



IN THIS ISSUE

FROM THE PRESIDENT

NZSEE PRESIDENT-ELECT

 GOVERNMENT POLICY
 ANNOUNCEMENT ON EPB
 REFORM

NZSEE 2026 CONFERENCE

 LFE UPDATE – THAILAND
 RECONNAISSANCE

 NZSEE WEBINARS AND
 SEMINARS

 NON STRUCTURAL
 ELEMENTS CAPABILITY
 SEMINAR - SURVEY

 GUIDANCE RELEASED:
 INSPECTING AND ASSESSING
 HOUSES FOR SLOPE
 MOVEMENT DAMAGE

NZSEE BULLETIN

NZSEE FEE RENEWALS

 FOUR MORE YEARS:
 FUNDING FOR NSHM SCIENCE
 PROGRAMME

 ENGINEERING NEW ZEALAND
 MEDIA RELEASE: INDUSTRY
 PUSHES TO FIX BROKEN
 STANDARDS SYSTEM

 CONGRATULATIONS TO
 HELEN FERNER ON
 RECEIVING THE TE HIRANGA
 RŪ QUAKECORE,
 DIRECTORS' AWARD 2025

 NIGEL PRIESTLEY ORAL
 HISTORY

OBITUARIES

 ATHOL CARR & DR ARTHUR
 O'LEARY

From the President . . .

Welcome to the October 2025 issue of our newsletter on recent developments.

There has been a lot happening in the earthquake space over the last quarter . . . the SESOC conference, the QuakeCORE Annual Meeting and the announcement of change to how the government intends to manage the earthquake risk to existing buildings.



President-Elect

Our society has a system where we have a president-elect during the year before someone becomes president, subject to being re-elected. This year we had a process where members of the management committee were invited to express interest, and the committee has elected a new President-Elect. I am pleased to announce that [Julian Benito](#) is our President-Elect for this year.

Managing Earthquake Risk to Existing Buildings

Many of you would be aware that the government has announced changes that they intend to make to the Earthquake Prone Building Policy, and we circulated an [overview](#) at the time the announcement was made on 29 September 2025.

NZSEE has been collaborating with Engineering NZ, SESOC and the Timber Design Society on providing some information to the engineering community on these changes announced. To this end we have collectively organised a [webinar](#) for Monday, 13 October 2025 at 12:30 pm, under the auspices of Engineering NZ, where MBIE will present the proposed changes.

We propose to collect feedback from members after the webinar (we will share a link to provide feedback), and we plan to hold another webinar later in the year to provide additional information. You will have views on this important policy that will have a big effect on managing earthquake risk associated with existing buildings, and your feedback would be invaluable. The government is due to release their proposed legislation in the new year 2026, followed by a select committee process.

You might remember that NZSEE formed a sub-committee when the review was announced by the government last year, and we provided proactive information to MBIE. We are very grateful to [Ken Elwood](#), Chief Engineer for MBIE-NHC for coordinating this invaluable work on behalf of MBIE and involving the technical societies and keeping us up to date throughout the process. Thank you very much on behalf of NZSEE.

MBIE invited us to be on a Steering Committee for the review work, and we were ably represented by [Andrew Thompson](#) and [Hugh Cowan](#). I also represented NZSEE on a technical stakeholder group that MBIE consulted with. Andrew Thompson also provided valuable input to the process through his role representing NZSEE in the Joint Committee on Seismic Assessment and Retrofit (JC-SAR), and we thank him as well as





UPCOMING EVENTS

[NZGS Symposium 2025 - Geotechnical Horizons: Innovations & Challenges](#)

Aotea Centre, Auckland

15-18 October 2025

<https://confer.eventsair.com/nzgs2025/>

[Seismic design observations from a study tour of Chilean base isolation hospitals](#)

Online

21 October 2025

www.nzsee.org.nz/events/

[National Lifeline \(Utilities\) Forum 2025](#)

Te Papa, Wellington

16-17 October 2025

<https://www.eventbrite.com/e/nluf-2025-infrastructure-resilience-in-a-shifting-landscape-tickets-1389939589729>

[Australian Earthquake Engineering Society Conference](#)

Melbourne, Australia

20-22 November 2025

<https://aees.org.au/>

[13th National Conference on Earthquake Engineering](#)

Portland Oregon

13-17 July 2026

<https://13ncee.eeri.org/>

[NZSEE Conference 2026](#)

Tākina, Wellington

15-17 April 2026

<https://confer.eventsair.com/nzsee2026/>

many other NZSEE members who provided and continue to provide input to the process.

QuakeCORE Annual Meeting

QuakeCORE held its annual meeting early last month in Dunedin, and I thank [Santiago Pujol](#) for inviting me to participate in the meeting, which facilitated collaboration. I was also invited to participate in a number of workshops on behalf of NZSEE, including discussion on the proposed earthquake prone building policy advice, the level of resilience appropriate for buildings in New Zealand and the formation of Technical Co-ordination Groups (TCG) to advise on the need for changes to standards. A few groups are proposed to represent different areas. More on this later. [Greg MacRae](#) of our management committee organised the work on earthquake resilience levels, and they plan to publish this information in our Bulletin.

Learning from Earthquakes

You will be aware that NZSEE supported a reconnaissance team that visited Thailand to learn from the damage to buildings in Bangkok in the magnitude 7.8 Myanmar earthquake of 28 March 2025. [Catalina Miranda](#) from our committee took part in that reconnaissance and is planning some webinars to share information in late October – early November.

NZSEE Conference 2026

We are working to bring together another exciting conference next year, given the significant changes in the earthquake engineering sector. Next Year's conference is planned to be held in Wellington at the Tākina Convention Centre, from 15-17th April 2025, with possible workshops and site tours on 14th April 2025.

I thank Nikoo Hazaveh and Julia Becker for taking on the task of co-convening the 2026 conference. You would notice that we are emphasising the importance of diversity and collaboration, with our co-convenors bringing diversity in sectors, disciplines and demography.

TS 1170 Seismic Design of Buildings Technical Specifications

We understand from the Ministry of Business Innovation and Employment (MBIE) that Draft TS 1170 that came for comments in 2023, has now been finalised, and is due to be released this month, October 2025. We will advise you once this is released.

Building Resilience in Design Guidance and Engineering (BRiDGE)

Ministry of Business Innovation and Employment (MBIE), Natural Hazards Commission and New Zealand Transport Agency have come together to engage Engineering New Zealand to manage the development of guidance for the industry. Paul Campbell from WSP has been appointed as Establishment Director for BRiDGE, and two other roles are being recruited. Technical societies (including NZSEE) and research organisations will be represented on a steering committee. More on this in the next newsletter.

~ P Brabhakaran ~



NZSEE President-elect 2025 - 2026

The NZSEE Management Committee has elected committee member Julian Benito as the President-elect for the 2025-26 term.

Julian is a Technical Principal in Structural and Earthquake Engineering at WSP, based in Taupo. With over 16 years of consulting experience, he brings a multidisciplinary approach to earthquake engineering. Julian's expertise spans structural, civil, and geotechnical areas. He graduated from the University of Buenos Aires and later completed a master's degree in Earthquake Engineering at the University of Canterbury.



From 130-meter-high dams to tunnels and buildings, he has worked across various projects in active seismic zones, not only in New Zealand but around the world. Earthquake engineering has been his passion and one of the reasons to move to Aotearoa. It drives his personal purpose as an engineer as he strives to save lives by designing resilient structures and mentoring fellow engineers to find their passion in this field too.

In the past 18 months, Julian has been part of the Management Committee and has been actively involved with the Learning from Earthquakes missions and programme, organising proposed training on the seismic assessment guidelines and supporting the organisation of the annual conference. Julian's vision is to continue to grow the Society by strengthening collaboration between professionals, researchers, and students and by championing policies and knowledge that promote earthquake resilience. He is committed to NZSEE's renowned excellence.

As President-elect and a management committee member, Julian aims to contribute his knowledge and skills to create a better society of professionals for a more resilient Aotearoa.

Government Policy Announcement on EPB Reform

On 29th September, Building and Construction Minister Chris Penk announced Cabinet's proposals for a refocussing of New Zealand's Earthquake-prone Building (EPB) system.

The announcements are the outcome of the [Earthquake-prone Building and Seismic Risk Management Review](#) announced in April 2024.

NZSEE have prepared the below overview and Q&A for members, to help familiarise with the proposals and what they could mean.

[Overview of the Government's EPB Policy Announcement](#)

Please note, that at this stage, the announcement contains proposals only—and an intent to introduce an amendment Bill to parliament as soon as possible. Therefore, the proposals are subject to the full legislative process and could change before implementation.

Select Committee hearings are planned for the first half of 2026. NZSEE looks forward to engaging in the Select Committee process alongside Engineering New Zealand and our partner societies, and we encourage members to familiarise themselves with the proposals contained within this announcement, and the detail that is anticipated to follow in the coming months as MBIE work with the government to prepare draft legislation and supporting documents.

The media release and proactive release of the cabinet paper, regulatory impact statement and MBIE's review report are available on the [MBIE website](#).



Changes to the earthquake-prone building system webinar

Join a webinar to be held on Monday, 13 October from 12.30 pm – 2 pm to find out what the Government's intended changes to the earthquake-prone building system mean for you. You'll learn about the shift to a more proportionate and risk-based system and get answers to your questions.

Date: Monday, 13 October

Time: 12.30 – 2pm

Location: Online

[Register here.](#)

To help support you and help you answer questions from your clients, Ministry of Business Innovation and Employment officials will explain the announcements and the steps ahead as we move toward Select Committee and eventually implementation. Don't miss your chance to hear directly from the people working on the changes. Our presenters are Chris Hubscher (Principal Policy Advisor) and Ken Elwood (MBIE-NHC Chief Engineer).

If you've got a question you'd like answered please submit it [here](#) or reach out to the team at advocacy@engineeringnz.org.

Please note that the government is still working through the detail of the proposals so there'll be questions that officials aren't able to answer.


This'll be the first in a series of webinars on this topic, we'll continue to ensure you hear from the experts as the policy development progresses.

NZSEE 2026 Conference



You're Invited: NZSEE 2026 Annual Technical Conference

 *Tākina, Wellington*

 *15–17 April 2026*

We warmly invite you to attend and submit papers for the NZSEE 2026 Conference, themed: “Preparing for the Big One: Innovating for a New Era of Resilience.”

This year's event will bring together professionals and researchers to explore the latest developments in research, technologies, and strategies for seismic resilience across engineering and policy. The programme will feature keynote speakers, technical sessions, and insights into emerging tools.

Myself and Julia Becker are co-convenors for next year's conference.

Stay tuned for updates and submission details on the [NZSEE 2026](#) website.

We look forward to welcoming you to Wellington!

- Nikoo Hazaveh, Conference co-convenor



New Zealand Society for Earthquake Engineering Newsletter

Issue 3, October 2025

Call for Abstracts Open!

Key Dates

Abstract Submission Deadline	31 October 2025
Presenters Notified of Acceptance	24 November 2025
Paper Submission Deadline	30 January 2026
Presenter Registration Deadline	20 March 2026

[Submit Your Abstract Here](#)

LfE update – Thailand Reconnaissance

Initial reports after the Myanmar Earthquake on the 28th of March 2025 have indicated that while the seismic demands in Bangkok (nearly 1000 km away) were relatively small, many high-rise building structures have sustained non-structural damage, while several also sustained structural damage.

Many high-rise buildings in Bangkok are apartment, office and hotel buildings. Though the Thai Building Code considered Bangkok as a low seismicity region, the damage to these buildings was unexpected considering the large distance of Bangkok from the epicentre.

To gain a detailed understanding of the impacts of the earthquake, a New Zealand team was deployed to Bangkok in June 2025. Currently, the team is in the process of analysing the collected data. Comparisons will be made across multiple datasets including site period, building period, location and extent of non-structural damage, and wall density to building period. These comparisons will enable patterns to be identified and help justify potential policy changes to promote better functional recovery.

The results will be presented in conference proceedings, journal publications, and reports. The takeaways from this reconnaissance not only provide valuable insights for New Zealand but also has helped to develop relationships between the Thai and NZ societies for earthquake engineering.

NZSEE Webinars and Seminars

Upcoming NZSEE Webinar - Seismic design observations from a study tour of Chilean base isolation hospitals

When: Tuesday, 21 October 2025

Time: 11am – 12pm

Where: Online

This webinar summarises observations from a recent study tour of base-isolated hospitals in Chile, carried out as part of a collaborative NZ-Chile research programme on the seismic design for healthcare infrastructure. Site visits to major hospitals including the Militar de Santiago, Sotero del Río, Provincia Cordillera, Félix Bulnes, and Alto Hospicio Hospitals, highlighted a range of effective seismic design strategies implemented in a high seismicity context. The hospitals visited are seismically isolated using lead rubber bearings, with one hospital employing friction pendulum sliders.

A notable finding was the consistent high-performing design outcomes, often through approaches and design assumptions that differ from those commonly adopted in New Zealand, despite the absence of explicit performance-based justification at first glance.



The study also noted the important role of Chile's construction monitoring practices, which appear to be well-integrated into the delivery process. These frameworks promote rigorous oversight during construction, contributing to the consistently high-quality buildings. This aspect of Chilean practice may offer valuable lessons for strengthening quality assurance in the New Zealand context.

Overall, the observations prompt useful reflection on New Zealand design conventions. The presentation also introduces the associated design comparison project currently underway.

Find out more and register [here](#).

Past NZSEE Seminar - Global Lessons: What International Mitigation Strategies Can Teach Us About Seismic Resilience in New Zealand

On 27 August, NZSEE hosted a seminar in Auckland and online: Global Lessons: What International Mitigation Strategies Can Teach Us About Seismic Resilience in New Zealand.

We were pleased to welcome Dr. Olga Filippova, who shared valuable insights on how international approaches to seismic risk mitigation can inform and strengthen New Zealand's own resilience strategies.

Thank you to everyone who joined us, and to WSP for generously hosting the event.

The full recording is now available on YouTube. Please note: audio improves from around the 18-minute mark.

Watch it [here](#).

Non-Structural Elements Capability Seminar - Survey

NZSEE is currently in the early planning stages of a **Non-Structural Elements Training Capability Seminar** and would like to gauge interest from our members. To help us tailor the seminar to best suit your needs, we are seeking your feedback on whether you would be likely to attend a paid **in-person** event. Additionally, we would appreciate your input on topics and preferred locations for the seminar. Your responses will be invaluable in guiding the planning and ensuring the seminar is both accessible and beneficial for participants.

Complete the survey [here](#).

Guidance released: inspecting and assessing houses for slope movement damage

Engineering New Zealand has released new guidance for inspecting and assessing houses for structural damage arising from slope movements.

You can view a copy of the final document [here](#). It is also available on [Engineering New Zealand's website](#).

This document, alongside the Canterbury Earthquakes Legacy document [Guidance for engineers on residential damage assessment and reinstatement](#), provides a strong foundation for future work in this area.



NZSEE Bulletin Vol. 58 No. 3 (2025)

We have recently published the third Bulletin of the NZSEE for 2025, and the articles are listed here.

Articles

- [Seismic performance and loss assessment of light timber frame residential houses in New Zealand: State of the art](#)

Kexin Wang, Minghao Li, Angela Liu, Rajesh Dhakal

- [Investigating the impacts of design ductility values and importance levels on the performance of base-isolated buildings in New Zealand](#)

Claire Dong, Timothy Sullivan, Didier Pettinga

- [The applicability of 3D effects to pseudo-static design acceptance criteria: The recovery design for Wall 375](#)

Elena Zabolotnii, Tarik Dirikolu, Jeeva Subramaniam Kumar, Julian Venter, John Read

- [Communicating seismic building risk with commercial building tenants](#)

Catalina Miranda, Cameron Eade, Charlotte Brown, Julia Becker, Emma Doyle

Technical Notes

- [Installation methods for ground motion sensors in community-engaged earthquake early warning system](#)

Chanthujan Chandrakumar, Max T. Stephens, Raj Prasanna

NZSEE Membership Fee Renewals

Membership renewal notices for the 2025–2026 year are currently being distributed by Engineering New Zealand.

We wish to inform you that membership fees have been reviewed and adjusted for the upcoming year.

Please refer to the table below for the updated rates:

	New Zealand (+GST)	Overseas*
Ordinary membership	\$160.00	NZ \$160.00
Young Professional	\$80.00	NZ \$80.00
Student	Complimentary	NZ \$80.00
Corporate membership	\$300.00	NZ \$300.00
Overseas Bulletin Add on	N/A	NZ \$175.00

* Overseas memberships do not include a physical Bulletin subscription. Members outside New Zealand who wish to receive a printed copy must purchase the Bulletin Add-on, which incurs an additional fee.



NZSEE Bulletin Subscription		
	New Zealand (+GST)	Overseas
Bulletin Subscription	\$250.00	NZ \$475.00

If you have any questions regarding your membership or the updated fees, please don't hesitate to get in touch with Amy Samuelu, Executive Officer, exec@nzsee.org.nz.

Four more years: Funding for NSHM science programme

The National Seismic Hazard Model (NSHM) is a key Earth Sciences NZ forecasting product that calculates the likelihood and strength of earthquake shaking that may occur in different parts of Aotearoa New Zealand over specified time periods.

Last updated in 2022, the National Seismic Hazard Model science programme has been funded through to mid-2029 through a \$16.2 million MBIE (Ministry of Business, Innovation and Employment) contract.

The NSHM presents a range of maps, hazard curves and reports that can be used to provide a forecast of the earthquake shaking expected over, for example, the next 10, 50 or 100 years at a range of probability levels.

Along with a suite of improvements on the 2022 NSHM update, the current programme has two key priorities:

- One year time-dependent NSHM by 2028 supporting short-term decision making by modelling the effects of aftershocks and short-term seismic behaviours. These will be valuable to the Natural Hazards Commission and the reinsurance industry.
- A 100 year time-dependent NSHM by 2030 supporting long-term decision making by revising the 2022 NSHM with new data, revised science and modelling to inform building code requirements and long-term planning.

The future updates in the NSHM will include targeting some key scientific areas in different components of the model which were identified in the 2022 release of NSHM as the major sources of uncertainty as listed below.

1. Modelling time dependence of earthquake occurrence rates,
2. Joint ruptures of Hikurangi with upper-plate crustal faults,
3. Uncertainty in slip rates on faults, Distribution of complex ruptures,
4. High sigma values of ground-motion models,
5. Incorporating physics-based ground-motion simulations to constrain shaking for large ruptures,
6. Constraints on nonlinear ground-motions,
7. Regionalised (non-ergodic) ground-motion models,
8. Optimisation of logic trees including seismicity rate model and ground motion characterisation models.
9. Updates in the earthquake catalogue, earthquake geology database, ground-motion database as well as site characterisation database.

The NSHM informs a range of safety, security, resilience, financial, and economic purposes such as building codes, infrastructure design, community resilience plans, hazard risk and loss models and more.



Earth Sciences NZ is the proprietor and custodian of the model, but key stakeholders include the building standards authorities, local and regional authorities, Waka Kotahi (New Zealand Transport Authority), and geotechnical professionals.

Engineering New Zealand Media Release: Industry pushes to fix broken standards system

More than 30 leading organisations from across NZ’s engineering, construction, manufacturing and trade sectors are calling on the Government to urgently overhaul the country’s standards system.

In an impressive show of unity, the industry has written to key Ministers requesting urgent action. They say the current model for funding and accessing technical standards is outdated, expensive and slowing down progress in key sectors. Requiring industry to both fund and volunteer to develop standards – and then pay to access them – is inefficient and unfair.

“This is one of the strongest signals yet that the system for managing our standards is simply not fit for purpose,” says Engineering New Zealand Chief Executive Dr Richard Templar. “We have wide and united support across the sector for change. The time to act is now.”

The joint letter highlights longstanding issues: outdated standards, high costs to access essential documents, over-reliance on unpaid volunteers, and a lack of alignment with law and innovation.

The New Zealand Society for Earthquake Engineering has contributed to and supported this initiative from Engineering New Zealand.

[View the full media release here.](#)

Congratulations to Helen Ferner on receiving the Te Hiranga Rū QuakeCoRE, Directors’ Award 2025



This annual award is given to members of QuakeCoRE whānui, to recognise significant dedication and service to the mission and values of QuakeCoRE.

This year’s award recognises the important contribution of Helen Ferner in supporting the advancement of the Te Hiranga Rū QuakeCoRE mission since 2019.

Helen is a regular QuakeCoRE attendee and presenter, as well as an active participant in QuakeCoRE-relevant activities. She undertakes high-impact work that supports the advancement of engineering and provides benefits in making Aotearoa New Zealand safer from earthquakes. Such recent activities have included research that seeks to understand societal expectations better and advances engineering policy and practice, through to organising conferences and workshops that provide forums for discussing issues and developing solutions.

She is active in providing linkages with key policy agencies. Additionally, her internationally renowned earthquake reconnaissance, assessment, and retrofit skills have been applied in Aotearoa New Zealand following large earthquakes here, to assist in post-earthquake contexts.

Helen has been a keen advocate in keeping women engaged in earthquake engineering. She has been a strong mentor and role model for young female engineers, undertaking informal mentoring roles for young structural engineers.

In her past role as President of the New Zealand Society for Earthquake Engineering (NZSEE), Helen was key in developing and negotiating the NZSEE / QuakeCoRE Emerging Women Leaders in Earthquake Engineering award, which recognises and encourages early-to-mid career women. Helen has been a regular attendee at the Women in QuakeCoRE Breakfast and has been a guest mentor at the event several times.



Nigel Priestley Oral History

In 2021 NZSEE together with the Earthquake Engineering Research Institute (EERI) published the 30th volume of Connections: The EERI Oral History Series, featuring the late Professor Nigel Priestley—a significant figure in the field of earthquake engineering here in New Zealand, the United States, and globally.

The interviews for this volume were conducted in the final year of his life, by NZSEE life member Richard Sharpe, and Nigel's daughter Rebecca Priestley, a historian of science with the Centre for Science in Society at Victoria University of Wellington.

The EERI Oral History series is available free of charge in PDF format [here](#). It is also available for purchase in a printed version. If you are interested in purchasing a copy please contact Executive Officer, Amy Samuelu, exec@nzsee.org.nz. Price will be determined once final numbers are confirmed.



Obituaries



Prof. Athol Carr

Athol Carr, Fellow of NZSEE

Prof. Athol Carr passed away on 25 June 2025 at the age of 84.

Athol completed a bachelor's degree in civil engineering with 1st class honours at the University of Canterbury, UC, in 1963. He then worked for Bill Lovell-Smith conducting design of structures before going to the University of California, Berkeley, where he completed a Master of Science in Engineering (1966), and a Doctor of Philosophy (1967) in structural engineering on the topic of "Refined Finite Element Analysis of Thin Shells including Dynamic Loads".

Athol returned to his alma mater, UC, as an academic staff member. He specialised in non-linear structural dynamics and finite element methods, particularly as they relate to earthquake engineering. Some of his early work, using punch cards on the computers at the time, involved wool research, modelling the behaviour of yarn. Amongst other things, Athol was a pioneer of inelastic dynamic time history analysis methods, and he became internationally known for his software, RUAUMOKO. He worked with Andriano, Bevan, Bull, Chase, Chey, Crisp, Crisafulli, Cooke, Cubrinovski, Deam, Dhakal, Fenwick, Filiatrault, Kam, Jury, Lee, MacRae, Mander, Moghaddasi, Mori, Moss, Palermo, Pampanin, Pardoen, Park, Paulay, Pender, Priestley, Puthanpurayil, Restrepo, Rodriguez, Sharpe, Stewart, Walpole, Wijanto, Zhang, Zhao, and others, to make significant contributions in the field of earthquake engineering. His analyses emphasised the use of total equilibrium, as opposed to the relative equilibrium formulations of the time which he claimed "allowed engineering analysts to send buildings into space faster than NASA!". He also made major developments related to structural damping. Modelling using his techniques resulted in improved understanding of the earthquake behaviour of reinforced concrete, timber, steel, base isolated, and other structures. The findings, now expressed in standards and design practice, were recognised around the world, and underpinned New Zealand's strong international reputation in the field of structural earthquake engineering.

Practical applications of Athol's knowledge, skills and tools range from his design of the Spitfire aircraft stand at Christchurch airport, a hyperbolic paraboloid roof, and early lift-slab structures, to his involvement with the Auckland Sky Tower, and Union House.

Athol travelled the world with extended periods in Norway, Iceland, and as a faculty member of the ROSE school in Pavia, Italy, teaching and advising students.

Athol was a man of many talents with diverse interests. Examples are his roles as a member of the university tramping club, a trainee pilot, and an expert ballroom dancer. He constructed, captained and raced his yacht, "Ivanhoe", and organised sailing club races. He delighted in restoring old



tractors, and he was a stalwart of the vintage farm machinery club. He enjoyed telling people about his experiences, the technical details of yachts, aircraft, and tractors, as well as his travels. One person commented that Athol talked to them as if they had the same intelligence and background knowledge in all these areas as he had!

Even though he retired in 2010, Emeritus Professor Athol Carr, and NZSEE Life Member, remained active. He continued working on interesting problems with industry, with students, in person and at conferences, challenging people about the reliability of their analyses. Athol enjoyed catching up with his colleagues, students and friends hearing their latest family news. He also remained active with tractors. However, his favourite discussion topic was his own family with whom he had many adventures around the country (using his Mitsubishi) and at the Marlborough Sounds holiday home. Athol was a devoted husband, father and grandfather.

Athol is survived by his children, James and Kirsti, their spouses, and three grandchildren. Those of us who have known him feel privileged to have been acquainted with a brilliant researcher, a generous mentor, and a kind friend. Some of his overseas collaborators stated that the earthquake engineering community has “lost a giant” and that “Athol’s contributions to the field were visionary”. They stated that it was his quiet generosity, deep intellect, and humble demeanour that truly set him apart, and that while he is no longer with us in person, his legacy lives on not only in his software and publications, but in the thousands of students, engineers and researchers he has inspired and guided around the world.

Athol, may you rest in peace.

- Greg MacRae

Dr Arthur O’Leary, Fellow of NZSEE



Dr. Arthur O’Leary

We celebrate the contribution to earthquake engineering of Arthur O’Leary, a Fellow of NZSEE, who passed away recently in Wellington aged 80.

Arthur graduated with a PhD from the University of Canterbury in 1970. His thesis, supervised by Prof. Bob Park, was titled “Shear, Flexure and Axial Tension in Reinforced Concrete Members”. As “Tension” indicates, his research would have informed the rapid development of earthquake engineering at the university at that time.

After a period in England, Arthur joined the engineering consultancy Morrison Cooper & Partners in Wellington. Arthur stayed with the office as it merged in the late 1990s with Auckland-based KRTA to become Kingston Morrison and then as it was absorbed into the large Australian consultancy Sinclair Knight Merz (now Jacobs). He became a shareholder and Senior Consultant.

In 1980, Arthur attended the short course “Advances in Earthquake Engineering” at the University of California, Berkeley. The course traversed all recent developments in engineering seismology, seismic resistant design of civil and building structures, and seismic analysis. NZSEE published his Technical Note on the course with the summary: “Attention to sound detailing of structural sub-assemblages and members gives better performance under earthquake attack than excessive attention to the sophistication of the analysis of response.”

Soon after, Arthur applied this understanding to develop innovative solutions that enhanced the seismic-resistant detailing of reinforced-concrete building structures.

An example was his involvement in the development of multi-storey, seismic-resistant perimeter frames consisting of narrow shear walls extending up the height of the building. These were linked at each floor level with a horizontal, ductile, steel billet designed to damp the earthquake response by yielding.



Similarly, Arthur developed a system of precast concrete, double cruciform-shaped, perimeter frames connected by a mid-span, cast-in-situ joint. This allowed the ductile detailing in the beam/column joint to be entirely contained within the precast unit (see photos). These two structural forms¹ (see photos) were used in the 1980s in two buildings on The Terrace, Wellington.

Throughout his career, Arthur was involved in a wide range of building structures, as well as in seismic code development. The structures ranged from industrial complexes (including meat processing) and infrastructure to multi-storey offices, apartments, schools and public buildings which included major elements of the Wellington Civic Centre complex.

Arthur is survived by his wife Marie, their children Liam, Catherine and Brigid, and their six grandchildren.

- Win Clark (work colleague)

¹ O'Leary, A. J., Monastra, D. P., and Mason, J. E., "A Precast Concrete Moment Resisting Framing System,"

Proceedings, Pacific Concrete Conference, V. 1, Auckland, New Zealand, November 1988, pp. 287-298.



13-storey Precast Concrete Perimeter Frame office building on the Terrace, Wellington