

Life, Earth & Environment Seminar Series

When: Wednesday 9th November, 12 – 1 pm

Where: Natural Resources Building, Lecture Theatre 1 (EM1)

DYNAMIC EARTH PROCESSES IN ICELAND: PRODUCTS, ENVIRONMENTAL EFFECTS AND HISTORICAL INFLUENCES

Dr Paul Ashley

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Iceland is a unique entity on planet Earth. Its tectonic position and development since the mid-Miocene has led to formation of a dynamic landmass dominantly created by volcanic processes, modified by ice, water and wind, and more recently by human activities. The present co-incidence of the Mid-Atlantic Ridge rift zone and a mantle plume (“hot spot”) has led to enhanced magma production and a dominance of largely basaltic volcanism that has constructed the present landmass. In the seminar, these processes are briefly explained, along with the nature of volcanic products and the imposed processes that have created the Icelandic landscape. Historical volcanic-related events have periodically negatively influenced the population in Iceland and the Northern Hemisphere as a whole. Due to landscape “fragility” and climatic factors, major environmental degradation has occurred historically and Iceland faces daunting challenges to manage environmental sustainability.



Biography

Paul Ashley is an Adjunct Associate Professor in Earth Sciences at UNE, being a staff member between 1985-2008, and casually employed in 2011-2013, following an earlier career in the minerals industry, and gaining of a BSc from the University of Sydney and PhD from Macquarie University. He has had broad research output, focused in the last 20 years on environmental geochemistry. He is also employed in petrographic and environmental consultancy work for the minerals industry and government agencies. Wider interests in recent years have included the relationship between geological processes and other natural sciences in diverse “wild places” in New Zealand, Papua New Guinea, Iceland, the Himalayas, the North American cordillera and South America (Patagonia and the Atacama Desert), with Gondwana connections being of particular interest.