

LEE BINT

A focus on water efficiency

At a time when the question of who uses how much water is gaining a higher public profile, Lee Bint talks to **Vicki Jayne** about her focus on research that is designed to improve water efficiency.

One of the “nerdy” things Lee Bint did as a youngster was create 3D cardboard building models using pre-drawn plans from a local building company – so it’s maybe not surprising her career path led her into building science which, in turn, led to a focus on water efficiency.

It was, she notes, a knowledge gap waiting to be filled. That her doctoral studies focused on water efficiency was, in part, because very little research had been done in the area. And that, she says, is symptomatic of New Zealanders’ laissez-faire attitude toward water use.

“There is such a lack of awareness. Everybody seems to think we have lots of water – but then there are droughts and water contamination... In my research for BRANZ, I talk to a lot of people and to councils who are exploring water metering options.

“Some people think water should be free for all and don’t want to have a conversation about metering. Then there are those like me who say, so how much are you using and how much impact are you having on the environment? How do you know if you are not actually measuring it?

“We understand the impact of switching on a light – but what about the impact of leaving the tap running while you clean your teeth? There is a huge amount of awareness to be raised.”

As part of her doctoral studies, she pioneered a Water Efficiency Rating Tool (WERT) and in her role as Sustainable Building Scientist at BRANZ, Lee has spent the last couple of years undertaking a feasibility study on the use of rainwater and greywater in urban environments.

Her research focus has now turned toward residential water use.

“As part of the project, we’re working

with councils and water service providers to install water meters on sample buildings to understand how water is being used. The next step would be to look at efficiency options and then alternative water sources (such as rainwater catchment). So this is the first step in a wider programme of potential water research.”

Lee is also on the newly established Water Efficiency and Conservation Network (We Can). Set up under the umbrella of Water New Zealand, We Can provides a forum for water demand practitioners to share existing knowledge, look where it needs to be extended, facilitate capabilities and help establish practice standards for water efficiency and conservation.

She was a key presenter at the group’s first (fully subscribed) get together in Auckland last month and thinks the level of interest at its inaugural event marks a positive move toward lifting awareness.

“It’s really a first step towards a more coordinated approach and involves those interested in water efficiency and conservation coming together for the first time. So, yes, awareness is definitely picking up.”

Water efficiency is not her sole strand of research – Lee is also deeply involved in mapping out potential career paths within the construction and infrastructure industry so that both school leavers and those already in the industry are aware of their options.

In many ways, it’s a natural development from her 2013 nomination into the Sustainable Building Council’s future leadership programme (FLP).

“As a cohort, we were tasked with understanding how business can support youth into employment. Because we have one of highest

youth unemployment rates in the OECD, it was a matter of taking it on as a business issue.

“In terms of the construction and infrastructure industry, we need to look at where we are at and how can we best attract and retain skills. We have created a map of all the roles that exist and how people get between them – to give clear lines of sight from high school right through to CEO.”

That career mapping project is still being developed.

“We’re now in discussion with a second party about digitising the map and turning it into an online interactive tool for a range of people – from school leavers to career advisers or those already in the industry – to use.”

There’s a personal element in the project. Her own path to a PhD was hardly typical. Her innovative bent was primarily fostered by out-of-school



activities and an academic career was not in her sights at all during secondary school years.

A rural background contributed to her practical bent – and then there were the building models.

“Mum and I used to go to GJ Gardner for their pre-drawn plans. We would cut them up, put them how we wanted and build cardboard models where you could take the roof off.”

An enthusiastic sports person, she applied more energy to playing representative basketball and netball than to academic pursuits and left school at the end of the fifth form, picking up casual work and doing a bit of travelling.

“I worked in a fish factory, did fruit picking – seasonal stuff.”

Then, at 19, she decided this was not what she wanted to do for the rest of her life. So she enrolled in a diploma of construction technology at WelTec with an architecture degree in mind. Instead, she was convinced by one of her lecturers to go into the Building Science Programme.

That led to a Bachelors degree, then honours and then the doctorate. In retrospect, Lee appreciates the value of the years away from school.

“It really solidified what I was interested in – and what I didn’t want to do. I think a lot of students fluff around

in their first university year. Some fail before they find a direction.”

The fact that her partner’s family came from an academic background helped her realise what options were available – which is why she wants to ensure others just starting their career track can more clearly see what is on offer.

Her studies helped hone her own solutions-oriented approach. That led to the creation of the WERT which earned a Wellington Regional Council Award through the Bright Ideas Challenge. Following completion of Grow Wellington’s “Activate” business course, she launched the Water & Resource Innovation (WARI) as a start-up company to build on her water efficiency work, and to develop the WERT further.

At the moment, it’s taking a back seat to her BRANZ role, says Lee.

“I do have a long-term vision for WARI. Eventually, there will be some software development around it.”

Meanwhile, Lee’s profile within the water industry is on the rise and her We Can involvement is only part of that. Last year, she picked up the Mott MacDonald Poster of the Year award for her *Commercial Rainwater & Greywater Feasibility: preliminary findings* at Water New Zealand’s annual conference. It’s actually the third time she’s won that particular award.

“I wasn’t expecting to win – but it’s great to know that my communications strategy is getting the message across.”

Communication is a large part of her current role – including regular articles in the BRANZ magazine.

“I enjoy the variety of what I’m doing – and working in an organisation that really promotes stakeholder engagement. I love the research aspect, but I really love getting out and talking to people and taking a project from the strategy aspect to actually creating an impact in the industry. It’s great to follow through and ensure it is a worthwhile piece of work.”

In terms of future development, she is particularly interested in sustainable enterprise – and how sustainability can best be incorporated in a ‘business-as-usual’ framework (as well as driving New Zealand to become a water conscious country!).

“As a follow through from the Future Leaders Programme, I now get to sit on the advisory board for the Sustainable Business Council along with the CEOs of some big companies, representing the voice of the Future Leaders alumni. That’s a real eye opener and a huge opportunity for personal development.”

There is little doubt that her focus on the most efficient use of water will form a big part of a more sustainable building future. **WNZ**