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## ACA NZ BRANCH AGM 2025

The AGM was held at the "The Meeting Rooms" near Christchurch Airport.

The event incorporated a site visit to the Air New Zealand maintenance hangar. This started with a classroom presentation where two AirNZ experts explained their maintenance procedures/inspections - where for example, every screw in every wing has a unique number and a record of its condition. If any corrosion is identified, it is inspected and reported to the Aircraft manufacturer's engineers. They assess the reduction in strength and send back a repair procedure.

The second half was a walk around the hangar, where various aircraft in various states of repair were viewed. We even learnt about how spilt coffee can affect the seat mounts.

The whole experience was very informative and AirNZ gave great explanations of the intricacies of their corrosion issues and coating procedures. We also learnt about the pneumatic de-icing equipment mounted to the leading edge of the wings and the



heated propellers, so next time any of us fly we will be looking for the equipment we observed, and will have a new appreciation of what's involved with keeping these planes in the air.

The NZ Branch Committee meeting and the 2025 AGM were also held in "The Meeting Rooms." Grant Chamberlain discussed his President's report, which covered the following topics and a general discussion was held about each topic.

### Representation of the NZ Branch in Australia

The ACA NZ has good representation within the ACA management system, with Raed El Sarraf now President of the ACA Council and Trish Shaw on the ACA Board. This should help with getting the MOU between ACA NZ and the ACA head office approved.

### The Bulletin

The monthly NZ Bulletin has had another successful



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year. A discussion was held about better planning of events and going back a few years ago, we had a year's worth of events scheduled. This would allow for the better promotion of events through the Bulletin.

### The ACA is "preaching to the converted"

The ACA needs to contact other organisations whose members are interested in preventing, identifying, and treating corrosion. If we can get on their mailing list, we can share information about the scheduled field trips and technical discussions. The ACA Centre can only email the info to ACA members when we hold events.

Not being able to promote ACA events to others who are not already part of the ACA is having an impact on ACA events, with the Coatings Roadshow and the Lyttleton drydock visit having to be postponed due to lack of support.

The outcome of the discussion was if any ACA member knows of an organisation that may be interested in preventing, identifying, and treating corrosion, could they please notify Mark Sigley, (acanz.mail@gmail.com) who is complying with the database - ideally with the name and email of someone in a senior position, i.e. the communication officer.

### Time Poor volunteers

Grant also spoke about the ACA being made up of volunteers who are time-poor. We should use the paid ACA Centre personnel as much as possible.

### Treasurer's report

Willie Mandeno presented the Treasurer's report. The Branch is OK financially, but it is slowly chewing through its reserves because, at present, the ACA is not returning any of the NZ membership subscriptions, as it used to before Covid. For further details, see page 5.

### NZ Committee

The existing NZ Branch Officers remain unchanged. However, it was great to have four new members elected to the Committee at the AGM, including two new YCG representatives.

The ACA NZ Branch committee members are:

- o **President / Councillor / Electrolysis:**  
**Grant Chamberlain** (Canterbury, CPNZ)
- o **Vice-President:** **René Hill** (Canterbury, Southern QA)
- o **Treasurer, Councillor:** **Willie Mandeno** (Wellington, Retired)
- o **Youth Representatives:** **Declan Cruickshank** (Canterbury, Lumen)  
**Lakein Cottam** (Taranaki, Firstgas)
- o **Technical:** **Raed El Sarraf** (Canterbury, WSP)
- o **Communications:** **Trish Shaw** (Wellington, Retired)
- o **Education:** **Matt Vercoe** (Auckland, Metal Spray Services)
- o **Secretary:** **Mark Sigley** (Taranaki, Firstgas)
- o **Committee:** **Philip La Trobe** (Auckland, Culham Engineering)  
**Ry Collier** (Taranaki, Methanex)  
**Nicholas Zglobis** (Taranaki, WSP)  
**Steve Watts**, (Canterbury, Industrial Minerals)  
**Marius Gray** (Taranaki, Firstgas)
- o **Bulletin Team:** Les Boulton & Corrie Cook (Auckland)



The ACA Applicator and Coatings Technical Groups are excited to hit the road! Their annual Roadshow is heading to Sydney, Perth, Auckland, and Christchurch for an epic tour across Australasia, with roadshows three and four in New Zealand.

**Roadshow Three:**  
**Monday 21st July 2025, Auckland**

**Roadshow Four:**  
**Thursday 24th July, Christchurch**

These events will include a variety of engaging presentations by expert speakers, an exhibition featuring our corporate partners in the coatings industry, and live outdoor demonstrations of the latest equipment designed for coatings professionals.

**TICKETS NOW AVAILABLE! For more information and to reserve your place, go to**  
<https://www.corrosion.com.au/events/upcoming-events/>



## ELECTRIC FISH BARRIER – LIKE IMPRESSED CURRENT CP BUT NOT

At a mixed sheep farm in Canterbury, a bottom-mounted electric barrier has been installed in the Bealey Stream, a tributary of the Hororata River, to deter upstream movement of trout from the river into an endangered native mudfish habitat.

It is the first permanent electric predator exclusion project of its kind in NZ.

The small native mudfish, which survive in low oxygen-level water, are consumed by non-native brown trout from the river where their habitats physically overlap in the spring-fed stream. The waterway can be 1.6m deep and up to 13m wide. The fresh water in the stream has a conductivity of up to 220  $\mu\text{S}/\text{cm}$ .

Environment Canterbury, in association with the landowner (Haldon Pastures owned by the Grigg family) and several other interested groups, contracted the Smith-Root company (USA) to design

and build a fish deterrence electric barrier to stop the trout migrating upstream into the mudfish habitat.

The unique electric barrier design is a 3kW solar-powered source of pulsed DC current delivered into the water of the stream through three submerged iron electrodes.

In the pulsed DC current system, not unlike an impressed current CP system, the current passes through the submerged iron structures into the stream water where (presumably) each iron bar is either positive (anode) or negative (cathode), causing a voltage gradient. The voltage gradient in the stream water deters trout and eels from approaching the mudfish habitat wetland area; the technique is called predator exclusion.

**Right:** The electric trout barrier installed in the Bealey Stream.

**Below:** Three iron bar electrodes are installed in the stream to carry a pulsed DC current fish deterrent in the water



**Below left:** Electric fish barrier site in the Haldon Pastures wetland. The solar panel array is visible alongside the stream.

**Below:** Schematic of an electric fish barrier designed by Smith-Root. Each project has a custom built telemetry and control system installed.



Acknowledgement: TVNZ Hyundai Country Calendar

## 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](mailto: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: Are there corrosion risks using pumps in water?**

### **& A: Always!**

Water pumps and valves are critical for industrial and agricultural processes. Many pumps are subjected to aggressive environmental conditions such as variable temperature and flow velocities. The water being pumped might contain corrosive contaminants, abrasive solids and vapour bubbles. Hence we should devise suitable corrosion protection strategies to ensure reliable and economical operation of water pumps, valves and pipe fittings.

The choice of pump and valve materials depends upon parameters such as:

- pH of water and impurities present
- air and vapour entrapment
- flow turbulence
- liquid pressure
- water temperature range
- pump duty type – intermittent or continuous

Cast iron is frequently chosen for pump and valve bodies in normal applications. For impellers, the material is selected on the basis of its suitability for casting, strength, machinability, abrasion and corrosion resistance. Cast iron is used on account of its lower cost, but it is inferior for cavitation, corrosion and abrasion resistance. Brasses are sometimes used for steam and water, but not in seawater as the corrosion resistance may be inadequate. Bronzes such as phosphor bronze and nickel aluminium bronze perform better in seawater because they show good resistance to cavitation damage.



Glass reinforced plastic (GRP) can be used for impellers that pump seawater. The correct grade of stainless steel is also used for heavy duty high-speed pumps on account of its good corrosion and cavitation resistance; e.g. duplex grades of stainless steel. Ceramic coatings can also minimise cavitation corrosion.

Seawater pumps and those pumping contaminated water face a severe corrosion and abrasion damage risk. High-speed pumps with high fluid velocity may face cavitation risk as well. High temperatures and restricted fluid flow paths add to the risk of cavitation.

The corrosion risk of water pumps can be minimised by adopting suitable design parameters during the design stage and selecting suitable materials for components like impellers, valves and pipe fittings. Anti-corrosion coatings reduce corrosion damage and improve pump efficiency and the economic life of the pumping system. Condition monitoring and preventive maintenance will also contribute to the economical operation of water pumps and the overall pumping system.





Registrations are open for the 2025 SCANZ convention, to be held in Rotorua from 21-23 May.

On receipt of registration form an invoice will be issued for payment within 7 days. Direct payment and Credit Card options will be on the invoice.

Accommodation is to be booked through us but payment will be direct to the Hotel upon arrival.

We look forward to seeing you and thank you for your support.

Any queries please contact [secretary@scanz.org.nz](mailto:secretary@scanz.org.nz)

## MID YEAR 95TH AEC MEETING MAY 2, 2025

**9.30am – 3.30pm, ACA office,  
Preston, Victoria**

The 95th AEC meeting will be held in ACA Preston office and if you or your technical group would like to have a presentation in the session, please let us know the title for presentation,

The full program will be sent to ACA and AEC members by mid-April 2025 for further distribution and registration.

**“ This meeting is probably the best in Australasia for discussion of CP, interference, and closely related subjects. ”**

Mark Sigley, Secretary,  
NZ Electrolysis Committee

## ACA NZ Branch Inc. Treasurer's Report, 2024

The ACA NZ Branch Treasurer's report for 2024 was presented at the AGM held in Christchurch on 14th March 2025. As at 31 December 2024, we note that no subscription reimbursements have been received from the ACA HQ since Q2 2021. These were 'frozen' by the ACA Board to provide liquidity following the loss of training income due to Covid.

Since then, we have paid out \$900 for sponsorship of the 2024 Wellington, Taranaki and Otago School Science fairs. We also paid a \$1500 travel subsidy to our Chair, Grant Chamberlain, to represent the NZ Branch at the 2024 ACA Conference in Cairns. Also, as agreed we paid \$2,659.90 towards Raed El Sarraf's conference costs as incoming ACA Council President.

Monies have also been transferred into our current account from the AC Kennett (ACK) Fund to balance

the amounts (paid via the Treasurer's A\$ account) for the 2019, 2022 and 2023 ACK Awards. The ACK current account includes a \$2,000 donation from Phoenix Solutions to be used to pay the NZ winner of their ACA Foundation Scholarship, with the balance in the current account reserved to pay the winner of the 2025 ACK Award.

Our GST Return to 31 Dec 2024 was submitted online and the GST owing has been paid to IRD from our ANZ current account. Our audited Financial Report for the NZ Charities Commission is due in June and when lodged will become a public document available at <https://www.register.charities.govt.nz/Charity/CC42875>.

*If any NZ member would like to receive a full copy of the ACANZ Branch 2024 Annual Accounts please email Willie Mandeno, ACANZ Branch Treasurer: [wmandeno@gmail.com](mailto:wmandeno@gmail.com)*

## Choose CPNZ for your cathodic protection needs

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Cathodic Protection (NZ) Limited was founded in 1989 by Bob James, who introduced cathodic protection (CP) to New Zealand. Known as “Mr CP of NZ,” Bob played a pivotal role in designing, installing, and maintaining CP systems across numerous wharves and pipelines throughout New Zealand and the Pacific Islands.

In 2021, Grant Chamberlain took over CPNZ. As an ACA Corrosion Technologist, he is certified to approve CP design, commissioning, and survey work in accordance with the AS2832 suite of standards.

These standards cover:

- Pipelines (pipes and cables)
- Compact buried structures (e.g., LPG tanks)
- Fixed immersed structures (wharf and bridge piles)
- Internal surfaces (e.g., water tank internals)
- Steel in concrete structures (e.g., concrete bridges)

With over 32 years’ experience in corrosion prevention—first as a coating inspector and later specialising in CP—Grant has worked extensively in the industry. His CP expertise began at TBS Coatings, Maui B, Devonport Dockyard, and Natural Gas Corporation (now Firstgas),

where he established the coatings maintenance plan and assisted with the CP for 3,000km of pipelines across the North Island, including the ONGAS LPG system. He then managed CP systems for Vector Gas distribution before joining CCE as a Corrosion Technologist, where he worked on a diverse range of CP projects, including concrete CP in Bluff, water tanks, wharf piles, clarifiers, and pipelines in Northland

Grant brings a holistic approach to corrosion prevention, recognising the risks of assuming corrosion is under control, especially in under insulation.

CPNZ also specialises in DCVG surveys. DCVG surveys identify bare steel in contact with the soil. Excavating bare steel and finding that it’s not corroding is the ultimate proof of the CP’s effectiveness. The DCVG also identifies coating defects caused by third-party damage.

If you’d like to discuss your asset integrity, Grant is always happy to chat and offer expert advice.



## ACA NZ BRANCH COMMITTEE & OFFICERS 2025-26

**President:** Grant Chamberlain

**Communications:** Trish Shaw

**Secretary:** Mark Sigley

**Membership:** Trish Shaw

**Treasurer:** Willie Mandeno

**Technical:** Raed El Sarraf

**Education:** Matt Vercoe

**Electrolysis:** Grant Chamberlain

**Members:** Rene Hill (VP), Philip La Trobe, Nicholas Zglobis, Ry Collier, Marius Gray, Steve Watts tbc

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