



THE SCHOOL OF SCIENCE & ENGINEERING PRESENTS...

# Café Scientifique

## *Cleaning up our act*

Nitrate, a form of nitrogen, is a significant surface water and groundwater contaminant. Nitrate is derived from animal wastes, nitrogen-fixing plants, fertilisers and wastewater. It is water-soluble and is readily leached into groundwater or carried into surface water. Increased nitrate levels contribute to eutrophication, algal growth and habitat loss in lakes and rivers.

Dr Schipper developed the concept of denitrification walls for removing nitrate from shallow groundwater. This work led to the development of denitrification beds for treating a range of effluent streams. When sized appropriately, denitrification beds and walls can achieve 100 percent removal of nitrate without active maintenance, something no other simple technology has achieved.



Figure: Trial of different denitrification beds at the Taupo District Council wastewater plant. Photo courtesy of GNS Science

Come along to hear some background information, share your thoughts and questions.

Speaker: Dr Louis Schipper is an Associate Professor at the Department of Earth and Ocean Sciences, The University of Waikato.

*For more information about future Cafés in Hamilton, contact Marcus Wilson,*

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*<http://www.sci.waikato.ac.nz/cafescientifique>*

*Tuesday 1 June 2010*

*7.30pm*

*“The Bank” (corner Victoria & Hood Streets), Hamilton*