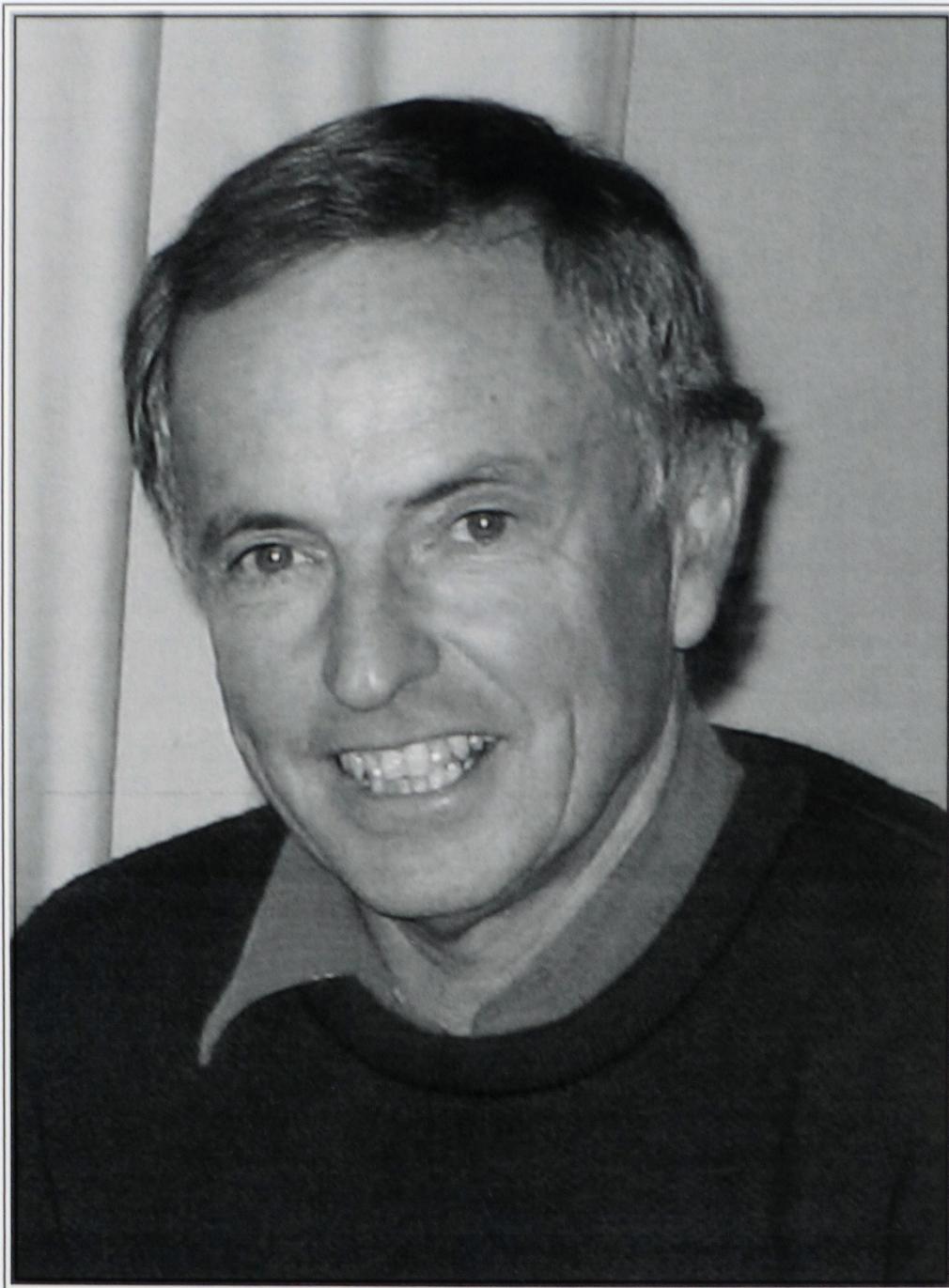


*Bruce Wilson Riddolls*



*01.10.1943 - 27.06.2019*

**Bruce Wilson Riddolls MSc (Hons) PhD MNZGS MGSNZ**

*1 October 1943 – 27 June 2019*

***Pioneering Engineering Geologist***

Dr Bruce Riddolls was a noted engineering geologist who played a leading role in making geological considerations an integral part of project investigations in New Zealand. Having studied regional mapping for his MSc at Canterbury University and obtaining a PhD from Exeter University on geological mapping Bruce developed a strong appreciation of the importance of geological context to the safety and viability of major engineering works. This appreciation was greatly enhanced during his ten years (1971-81) with the NZ Geological Survey (NZGS) Division of DSIR (later to become GNS Science). He joined at a time of rapid development of national infrastructure. NZGS had a long-standing role in providing geological advice to government and its Engineering Geology section grew to provide advice on hydro-electric and thermal power development, tunnelling, roading, railways and gas pipeline projects.

At a time when engineering geology was in its infancy in the private consulting engineering profession, Bruce accepted an offer from Worley Consultants (now AECOM) to establish and lead an engineering geology group. During his six years in Auckland, (1981 to 87) as Chief Engineering Geologist, Bruce carried out and led a wide range of assignments on major civil and mining engineering projects across New Zealand and overseas, including Laos, Indonesia and PNG. Engineering geology became recognised as a vital consideration on projects of any scale.

Having established his credentials in the private sector, Bruce set up his own consultancy, Riddolls Consultants Ltd with his wife Patricia, based in Queenstown. His work during that time (1987 to 89) centred on the massive challenges involved in the Clyde Dam development, not just with the dam itself but with the geographically extensive engineering impacts of the establishment of Lake Dunstan – notably the need to stabilise inundated slopes to avoid landslides which could cause overtopping of the dam. Up to 35 engineering geologists were involved and Bruce made strong contributions with his knowledge, insights and analytical skills. He stood out for his ability to visualise and conceptualise and determine the geological setting and its engineering implications. His ability to think laterally to generate bright ideas was much appreciated by his peers – though this ability could frustrate on occasion.

Having established Riddolls & Grocott with fellow engineering geologist, Guy Grocott in 1994, he moved to Christchurch in 1996. For the next four years he applied his skills and knowledge to government and private sector projects. Notable amongst a range of projects Bruce collaborated on was a 1999 report for BRANZ, *Quantitative Assessment for Determining Slope Stability Risk in the Building Industry*, which is an important reference work for practitioners still being cited in New Zealand geotechnical publications and internationally. Dr Riddolls served four years (1998-2002) as Vice President for Australasia for the International Association of Engineering Geology and the Environment, having previously served on the Management Committees of both the NZ Geotechnical Society and the NZ Society for Earthquake Engineering.

In 2000, RGL merged with Golder Associates Ltd a large international geotechnical consulting firm headquartered in Canada. Bruce's focus shifted to project reviews and management of professional services. This broadened his perspectives and experience but did not satisfy his desire to be hands-on. In 2003, with an established reputation for insightful interpretations of geological and geotechnical aspects and concise reports, Bruce re-established Riddolls Consultants to focus on geological reviews, strategies, expert evidence and mentoring. Risks from natural hazards and their implications for major engineering developments formed a strong part of his work in this period. His 2007 co-authored report for

EQC, *Managing Landslip Risk – Improving Practice*, highlights Bruce's understanding of the issues and demonstrates his ability to communicate simply, clearly and succinctly.

During this time Bruce exhibited an entrepreneurial spirit. In 2005, with two colleagues, he helped form B2G Energy Ltd to explore for coal-bed methane gas. B2G Energy was granted an exploration licence in part of the Roxburgh Coal Field but the one hole that the company drilled proved barren.

A particular strength Bruce developed in later years was high-level peer review of geological modelling for major projects and in that capacity he was retained by major clients including Transit NZ (now NZ Transport Authority), KiwiRail, Wellington City Council, Canterbury Waste Services Ltd, Fulton Hogan Ltd, and the Department of Conservation.

Bruce continued to provide consulting services until very recently, moving to Auckland in 2014 and then to Pegasus in 2018 where he could once again enjoy being on the Canterbury Plains and close to the Southern Alps.

Bruce Riddolls was not just a dedicated and highly skilled professional. He was passionate about passing on his knowledge and insights and acted as mentor for many younger engineers and engineering geologists. Few people with whom he interacted would realise the breadth of his knowledge and experience or the depth of his insights. He was unassuming and not particularly assertive in putting his views forward. But he was strong-minded with a drive towards excellence in all his work. His contributions were always very much to the point and reflected his deep knowledge and understanding. One of his many qualities was brevity in report writing – if it could be stated in one page, there was no need to say it in 10.

Rarely did he mention that he had spent a season exploring remote parts of Antarctica in 1966-67 – a challenging assignment in those days which gave him the opportunity to put Mt Riddolls on the map.

Bruce recently celebrated his 50<sup>th</sup> wedding anniversary. He met his geologist wife, Patricia, while studying in Exeter. They worked at NZGS together and formed their consultancy. These common interests no doubt enabled Bruce to refine and develop his knowledge and skills. The Riddolls family, Bruce, Tricia and daughters Ellen and Frances, lived in different parts of New Zealand. Bruce was able to use his innovative DIY and other skills on a range of properties, all to good effect. He was noted for his quiet and dry sense of humour and colleagues recall several (harmless) practical jokes played on them.

Bruce played and watched cricket, golf, football, tennis and squash. He enjoyed travel, reading and listening to music. He sang in choirs and performed on stage, notably in *Hello Dolly* and Gilbert and Sullivan operas.

With his wide professional and personal experience this man of gentle spirit quickly gained and then retained the respect and admiration of his friends and colleagues who rated him amongst the best of their acquaintance. Someone it was good to spend time with. And who will be sadly missed.

*Compiled by David Hopkins with input and assistance from Ian Parton, Guy Grocott, Ian Brown, Don Macfarlane, Geoff Farquhar, Nick Perrin, Simon Nathan and Patricia Riddolls.*