

CHARLES DARWIN UNIVERSITY

PROFESSORIAL LECTURE SERIES

Drains, mains and pipelines: a civil engineer's journey through our hidden infrastructure

Professor Charlie Fairfield

Power and Water Corporation Chair in Sustainable Engineering

5:30pm – 7:00pm

Tuesday 29 July 2014

Nitmiluk Lounge, Level 4, Parliament House

RSVP: Thursday 24 July 2014 E: rsvp@cdu.edu.au T: 08 8946 6554

Lecture abstract

Civilisations have risen on the back of mankind's ability to supply safe drinking water and most crucially dispose of wastewater and sewage safely. But these days pipes, ducts, conduits, drains and sewers not only carry water and remove waste, increasingly they carry data over fibre optic links. In the developed world, the true impact of the digital age on our need for ducted infrastructure is yet to be seen. As it is, the underground utilities and pipeline infrastructure in the UK alone is estimated to be worth about £500 billion (A\$900 billion).

In this lecture Professor Fairfield focuses on the modern methods used to clean sewers and drains. In particular, he concentrates upon our engineering efforts to design the next generation of prototype sewers which will be capable of resisting the combined effects of our tendencies to throw anything down them from dead animals and tree roots to nappies and even items as weird as television sets and the high-pressure water-jets used to clean them. Strategies for the future of our essential utilities are then pondered from a range of viewpoints: philosophical, political, economic, environmental, and technical.



Professor Charlie Fairfield

School of Engineering and Information Technology
Power and Water Corporation Chair in Sustainable Engineering

Professor Fairfield is a Chartered Engineer. His reputation stems from his work in sustainability, soil-structure interaction, trench reinstatements and plastic pipes. His research at CDU encompasses the modelling of sewers, hydrology, the eco-engineering of wetland/river systems, and sediment transport around the Top End. His aim at CDU is to focus the best research and development efforts on the management and engineering of that most precious resource: water. He aims to collaborate with government, international NGOs, business and academics to seek solutions to both regional and global water-related problems.

