



Western Regional Group of the Geological Society

Evening Lecture

Briars Lane, Hatfield - Chalk Mine Treatment

**Chris Milne & John Rigby-Jones - RJM Ground Solutions Ltd;
Andrew O'Donovan - Ritchies, Div of Edmund Nuttall**

Tuesday 21st April 2009, 6.00 for 6.30pm

Synopsis:

Treatment of abandoned chalk mines beneath developed areas gives rise to particular challenges in identifying irregular workings and validating their successful treatment. These difficulties are compounded where the very weak nature of the Chalk leads to the presence of both voids and unstable collapsed ground. These mixed ground conditions require the application of a specialised grouting methodology. As a result of these challenges only a limited number of such schemes are undertaken each year in the UK and a systematic approach to the treatment of chalk mines has yet to be fully developed.

The risk of surface ground movements from chalk mining in Hatfield has resulted in the development of new strategies for addressing the treatment of worked chalk. This treatment has been undertaken beneath occupied residential properties and live highway along Briars Lane in Hatfield. The on-site development of various treatment methodologies have enabled the efficacy of different treatment techniques to be assessed in the presence of extremely varied ground conditions. Comprehensive monitoring and risk assessment strategies have been successfully employed to minimise disruption and evacuation of local residents.

An innovative validation process based on 3D mine modelling and an integrated data management system have allowed real-time assessment of the impacts of treatment works and progressive re-occupation of properties. The scheme has therefore allowed a structured approach to the specification, implementation and validation of chalk mine treatment methodologies and risk management to be developed. This talk will summarise the results of the works and details of the methodologies employed.

Venue:

S H Reynolds Lecture Theatre (Room G25), Department of Earth Sciences, University of Bristol, Wills Memorial Building, Queen's Road, Bristol BS8 1RJ

For directions see: <http://www.gly.bris.ac.uk/about/directions.html>

Convenor:

Charlotte Woodhall-Jones (Charlotte.Woodhall-Jones@Burohappold.com)

Notes:

Refreshments will be available from 6 pm. In case of any query please contact the Convenor or visit <http://www.geolsoc.org.uk/gsl/groups/regional/wrg>

This event may be considered for contributing to a recognised Continuous Professional Development (CPD) scheme. Delegates should check their individual scheme requirements.

For any enquiries regarding this event please contact the convenor. For any other enquiries please contact the Western Regional Group on westernregionalgroup@hotmail.co.uk