

Summary Bio

Tim Logan
Senior Surveillance Engineer



Nationality
New Zealand

Language
English



Key Qualifications

Bachelor of Science, Victoria University of Wellington, 1973

Professional Affiliations

Member of Electricity Engineers Association of New Zealand

SPECIALISATION

Dam Safety
Geotechnical Instrumentation
Geophysical investigations using surface and borehole techniques
Seepage investigations using high resolution temperature profiling
Shear wave and compression wave velocity testing for seismic response
Ground and structure vibration impact assessment
Thermal resistivity of soil and backfill for underground HV cables

SUMMARY BIO

Tim Logan is an engineering geophysicist, specialising in the analysis of dam surveillance data at Damwatch Services Ltd and is based in Wellington. The firm specialises in dam safety and dam engineering and undertakes surveillance of over 50 hydro dams in New Zealand, Fiji and the Philippines. Damwatch also advises on dam safety management, dam safety deficiencies and their remediation, as well as associated dam engineering issues.

Tim has over 24 years experience in geotechnical instrumentation and the application of geophysics for investigation of dams and other major infrastructure projects, including the acquisition and analysis of data related to groundwater movement, geological structure and material properties in the fields of civil, geotechnical, transportation and electrical engineering. In 1983 he joined the Ministry of Works and Development where he worked on foundation investigations at the Clyde Dam site and feasibility studies for dams on many rivers in New Zealand and the Afulilo Hydro Scheme in Western Samoa. Following the 1987 Edgecombe earthquake, Tim was involved in assessing the extent and locations of damage at Matahina Dam, installation of piezometers during repairs and shear wave testing for the reassessment of the seismic response of the dam.

Since 1989 Tim has developed highly specialised expertise in the analysis of high resolution temperature and flowmeter data to assess the movement of groundwater. These techniques have been applied to investigation of large landslides, performance of relief drains in slides and dams and the characterisation of seepage associated with dams and canals. Aligned with this, Tim is nationally recognised as a specialist in soil thermal resistivity and the design/installation of thermally stable backfill for high voltage underground cables. Tim also has considerable expertise in vibration monitoring and impact assessment, which has led to him providing expert witness in the Environment Court for construction projects including ports, power stations and roads.

Tim joined Damwatch in March 2004 and is currently responsible for assessment of surveillance data, annual dam safety reviews, geophysical investigations associated with new wind farm and dam sites and the internal audit of Damwatch's Quality management System, which is certified to AS/NZS ISO 9001:2000.