ACA BRANCH NEW ZEALAND BRANCH

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ACA NZ BRANCH: WELLINGTON MEETING

ACA Members and guests are invited to attend a joint meeting with SESOC and the Bridge Engineering Technical Society arranged by their Wellington Bridge Group

Date:	**Wednesday, 29th October 2025**
Time:	Meet for refreshments (kindly sponsored by GANZ) from 5:30pm. Technical Presentations 6:00 to 7:30.
Venue:	**Engineering NZ Wellington Office,** Level 6, 40 Taranaki St, Wellington 6011
Chair:	**Raed El Sarraf,** 2025 ACA President
Speaker 1:	**Kevin Irving,** from the International Zinc Organisation
Subject:	**Zinc-based coatings for bridge preservation**
Speaker 2:	**Willie Mandeno** who will give a brief overview of the new zinc coating Standards, AS/NZS 2312.3:2025 and AS/NZS 4680:2025

RSVP to wlmandeno@gmail.com or register at
https://pd.engineeringnz.org/ipenzt/register?sgid=06978b47c78e4a30be40a9795b7efdaa

Bridge Engineering Technical Society SESOC GANZ GALVANIZING ASSOCIATION 40 1985 -2025

ACANZ would like to gratefully acknowledge this month's sponsor…

Maintenance is vital for asset management

Asset management is the practice of planning for and investing in infrastructure over its entire lifespan.

New projects get the attention of the public with ribbon-cutting and photo ops, but it's also very important to keep focused on how well we care for the assets that we already have. Perhaps because new projects get the headlines, steady attention to maintenance often goes unnoticed. Instead of waiting until a structure fails before stepping up to make repairs, the asset management approach emphasises regular proactive maintenance, from good design, to ensuring a long lifespan until eventual replacement.

Infrastructure isn't free; neither is neglect

If infrastructure fails it's not just an inconvenience - it can be dangerous and costly to fix. Without reliable information on how assets are being managed, decision-makers and management are essentially flying blind. They can't plan wisely or anticipate future issues that will almost certainly arise. Instead, they are left to contend with crises after they happen – it's a reactive cycle that drains funds and profits. Proactive maintenance planning gives management a choice and overall control, whereas reactive investment can only lead to failures and inflated costs.

To shift from a crisis mode to a future–focused strategy, management needs to think carefully about how to plan for infrastructure maintenance throughout a structure's lifespan. As engineers know, there are many practical solutions using proven non-destructive methodologies to ensure that focused, preventative maintenance is carried out on a new structure from its commissioning until its final replacement. Some of these strategies are:

- Match depreciation with renewals funding. Ensure every dollar accounted for as asset wear-and-tear is reinvested into maintaining the asset.
- Drive code compliance with best practice for the maintenance of a structure.
- Invest in workforce capability to ensure that the skills exist to manage the infrastructure and assets well.
- Improve understanding of the performance and the condition of existing assets to better inform future strategic decisions.
- Create a reliable proactive investment 'pipeline' for maintenance and renewal of infrastructure and assets.

These well known actions are all achievable steps that matter a lot to the engineers who are employed to operate and maintain plant infrastructure and assets.

Durability seminar a great success

The HERA-organised joint seminar with SESOC and ACANZ, was held on September 25 at the Waipuna Conference Centre in Auckland. It was entitled “Designing durable and sustainable steel structures” and delivered a most interesting day for all 75 attendees, and featured eight speakers across a range of structural engineering and allied scientific disciplines plus exhibits from a number of leading coatings suppliers.

For Matt Vercoe, ACA NZ Branch official representative at the seminar, the main takeaway is that thermal breaks in buildings are just as important as insulation for temperature regulation.

Glenn Ellis of WSP explained about the development of thermal breaks in aluminium framing for double glazed windows – early iterations of these actually had more thermal transfer than a single-pane window with a wooden frame.

2025 ACA President, Raed El Sarraf from Structural Integrity Consultants, also spoke of the revisions to AS/NZS 2312.1, SNZ TS 3404 and NZTA protective coatings guides as well as to the HERA Report R4-133. All are currently being updated and aligned with each other.

Zhengwei Li from BRANZ spoke about his recent atmospheric corrosivity studies including work in the Chatham Islands where the first CX (extreme environment) corrosion rates have been recorded in NZ.

Other speakers included SESOC’s Stewart Hobbs from Proconsult who discussed microclimates, Garth Moran from Carboline who presented test data on a novel silicate based coating system, and several others on different building sustainability topics.

Q & A CORNER

Older ACA NZ members have probably seen a number of situations that may never have made it to a textbook.

If you have a question you'd like clarification on, email it to the Editor at lesboultonrust@gmail.com. We'll pose it to our panel of experts who will answer it in another Bulletin, so everyone can improve their knowledge.

Q: *What and where are the Blood Falls?*

& A:

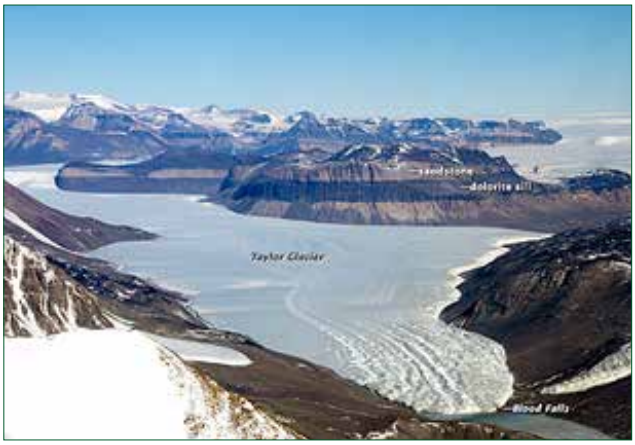
The Blood Falls is an outflow of an iron (III) oxide-tainted plume of saltwater, flowing from the tongue of the Taylor Glacier onto the ice-covered surface of West Lake Bonney in the McMurdo Dry Valleys in East Antarctica.

Iron-rich hypersaline water sporadically emerges from small fissures in the ice cascades. The saltwater source is a subglacial pool of unknown size, overlain by about 400 metres of ice, several kilometres from its tiny outlet at Blood Falls. The reddish coloured deposit was found in 1911 by the Australian geologist Thomas Taylor who first explored the valley that bears his name. The Antarctica pioneers first attributed the red colour to red algae, but later it was proven to be due to red iron (III) oxides (just like rust).

Insoluble hydrated ferric oxides (Fe2O3. xH2O) are deposited at the surface of the ice after ferrous ions (Fe++) present in the unfrozen saltwater are oxidised in contact with atmospheric oxygen. The more soluble ferrous ions initially are dissolved in old seawater trapped in an ancient pocket remaining from the Antarctic Ocean when a fjord was isolated by the glacier in its progression during the Miocene period, some five million years ago when the sea level was higher than it is today.

Above: *Blood falls Antarctica in 2015*

Below: *Blood Falls at the toe of the Taylor Glacier*



Acknowledgement: Wikipedia https://en.wikipedia.org/wiki/Blood_Falls

Reduced materials durability in geothermal areas and the Chatham Islands

Since 2015, scientists have been testing materials in Rotorua, just outside the Hell's Gate thermal park. The results show that some alloy coatings that usually last 15+ years, rusted in just 2–3 years, while treated timber split and discoloured in just a few years.

With the building standard NZS3604:2011 Timber-framed buildings currently under review, BRANZ is recommending the design boundary for geothermal hotspots be extended from the current 50m to 500m. Building work inside this boundary and close to a hotspot is out of scope for NZS 3604 and requires specific engineering design.

Meanwhile, the Chatham Islands has long been classified as Zone D for corrosion, the most corrosive environment, but with limited evidence. BRANZ and the Joint Centre for Disaster Research at Massey University have done some investigating.

The first round of tests across four sites showed that an unprotected carbon steel plate 1 mm thick was completely corroded within 1 year, despite lasting more than 50 years in rural inland areas on the mainland.

"If you use materials approved for Zone D corrosivity in the Chatham Islands, you will have early material failure," BRANZ Senior Scientist Zhengwei Li says.

An additional series of tests with an extra seven sites added found that carbon steel corroded 22 times faster than inland rural New Zealand and more than three times the rate of the harshest coastal sites on the mainland.

Source: BRANZ Guideline 2025

2025 ACA Foundation Scholarships awarded

Three of the eleven ACA Foundation scholarships for 2025 have been awarded to ACANZ members.

The Ray Osborne Memorial Scholarship* to assist a Young Corrosion Group member attend the ACA Conference in Melbourne, sponsored by Universal Corrosion Coatings, has been won by Grace Bryant, a coatings and corrosion technician with First Gas.

Another Conference attendance scholarship, sponsored by Carboline NZ, was won by Matt Meylan, the Sales & Marketing Manager for Lordco.

The Metspray-sponsored Conference or Training Scholarship was awarded to Anthony Jujnovich, a coatings consultant with Lumen.

*The late Ray Osborne was an ACA Life Member and Gold Medalist, serving the NZ Branch from 1973-2001. He helped organise four ACA conferences, spent three periods as Secretary of the NZ Branch and two as President, then became its Executive Officer when he retired.

Submitted by Willie Mandeno, ACAF Director

Protecting New Zealand's future – Blast Worx Limited leads the way

Advertorial

Introducing Blast Worx Limited, New Zealand's newest name in the Corrosion Protection Industry – but don't let "new" fool you. Backed by years of hands-on experience, our team brings a wealth of industry knowledge, proven expertise, and a true passion for quality service.

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