



Backflow Group
WATER NEW ZEALAND



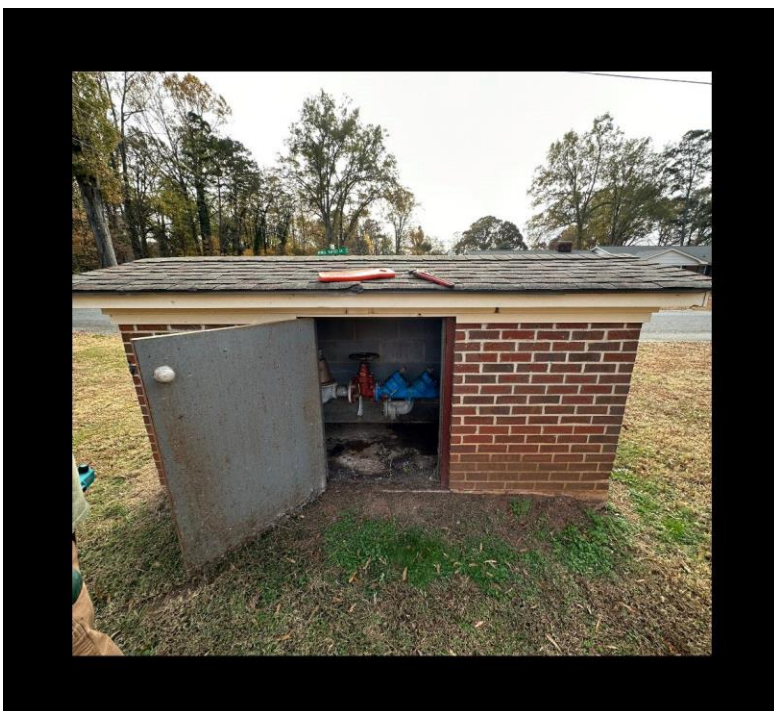
Backflow Group Newsletter

The Water New Zealand Backflow Group monthly e-Newsletter

Kia ora!

Christmas is fast approaching and with the silly season on our doorstep the backflow group have been busy with our work plan following on from our AGM in August. Since our last newsletter we have had two meetings, one in October and one in November which you can read about in the meeting report section of this newsletter. This will be our last newsletter for 2023 so we wish you all a Merry Christmas and Happy New Year and are looking forward to regrouping in the 2024 to continue our work in the backflow protection space.

In the Dog Box



Later in the newsletter we have a 'working space' article which speaks to some of the issues backflow testers and repairers face when it comes to adequate enclosures. Surely the creator of this interesting example would be in the dog box.

What's New

IN THE DOG BOX

VIEW FROM THE CHAIR

UPCOMING EVENTS

MEETING REPORTS

BPAA CONVENTION

WORKING SPACE

NEDS REVIEW

COMMITTEE SPOTLIGHT:
WAYNE SHIELDS

View from the Chair

As Summer starts to make its mark, this brings the annual seasonal issue of water supply demand. Many areas have issues maintaining their supply, and drought conditions are a risk for backflow conditions as pressure drops may be a consequence.

The importance of a comprehensive Backflow Prevention Program can never be highlighted enough, with the surveying component the best defence against unidentified risks to the drinking water network.

Our committee has completed and submitted comments on the National Engineering Design Standards (NEDS) and is in the process of commencing the comprehensive review on the Boundary Backflow Code of Practice. This will be a far-ranging review including the document scope, key stakeholders and ensuring it is fit for purpose to use for the water reform implementation phase.

We have one meeting left this year, on December 7th. As reminder to our wider group, and the water and plumbing industries we represent, if you have any queries/questions you would like put forward to the group committee for discussion or resolution, please contact our liaison Noel at noel.roberts@waternz.co.nz and he will add it to our meeting agenda.

Richard Aitken
Chair
Backflow Group



Upcoming Events - 2024

- April 10 - 12 [NZ Plumbing Conference 2024](#) Pōneke Wellington
Master Plumbers
- April 22 – 24 [ABPA 39th Annual Conference](#) Charlotte, North Carolina, USA
American Backflow Prevention Association
- May 15 - 17 [WIOG Conference](#) New Plymouth
Water Industry Operations Group
- May 20 - 22 [BOINZ Annual Conference & Expo](#) Wellington
Building Officials Institute of New Zealand
- Jul 31 - Aug 2 [ABC Conference 2024](#) Nelson
Association of Building Compliance
- Aug (likely) [BPAA](#) Conference possibly Perth, Western Australia
Backflow Prevention Association of Australia
- Sept (usually) [PWWA](#) Conference and Expo
Pacific Water & Waste Association
- Oct (possibly) [FPANZ](#) Conference & Tradeshow
Fire Protection Association of New Zealand

Group Meeting Reports

Backflow Committee meeting 26 October 2023

09:30 – 12:30 Online only

- Attendance: **In person:** Richard Aitken, Brian Brown, Wayne Shields, Paul van den Burg, Erica Hobbs, Rob Hill (until 14:28), Hugh Chapman (until 12:03). **Online:** Kevin Healey, Steve Harwood (until 12:10). **Apologies:** Glenn Burr, Master Plumbers representative Jon Lewis, Water NZ backflow liaison and Technical Manager Noel Roberts.
- BPAA convention was attended by our Chair. *[See report later in this issue.]*
- Support for re-joining AS 2845.2 submitted to Standards NZ, endorsed by MBIE and Master Plumbers.
- Boundary Backflow Prevention Code of Practice review planning discussions re-commenced now the Draft NEDS review has been completed.
- Discussions had around IQPs, legionella, digital vs analogue test kits, training facilities, protecting groundwater and wellheads, and industry overlaps.

Backflow Committee meeting 09 November 2023

09:30 – 14:30 at the Hydroflow offices, Penrose, Auckland and Online

- Attendance: **In person:** Richard Aitken, Brian Brown, Wayne Shields, Hugh Chapman, Andrew Booth, Kevin Healey, Water NZ Technical Manager Noel Roberts. **Online:** Steve Harwood, Erica Hobbs. **Apologies:** Paul van den Burg, Master Plumbers representative Jon Lewis, Glenn Burr, Rob Hill.
- Conference Planning Update – our team is investigating the possibility of a joint conference with BPAA and considering options for our next biannual conference, with the possibility of holding smaller events in between.
- Working Group Updates:
 - WS-014 (AS/NZS 3500) – meeting at MBIE with NZ group members, to develop NZ response to public consultation.
 - WS-023 (AS/NZS 2845) – meeting pending.
 - NZBC Compliance Handbook Review – ongoing.
 - ASSE 1004 – meeting pending.
- Work Plan – potential conferences, events, and programmes to attend, present or exhibit at were identified, including sharing of this workload.
- Water NZ SIG Terms of Reference – new terms discussed and accepted.
- Boundary Backflow Code of Practice Review – review sectioned and assigned, key issues identified, and key stakeholders identified with key stakeholders to be invited to contribute and form the steering committee.

Our upcoming meetings are:

- Thursday 07 Dec 2023 - 11:30 to 16:00 – Hydroflow Offices / Teams
- Thursday 08 Feb 2024 - 09:30 to 16:00 – venue TBC

Group members are welcome to attend the committee meetings. If you wish to attend any of the meetings, please contact the Chair at richard@telfordconsulting.co.nz.

BPAA Backflow Convention report

18th – 20th October 2023, Tweed Heads, New South Wales

Attended by Richard Aitken, Chair Water NZ Backflow Group Committee

Pre-conference Workshop

I arrived on the 17th, so I could attend the pre-conference workshop in the 18th. This workshop was on the updated backflow testing standard AS/NZS2845.3, industry updates and included a supplier presentation. Peter McLennan from the ABCB presented on updates to the APC and the revised hazard rating chart, and Brian Gould presented on his new app and interface for his QR ID tags with his digital test kits and online platform.

A practical demonstration by the BPAA followed, working through the new procedures on valves. This practical session was held in the backflow training facility, which allowed for everyone to get amongst the testing. This training facility is by far the best plumbing, drainlaying and gasfitting training complex I have ever set foot in... from a 4-story tower to allow multiple story stacks to be constructed, to four floors of students undertaking bathroom pipeouts with hot and cold pipework. The dedicated backflow training room was second to none, open to both the plumbing and network industries - this facility is what New Zealand must strive for. If ever a centre of excellence is created, this is the blueprint for 'across the industries' training.

Convention Welcome Function

The Convention welcome function was held on the event site and was well attended, a great way to mingle with delegates, exhibitors, and presenters alike. The scene was set for a great event to follow, with new and old connections alike mingling and celebrating life.

Day 1

A full program was on offer, with an impressive array of technical presentations from across the industry putting forward national and international perspectives. It was great to see the growth of the BPAA with chapters in 6 of the 7 states of Australia. New South Wales, Victoria and Western Australia all presented.

A great presentation from Matt Vassallo (AVG Watts) on the history of Watts, from a beginning in 1874 with James Watts on the belief that water boilers in textile mills shouldn't explode. What started with a pressure relief valve in a tiny New England machine shop has paved the way for today's high-quality, worldwide water solution technologies.



The BPAA always knows how to put on a celebration of the industry, and a great day of presentations, conversations and networking was capped off with a chance to dress up and enjoy a night of food and entertainment and a slightly biased quiz!

Day 2

Friday saw the introduction of the Legionella Stream for the first time at a BPAA Convention - this was well received and had standing room only for this topic of huge relevance to all concerned with drinking water safety. The Backflow Stream still had a good number of delegates in attendance, which saw my presentation delivered to an audience of around 70 delegates. I found an opportunity to introduce a new degree of risk ... the very low threat ... a picture of the Australian rugby team, and though deep in league country, it got a good laugh.

My presentation on the water reforms in New Zealand, cross connection programs and cross connection surveying was well received. We are leading the way in many areas, and behind in others, it's fair to say. What is very clear is that there are many opportunities to share training content and present specific courses in Australia, and few good courses to bring back across the ditch. Dialogue has been good on this, and more will be revealed in the future.

The last NZ presentation was from Deborah Prus-Loughlin, who shared her brilliant presentation on rural water supplies and the requirements for verified UV systems. This was well received and led to many conversations afterwards, as it did at our conference in August. The conference was wrapped up with a Q&A session with the executive and closed by the BPAA National President.

An excellent event once again, many thanks to BPAA for their hospitality, and to Water New Zealand for their continued support for the Backflow Group as it advocates the benefits of drinking water protection both nationally and globally.

National Engineering Design Standards

As mentioned earlier in this newsletter by our committee chair, one of our immediate focusses as a group is to review and make submissions to the National Engineering Design Standards (Water Supply) specifically where this relates to backflow prevention devices.

The NEDS is an important document with several sections relating to backflow protection devices and our group with its expertise in this area is eager to assist in getting it right to ensure that the end result is a quality document outlining industry best practices for the entities to follow.

Members of our group got together in October to review this document and make our submission, which received excellent feedback for being well presented (it included suggestions and questions, with supporting information or reasoning) and have been advised by the creators that they will be coming back to us for our technical expertise.

More information can be found at <https://www.waterservicesreform.govt.nz/the-case-for-change/national-engineering-design-standards/>.

Working Space

A tester/repairers perspective on backflow prevention device installations.
Hugh Chapman

Backflow prevention devices and their installation are generally easy to test, well installed and easy to repair but some are not.

There are many stories of reduce pressure zone (RPZ) devices installed in pits, often with poor, or no, drainage if the vent should discharge. Testable double check valves (DC or DCV) are increasingly being installed in inaccessible locations, making testing and maintenance a challenging, and sometimes impossible, task. I have tested many devices where I'm having to stand on the top couple of rungs on a ladder - not too good for Health and Safety! It makes you wonder who thinks that it's a good idea to put these devices in such awkward positions.

Placing them within reach, with sufficient space around them, simplifies maintenance and testing, allowing swift responses to potential issues, that happen from time to time, thus preventing costly and disruptive system failures.

Yes, it's up to us plumbers and inspectors to make sure the devices we put in are easy to test, and if a repair is needed later, that the repair can be done in an efficient manner.

As we wander around our towns and cities, we often see backflow prevention devices in cages, compounds or boxes. These too need to be practical and easy to test and or carry out repairs. For those designing these cages, thought should be put into 'what if this BFP device needs to be repaired', because it isn't very practical having to do things like cut wire fencing or make holes in walls to get access to dismantle the backflow valve. There is no doubt that cost is a big driver on these cages, compounds and boxes so the design needs to incorporate sufficient access for testing and repair because gaining access (and reinstating the hole) can be a time consuming and costly activity.

Backflow prevention devices should also be installed so the testing is possible and uninterrupted - if test nipples are needed these should be able to be fitted without an issue, as should the test rig hoses. Issues arise when devices are installed in walls, high up under bench tops or inside very snugly fitted cabinets. It's also very helpful if the test cocks are facing forward not toward the wall.

It is also important that resilient seated isolation valves be installed upstream and downstream of all backflow prevention devices, along with an appropriate line strainer. It is impossible to properly test a backflow prevention device if you cannot isolate it.

Good design and practical installation are critical to ensuring a well-maintained compliant backflow prevention device.



Installed high ... well above the top of the 3m ladder.



Above: Backflow in a box with screwed lid - easy to remove for testing and repair.

Below: 150mm backflow in a cage - just ok to test, but very difficult to do repairs on.



Committee Spotlight – Wayne Shields

Born and bred in Auckland, Wayne Shields decided at the age of 15 that school wasn't for him. So, he sought advice from the school counsellor and ended up interviewing with a local plumbing company, George Botica and Co Ltd.

After completing a six-year plumbing, gas fitting, and drain laying apprenticeship, he spotted a job ad in the Herald for a sales representative position at Caroma Bathroom ware. To his surprise, he got the job and started as the Waikato Bay of Plenty Sales Representative.

Just six months into the role, Caroma offered him another job to set up a quality control system and a just-in-time manufacturing program. At the time, Caromas manufacturing facility in Mt Roskill was the largest injection moulding facility in Auckland. Wayne had no clue what he was doing initially but the CEO, Don Hilliker, took him under his wing, providing the help and advice needed to succeed.

Wayne later managed Caroma's quality control program, achieved ISO accreditation, worked on R&D projects like dual flush toilet cisterns, and led the technical team.

Seeking a new challenge, Wayne moved to RMC, specializing in hot water cylinder valving and backflow prevention. He developed a passion for backflow prevention and its importance for protecting the potable water network.

Working closely with Kevin Healy, Wayne helped drive the backflow industry forward, despite scepticism from many. In 1998, Wayne and others formed the NZ Backflow Association, which quickly grew in membership and became a Special Interest Group of Water NZ.

They conducted numerous one-day backflow training sessions throughout New Zealand and later developed a 40-hour IQP Course to train professionals. Wayne's journey in Backflow continued when he joined Hydroflow in 2003, working on the Watts Backflow agency and expanding the company's presence in the commercial plumbing and specification market.

Outside of work, Wayne is an expert fisherman and loves to be out on the boat fishing. He is also mad on stockcar motor racing, spending many Saturday nights at Waikaraka Park. He and his wife, Jenni, have two adult sons and three grandchildren, who bring great joy to their lives. They recently built a house in Papamoa, a place with many fond memories from Wayne's RMC days when the head office was in Mt Maunganui.

Wayne is a staunch advocate for industry best practices through training, innovative products, improved standards, legislation, and a hands-on approach.

