



The
Geological
Society

serving science & profession



The Geothermal Campus project at the University of Leeds

Professor Fleur Loveridge

(Geo-Energy Engineering, Civil Engineering Department, University of Leeds).

Email: f.a.loveridge@leeds.ac.uk

9th December 2025 | Hybrid Event: Mott Macdonald offices in Birmingham city centre and Zoom | 6:30pm start

Abstract:

During 2024 drilling was carried out at the University of Leeds as part of its Geothermal Campus project, part of wider plans to decarbonise the campus estate by 2030. This presentation will describe the different boreholes constructed to provide open loop wells for an operational ground source heat pump system, as well as monitoring and test boreholes. The holes primarily target the Elland Flags sandstone aquifer, part of the Middle Pennine Coal Measures, but cored pilot wells and one closed loop borehole extend deeper to identify the Rough Rock of the Lower Pennine Coal Measures that may also be a suitable host reservoir. Initial results have proved extremely positive with advantageous groundwater conditions in the aquifer meaning the design of a hybrid GSHP-ASHP energy centre is proceeding.



As well as providing a working energy system for campus decarbonisation, the project also provides a platform for research, student education and wider engagement around geothermal energy. The talk will therefore additionally present details of how the drilling was accompanied by an intensive communications initiative with staff, students and local communities, to inform and allay any concerns about drilling, especially where close to student residences. The results of the project are also being leveraged to support several research projects in the city. Work around understanding how shallow geothermal solutions can feed into the development of future Heat Network Zones, and how the subsurface can support power system flexibility and renewables integration through grid balancing will also be described. These projects are all examples of how working across the geoscience, engineering and policy spheres can deliver enhanced impact through sustained collaboration.

e-mail

Get in touch

geolsoc_wmrg@live.co.uk

www

Find us on the web

www.geolsoc.org.uk/wmrg



Connect on LinkedIn

[WMRG ID: 4315899](#)

Geological Society, Burlington House, Piccadilly, London, W1J 0BG

Tel: +44 (0)20 7434 9944 Fax: +44 (0)20 7439 8975 Email: enquiries@geolsoc.org.uk Web: www.geolsoc.org.uk

Registered Charity No. 210161



The
Geological
Society

serving science & profession



About the Speaker:

Fleur Loveridge is a Professor of Geo-Energy Engineering and the Director of Research and Innovation in the School of Civil Engineering at the University of Leeds. She has a background in engineering geology and geotechnical engineering and has over 25 years' experience spanning industry and academia. Fleur leads interdisciplinary research on heating and cooling decarbonisation and infrastructure resilience. She has a special interest in ground energy systems and shallow geothermal energy applications. Her early research pioneered the use of energy geo-structures (where buried foundations and infrastructure is used for heat exchange). Now as part of the Geo-solutions team in Leeds work also includes underground thermal energy storage, and their connections to heat pump and district heating systems. Fleur is the academic co-lead of the University of Leeds Geothermal Campus. This living lab is part of a major investment in decarbonisation of the University estate, and it provides a test bed for ground-breaking research, while simultaneously offering facilities for enhanced student education. Fleur is a Chartered Civil Engineer and a Chartered Geologist.



Forthcoming Talks:

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.

Contact:

For all enquiries regarding the West Midlands Regional Group and events please contact us using the details below.

e-mail

Get in touch

geolsoc_wmrg@live.co.uk

www

Find us on the web

www.geolsoc.org.uk/wmrg



Connect on LinkedIn

[WMRG ID: 4315899](#)

Geological Society, Burlington House, Piccadilly, London, W1J 0BG

Tel: +44 (0)20 7434 9944 Fax: +44 (0)20 7439 8975 Email: enquiries@geolsoc.org.uk Web: www.geolsoc.org.uk

Registered Charity No. 210161