THE CENTRAL SCOTLAND REGIONAL GROUP OF THE GEOLOGICAL SOCIETY

Notice of event: Tuesday 26 September 2017

Room A426, Govan Mbeki Building, Glasgow Caledonian University,

Cowcaddens Road, Glasgow, G4 0BA

6.00pm for 6.15pm

Charge of £5 for non - fellows

The Engineering Geology and Geomorphology of Glaciated and Periglaciated Terrains

The Working Party on The Engineering Geology and Geomorphology of Glaciated and Periglaciated Terrains was tasked with producing essential guidance for engineering geomorphologists, engineering geologists and geotechnical engineers. In particular it was intended to bring greater synergy between the rapidly evolving areas of expertise of glacial geomorphologists and engineering geologists working in glacial and periglacial materials.

To this end the individual chapters cover *The Quaternary*; *Geomorphological framework: glacial and periglacial sediments, structures and landforms*; *Conceptual ground models*; *Conceptual glacial ground models*; *Periglacial and permafrost ground models*; *Material properties and geohazards*; *Engineering investigation and assessment*; and *Design and construction considerations*. Chapter 1 includes case studies that demonstrate some of the typical engineering problems that have been encountered over the last 100+ years in these materials, while those in Chapter 9 illustrate the nature and complexity of the ground conditions likely to be encountered when working in relict glacial and periglacial terrain.

This lecture will summarise the main chapters while focussing on the chapters on *Conceptual glacial ground models* and *Design and construction considerations* for which the speakers are lead-authors. The book will be published as Engineering Geology Special Publication 28 in autumn 2017.

More information on the Central Scotland Regional Group can be found on our webpage.

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David J A Evans (BA, MSc, PhD, FRGS) is a Physical Geographer specializing in glacial geomorphology. He was educated at the University of Wales (BA), Memorial University of Newfoundland (MSc) and University of Alberta, Canada (PhD) and has worked on glaciers and glaciation in a wide range of locations including the Canadian Arctic, Iceland, Svalbard, New Zealand, Norway, South Georgia and the Canadian prairies as well as his native British Isles. After a 14 year spell at the University of Glasgow he moved to Durham University in 2004, where he is part of a large glacial research group. His expertise is in three inter-linked research areas: 1) glacial landsystems and paleoglaciology, which involves the elucidation of glacial process-form relationships through the study of geomorphology and sedimentology; 2) glacial sedimentology; and 3) Quaternary environmental reconstruction, involving reconstructions of former glacier ice cover. Key publications include the books *Glaciers and Glaciation* (1998 & 2010), *Glacial Landsystems* (2003), *A Practical Guide to the Study of Glacial Sediments* (2004), *Vatnajökull National Park (South Region) – Guide to a Glacial Landscape Legacy* (2016), and *Till – A Glacial Process Sedimentology* (2017). He was awarded the Busk Medal by the Royal Geographical Society in 2017 for excellence and originality in the study of glacial landscapes and processes and empowering the next generation.

Mike Winter (BSc PhD CGeol FGS EurGeol CEng FICE Eur Ing) graduated from Nottingham Trent and Durham Universities. He is Head of Ground Engineering and Honorary Chief Scientist at TRL and Visiting Industrial Professor at the University of Portsmouth. His main areas of research/expertise include landslides (particularly debris flows) their hazard and risk assessment, management and mitigation, and their socio-economic and network impacts; engineering in glacial tills; soil compaction; soil acceptability for earthworking; slope stability; soil slope strengthening; retaining systems; and the use of waste geomaterials and of waste materials in geo-structures including tyre bales.

He has sat on many national and international committees and steering groups including the ISSMGE TC202 (Transportation Geotechnics) and the World Road Association (PIARC) Strategic Planning Commission. In 2004 Mike was appointed as lead external consultant for the Transport Minister's Working Group responding to the debris flow events that affected the Scottish road network.

His work has been published on the international stage in around 250 peer-reviewed publications. He is the joint longest-serving Chief Scientific Editor of the Quarterly Journal of Engineering Geology and Hydrogeology (QJEGH) (2007 to 2012). He led the organisation of the record-breaking XVI European Conference on Soil Mechanics and Geotechnical Engineering (Edinburgh, 2015).

Mike has worked in over 30 countries and on each of the world's continents, with the major exception of Antarctica – in this respect Mike remains open to offers.