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What is a geological disposal facility, what opportunities does it present for geoscience community?

Jonathan P Turner

(Chief Geologist – Radioactive Waste Management)

11th May 2021 | Zoom Video Conference | 6:30pm start

Abstract:

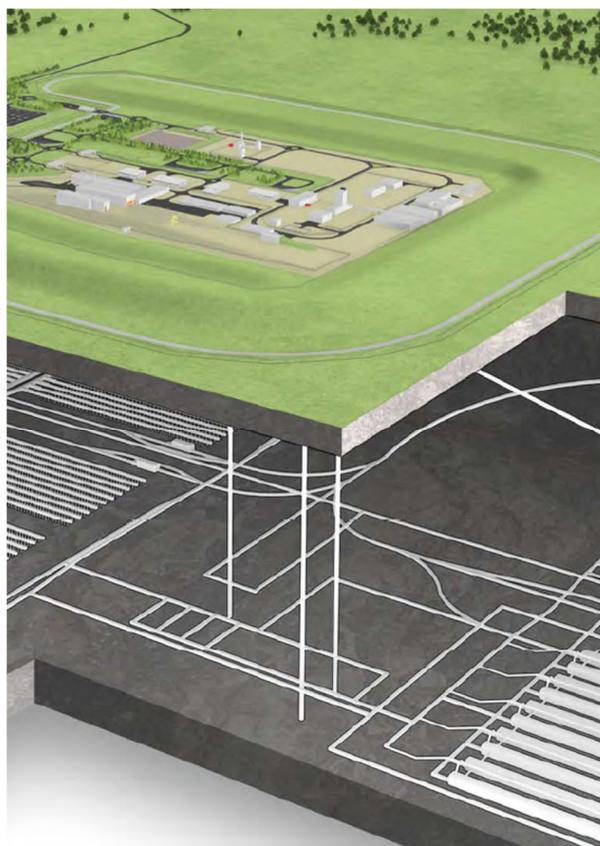
This presentation has two main aims: to give a flavour of the range of geoscience skills that will be needed to support the deep geological disposal (GDF) programme, and to provide an introduction to some of the 'whats' and 'whys' of radioactive waste disposal.

Britain has been accumulating radioactive waste for more than 70 years. RWM is engaged in delivering one of the largest environmental projects ever undertaken in Britain: a GDF in which higher activity radioactive waste from England and Wales will be disposed of permanently. RWM will evolve to become a prime investor in the UK subsurface and GDF delivery creates attractive new career opportunities for a broad range of geoscience practitioners.

The by-words for delivering deep geological disposal safely are containment of radionuclides such that they cannot harm people or the environment, and deep isolation of the higher activity waste from surface processes and from inadvertently mining into the GDF. A key component of RWM's disposal concept is the multibarrier system, in which the natural geological barrier works together with engineered barriers, such as the canisters, plugs and seals.

There is a diverse range of geological settings that could be suitable for a GDF and the National Geological Screening reports give communities a flavour of how their local geology would contribute to its long-term safety. For example, to demonstrate the integrity of the GDF over the hundreds of thousands of years post-closure period, RWM will need to model the effects of continental glaciations and earthquakes.

GDF delivery is one of the most challenging major infrastructure programmes with direct bearings on the current debate on our energy future. Its unique blend of science and technology, design and engineering, and science communication means that the GDF programme offers exciting possibilities for training and career development across the geoscience community.



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About the Speakers:

Jonathan is a Chartered Geologist with over 30 years' experience in senior roles within both academia and industry. He has delivered industry-leading graduate training for early-career geoscientists and worked on some of the most technically ambitious production projects in the world.

Jonathan is currently Chief Geologist at Radioactive Waste Management; the organisation tasked with delivering a Geological Disposal Facility and providing radioactive waste management solutions within the UK.

Forthcoming Talks:

DATE	TITLE	SPEAKER	VENUE
8 th June 2021 6:30pm	Message in a Bottle	Traci Dix-Williams (Dudley Canal and Tunnel Trust)	Zoom - Virtual Meeting
13 th July 2021 6:30pm	Chartership Evening	Shaun Richardson (The Geological Society)	Zoom - Virtual Meeting
14 th September 2021 6:30pm	Cenozoic Climate Change	Dr Tom Dunkley-Jones (University of Birmingham)	Zoom - Virtual Meeting
12 th October 2021 6:30pm	Nitrate sources and processes from ground surface to the aquifer for Chalk and River Terrace Gravels	Dr Josie McSherry (Affinity Water)	Zoom - Virtual Meeting

The WMRG is constantly on the lookout for fascinating talks. If you would like to present, know someone who is willing, or would like to request a subject please contact the WMRG committee (details below) and we will try our very best to accommodate your requests.

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