

## David Thom 1924 - 2017

There is little doubt that history will see David Thom CBE, Dist. FIPENZ, FICE, as one of the greatest New Zealand engineers. David aged 92, died in Auckland on 19 January 2017.

He changed the way engineers in New Zealand think and act towards the environment also having a major influence on environmental thinking for engineers worldwide.

Having served as a navigator during WW2, David returned to New Zealand in 1946 to undertake his engineering training for the Institution of Civil Engineers (UK) examinations at Seddon Memorial Technical College (now Auckland University of Technology).

Under an indentured apprenticeship with Andrew Murray in 1950, he surveyed the environmental deterioration of the Maketu estuary in the Bay of Plenty and proposed remedies, thus commencing his life-long endeavours for the environment. He joined Jones Adams, Kingston in 1952, becoming a partner in 1957 in the consultancy which became Kingston, Reynolds Thom and Allardice.

It was the proposed 30 metre raising of Lake Manapouri for hydro-electric generation in the 1960's that raised David's concern. There was huge public protest and the bad press for engineers. As Chairman of the NZ Institution of Engineers Annual Conference in 1965, he arranged the theme "Engineering and Environment". But more needed to be done, so David organised a New Zealand Institution of Engineers Conference in 1967 called "Countryside in 1980" followed by another conference in 1972 called "Population Conference".

At these conferences engineers realised that environmental issues had to be given careful consideration and there was more to works in the landscape than planting a few trees. Also responding to David's initiative, the Government in 1969 brought in the requirement that all major projects must have environmental impact reporting. "Roads in the Landscape" was a talk by David in 1970 that changed the way engineers designed roads. Roads could be made interesting with appropriate curves and vistas, rather than being the traditional straight line from A to B.

As well as being an engineer David was a superb leader and original thinker. During the 1990s decade he became very widely regarded and respected within the international engineering community as a leading advocate for engineering and sustainable development and care for the environment and was invited to be a guest speaker at many national and international engineering conferences. He was a member and chairman of many national and international organisations that were concerned about engineering and environmental issues. Some of these included; President of the NZ Institution Engineers in 1979-1980 and Chairman of the Institution's Standing Committee on Engineering and the Environment from 1986 – 1990, Chairman Environmental Council of New Zealand 1976 -1981, Chairman of the National Parks and Reserves Authority from 1981- 1990 and Chairman New Zealand Conservation Authority 1990 – 1993. Internationally he was Chairman Environmental and Engineering Committee World Federation of Engineering Organisations (WFEO) 1991-1999, Vice President of WFEO from 1995 - 1999 and Chairman of the Federation of Engineering Institutions of South East Asia and the Pacific standing committee on Engineering and the Environment 1987 - 1991.

David was recognised both nationally and internationally by many awards. Emeritus Professor David Elms in a tribute to David had the following to say.

The headquarters of the Institution of Civil Engineers is a gorgeous Georgian building, graceful on the outside and lavishly ornate within. It was deliberately built close to the Parliament Buildings in London as engineers of that era realised the importance of politics and political connections in bringing their dreams to reality. So it was fitting that it was there

that David Thom was awarded the Institution's gold medal in 1999, where he gave a memorable address on "Can technology save the world?" David had dreams, ways of looking at the world in advance of most of his peers, but he also understood that dreams alone are not enough, and that action, both national and international, required practical ideas and an involvement with politics and the wider social environment.

David was different, and in the best sort of way. He followed a path he thought was right, and it was not always a path of convention. Following your own path can be lonely, and some who do so become solitary eccentrics; but not David. Rather, he was able to reach out and share his vision with an engaging good humour, bringing people along with him into his world.

He was a great engineer. Engineers focus on achieving things, building things, making things happen, and therefore very naturally engineers look towards the future, at what can be, what should be. It's creative, but unlike, say, writers of science fiction, engineers also have to be connected with the concrete reality of what is, for that is where they start. Their creativity is constrained by the practicalities of physical feasibility, the environment within which they must work and the requirements of functionality and cost. Their thinking and action is ontological, related to being.

But this is not all. There is also a moral imperative, to do what is right. This imperative was particularly strong for David, resulting in his strong and effective involvement with the natural environment and the need for good stewardship. His engineering was environmentally sympathetic – for example, New Zealand Rail's Horopito Deviation in the National Park – his broader influence on the profession was strong both nationally and internationally. He was the moving force behind the World Federation of Engineering Organisation's adoption of its Code of Environmental Ethics. Beyond engineering he played a crucial role in developing the nation's attitude to the environment through the national bodies he headed such as the Environment Council and the National Parks and Reserves Authority. He guided the development of two new national parks and laid the foundations for a third.

David took a long view. He was strongly supportive of policy frameworks, and felt the way forward had to be through political action. In engineering education (so crucial for the future), it was not so much that he hoped for curriculum changes as that he believed that we engineers needed to change our very way of thinking and adopt a systems approach, seeing the whole as well as dealing with the detail.

Fittingly David received many awards, of which the most prestigious were perhaps the Fleming Medal of the Royal Society of New Zealand and the Gold Medal of the ICE, and of course the CBE he received in 1981.

And yet he remained himself: human, humorous, warm, a cheerful good friend, and a mentor to many. David, in his writings and his actions, did much to change the world – the worlds of engineers and educators, and the greater world beyond. Many others have tried to do so. David succeeded more than most. David was appointed Adjunct Professor at UNITEC from 2000 – 2005. For him, education really was very important, and he strongly supported and contributed to the Association of Engineering Education in Southeast Asia and the Pacific, presenting a paper at that organization's conference on engineering education in Manila in 1997 entitled "Environment, Sustainability, Engineering". In 1995 he contributed to the conference and book *The Environmentally Educated Engineer* organized by the Centre for Advanced Engineering at Canterbury University. In fact he wrote several papers on aspects of engineering education

But on top of all this David was responsible for a major Engineering Consultancy, Kingston Reynolds Thom and Allardice Ltd (KRTA) where his main role was the development of environmental practices in relation to civil engineering, coordinator of environmental impact reports, planning and policy studies, particularly in relation to harbours and coastline.

David was also a prolific writer. His books included;

“Seacoast in the Seventies” co-authored with John Morton and Ron Locker, 1987

“Heritage – The Parks of the People celebrating 100 years of National Parks in New Zealand” – a wonderfully illustrated 264 page volume published in 1987”“Onset of the Environmental Age – the Papers of David Thom”, 631 pages published in 2014 and launched at his 90th birthday party on 19 October 2014.

“History of KRTA” – a work still in progress involving KRTA staff and an editor.

**References:** “Onset of the Environmental Age, KRTA Curriculum Vitae.

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