

Manchester Geological Association

Annual General Meeting, Wednesday 10 February 2021

President's Address: Niall Clarke

Borehole geology and public water supplies in the north west of England

Despite the extensive reservoir and river sources in the north west, boreholes make a significant contribution to public water supplies with important aquifers in Carboniferous and Permo-Triassic lithologies. Quaternary deposits also play a role.

Ground water provides c 10% of public water supplies. These supplies are especially important during periods of high demand and drought.

Starting with a brief overview of the evolution of public water supplies in the north west, the talk will look at the different sources of ground water. By way of a number of case examples, I will explore the geological and other constraints on managing groundwater; how geochemical, sedimentological and structural factors influence abstraction from aquifers.

The groundwater environment is intricately linked to surface waters and I will look at the contribution the Water Framework Directive has made to joined-up management of our water environment and the constraints it places on ground water abstraction.

As well as some historical context I will look to the future sustainable utilisation of this important resource.