



Engineering Group of the Geological Society

Newsletter

March 2008

Other than having your speakers turn up (particularly if they've come half way around the world!), the next best thing for a convenor is having your meticulously organised event well attended. Fortunately, Engineering Group convenors are currently justly content.

The Committee attempt to convene meetings that are both topical and of appeal; but please just don't leave this to the Committee, suggestions or offers to convene meetings are welcomed.

Attendance at any of our meetings is open to all.

Darren Page

dpag@otbeng.com



To see this image in context visit the Engineering Group's Working Party on Geological Hazards website at <http://www.ukgeohazards.info>

HIGHLIGHTS

- ...IAEG Congress 2006 – reports from Martin Culshaw and Alison Littlejohn et al...
- ...Forthcoming Engineering Group Events - update...
- ...Annual Field Trip 2007 to Ironbridge Gorge and North Shropshire – photos...
- ...‘The Diary of an Engineering Geologist’ by Chloe French...
- ...Restoration of hard rock quarries – meeting report by John Cripps



Geological Society
Burlington House
Piccadilly
London SW1V 0JU
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

Engineering Group of the Geological Society
Correspondence Address
Ms Tracey Radford, EGGGS Secretary
Atkins Consultants Limited,
Woodcote Grove,
Ashley Road, Epsom
Surrey, KT18 5BW
Tel: +44 (0) 1372 726140 or 754383 (direct)
Fax: +44 (0) 1372 754499
Email: tracey.radford@atkinsglobal.com
Web: www.geolsoc.org.uk

COMMENTS AND SUGGESTIONS

The Engineering Group is run for the benefit of its members and your suggestions and contributions are welcome. The Committee will particularly welcome suggestions for future events and activities. Please contact the Group's Secretary, **Tracey Radford**.

Please send any items for inclusion in the newsletter to Darren Page at dpage@otbeng.com

NEWS

IAEG Subscription

For those of you who wish to join the IAEG and receive the Bulletin this can be done through Rachel Boning (rachel.boning@geolsoc.org.uk). Subscription fees for 2008 are £41. In future, IAEG Membership and Subscription will be possible via the Fellowship Renewal Invoice.

Asset Management Competence

The Institute of Asset Management is currently revising the Competences Framework it published in June 2006 with a view to publishing a second version in June 2008. A draft version of this has been developed by the IAM Membership Committee which has been issued for consultation. Copies of the framework can be obtained from jo.hardman@casolutions.co.uk to whom comments should be addressed.

GEOLSOCENGGROUP@JISCMAIL.AC.UK

The Engineering Group, through David Giles, has established a JISCMAIL account with the National Academic Mailing List Service (funded by Joint Information Systems Committee). JISCMAIL means the Engineering Group can communicate, discuss and inform direct by email: messages can be posted by any member and to all members. If you would like to be included in this email list, contact David Giles (David.Giles@port.ac.uk).

BS EN Committees

David Norbury writes: "You may or may not be aware but I am the GSL nominated representative on BSI Committee B/526/3. Accordingly it is my responsibility to keep the Society up to date with what is happening on the European Standards coming

through from CEN TC 341. Accordingly, please find enclosed the following Draft Standards for UK review.

- Geotechnical investigation and testing - Geohydraulic testing - Part 3: Water pressure test in rock (ISO/DIS 22282-3:2007) Deadline for comments 29 February (Sorry about the short notice)
- Geotechnical investigation and testing - Geohydraulic testing - Part 4: Pumping test (ISO/DIS 22282-4:2007) Deadline for comments 31 March.
- Geotechnical investigation and testing - Geohydraulic testing - Part 5: Infiltrometer test (ISO/DIS 22282-5:2007) Deadline for comments 31 March

Copies of the draft documents are available from Tracy Radford. Comments should be sent to Jim Griffiths.

There are three other parts to come of 22282 (timing uncertain)

- Part 1- General Rules
- Part 2 - Water permeability test in borehole without packer
- Part 6 - Closed packer systems

You can also indicate whether you believe the UK should vote positively or negatively for these standards. For your information, the UK representative on the 22282 drafting committee is **Martin Preene**."

Glossop Award 2007

This was presented to **Anna Pearson** of Arup at the Engineering Group Forum held in November at the Royal Geographical Society.

Glossop Lecture 2008

Mike de Freitas has gladly accepted the Group's invitation to deliver this lecture on 13th November 2008. The lecture will be held at Imperial College and will be followed by a buffet reception.

Society Awards 2008

The Committee is currently considering suitable candidates to put forward to Council for this year's prestigious Society Awards. The awards include the William Smith Medal, Wollaston Medal, Lyell Medal and Prestwich Medal. Suggestions for suitable candidates should be made to Tracey Radford tracey.radford@atkinsglobal.com.

Engineering Geologists' Training Guide

A document has been prepared and will be published within the Group's pages on the Geological Society website imminently.

Geological Society Council Nominations 2008/9

Nominations for Council Elections include **Andrew Pitchford**. Andrew served as the Engineering Group's Secretary from 1998 to 2001 and again from 2003 to 2005. Only Fellows of the Society are eligible to vote. Elections close 31st March 2008.

Hot Deserts Working Party

All chapters have been drafted and the final manuscript will be submitted to the editors in the summer. It is anticipated that their report will be published late in 2009. International launch planned in Bahrain.

Geo-Hazards Working Party

The aim of this working party is to utilise the expertise within the Engineering Group to provide a 'one-stop' resource for UK geohazard related information and awareness. Key objectives are; to provide a link between Geohazard Experts to those industries, professions and communities that interact or encounter geological hazards in the UK and overseas; to engage with that 'end-user communities' in order to provide a useable resource for their specific geohazard related requirements; to improve communication between specialists, and between hazards practitioners and the wider communities.

Unlike previous Working Parties this one will be web-hosted. A trial website is currently under construction see <http://www.ukgeohazards.info/>. The website will hopefully become an international resource for geohazard information and awareness. Contributions are welcomed. For further information contact David Giles (David.Giles@port.ac.uk).

Applied Petrology Group

The principle objectives of the APG are as follows:

- To review, and where necessary recommend modification to national and international standards relating to petrography.
- Prepare practical guideline and code of practice documents relating to petrographic investigation of materials.
- To insure the highest professional standards are maintained by petrographers and to prepare a list of qualified professional petrographers for access by industry.
- To organise training programmes and meetings to promote competency in petrographic investigation methods.
- To publicise and promote the usefulness and value of petrographic methods to a wider professional audience.

Membership of the Group is open to applied petrographers and members of other professional groups who make use of and have an interest in petrographic information.

For more information contact Richard Fox richard.fox@rfoxassociates.co.uk

Who's Who: The Engineering Group Committee 2008

As of the beginning of 2008 the Engineering Group Committee comprised the following members:

Officers:

Jim Griffiths – Chair
Ivan Hodgson – Vice Chair
Tracey Radford – Secretary
Simon Wheeler – Treasurer

Members:

Patrick Cox – Meetings Sub-Committee
Ursula Lawrence – Publicity Sub-Committee
Simon Wheeler – Training Sub-Committee
Mike Whitworth – Glossop Award Sub-Committee
Sarah Chilton
Alison Littlejohn – SETNET
David Waring
Jeremy Baldock
Chloe French – Shools Development Initiative
David Giles – Field Meeting Sub-Committee
Patrick Cox – Shadow Meetings Chair

Ex-officio Members:

David Shilston – Council
Mike Winter – QJEGH Editor

Representative Members:

Darren Page – Editor Newsletter/Forum 2009
Ian Duncan – Engineering Group Strategy
Adrian Collings – Hazards Forum
Ian Jefferson – IAEG
Ivan Hodgson – Institution of Highways & Transportation
Rodney Chartres – National Geoscience Data Centre Advisory Group, Geological Society of America
Richard Fox – Applied Petrography Working Group
John Harris – Site Investigation Steering Group
Graham West – Hot Deserts Working Group
Mark Dawson – Australasia
Jim Gelder – Middle East

Co-opted Members

David Entwisle
Paul Maliphant
Chris Martin
Sarah Terry
Jackie Skipper

**IAEG2006 – 10th Congress of the
International Association for
Engineering Geology and the
Environment, Nottingham, 6–10
September 2006**

It is a little known 'fact' that the idea for the UK to hold one of the four yearly Congresses of the IAEG was born in a pub in Portsmouth during the 32nd Annual Conference of the Engineering Group in September 1996. That it took 10 years for the idea to come to fruition is a demonstration that patience in international affairs is a definite virtue! So, in the end, was it worth it?

The Congress Organising Committee (OC) was skilfully chaired by Professor Jim Griffiths with the excellent support of **Dr Andrew Pitchford** as the Secretary, **Graham Garrard** as the Treasurer and a large number of Committee members including **Eva Batalexi, Rodney Chartres, Martin Culshaw, Laurance Donnelly, Louise Dyer, Helen Edmonds, Mike de Freitas, David Giles, Ian Jefferson, Joanna Mears, Richard Nicholson, Helen Reeves, Mike Rosenbaum, Derek Smith, Tim Spink and Georgina Worrall**. In all, 12 Organising Committee meetings were held from the first on 8 August 2002 to the last on the day before the Congress.

The initial intention was to hold the Congress in London but it soon became apparent that the high cost of venues and fears about the number of delegates who would attend, drove the OC to seek cheaper locations. In the end they settled on the University of Nottingham's Jubilee Campus, an almost new, modern and very striking set of buildings on a redeveloped, old industrial site. In many ways, this was an appropriate location for an international gathering of engineering geologists. The OC also wanted a forward looking theme for the Congress and soon settled on the title: "Engineering Geology for Tomorrow's Cities." Twelve technical themes were agreed, covered in two parallel sessions across four days. Each Theme had a keynote speaker and a rapporteur and a chairperson controlled the presentations from authors and the discussion.

Chairs, Keynote Speakers and Rapporteurs by Session

Theme	Keynote Lecturer	Chair	Rapporteur
Geology of Megacities and Urban Areas	Prof Ed de Mulder (Netherlands Institute of Applied Geoscience)	Dr Joy Pereira (Universiti Kebangsaan Malaysia)	Dr Brian Marker (Independent Consultant)
Environmental urban geotechnics	Prof Stephan Jefferis (University of Surrey)	Peter Braithwaite (Arup)	Dr Ian Jefferson (University of Birmingham)
Urban site investigation	Prof Chris Clayton (University of Southampton)	Dr Jan Hellings (Dr Jan Hellings & Associates Ltd.)	Jennifer Farrer (Halcrow Ltd.)
The Future of Engineering Geology	Dr Robert Tepel (Independent Consultant)	Dr Fred Baynes (Baynes Geologic Pty Ltd.)	Prof Jim Griffiths (University of Plymouth)
Geodata for the urban environment	Dr Robert Hack (International Institute for Geoinformation and Earth Observation)	Dr Terry West (Purdue University)	Dr Helen Reeves (British Geological Survey)
Legacy of the Past and Future Climate Change	Dr John Rees (British Geological Survey)	Judith Nathanail (Land Quality Management Ltd.)	Dr Vanessa Banks (British Geological Survey)
Dereliction, pollution and contaminated land	Dr Paul Nathanail (University of Nottingham)	Dr Allen Hatheway (Independent Consultant)	Duncan Scott (University of Nottingham)
Infrastructure for the city and its region	Prof Giulia Viggiani (Università di Roma Tor Vergata)	Dr Doug Allenby (Edmund Nuttall Ltd.)	Leigh Sharp (Edge Consultants Ltd.)
Substructures and underground space	Prof Chris Rogers (University of Birmingham)	Dr Dave Chapman (University of Birmingham)	Dr Dexter Hunt (University of Birmingham)
Planning and geohazards	Dr Sergio Mora (Inter-American Development Bank)	Prof Robin Chowdhury (University of Wollongong)	Dr Andy Gibson (British Geological Survey)
Urban Landslides	Prof Dave Petley (University of Durham)	Prof Ed Bromhead (Kingston University)	Dr Mike Whitworth (University of Plymouth)
Resources for the City	Dr Björn Schouenborg (Swedish National Testing and Research Institute)	Dr Daniel Morfeldt (Mine Consult, Sweden)	Dr John Cripps (University of Sheffield)

The Congress was opened by one of the UK's most eminent geotechnical engineers, Professor John Burland and following the official necessities by the President of the IAEG, **Dr Niek Rengers**, the Congress began in earnest.

The opening event of the Congress was the IAEG's prestigious 3rd Hans Cloos Lecture which was delivered by **Dr Robert Schuster** of the USA on the subject of: "Urban landslides: socioeconomic impacts and overview of mitigation strategies". Dr Schuster was then awarded the Hans Cloos Medal by the President of the IAEG, Dr Niek Rengers. As well as the 12 technical themes, a special session was held in recognition of the outstanding contribution to engineering geology of Professor Asher Shadmon, the first President of the IAEG.

The 12 keynote lectures were delivered by leading researchers and practitioners from the UK and around the world. The keynote papers and papers by the Theme chairs and rapporteurs, together with an introductory paper, will be included in a book to be published by the Geological Society in late in 2007 or 2008. Inserted in the book will be a CD-ROM that includes all the delegate papers.

On the last day of the Congress, a series of field trips was organised. The field trips looked at gypsum dissolution in Ripon, North Yorkshire (thank you Tony Cooper), landslides and abandoned metalliferous mines in the Peak District of Derbyshire (thank you **Laurance Donnelly**) and building stones and artificial caves in Nottingham (thank you **Tony Waltham**) and were very popular.

Despite initial fears about numbers, the Congress was very successful, attracting around 400 delegates who submitted about 450 papers, all of which were reviewed by a panel of reviewers and editors. Because of the success of the Congress, it was able to return a surplus to the Geological Society (who very generously supported the Congress throughout (thank you **Edmund Nickless**) and the IAEG.

One of the non-scientific highlights of the Congress was the interaction between delegates. This was brought about by the vast majority of delegates staying in accommodation on the Congress site (managed by the University of Nottingham). It was a joy to see hundreds of engineering geologists from dozens of countries in animated discussion in the bar most evenings! It felt just like the old Engineering Group Annual Conferences, and all the better for that!

Martin Culshaw



Prof. John Burland



Glossop Award winner Joe Appleby with Lady Chitty



Glossop Lecturer Prof. Robin Fell with Lady Chitty

The 10th International Congress of the International Association of Engineering Geology and the Environment was held in Nottingham from the 6th to 10th September 2006 on the Jubilee Campus of the University of Nottingham. The Congress was hosted by the Engineering Group of the Geological Society of London. The theme of the Congress was Engineering for Tomorrow's Cities addressing issues associated with the rapid emergence of new cities in developing countries and the enlargement and regeneration of old cities.

Over the four days, the Congress had 12 themes organised in a series of parallel sessions each with a keynote speaker with poster displays of research work related to the themes. The speakers discussed and debated the engineering geological issues raised by the development of the urban environment, the impact of environmental change on engineering construction and practical considerations for the future. There were poster displays of all papers submitted and a series of open meetings and seminars of various commissions and working parties. A day of UK based field trips looked at the engineering geology of the Peak District, the engineering geology of subsidence hazards in North Yorkshire, a geological walk around Nottingham and a four day trip to study the engineering geology of the Alp Transit Rail tunnel in Switzerland, followed the Congress.

On Thursday 7th September the opening address was given by the then current chair of the IAEG **Niek Rengers** of ITC and was followed by the opening lecture given by **Prof. John Burland**. Prof. Burland underlined the huge engineering challenges which face us due to the rapid acceleration of urban population growth. Following the opening lecture, Dr Rengers presented the Hans Cloos Prize to **Dr Robert Schuster**. The Hans Cloos Lecture was entitled 'Urban Landslides: socioeconomic impacts and overview of megacities strategies'. Dr Schuster highlighted the reality that the expansion of urban areas commonly includes construction on potentially unstable hillsides. He presented a number of case histories and discussed potential methods of addressing these issues within a planning and development framework.

The *geology of megacities and urban areas* session was chaired by Dr Rengers. The keynote lecture was given by **Prof. de Mulder** who described the challenges facing many cities owing to rapid urbanisation. Prof. de Mulder explained that geohazards need to be considered at planning and development stage through identification of potential problems, production of hazard and risk maps and the development and implementation of solution-oriented strategies. Dr Rengers described this discipline as

'medical geology'. He predicted that the focus for development of the city would be the improvement of the quality of life with the potential use of subsurface structures with sustainability being critical to urban management in the future.

Within the *environment urban geotechnics* session **Prof. Stephan Jefferis** presented a provocative keynote speech on current attitudes towards sustainability within geotechnics, concluding with a strong message that sustainability is here to stay and challenging us as engineering geologists to look to the future and help shape the environment. It is anticipated that by 2050 our carbon allowance will be 1 tonne per year and will result in a radical change to our current lifestyle. He envisaged that the biggest threat to the adaptation of sustainable solutions is political instability and international security.

The *future of engineering geology* session was chaired by **Fred Baynes** and saw a number of thought provoking papers on the role of engineering geology and the issues affecting the future development of engineering geology. **Prof. Jim Griffiths** raised concern over the decline in student numbers on graduate and postgraduate courses. **Dr Bob Tepel** presented the 'Core Value of Engineering Geology' from the Joint European Working Group (2004). The recent introduction of FIGS (Federation of International Geo-Engineering Societies) process was introduced by **Dr Helmut Bock**. The second half of the session was dedicated to discussion. Key challenges for the future were identified as: communication with and education of non-professionals; raising the profile of engineering geology, utilising current media and public interest in natural disasters. Engineering geologists need to think about how are we telling our story and can we tell it better? It was concluded that improvement could be achieved through communication, competition, codes and commission work such as that undertaken by the FIGS.

The *legacy of the past and future climate change* session chaired by **Judith Nathanail** feature keynote speaker **Dr John Rees** from the British Geological Survey. Dr Rees talked about the impact of climate change on landsliding, coastal erosion, subsidence and flooding and the impacts of past activities such as mining and industry on engineering geology. National and regional databases and models exist for natural and mining hazards. However, the impact of contamination from past activities is modelled on a local level only. The effects of global warming add another level of uncertainty in geotechnical design. More research is needed on assessing the effect of past activities on geotechnical properties and groundwater dynamics

and also the interface between rocks, soils and the coastal zone.

The *urban site investigation* theme was chaired by **Dr Jan Hellings** with a keynote speech from **Prof. Chris Clayton**. Prof. Clayton underlined the importance of accepting that there is always uncertainty associated with a project, particularly for brownfield sites. A well considered phased ground investigation aims to reduce uncertainty only, it cannot remove it. Expert knowledge and desk studies are essential with a risk based approach being required. The residual uncertainty in ground investigation data was the main focus of the discussion. It was noted that there was sometimes a dangerous perception that providing a model rules out uncertainty and we should not be afraid to highlight residual uncertainty.

The *geodata for the urban environment* session was chaired by **Jeff Keaton** with keynote speaker **Dr Robert Hack**. In the past construction was often carried out using a 'trial and error' approach. Today we favour modelling and further testing. To facilitate this, appropriate geodata is required. Dr Hack posed the question; will the requirement for geodata increase in the future? It is likely that with the recent developments in data management and interfaces, such as GIS packages, the added value of valuable visualisation and analytical tools that the requirement for geodata will increase rapidly.

The evening of the 8th September saw the presentation of the *Engineering Group of the Geological Society's Glossop Lecture and Glossop Award*. The Glossop Award was won by **Joe Appleby** of Atkins who gave a presentation entitled 'Reedness river bank stability – an engineering geological approach'. The Glossop Lecture was given by **Emeritus Professor Robin Fell** from the University of New South Wales on 'Rapid Landslides – the importance of understanding mechanisms and mechanics'. Rapid landslides have the potential to cause loss of life and major damage. Prof. Fell discussed the importance of understanding the mechanism of landsliding, the mechanics of the surface of rupture and internal and lateral shear surfaces, ground and surface water and landslide geometry in the prediction of how rapid soil and rock landslides are likely to travel.

The session on *infrastructure for the city* and its region was chaired by **Doug Allenby** with a keynote speech by **Prof. Giulia Viggiani** of Università di Roma Tor Verata on the development of underground railways in Napoli and Roma. Prof. Viggiani presented case studies on the prediction of excavation-induced movements in urban areas of historical and archaeological interest. She demonstrated the

development and use of predictive models for excavation-induced ground movements and described the process of deriving the ground model, increasing complexity of analysis, instrumentation and monitoring. Impressive correlations between the predictive models and actual ground movements were observed.

The *dereliction, pollution and contaminated land* session was chaired by **Allen Hatheway**. Keynote speaker **Paul Nathanail** from the University of Nottingham discussed the role of engineering geology in risk based land contamination management. Key skills of site, contamination source and ground characterisation are essential to contaminated land management and along with long term monitoring are used to develop a risk assessment, select a strategy for remediation and implement and remedial design. Engineering geologists therefore play a key role in contaminated land management for sustainable regeneration as we create tomorrow's cities.

Martin Culshaw chaired the *planning and geohazards* session. Keynote speaker **Dr Sergio Mora** from the IADB delivered a stimulating presentation entitled 'Disasters are not natural'. Dr Mora demonstrated how risk management can be incorporated into the planning process to prevent so called 'natural' disasters. Urbanisation is the trigger of many geohazards. For a disaster to occur there needs to be both hazard and vulnerability. He stressed that engineering geologists should use knowledge and understanding of the causes and consequence of natural hazards to influence the decision makers. Risk management should be used to focus on avoiding exposure through planning rather than looking to mitigate the consequences of natural hazards when they occur. Financial resources used post-disaster would be better spent on disaster prevention.

The *substructures and underground space* session was chaired by **David Chapman** with a keynote speech by **Prof. Chris Rogers**. He described how underground construction can be sustainable in terms of economy, society and environment. In accordance with Bruntland's definition of sustainability as 'meeting the needs of the present without compromising the ability of the future generations to meet their own needs', every project should have a design life and design should consider future reuse. It is expected that in the future almost everything excavated would become a resource. He concluded that our client is the society and for its service we should do our best to avoid 'the unknown unknowns' and should try to envisage different future scenarios within today's projects.

Resources for the city was chaired by **Lars Persson**, featuring keynote speaker **Bjorn Schouenborg**. The session discussed industrial minerals, groundwater supply and quality, planning versus exploitation and waste disposal.

The *urban landslides* session, held on the final morning, was chaired by **Eddie Bromhead** with a keynote speech by **Prof. David Petley**. Prof. Petley described the impact of urban landslides and demonstrated the correlation between seismicity, tropical climate and large fatality-causing urban landslides. Rainfall and seismic activity play a dominant role but social aspects define the impact. Fatalities are rising over time in relation to climate change, population growth and infrastructure development. Prof. Petley called for more research to be undertaken in the low-latitude landslide prone areas where rates of urban growth are high.

Alison Littlejohn, Jenny Hambling, Alex Fernandes and Sarah Chilton



Prof. Jim Griffiths



Prof. Richard Fortey



Niek Rengers and Hans Cloos Medal winner Dr Robert Schuster



Distinguished delegates

Report on meeting
Planning the Reclamation of Hard Rock
and Limestone Quarries
University of Sheffield
Held on Tuesday 17th April 2007

This meeting was arranged to discuss problems, conflicts and solutions associated with the reclamation of hard rock and limestone quarries, many of which occur in upland rural settings, including National Parks and area of Outstanding Natural Beauty. This followed on from research carried out by the Environmental Consultancy - University of Sheffield (ECUS), Department of Civil and Structural Engineering - University of Sheffield and EDGE Consultants that had been funded by the Mineral Industries Research Association's Sustainable Land Won and Marine Dredges Aggregated Minerals Programme. All delegates received a free copy of the report 'Reclamation Planning in Hard rock Quarries: A Guide to Good Practice' which was produced as a result of this research. The seminar was sponsored by Scott Wilson's and Richies as well as ECUS, EDGE and the University of Sheffield who participated in the original research project.

The seminar programme is given in Figure 1. As this shows, the 15 speakers, drawn from the quarrying and minerals industry, interest groups such as the Campaign for the Protection of Rural England (CPRE), County and National Park mineral planning offices, researcher organisations and consultancies made presentations and there was a generous time allowed for general discussion. The first session was devoted to consideration of mineral planning issues and included a demonstration of an interactive CD, designed to assist with the visualisation of landscape at different stages in the life of a quarry. This was followed by a session on the opportunities and constraints on the design of quarry schemes, including the impact of the geological conditions and engineering approaches to avoiding instability problems. The afternoon was taken up by presentations on the effects of a lack of long-term planning in quarrying planning decisions and case histories of quarry reclamation schemes in the Peak District and North Yorkshire National Parks. In the final session, three different papers were given on planning and technical issues associated with the redevelopment of former quarry sites in urban areas. All the sessions stimulated much lively discussion.

About one third of the delegates were from consultancies, one third from the quarrying and minerals industry and the reminding third were from planning authorities, academia, research organisations and charities. Feedback on the seminar was received from 36 delegates who gave the ratings.

The average response for all questions was better than 'Good'. Unfortunately, a few delegates rated the delegate materials and the facilities as poor but these were greatly exceeded by those who rated these and other aspects as excellent. Some of the written comments indicated that with a basic charge to Geological Society Fellows of £50 and £60 for non Fellows, the seminar was regarded as excellent value for money in view of the standard of catering and printed material that was provided.

The seminar was followed on Wednesday 18th April by a day of visits to five quarries and quarry sites in Sheffield and the Peak District National Park. This was offered as an optional activity and based on the responses on the booking form, approximately 15 people were expected. It was disappointing that there were only three people took part in these visits, especially in view of the excellent weather and the provisions made by the host companies. However, all three participants felt the time was well spent and much appreciated what they saw.

Arrangements are in hand to place the seminar presentations on a web site so that they are more widely available and the possibilities for publishing at least part of the proceedings are being investigated. In addition the final revisions to the report on 'Reclamation Planning of Hard Rock Quarries: A Guide to Good Practice' are being undertaken.

J. C. Cripps,
Department of Civil and Structural Engineering,
University of Sheffield.

29 May 2007

Diary of an Engineering Geologist By Chloe French



My name is Chloe French and I am an Engineering Geologist. I didn't always know this was where I would end up, but I knew I would be outside and it would have something to do with rocks.

September 1997

I enrolled at New College, Telford to do my A-Levels, amongst which was geology. In our first geology lesson our tutor, Anna Hycyszyn a.k.a Miss H, asked why we were here. Of course the exciting parts of geology cropped up, in fact I said, 'I'm particularly interested in seismology and vulcanology.' I knew the words and was going to use them! I was off on the road to a career in geology.

December 2001

I was in my second year of BSc (Hons) Geology at Cardiff University, studying but also 'in office' as President of The Cardiff University Geological Society. Part of our work in Geol. Soc was to organise guest speakers, specifically specialists from various areas of geology. This got me thinking, I knew in the third year I was going to focus my modules towards structural and hard rock geology, but what was I going to do after that?

I scoured websites and journals for jobs. I didn't think I was ready to do a PhD and the jobs that appealed to me required experience and/or higher qualifications. So I stayed at Cardiff University to do the MSc in Applied Environmental Geology. I focused on the rock engineering, soil mechanics and geomorphology modules and the course involved a work placement, meaning I got some industrial experience too.

June 2004

At the end of my work placement with WSP Environmental in Birmingham I was offered a permanent position. After a year the commute to Birmingham from my home in Telford was exhausting me, so I moved to Scott Wilson who have a Geotechnical department in their Telford office.

I had done some earthworks design at WSP, but now I began using that knowledge to develop ground models using SlopeW for projects all over the UK.

I was soon mucking in with the Geotechnical earthworks design team for the Trent Valley Quadrupling (TV4) rail project. The railway needed to be expanded from two tracks to four. As part of the West Coast Route Modernisation Scheme, this project was massive!

I started out working with cross sections showing the existing railways earthworks, the proposed earthworks and the railway boundaries. Where the additional embankment or cutting would fit within the boundary as per the design we were home free. Where it did not.... we had to design something that did.

Not only did I work on TV4, and many other jobs, but I began my project management experience on a small job in Wednesbury. This is an area famous for its industrial heritage, including mining. This made the important desk study stage of the ground investigation design all the more crucial.

July 2005

Through graduate development courses I realized there was a lot going on that I didn't know about. So, in my yearly review I asked that should any short term overseas opportunities arise I would be interested.

Two weeks later I was on a plane to Sakhalin Island, Russian Federation, just off the far end of Siberia! The project involves the construction of two parallel pipelines, one carrying oil, the other gas from off-shore platforms. The pipelines will carry the oil and gas to the southern tip of the island to a sea-ice free location where it can be exported all year round. The sea freezing in the northern part of the island for much of the year puts something of a damper on that!

September 2007

Short term they said, two years on and I am still traveling to Sakhalin and having a ball! My time is split between the U.K. and Sakhalin. In the U.K. I have continued my involvement in road, railways and development projects expanding both my technical and project management experience. In Sakhalin I have applied the geomorphological skills learnt from my MSc course and have spent most of my time looking for landslides, mapping and assessing them and logging the rock and soils within them.

Communication is key to my work. For example, if I see unstable material in the trenches excavated for the pipelines, I have to quickly report what I see and explain why it is an issue. Then a rapid solution can be figured out. If I can't explain why it is a problem, how will the construction team know how best to resolve it?

The Future



My work in Sakhalin triggered me to go back to my A-Level college and talk to my geology tutor, I then started talking to A-level students about how I got to where I am and some of the options open to them. This expanded and I became a guest speaker for their Applied Geology module too.

The Engineering Group of the Geological Society of London heard about what I was doing and have asked me to work with them to develop a programme of talks for people like you who may like to hear about a career in engineering and geology.

I'm not sure how long I can continue to do the A-Level talks, I'm creaking passed 26yrs old, so soon there will need to be more young geologists and engineers to do something new and interesting to get people like you enthusiastic about our industry.

For now, I am working in Sakhalin. In the Autumn I will go back to my A-Level college to do a Pre-UCAS talk and travel to London for my first Engineering Group committee meeting.

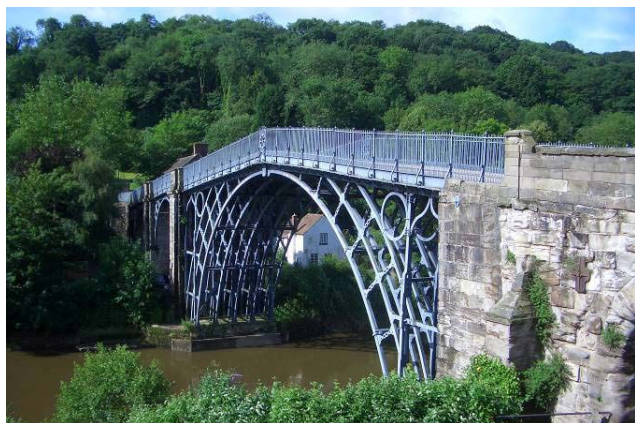
After that I will begin *serious* work towards my Chartership submissions for both geology (CGeol) and engineering (CEng) through the Geological Society of London and The Institute of Minerals, Materials and Minin.

There is a great deal going on in the Engineering Industry at all levels, all over the world. I'm having an amazing time and hope to continue pulling my boots on and hiking over hills in remote places for a long time to come.

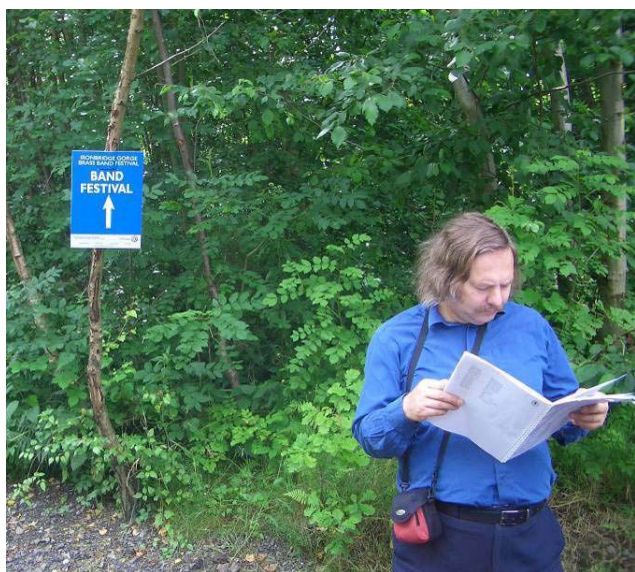
Annual Field Meeting
ENGINEERING GEOLOGY OF IRONBRIDGE
GORGE and SHROPSHIRE

Friday 30th June – Sunday 2nd July 2007

Great engineering geology, great venue, great beer and great food! Thanks are due to David Giles (University of Portsmouth), Neal Rushton (Telford & Wrekin Council & Shropshire Mines Trust) and Adrian Collings (Arup). For details of localities visited and background information visit http://userweb.port.ac.uk/~gilesd/Pages/engineering_group_ironbridge.htm



The Ironbridge



Lost? Adrian Collings



Coalport Tar Tunnel



Our hosts from Telford & Wrekin Council demonstrating the results of geohazard mapping of Ironbridge Gorge (Neal Rushton, left and Colin Pitcher).



Former Chairman, John Perry and friend



Underground again at Snailbeach Mine



Made in the mist – Ian Longworth



"What do you reckon Jn is then?"



It's not all geology. Well done Chloe French for recommending Sunday's pub, the White Horse Inn at Pulverbatch!

FORTHCOMING ENGINEERING GROUP EVENTS

11th March 2008 One Day Conference

'Reinforced Water – Engineering and Environmental Considerations in Construction over Peat'

Keynote speaker: Jeff Warburton (author '*Geomorphology of Upland Peat*').

Joint with Central Scotland Regional Group (see flyer attached)

British Geological Survey, Murchison House, Edinburgh

Convenor: Keith Salt (email: keith.salt@esgl.co.uk)

13th March 2008 Evening Meeting

'Dealing with construction waste'

Speakers: Paul Maliphant and Geoff Webber

Joint with Chartered Institution for Water & Environmental Management

Halcrow Offices, Burderop Park, Swindon

Convenor: Paul Maliphant (email: maliphantpc@halcrow.com)

19th March 2008 Rankine Lecture

'The engineering behaviour of fill – the use, misuse and disuse of case histories'

Dr Andrew Charles

Sherfield Building, Imperial College, London

Convenor: British Geotechnical Association

21st May 2008 Half Day Meeting

'Storage of Radioactive Waste'

Speakers to include: Phil Davies (NDA), Paul Robinson (NUKEM)

Joint with Hazards Forum

Burlington House

Convenor: Adrian Collings (email: adrian.collings@arup.com)

17th June 2008 Evening Meeting

'200 years of Engineering Geology'

(follows QJEGH Special Publication in May 2008)

Annual General Meeting and Engineering Group Award

Speakers: Martin Culshaw, Helen Reeves, Ron Williams, Ted Rose, John Charman, George Reeves

Burlington House

Convenor: David Waring (email: David.Waring@atkinsglobal.com)

TBA July 2007

Annual Engineering Group Field Trip

Bath

Convenor: David Giles (email: David.Giles@port.ac.uk)

3rd September 2008 Half Day Seminar

Theme - Engineering geology of major projects in East London

Speakers: TBA

Burlington House

Joint with Environment Group

Convenor: David Entwistle (email: dce@bgs.ac.uk)

4th September 2008 One Day Conference

'Subsidence-Collapse: Occurrence, Impact and Mitigation'

University of Birmingham

QJEGH Symposium in Print

Joint with West Midlands Geotechnical Group

Convenor: Ian Jefferson (email: i.jefferson@bham.ac.uk)

7th to 10th October 2008

4th European Geosynthetics conference

Edinburgh

Joint conference with the IGS

EGGS convenor: Paul Maliphant (email: MaliphantPC@halcrow.com)

15th October 2008

Theme - Offshore ground investigation practice and techniques

Speakers: TBA

Burlington House

Joint with the Society for Underwater Technology's Offshore Site Investigation and Geotechnics committee

Convenor: Chloe French (email: Chloe.French@scottwilson.com)

TBC November 2008 One Day Conference or Half Day Seminar

'Reduce risks for society caused by natural and man induced hazards'

Report of the Geohazards Working Party

University of Portsmouth

Joint with South East Regional Group

Convenor: David Giles (email: David.Giles@port.ac.uk)

13th November 2008 **Glossop Lecture, Award and Reception**

Title TBC

Speaker: Dr Mike de Freitas

Sherfield Lecture Theatre, Imperial College

Convenor: Chris Martin (email: chris.martin@arup.com)

Engineering Group events are arranged to be held both at Burlington House and at various venues around the UK. Full details of the meetings are posted on the Geological Society's website in advance of the meeting.

It is strongly recommended that you check with the Group's website (www.geolsoc.org.uk) immediately prior to the event, as details do sometimes change at very short notice.

Half day meetings at Burlington House normally commence at 1330hrs and evening meetings at 1730hrs. Tea and biscuits are served at 1300hrs and 1700hrs in the Lower Library preceding the meeting.

Evening meetings are free. There may be a modest charge for half-day and one-day events.

ENGINEERING GROUP PUBLICATIONS

The following is a complete list of titles produced by the Engineering Group. Those marked with an asterisk are available for purchase from the **Geological Society Bookshop** the remainder may be found in the Library.

EGSP 1: Aggregates: Sand & Gravel (1985)
 EGSP 2: Site Investigation Practice: Assessing BS 5930 (1986)
 EGSP 3: Groundwater Engineering Geology (1986)
 EGSP 4: Planning & Engineering Geology (1987)
 EGSP 5: Engineering Geology of Underground Movement (1988)
 EGSP 6: Field Testing In Engineering Geology (1990)
 EGSP 7: Quaternary Engineering Geology (1991)
 EGSP 8: Engineering Geology of Weak Rocks - *publ by Balkema* (1993)
 EGSP 9: Aggregates: Sand & Gravel (2nd edition) (1993)
 EGSP 10: Engineering Geology of Construction (1995)
 EGSP 11: Engineering Geology of Waste Disposal (1995)* *Limited*.
 EGSP 12: Modern Geophysics in Engineering Geology (1997)*
 EGSP 13: Advances in Aggregates and Armourstone Evaluation (1998)*
 EGSP 14: Contaminated Land & Groundwater (1998)
 EGSP 15: Geohazards in Engineering Geology (1998)*
 EGSP 16: Stone: Building Stone, Rockfill and Armourstone in Construction (1999)*
 EGSP 17: Aggregates: Sand & Gravel (3rd edition) (2001)*
 EGSP 18: Land Surface Evaluation in Engineering Practice (2001)*
 EGSP 19: Geophysics in Engineering Investigations - *publ by CIRIA* (2002)*
 EGSP 20: Coastal Chalk Cliff Instability (2004)*
 EGSP 21: Clay in Construction (2006) *

PHRTS: Tropical Residual Soils (1997)*
 MPB36: Coastal Defence and Earth Science Conservation (1998)
 KIMAP: Mapping in Engineering Geology (2002)*

The following Geological Society publications are currently in stock at the **Geological Society Bookshop** (<http://bookshop.geolsoc.org.uk>). Generous discounts are available to members.

Titles in Engineering Geology

SP157: Chemical Containment of Waste in the Geosphere, (1999)
 MPB39: Issues in Environmental Geology: a British Perspective, (1998)
 SP52: Phosphorite Research and Development, (1990)
 SP205: Natural Stone, Weathering Phenomena, Conservation Strategies and Case Studies, (2003)
 SP236: Energy, Waste & the Environment: A Geochemical Perspective, (2004)
 SP261: Fractal Analysis for Natural Hazards (2006)
 SP266: Function of Soils for Human Societies and the Environment (2007)
 SP271: Building Stone Decay: From Diagnosis to Conservation (2007)
 SP279: Natural and Anthropogenic Hazards in Karst Areas (2007)
 SP283: Mapping hazardous terrain using remote sensing (2007)
 SP296: Landscape Evolution: Denudation, Climate and Tectonics over Different Time and Space Scales (April 2008)

Titles in Hydrogeology

SP115: Global Continental Changes: the Context of Palaeohydrology (1996)
 SP128: Groundwater Contaminants and their Migrations (1998)
 SP182: Groundwater in the Celtic Regions: studies in hard rock & Quaternary hydrogeology (2001)
 SP130: Groundwater Pollution, Aquifer Recharge and Vulnerability (1998)
 SP189: Palaeowaters in coastal Europe: evolution of groundwater since the late Pleistocene (2001)
 SP193: Sustainable Groundwater Development (2002)
 SP198: Mine Water Hydrogeology and Geochemistry (2002)
 SP225: 200 Years of British Hydrogeology (2004)
 SP288: Climate change and groundwater (2008)

Titles in Geomechanics

SP263 Fluid flow and solute movement in sandstones (2007)
 SP270 Fractured reservoirs (2007)
 SP284 Rock physics and geomechanics in the study of reservoirs and repositories (2007)
 SP289 The relationship between damage and localisation (2007)

CONTINUING PROFESSIONAL DEVELOPMENT

It is our intent to list here issues relating to CPD including guidance on its administration and opportunities as to where and how to refresh or gain new knowledge and experience. The Geological Society website (www.geolsoc.org.uk) lists a range of CPD courses and this should also be consulted (follow the links on the Career page).

Listing here does not confer approval by either the Geological Society or the Engineering Group.

The training and professional development of engineering geologists, pre- and post- Charter, is supported by means of regular meetings, conferences, working parties, training guides, scientific publications and technical handbooks. Formal CPD accreditation for those aiming to become a Chartered Geologist is usually available for most Group events (see the *Event Convenor* at the event). Through the **Geotechnical Training Co-ordination Committee** (GTCC) - a joint initiative of the British Geotechnical Association, Association of Geotechnical Specialists and the Engineering Group - appropriate training for engineering geologists and those involved in geotechnics is being coordinated and promoted. The GTCC has the following objectives:-

- To collate information on existing courses suitable for the training of geotechnical professionals in the broadest sense (engineering geology, geotechnical engineering, engineering geophysics, rock mechanics, contaminated land, etc) and to distribute this information to its members;
 - To consider the gaps in training provision and to either fill these gaps by asking its member groups to run courses or encourage other organisations to do so.
-

UNIVERSITY OF PORTSMOUTH

Courses offered include:-



- **Soil and Rock Description to the new European Standard**
- **An Introduction to Landslides and Slope Stability**
- **Introduction to Geological Remote Sensing and Geographical Information Systems**
- **Introduction to Geology and Basic Field Geology**

The University of Portsmouth has developed bespoke CPD courses for the professional practising in the field of Civil and Geotechnical Engineering and Engineering Geology. The CPD programme is being co-ordinated by Nick Koor; an Engineering Geologist with over twenty year's international consulting experience in geotechnical and geological engineering in Europe, South East Asia and China. We therefore have direct insight and a deep understanding of what young professionals require from a CPD course

<http://www.port.ac.uk/departments/academic/sees/continuingprofessionaldevelopment/>

For further details of the course content, dates, fees and programme of activities please contact Nick Koor:

Tel: +44 (0)23 9284 2413

Fax: +44 (0)23 9284 2244

Email: nick.koor@port.ac.uk

OTHER EVENTS and CONFERENCES



Birmingham, UK
12th International Conference
Ground Penetrating Radar 2008
15-19 June 2008

Participants will enjoy an exciting journey through the wide range of applications, beginning at their front door with utility detection, moving through many infrastructure areas including roads, railways and structures to the environment, both ancient and modern, with archaeology and issues of major "green concern", for example glaciology in polar regions, hydrogeology, geology and sedimentology. The journey concludes with sub-surface investigations on the Moon and Mars.

For further details contact:

michelle.webb@pipehawk.com
www.gpr2008.org.uk



Cardiff, UK
Extractive Industry Geology Conference

25th - 27th June 2008

Please note the deadline for early bird booking rates is 25th April 2008 - please get your booking forms back as soon as possible to guarantee your attendance.

More information at: www.eigconference.org or from jeremy.elvins@lafargecement.co.uk

Xi'an, China
10th International Symposium On
Landslides And Engineered Slopes
30 June - 4 July 2008

More Info at: <http://www.landslide.iwhr.com/>

Kathmandu, Nepal
Fifth IAEG Asian Regional Conference on
Engineering Geology for major Infrastructure Development and Natural Hazards Mitigation
30 June - 4 July 2008

Nepal Geological Society in collaboration with

International Association for Engineering Geology and the Environment (IAEG), and Nepal Geological Society, P O Box 231, Kathmandu, Nepal

mailto:iaegnepal@ngs.org.np

More Info at: <http://www.ngs.org.np/iaeg.htm>

Kuala Lumpur, Malaysia
5th International Conference on
Landslides, slope stability & the safety of infrastructures
24 - 26 July 2008

For further information www.cipremier.com

Kuala Lumpur, Malaysia
An international conference on
'Recent advances in engineering geology'
28 - 30 July 2008

For further information www.cipremier.com

Washington, D.C., USA
6th International Conference on
'Case histories in geotechnical engineering and symposium'
In honor of Professor James K. Mitchell
11 - 16 August 2008

Marriott Crystal Gateway, 1700 Jefferson Davis Highway, Arlington, VA 22202

For more details: <http://www.6icchg2008.org>



Edinburgh, UK
EUROGEO4
4th European Geosynthetics Conference
7th September to 10th September 2008

The conference is being organised by the UK Chapter of the International Geosynthetics Society under the auspices of the International Geosynthetics Society and is supported by the British Geotechnical Association, Scottish Geotechnical Group, Ground Forum and the Engineering Group of the Geological Society. The EuroGeo4 conference will debate the subject of **Geosynthetics in Civil Engineering Applications** within a three-day event comprising keynote lectures, paper presentations, discussions and poster sessions. For further details contact: Neil Dixon

N.Dixon@lboro.ac.uk
<http://www.eurogeo4.org/>



Madrid, Spain
**Euroengeo 2008, The city
and its underground
environment**
15 – 20 September 2008

<http://www.euroengeo.com/>

Sendai, Miyagi Prefecture, Japan
International Conference on
**Management of Landslide Hazard
in the Asia-Pacific Region**
11th -15th November 2008

Satellite symposium of the First World Landslide
Forum, Tokyo)

Prof. Dr. Toyohiko MIYAGI (miyagi@izcc.tohoku-gakuin.ac.jp) or Dr. Vishnu DANGOL
(vdangol@yahoo.com)

<http://japan.landslide-soc.org/index-e.html>

Chiangmai, Thailand
10 - 12 December 2008
3rd International Conference on
**Geotechnical & geoenvironmental
engineering, rock mechanics &
engineering geology: recent
advances**

For further information www.cipremier.com

ABOUT THE ENGINEERING GROUP

Established in 1963, as the first specialist group of the Geological Society, the Engineering Group provides the main focus in the UK for geologists concerned with practice and study of geology across a range of applications including; construction and the built environment, mining and mineral extraction, land use and environmental planning, waste disposal, the management of geohazards and environmental engineering. It includes at its core engineering geology and hydrogeology, the theme of the Geological Society's leading international journal, *Quarterly Journal of Engineering Geology and Hydrogeology*.

The Group's aims are to:-

- Provide a forum for the exchange of ideas and networking for research, education, training and business.
- Promote recognition of the role of the chartered geologist within society
- Represent member's interests in professional matters
- Guide training and career development of professional geologists
- Provide a resource base for those in education, research and practice worldwide
- Promote and support learning and research both in the UK and Internationally

The Group's members form the largest proportion of the chartered membership of the Geological Society and the training and development of professional geologists is paramount to our aims. The Group maintains strong links with the professional associations for geotechnical engineers, highway engineers, the Society's regional groups and others with an interest in engineering geology. The Group promotes co-operation with engineering geologists within Europe and is the UK representative of the **International Association of Engineering Geology (IAEG)**. The Group represents the Geological Society on the **Hazards Forum** and is a core member of **Ground Forum** established to promote and coordinate activities across the learned professional societies occupied with ground engineering. The Group confers the prestigious **Glossop Lecture** every year.

OUR INSIGNIA AND WILLIAM SMITH



Our insignia features William Smith (1769-1839), the 'father of English geology'. Born in Oxfordshire the son of a blacksmith, William Smith trained as a surveyor and came to prominence during the upsurge of canal construction in the end of the

18th Century. It was during the construction of canals around Bath that Smith recognized that the strata around could be placed in a repeatable certain order based on their fossil content. Smith travelled widely across the UK collecting samples and specimens and noting their disposition - his goal to produce a geological map of England and Wales. He achieved his goal, not without some controversy, in 1815. Smith's achievements were not only those of a geologist but also those of a civil engineer and surveyor - he was the UK's first pre-eminent engineering geologist. The Society now awards the William Smith medal in his commemoration each year for the highest achievement in applied geology.

HOW TO JOIN

The Group currently has no formal membership as all members of the Geological Society may attend any of our events. However, should you not be a member of the Geological Society and wish to join, please contact the Society's Membership Secretary at Burlington House.

IAEG

Members of the Society can also pay their fees for the **International Association for Engineering Geology and the Environment (IAEG)** through the Society. To join the IAEG see <http://www.iaeg.info/> and contact Rachel Boning (rachel.boning@geolsoc.org.uk). Members receive a copy of the Bulletin.

• Edinburgh
www.eurogeo4.org

If you would like to register to receive information about the conference direct to your email or have any questions about the conference then please email your details (including name, email, organisation name and address) to eurogeo4@eurogeo4.org

Organised by

The International Geosynthetics Society UK Chapter.
Under the auspices of: The International Geosynthetics Society.
With the support of: The British Geotechnical Association,
The Ground Forum, Scottish Geotechnical Group and
Engineering Group of the Geological Society



The Fourth European Geosynthetics Conference

Edinburgh Scotland
7th - 10th September 2008





Engineering Group of the Geological Society

Co-hosted by Central Scotland Regional Group of the Geological Society

One Day Event

Tuesday 11th March 2008

Reinforced Water – Engineering and Environmental Considerations in Construction over Peat

Venue: British Geological Survey, Murchison House, Edinburgh

Synopsis: The importance of sustainable engineering practices in peat uplands of the UK is increasing as political pressure for renewable energy technologies increases. The high environmental value afforded to peatlands has required that the positive impacts of upland developments are evaluated against the negative consequences for local peat areas and their often diverse and unique habitats.

Despite increasing encroachment into peatlands, investigations into the properties of peat have remained limited. Detailed site investigations in peatlands are notoriously difficult due to the nature of the materials, the relative difficulty of access to the remote uplands in which they are found, and the harsh climate. In such instances, standard geotechnical investigations are often not appropriate and specially designed site investigations are required.

This conference places peatlands in their geological, geographical and geotechnical context, provides a forum for presentation of case studies of engineering practices in peatlands, and aims to facilitate discussion into how best peatlands might be engineered in the future.

Speakers: The session will open with an overview of peat terrains and their unique characteristics by Dr Jeff Warburton (co-author of the recently published book “Geomorphology of Upland Peat”. Other speakers will be drawn from industry and will have been involved in significant site investigations or developments over peatlands in the UK. There are still slots available if you would like to contribute to this event.

The latest date for submission of abstracts for presentations is 19th February.

Responses to: Dr Kevin Salt (email: keith.salt@esgl.co.uk)



Geological Society
Burlington House
Piccadilly
London SW1V 0JU
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

Engineering Group of the Geological Society
Correspondence Address
Tracey Radford, EGGs Secretary
Atkins Ltd
Woodcote Grove
Ashley Road
Epsom, Surrey
KT18 5BW
Tel: +44 (0) 1372 754383
Fax: +44 (0) 1372 754499
Email: tracey.radford@atkinsglobal.com
Web: www.geolsoc.org.uk/engineering

- ☐ GSL website ☐ Email ☐ Poster ☐ Geoscientist ☐ Ground Engineering ☐ Other (state) _____
- ☐ We would like to keep you informed of future meetings and other Society activities. Please tick here if you do not want to receive such information.



Engineering Group of the Geological Society
and the



Chartered Institution of Water and Environmental Management (CIWEM)

Evening Lecture

Thursday 13th March 2008, 5.30 for 6.00pm

EurGeol Paul C Maliphant & Geoff Webber

Waste Management: Dealing with Construction Waste

Venue: Halcrow, Burderop Park, Swindon, Wiltshire, SN4 0QD

(directions see <http://www.halcrow.com/html/contact/offices/swindon.htm>)

Synopsis:

Two papers looking at modern approaches to the disposal of waste arising from demolition and construction operations.

Paper 1: Waste Minimisation on the Porth Relief Road. EurGeol Paul C Maliphant, Halcrow Group Limited

The £98M Porth Relief Road in the Rhondda Valley, South Wales which was opened in December 2006, comprises 8kms of carriageway and was the largest single road contract led by a UK local authority at that time. The scheme was delivered by an Integrated Project Team comprising Client/Contractor/Designer working in effective partnership which was set up based on client procurement best practice and utilised Early Contractor Involvement to ensure effective Value Engineering and achieve best value. Waste minimisation became a key driver during Value Engineering when the construction cost was reduced by £18M. Scheme alignment changes, earthworks design and reuse of residual earthworks and demolition surpluses to create two new development plateaus adjacent to the new highway were key to reusing or recycling some 96% of waste generated. Extensive contamination risk assessments facilitated the reuse of all site won materials in embankment/development plateau construction and in the formation of topsoil for landscaping use by blending it with composted green waste. Use of site won materials was therefore maximised and disposal to landfill was only required where site constraints prevented temporary stockpiling for subsequent reuse. Furthermore, Halcrow worked with Landtech (UK) Ltd to trial a new, successful protocol for eradication of Japanese knotweed (95% successful with one treatment) with disposal of infested soils on site in agreement with the Environment Agency and Countryside Council for Wales. The scheme has won awards from IHT and Constructing Excellence and is a finalist in the Geotechnical/Geoenvironmental Public Sector Project over 1M category of the inaugural 2008 Ground Engineering Awards.

Paper 2: Waste Acceptance Procedures – An Introduction to the New Requirements of the Landfill Directive, Geoff Webber, CEMEX UK Limited (formerly Ready Mixed Concrete).

The Waste Acceptance requirements of the Landfill Directive came into force in July 2005 via the Landfill (England & Wales) (Amendment) Regulations 2004. Two and half years later, there are many Companies wishing to dispose of their waste that have still to come to terms with these new requirements. The Regulations are more prescriptive than previous legislation, which almost inevitably, adds complexity to the process of disposing of waste.

This presentation will aim to explain the requirements for the inert waste sector and also set out the procedures that CEMEX has implemented to help customers comply with the new rules. To add to the difficulties of waste producers, the outstanding requirements of the Landfill Directive were introduced on 30th October 2007 including the requirement to treat all waste going to landfill. The final part of the presentation will briefly mention waste treatment and another, linked issue, the forthcoming introduction of Site Waste Management Plans.



Geological Society
Burlington House
Piccadilly
London SW1V 0JU
Tel: +44 (0)20 7434 9944
Fax: +44 (0)20 7439 8975
Email: enquiries@geolsoc.org.uk
Web: www.geolsoc.org.uk

Engineering Group of the Geological Society
Correspondence Address
Mrs Tracey Radford
Atkins
Woodcode, Ashley Road, Epsom, Surrey. KT18 5BW
Tel: 01372 754383
Fax: 01372 754499
Email: tracey.radford@atkinsglobal.com

Registered Charity No. 210161

About the Speakers:

Paul Maliphant is an Associate Director (Engineering Geology) with Halcrow Group Limited based in their Cardiff office. In a career including spells in nationalised industry, local authority and consultancy he has added value to schemes as diverse as opencast coal mines, major new highways, public sector buildings, regeneration and landslide stabilisation schemes, canal restoration, minerals research, ground subsidence risk and spoil heap management, due diligence and planning guidance. He has worked as an expert witness, mediator and arbitrator on landslides, impacts of river diversions and canal restoration projects. As project manager for Halcrow's multidisciplinary services on the Porth Relief Road for the last 10 years he was responsible to the Integrated Project Team developed to deliver the scheme for geotechnical advice, earthworks and drainage design, ecological services and the category III independent checker of the landmark Rheola bridge. Waste minimisation was a key aspect of this work and Halcrow also acted as planning and design consultants to secure consents to reuse some 130,000m³ of residual earthworks surpluses to create two new development plateaus adjacent to the scheme for the future benefit of the local populace.

Geoff Webber is a Principal Advisor - Waste Management for CEMEX (formerly Ready Mixed Concrete) based at their head office at Thorpe near Staines. Geoff has a degree in chemistry & geology but considers himself to be a chemist. In his early years he worked in the laboratory of the Greater London Council's Poisonous Waste Unit, analysing samples of waste from companies all over London. He has also spent 10 years at Kent County Council where he was responsible for the Waste Regulatory functions of the County. He has now been with RMC/CEMEX for nearly 20 years and provides advice to operating company personnel within the Group regarding waste regulatory matters. Over the years he has sat on several peer review panels for waste management papers for the (old) DoE and currently sits on two Landfill Regulation Group sub-committees (EA/DEFRA) where he represents the Quarry Products Association.

Convenor: EurGeol Paul C Maliphant (email: maliphantpc@halcrow.com)

Attendance confirmation:

There will be a CIWEM charge of £3.00 for this meeting, payable on the door. Coffee, tea and biscuits will be provided.

Please note that places will be limited and allocated on a first come first served basis. Please book early to ensure your place. Attendance at evening meetings counts towards CPD and Structured Training

Please reserve me the following places(s) for the evening meeting to be held at Halcrow, Swindon on the 13th March 2008 _____CIWEM member(s) and / or _____GeolSoc member(s) and / or _____non-CIWEM/Geol Soc member(s).

Where did you hear about this meeting : Branch: ☐ Colleague : ☐ (Other) : _____

Your Name : _____ Fax : _____

Organisation : _____ Email: _____

Please list names of attendees : 1 _____ (CIWEM/Geol Soc/non CIWEM or Geol Soc)

2 _____ (CIWEM/Geol Soc/non CIWEM or Geol Soc)

3 _____ (CIWEM/Geol Soc/non CIWEM or Geol Soc)

Please return to: Neil Tytler, Tytler Associates, 45 Deanfield Road, Henley-on-Thames, Oxon. RG9 1UG

Email: neil@tytlers.com Tel: 07802 441710