for the next year

As I hand over the role of Chair, and a new committee comes on board, there will be some re-prioritisation and adjustments to our programme of work. I anticipate that our focus for the coming 12 months will be on:

Communicating our activities

The committee and all our supporting volunteers have plenty of projects to keep us busy. With so much going on it has become challenging to keep track of it all and report it in sufficient detail to our members. We have attempted to improve this by creating a new Activities section on the NZGS website for logged-in users. This summarises all our major activities and projects, with progress updates and contact details if you want to find out more.

Branch activities

Branch activities, after a year where face-to-face contact has been challenging, are starting to ramp up again and we're looking forward to a series of great talks. These activities are critical and will be a key focus for the next year.

In the Waikato Kori Lentfer and Andrew Holland have stepped down after 12 and 10 years in the role respectively. Jerry Spinks has stepped down from his role in Wellington, and Christoph Kraus has stepped up to take his place alongside Shirley Wang, Aimee Rhodes and Safia Moniz. A new branch has been set up by Frances Neeson in Gisborne, which is a great indication of the growth in the area.

Webinars

Following the success of our webinars last year we are starting the process of developing a series of webinars for the coming twelve months. We are also able to arrange for international speakers to present to us all online. Rolando Orense has kindly volunteered to liaise with our sister societies (SESOC and NZSEE) to learn from their successful series of webinars run last year.

Courses

We are starting to plan our training for the coming year, with an expectation that (at least at first) there will be some focus on training associated with work delivered this year – the Earthquake Geotechnical Engineering Modules, the update to NZS4431, and the Piling Specification.

Climate Change and Geotechnics Symposium

Great progress is being made on the development of a one-day symposium on climate change in geotechnics hosted jointly by NZGS and Engineering New Zealand. Following a slight delay caused by the latest lockdown, it has been moved online and split over three days on 1, 2 and 3 November. Led by Jen Smith (NZGS) and Tania Williams (Engineering NZ) this event is expected to be very popular.

Website upgrade

A small team of Olivia Gill (current website manager) and Sateesh Pisini (our enthusiastic volunteer project manager) have started the task of updating our website. It was developed in 2016, and some of the back-end software is reaching the end of its support period. To ensure it remains stable and secure, some work is needed to rebuild these elements.

We're taking the opportunity to look at what we can do to make other improvements to the website at the same time, and would welcome feedback. A survey will be sent to members in the near future.

When the current site was developed in 2016, it replaced a site with no calendar, no library, and no news feed. Now that we've had five years' experience with many more features we're well placed to identify what has worked well, and what can be improved.

In the past five years we've added 639 technical articles, 117 news articles, and have 677 registered users. We've had over 61,000 visitors to the website, of whom 23,000 came from New Zealand, with the bulk of the rest from Australia, the USA, India, China and the UK.

Advocacy

We will continue to advocate for the profession with central government, with our focus likely to remain on the work with MBIE looking at the Building Code, Standards and occupational regulation.

Guidelines

We have a number of significant projects underway or in the process of being scoped and started. These include a new guideline for ground anchors, work to improve the NZGS Field Description of Soil and Rock, some updates to the NZ Ground Investigation Specification, and starting the development of new guidance on slopes.

Report Closure

Please do not hesitate to contact me, the Management Committee secretary (Teresa Roetman, email: secretary@nzgs.org) or any of your Management Committee members should you have any questions regarding this report, or, suggestions for ongoing improvement to the services that your Management Committee provides.

Finally, I thank you for affording me the privilege of being your Chair for the 2019 to 2021 term.



Ross Roberts

NZGS Chair 2019 - 2021

chair@nzgs.org