A sustainable career

Ahead of his time for many years, Jim Bradley's views on sustainable development, optimising technology and the environment to achieve the best outcome for nature and the community are finally becoming more mainstream. By **Mary Searle Bell.**

> A s a boy, Jim Bradley was always interested in building things, "I came from a practical family," he says. In his teens Jim worked as a musterer in the hills of Canterbury, and there he learned about and gained a love of the wider environment.

> These two factors together began to steer a course, especially once he started his engineering degree at Canterbury University – influencing the papers he chose to study.

After graduating he started work with consultants ER Garden & Partners in Dunedin and pretty quickly learned he didn't want to be a structural engineer.

"I'm a people person.

"I was interested in the environment, in people and communities."

As a result he soon became involved in water, earthworks and roading projects rather than highly technical engineering design.

His interest in the environment lead him to the Netherlands, where he spent a year studying what we now know as environmental engineering.

"It was an international course in sanitary engineering – it was a very practical course with lots of field trips to look at water and sewage plants and their interaction with the environment. We looked at the science, the planning and the economics.

"It was a damn good basis for a lot of work I've done since."

When he returned home he began writing papers about a new term called 'environmental engineering'.

The world started to catch up, and in 1991, the RMA first included a definition of environment that was much wider than just the natural environment – it included the built environment, people, and communities.

"As a young engineer, I watched with interest the development of sustainability in engineering. I was particularly inspired by the work of [engineer and environmentalist] David Thom and others for their whole new approach to engineering."

Jim is in the rare position of having worked

for the same firm his entire career, although the firm he joined has developed over time into what is now Stantec New Zealand. Next year Jim will celebrate his 50th anniversary of joining the team and has nothing but praise for his employers and colleagues over the years.

"The highlight of my career has been being able to develop as I have, working in partnership with the firm. They have allowed me the chance to go the extra mile, to develop new ideas, and develop people, to present papers around the world, and to get involved with the industry both nationally and internationally.

"It's thanks to them I've been able to go for it – they've given me both the opportunity and the support – and it has resulted in a few accolades for me along the way. It's not what I set out to do, but it is nice to have my efforts recognised."

Amongst the various gongs Jim has collected, he's most proud of being the inaugural winner of the William Pickering Award for Engineering Leadership in 2005.

"It came out of the blue, and I was amazed to be selected from some very distinguished engineers. The award also credits the people who've worked with me along my journey."

That 50-year journey has been interesting and varied. We asked Jim to name just a few stand-out projects from among the many he has been involved in.

"In 1994 I was involved in the first environmental audit of New Zealand's Antarctic programme. It was a tall order at the time, as legislation for protecting the Antarctic environment was still being developed. We did an assessment of a number of activities there, particularly waste management and fuel handling, and their impact on the environment. On top of that, sleeping in a snow cave on the slopes of Mt Erebus gave pause for reflection.

"Another was the Life After Waste project for the Waste Management Institute in 2001. I was engaged to go around the country, interviewing various people and organisations across the board about waste and what they thought we could be doing and how we could change. It wasn't engineering, it was basically near psychology.

"It was a national campaign and the results were presented to local and central government. Unfortunately, it was before its time and didn't get over the line.

"However, it was interesting to see that people who lived and worked close to nature had a much better understanding and ethic around waste than some of their urban counterparts."

The Hastings Wastewater Treatment Plant and ocean discharge also makes Jim's top three projects. He describes it as an amazing journey with Maori that resulted in a plant designed to meet their cultural values along with the necessary technical requirements.

"This project was a paradigm shift," says Jim. "It was a partnership between the local iwi, the council, and the project team. And the outcome has stood the test of time. "The Maori world view is all about holistic approaches that are in harmony with nature and human nature. Likewise, good environmental engineering requires us to balance our human needs and actions with those of the natural and built environment."

Jim's passion for sustainable development and clean technology has inspired many fellow engineers around the world. He has written numerous papers on environmental engineering, and he's still just as passionate as when he first began.

He has also contributed significantly to the industry, giving his time, energy and expertise to advisory groups, technical committees and working groups. Of note is his involvement in the development of New Zealand's first waste strategy, ensuring it was all-encompassing and covered all waste, not just solid waste refuse.

"I also worked with Dr Morgan William, the former Parliamentary Commissioner for the Environment, on a more sustainable approach to urban development for water and waste. We looked at ecosystem services – what our environment can do to naturally treat our waste – and how we should value this instead of destroying it."

He's encouraged by the shift over the years to a more environmental approach, one with effects-driven solutions, but he believes we still can do better, particularly when it comes to integrating natural waters with built waters.

"We all have a duty to be good local stewards of the environments of our planet. I'm committed to working with others and to keep on learning." WNZ

