

Short & Slappy

Kia Ora,

Welcome to the November 2023 edition of our newsletter. We are delighted to have you on board as part of our community.

In this issue we introduce one of our new Board members, have a short rundown on The Industrial Waters conference along with good news stories from two industries and Geoff's opinion piece - a long but very worthwhile read.

Our BIG news this month is the updated and relaunched NZTIWF website. It can be found at <https://nztiwf.org.nz>. Please let us know your thoughts - the Board is very pleased with it. While you're checking out the new website, click the LinkedIn icon and join our LinkedIn community. We will be using both platforms to increase our profile and highlight what is happening in the Trade and Industrial Waters space over the next few months. Please invite your colleagues to join our community.

Your feedback is invaluable, please send any news items, or items about what's happening in your area - good or bad. As an organisation we are here to reflect your interests and expectations.

Ngā mihi

Jennifer

Jennifer Leadley - NZTIWF Executive Officer



Liquid & Hazardous Wastes Code Compliancy

CONGRATULATIONS TO THE FOLLOWING
COMPANIES THAT HAVE RECENTLY RENEWED
THEIR CODE COMPLIANCY STATUS.

- Allens United Waikato 1986 Ltd.
- Ecoworld NZ 2018 Limited.
- Prestige Loos Limited (Waikato)

Industrial Waters Conference 2023

“INFORMATIVE, WELCOMING AND INCLUSIVE, ENGAGING AND MOTIVATING, COLLABORATIVE AND GREAT SPEAKERS.”

Are all words used by delegates to describe the by 2023 Industrial Waters conference.

Overall feedback from the delegates after the 2023 Industrial Waters conference, held at Claudelands, Hamilton was positive and supportive. Although the attendance numbers were slightly lower than the previous year, the Board attributes this decline to business uncertainty preceding the election and fiscal belt tightening across all sectors of the industry. Those that did attend were presented with an impressive lineup of presentations and keynote speakers, including notable figures such as Simon Upton, Ralph Sims, and Vaughan Payne.

The takeaway comment from the conference for the delegates was "if you can't measure it, you can't assess and resolve it" This is something that needs to be considered at all levels of the industrial waters environment in New Zealand.

The topic of Water Reforms continued to be a focus of discussions as there were and still are many unknowns about the ultimate structure of the Reforms. Tim Hammond, representing the DIA 3 Waters National Transition Unit, provided insights and answers where he could, and was again generous with time and interaction with delegates.

A big thank you to our sponsors, exhibitors, and delegates - without you, there wouldn't be a conference.

Details of the 2024 Industrial Waters conference are being finalised by the Board and will be released soon.

NZTIWF Board

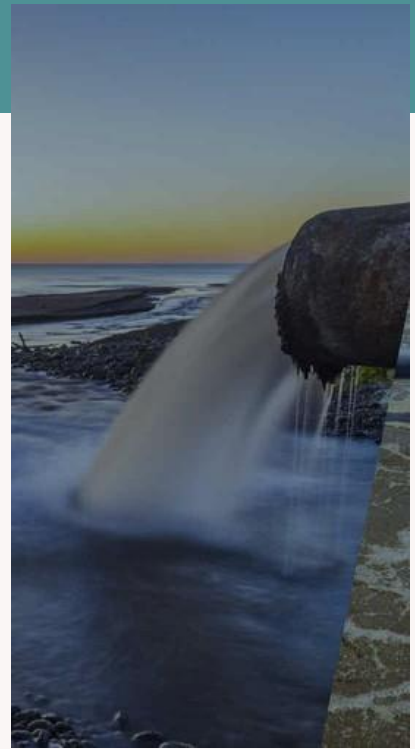
The NZTIWF Board for 2023-2024 were elected at the AGM in Hamilton. This year we welcome five new members onto the board, Komal Devi, Victoria Grant, David Hall, Sarah Wilson, and Shaw Wilson. Thank you to those that have been re-elected for supporting the Forum. We all appreciate your input.

We sadly farewelled Caitlin Egan, Rosstan Mazey and Anna Coman from the Board. We wish them well for their future endeavours and sincerely thank them for their input and dedication to the Forum.

2023/24 Board

President - Geoff Young
Senior Vice-President - Fiona Sutton
Junior Vice-President - Gary Soper
Executive Officer - Jennifer Leadley
Treasurer - Mike Sahayam
TWO Rep. - Komal Devi
LWO Rep. - Bruce Holland
Industry Rep. - David Hall
Science Advisor - Tara Okan
Board Members - Todd Landers, Jan Godfrey,
Victoria Grant, Sarah Wilson, and Shaw Wilson

Board members profiles can be found on the updated NZTIWF website <https://nztiwf.org.nz>



Faces Behind the Forum

**BOARD MEMBER AND REP ON DIA'
TRADEWASTE GROUP - SHAW WILSON
(WHANGAREI DISTRICT COUNCIL)**

Shaw a Scot, also known as a Malinky Longlegs (Tall person) is the 'Pollution Prevention Officer' for Whangarei District Council during the week as well as creating havoc in the countryside on his dirt bike, motor bike and 4-wheel driving in the weekends.

Originally from Skye in Scotland and after backpacking through Australia and New Zealand settled down in Whangarei with his family some 20 years ago. He is now a "Kilted Kiwi".

At WDC Shaw helps makes sure the environment, waterways and greenery are looked after well. He is currently working on new legislations regarding wastewater.

Outside work Shaw is a passionate outdoors and sports person, playing with the round ball of various sizes which includes football, hockey, and golf. And as we approach the end of the year Shaw says: "Lang may yer lum reek" - toast to one's health - a long and healthy one!

Cleaner Production at Counties Ready Mix Concrete

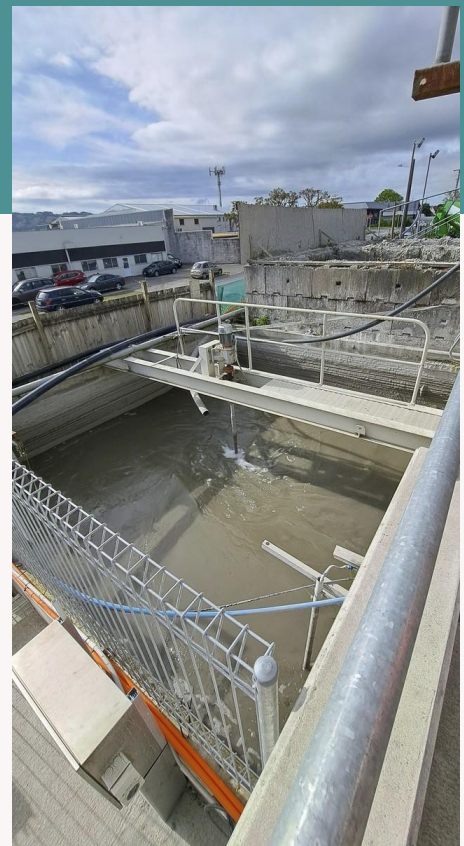
At Counties Ready Mix Concrete in Drury, South Auckland, outstanding results have sprung from a huge investment of time and patience into careful, detailed planning around their workplace environment. Each aspect of the company's operation was sectionalised, put under management's microscope, and thoroughly analysed. Specialists were brought in to scrutinise existing practices, suggest improvements, and contribute to the development of a master plan. This strategic initiative, in place for almost three years, has successfully revitalised and transformed the company into a showcase for sustainable concrete production.

It began with a management decision to discover what best drove efficiency. The outcome was not just one thing, but a combination of:

- Staff Wellbeing
- Health & Safety
- Environmental factors
- Self-sufficiency

The processes that emerged have caused this business to stand out as a national leader in its performance and achieve excellence in every aspect. However, these achievements were secondary. The primary focus was the determination by management to lead change and create the best working environment possible for employees.

This was achieved by investing heavily in them, their wellbeing, and their ideas, recognising them as the company's most valuable assets. This was achieved by investing heavily in them, their wellbeing, and their ideas, recognising them as the company's most valuable assets.



The results to date have included a payback on their investment through enhanced bottom-line performance, less stress for both management and staff, a safer workplace, the environment, and company assets. Changes in their practices include the following:

- Staff recruitment and training programs that reflect the importance of their work.
- The entire site is built on foundations and pavements of concrete and regularly cleaned by a sweeper truck service.
- Operations are divided into,
 - 1. Contaminated materials work area
 - 2. Clean materials work area
- Segregation of the perimeter and workspaces by utilising "BigBlocks", 1m3 interlocking concrete blocks created from recycled concrete and designed by the company.
- Ground surfaces in both work areas were contoured, mounded, and drained to ensure complete separation of both process and rainwater.

- Storm Water falling in the contaminated area is treated as contaminated.
- All water from the contaminated work area is captured, sent to the Recycling Pond, processed, and put straight back into the concrete batching plant system. Excess water is stored till needed.
- Rainwater harvested from buildings and the clean work area is processed, stored, and used to supplement process water. Excess water is filtered and discharged to the Council's stormwater system. Minimal wastewater is discharged this way.
- Company Bore water, which is barely used, ensures the achievement of water self-sufficiency.
- Catch pits, storage tanks, and water filters all receive programmed routine maintenance and cleaning.



- Innovative engineering allows optimisation of every cm² of the work site, including the development of 2 hollow loading ramps which incorporate 270,000 litre water storage tanks.
- Truck washout water, spillage, and yard wash water is all captured in a large recycle pond equipped with stirrers. Water is continuously recycled, and the sediment is removed periodically by a Code Compliant Liquid Waste Contractor and disposed of at a registered fill site. The waste is tracked using WasteTRACK (a national register and database for the tracking of wastes from generation, through transport to treatment or disposal)
- The Water Treatment Plant is automated to treat all process water, bore water and/ or storm water. The plant is critical to the entire operation.
- Water systems are carefully monitored and controlled by a fully automated management system, especially storm water when peak rain events occur, so that flows are controlled, and contaminants identified by type and strength. The system is designed to handle even major rain events.



Director for Houghton Plumbing (on right), Brian (Yarrows Process Manager), Russell (Yarrows General Manager), Komal (Trade Waste Officer).

Working Together for Trade Waste Compliance

Yarrows the Bakers, located In Manaia, has committed to complying with the South Taranaki Trade Waste Standards and is working closely with Houghton Plumbing, consultants, and Trade Waste Officer, Komal, to get fully compliant.

Yarrows have improved their processes and practices to reduce water consumption and solids discharge to improve on their trade waste discharge quality.

Yarrows the Bakers founded by Alfred Yarrow in 1923 is one of the largest remaining independently owned bakeries in New Zealand. Today, the family owned and operated business bakery in Manaia bakery operates 24 hours a day, seven days a week, producing a wide range of world-class frozen bakery products.



Comments from Geoff.

Geoff is actively engaging with central and local government and a wide range of interest groups ensuring that the voice of NZTIWF is heard. Keep an eye out for Geoff's personal commentary and views via his LinkedIn account.

<https://www.linkedin.com/in/geoff-young-36486839/>

Every newsletter we'll include a column from Geoff touching on some of his latest views as it affects NZTIWF members and the broader evolving water system. These views expressed by Geoff are his personal opinion rather than policy of the NZTIWF.

This month, a bit about Compliance.

This comment mostly relates to compliance with consents agreements and permits related to water and its use, but this could apply to any form of compliance where control of all the variables is just not possible.

For those of us on the policy side of things, compliance is black or white. You either comply or you don't. For those of us on the operational side of things, we see compliance as an inconsistent big fussy grey band.

But why the difference in perspective?

There are multiple reasons from the degree to which we control the variables related to that compliance from the human factor (the more humans the greater the factor!). The ridiculous requirement factor. The out of my control factor! And through to the ignorance factor.

Let's start with the ignorance factor:

Probably the best example I have seen of this was a Consent that had limitations on E. coli discharge where the technician responsible for collecting the sample used a 24-hour composite sample that had been sitting in the sun all day to source the micro analysis sample. This sample was probably sitting at 20 - 30°C, had lots of food and lots of time and an explosion of E.coli. Personally, I wouldn't have used this sample for anything let alone micro testing. This ended up being part of a prosecution by the local regional council. The issue was fixed by collecting a grab sample from the discharge, plonking it on ice straight away and shipping straight to the lab as per the APHA manual. I would like to suggest that this misunderstanding around micro-testing is unusual, but sadly it isn't. What was sad here was that the issue reached the courts before it was correctly identified.

The ridiculous requirement factor:

Common consent requirements around flow measurement are verification and accuracy requirements. Where the resource user has an open channel flow measurement device (flume or weir) often there will be a requirement for verification of accuracy to +/- 1%. Now as someone who has worked with open channel devices and who is not an instrument salesman, the open channel device made up of a control structure and some form of level measurement which is capable of better than +/- 5% consistently has not been invented. The ISO standards for all these devices state this in black and white yet the regulators issuing these requirements keep including this. Why? Best go back and look at the ignorance factor above! We are asked constantly to provide verification for these devices and must decline because what they are asking for is simply not possible. These are still the correct devices for the application, it is the requirements regarding accuracy that are at fault and Consultants and Consents Officers who keep asking for them.

The human factor: (this is probably the most problematic)

I have been to many a site where the management have put in all sorts of innovations to take control of their compliance etc. Then you go inside the process outside office hours, and you see the grates that were put in to contain gross solids etc. being "removed for cleanup, it is how we have always done it"! "These stupid screens just block up with stuff all the time and slow down the clean-up".

And believe me, all the management speak in the world won't convince that Supervisor that there is anything wrong with what they are doing, and it needs to change! "I will just dump this half full drum of unknown contents into this sump here, this won't cause any harm! We do this outside office hours because the compliance people have all gone home and what they don't know won't hurt them! "

No comment required here!

The out of my control factor:

This one was a curly one I came across working on a food processing site. We had most of the mainstream site pretty locked down, but there was a product development department that was "off limits".

Things would be steaming along nicely compliance-wise and then out of the blue, there would be a large event that caused a breach. Reviewing all the main manufacturing data revealed nothing and when asked, the R&D group said "It wasn't us now bugger off!" Not easily deterred we installed some equipment on their drain (outside hours to not be detected) and low and behold what did we find, when a product trial went bad, they just dropped everything on the floor, hosed it down the drain and started again.

At the completion of a trial, they dumped everything on the ground, hosed it down the drain and started again. They did this with what they thought was absolute impunity because as the R&D department, the rules didn't apply to them. The thing is, the Manager on site responsible for compliance believed that this was outside their control. Even the Site Manager didn't believe that they had sufficient authority to reign in the all-important R&D group. Of course, when the potential ramifications of out-of-control compliance issues were pointed out at General Manager level, change came swiftly! And on a less entertaining level, the vagaries of sampling, sample handling and sample analysis.

We try and collect representative samples; subsample for homogeneity, and pretreat samples for uniformity but the reality is, each step introduces a slight compromise to the sample.

To say that the sample had a xxx value of 122 through analysis is acceptable, claiming 100% confidence in that value representing the entire volume would be misleading.

Remember, our sample is just that, a sample and despite our best attempts to make it representative of the whole, in reality, there is significant justification for doubt. That is unless you are looking at a significant population of data points that indicate a consistency of range. However, I am getting technical and that wasn't my intent!

How do we fix this:

Somehow, we need to address the disconnect between policy and operational perspectives. We need to educate both the consultants and the regulators about realistic accuracy and relevant parameters. Despite the plethora of business improvement books and management expertise my observation has been in 40 years in the workforce that fixing the human factor that drives the ignorance and human factors is neither simple nor straight forward and typically cannot be resolved without outside help.

In many ways, like we do with so many other things in business, we need to be bringing in outside expertise (don't pick the consultants that believe in +/- 1% accuracy from open channel flow). Someone who can review the current scenario with a fresh set of experienced eyes, someone who can identify opportunities to minimise the sample handling errors and maximise the accuracy of the results.

Sadly, there is no shortage of people in the mainstream who claim to have these skills, but very few with the hands-on experience or understanding of the frailties of monitoring.

The NZTIWF Board is endeavoring to send out newsletters on a more regular basis. If you have news from your area, articles or items of interest, or would like to contact a Board member please email: nztiwf.org@gmail.com.