



International Association of Hydrogeologists
Irish Group



Technical Discussion Meeting

“GQ Toolbox – A New Geological Survey Ireland Application for Aqueous Geochemistry Analysis”

Shane Carey (MapTech Solutions) and
Seán Wheeler (Tobin Consulting)

Zoom link: shorturl.at/BHLRT

Meeting ID: 861 9874 2004 Code: 507567

Date: Tuesday 6th December, 2022

Time: Talks & discussion 18:00 – 19:30 (log in from 5.45 pm)



Bring your mince pie and mulled wine to your zoom



Why not have a Festive Zoom party & join the TDM in a small group of work colleagues or fellow students?

Future IAH Meetings

January 2023

Annual joint IAH-Geotechnical Society of Ireland lecture:

February 2023

Burdon Lecture – developing country hydrology and hydrogeology

March 2023

Early Career Hydrogeologists



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Short abstract

This will be a live demonstration of GSI's new Web-based Groundwater Chemistry Data Visualisation Application. This is a data-driven application, and the demonstration will convey how the various groundwater chemistry datasets can be analysed by bedrock geology, aquifer, catchment and county.

We will begin with uploading a dataset to the app and applying some data processing methods such as the removal of LODs, categorization of variables and addition of geo-environmental conditions at each location. We will show how areas of interest can be selected for analysis and visualisation. Then we will look at some basic analysis methods such as box-plots, time-series graphs and spatial concentration mapping. Finally, some 'traditional' groundwater characterization methods (Piper and Durov plots) followed by compositional analysis (Iir-ion plots and Principal Component Analysis).

The app consists of a map, line charts, boxplots and tabular data, all of which interact seamlessly together.

Speakers

	<p>Shane Carey</p> <p>Shane is currently a contract GIS Consultant at Geological Survey Ireland. He has developed applications for GSI such as https://gwlevel.ie, The Open Topographic Data Viewer and is responsible for the day-to-day running of the Groundwater Data Viewer on behalf of Geological Survey Ireland.</p>
	<p>Seán Wheeler</p> <p>Seán is currently a Hydrogeologist at TOBIN Consulting Engineers. He has previously worked for Tetra Tech and Causeway Geotech. Seán did his undergraduate at NUIG and masters at UCC before returning to NUIG for a PhD in the statistical analysis of geochemistry data.</p>