



The
Geological
Society

North West Regional Group Newsletter

Autumn 2011

Your guide to Geological Society events in the North West - 2011/12

Firstly a warm welcome back to all, following the summer recess. Once again it is time to start a new series of talks held by the Geological Society here in the North West, you will find more information in this newsletter and a handy single page poster of event listings.

Our last series of talks ended in May and were well attended with a range of interesting talks across geoscience disciplines. There were some changes to the programme as the year progressed and a couple of cancellations due to speaker commitments. I hope this did not cause too much inconvenience – hopefully there will be far fewer, if any, changes to this year's programme. I would encourage all members to keep an eye on the group's web pages which are updated regularly and will announce any revisions to the advertised programme. As ever, a flyer will be emailed to members in the week preceding each talk. If your email address has changed or for some reason you are not receiving our emails please drop me a message to geologicalsociety.northwest@gmail.com.

For the first time we have decided to move to wholly electronic distribution of this newsletter and programme so a paper copy will not be dropping onto your door mat this year. I hope this approach is acceptable, it does offer significant savings on postage which can be used instead to towards the programme of talks. For many I expect, the paper copy represented and unnecessary duplication of the programme already received by email, however any comments would be welcomed.

We have put together what is I hope both an interesting and topical series of talks. You'll no doubt notice that we have three talks this year which consider geological aspects of the nuclear industry, in particular the disposal of radioactive waste. This of course is an ever present 'hot topic' and I hope will be of interest to a large number of members. We also welcome two talks this year which look at Geohazards, one of which focused on the risks in the UK and the other considering theology and natural disasters. With the issue of Shale Gas resources in our region frequently being in the headlines it will no

doubt be of interest to see that we will be welcoming the British Geological Survey to speak on issues surrounding this topic. We missed out on a hydrogeology talk last year so I hope we can address that by offering a talk from the Environment Agency in the New Year.

Other events

A successful careers event was held in December 2010 by Manchester University's School of Earth, Atmospheric and Environmental Sciences. This event focused on career paths for undergraduate geoscientists with assistance from the Geological Society and a number of regional and national employers across industry, consultancy and academia. In light of the event success, another is planned for this year. The date is subject to final confirmation, but is likely to be in mid-December 2011. As this is not far away, the organisers would welcome support from possible employers. If you are able to provide a talk, stand or any other support, please drop an email to geologicalsociety.northwest@gmail.com.

I also understand that Liverpool University's Department of Earth and Ocean Science is keen to invite speakers to talk to their students about early stage career paths within the geological sciences. If you can help please do feel free to make contact using the same email above.

I hope that the programme of talks planned for 2011/12 provides an interesting range of topics and we welcome all attendees. Don't forget that attendance of talks and meetings is an important part of maintaining your record of Continued Professional Development (CPD).

We look forward to seeing you over the course of the next few months. Don't forget that the first talk is on Thursday 13th October at the University of Manchester. If you have any comments or questions regarding the events organised by the North West Regional Group please feel free to make contact using the details provided below. Finally as already mentioned, please do keep us up-to-date if your contact details change so we can keep you abreast of any changes to events.

Best Regards to all, on behalf of the Committee.
Chris Berryman
**Secretary to the Geological Society
North West Regional Group**



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North West Regional Group Programme

2011 / 2012

Date/Time	Speaker	Title	Venue
Thursday 13th October 2011 6.30pm	Dr. Trevor Jones (Managing Director - AdvanSci Limited)	"The Role of the Geologist in Radioactive Waste Disposal"	University of Manchester
Thursday 10th November 2011 6.30pm	Prof. John Reynolds (Managing Director - Reynolds International Ltd)	"The Role of Engineering Geophysics During Economic Austerity"	The Swan, Winwick
Thursday 8th December 2011 6.00pm for 6.30pm	Steve Majhu (Assistant Director Mining Services - Parsons Brinkerhoff)	"A Conceptual Design for a Geological Disposal Facility for the UK's Radioactive Wastes"	Birchwood Park
Thursday 26th January 2012 6.30pm	Sarah Scott (Senior Technical Specialist, Hydrogeology - Environment Agency)	"Ground Water Dependant Terrestrial Ecosystems"	The Swan, Winwick
January 2012 Date to be confirmed	AGM and Quiz Night	Details to be confirmed	
Thursday 23rd February 2012 6.30pm	Prof. Jon Lloyd (Professor of Geomicrobiology, University of Manchester)	"Hot Topics in Earth Sciences: The Geomicrobiology of the Nuclear Fuel Cycle"	University of Manchester
Thursday 22nd March 2012 6.30pm	Rev. Dr. David Chester (Reader in the Department of Geography at the University of Liverpool)	"Earthquakes, Volcanoes and God: Theological Perspectives on Natural Disasters"	University of Liverpool
Thursday 19th April 2012 6.30pm	Prof. Martin Culshaw (Visiting Honorary Professor, University of Birmingham and Honorary Research Associate at the BGS)	"Geohazards in the UK"	University of Manchester
Thursday 24th May 2012 6.00pm for 6.30pm	Ed Hough (Geologist and Team Leader, Data Capture and Best Practice - British Geological Survey)	"Shale Gas in the UK: what, where, why, how?"	Birchwood Park
Spring 2012 Date to be confirmed	Spring Field Trip	Details to be confirmed	

University of Manchester
Birchwood Park
The Swan, Winwick
University of Liverpool

Geology Lecture Theatre, Williamson Building, M13 9PL.
The Lecture Theatre, The Centre, Birchwood Park, WA3 6YN.
Upstairs Function Room, The Swan, Winwick, WA2 8LF.
Venue to be confirmed.

Contact: Event details will be emailed to members before each meeting and posted online at www.geolsoc.org.uk/nwrg. Please forward any enquiries to the Group Secretary, Chris Berryman: geologicalsociety.northwest@gmail.com

CPD: These events may be considered for contributing to a recognised Continuing Professional Development (CPD) scheme as part of personal development. Delegates should check their individual scheme requirements.

Selected Abstracts

A selection of abstracts available at time of going to press. Prior to each talk a flyer will be made available to provide a reminder of the talk, abstract, and speaker biography and venue details.

A Conceptual Design for a Geological Disposal Facility for the UK's Radioactive Wastes

Thursday 8th December 2011

As one of the pioneers of nuclear technology, the UK has accumulated a substantial legacy of radioactive waste from a variety of different nuclear programmes, both civil and defence-related. Some of this waste is already in storage, but most still forms part of existing facilities and will only become waste over the next several decades or so as these plants are decommissioned and cleaned-up. Demonstrating that the nuclear industry can satisfactorily deal with the radioactive waste that it has produced is crucial in gaining public confidence that legacy waste can be safely and economically managed as well as waste arising from any future programme of new build.

The development and construction of a Geological Disposal Facility for radioactive waste will be amongst the largest engineering programmes ever undertaken in this country. The nature of geological disposal makes it a unique and challenging project with first waste emplacement currently scheduled for 2040 and with an operational period of some 100 years.

This presentation provides an overview of the processes of waste emplacement and the lifecycle of the geological disposal facility as well as providing a snapshot of what such a facility may look like.

Steve Majhu: Assistant Director Mining Services - Parsons Brinckerhoff

Steven Majhu is an Assistant Director at Parsons Brinckerhoff (PB) and is responsible for business development and project management of work in the field of radioactive waste management. He has been involved with work on the geological disposal facility for the Radioactive Waste Management Directorate (RWMD formerly UK Nirex Ltd) since 2005 and most recently was lead author on a NDA published report which outlined illustrative designs for a geological disposal facility in a number of different geological settings. Steven has worked for Parsons Brinckerhoff for the last 3 years and holds a BSc (Hons) Geology and MSc in Micropalaeontology.

Hot Topics in Earth Sciences: Geomicrobiology of the Nuclear Fuel Cycle

Thursday 23rd February 2012

Microbial metabolism can have a controlling influence on the solubility of actinides and fission products in engineered and natural environments. In the "far field" surrounding a nuclear repository, microbial

processes can immobilise redox active radionuclides via respiratory processes that either change directly the oxidation state of the element, or produce new biogenic phases for enhanced sorption. In the "near field" of the repository, the direct and indirect impacts of microbial metabolism are less well characterised but have the potential to have a significant impact on wasteform evolution and radionuclide mobility, and must be incorporated into the safety case of the repository. Studies from a range of contrasting natural and engineered systems will highlight how microbial communities can respond to the radioactive inventory and the extreme (radio) chemistry of some disposed wasteforms, and ultimately control the biogeochemical fate of key radioactive elements.

Prof. Jon Lloyd: Professor of Geomicrobiology, University of Manchester, Royal Society Industrial Fellow and Senior Visiting Research Fellow, National Nuclear Laboratory

Earthquakes, Volcanoes and God: Theological Perspectives on Natural Disasters

Thursday 22nd March 2012

The Hebrew and Christian scriptures usually interpret disasters in terms of divine wrath visited on sinful people and nations, but discussion of catastrophes did not end at the close of the biblical era and continued throughout Christian history, with a number of alternative models being developed, some of which only became prominent following the devastation wrought by the Lisbon earthquake in 1755.

In the past few decades there has been a sea-change in both Christian attitudes towards disasters and in the ways in which losses are viewed by hazard researchers. From the perspective of the latter, an approach that envisions disasters as being primarily caused by extreme physical events has been largely replaced by one in which disasters are studied as social constructs, with emphasis being placed on human vulnerability. From the perspective of Christian theology much reflection on disasters, especially on earthquake which have occurred in South America, has resulted in greater prominence now being given to viewing disasters as events that represent institutional rather than individual human sinfulness, and which is manifested in national and international disparities in wealth, poverty, hazard preparedness and disaster losses.

Greater focus is also placed on Christian praxis, rather than merely trying to understand the nature of supposed divine responsibility. It is argued that these new hazard analytical and theological perspectives are synergetic: allowing on the one hand churches, their members as well as their leaders, more fully to engage in disaster relief; whilst, on the other, enabling civil defence planners more effectively to use the often considerable human and financial resources of Christian communities and their charitable agencies.

Rev. Dr. David Chester: Reader in the Department of Geography at the University of Liverpool

David K Chester obtained his PhD from the University of Aberdeen in 1978 and is currently Reader in the Department of Geography at the University of Liverpool. His research is primarily focused on natural hazards, including volcanoes, earthquakes and landslides, as well as geomorphology. In 1996, David obtained his Diploma of Theology from the University of Liverpool and he is an ordained minister of the Church of England. In this presentation, he brings together his academic and theological interests, as he has done in several of publications.

Geohazards in the UK

Thursday 19th April 2012

When the public becomes aware of geological hazards, it is usually because a catastrophic event such as an earthquake, a volcanic eruption or a tsunami has occurred elsewhere in the world. While Britain does experience these 'geohazards' very occasionally, their effect is usually small. Yet, geological hazards in the UK cause losses in terms of damage to buildings, structures and infrastructure of between £0.5bn and £1bn every year. In addition, people occasionally lose their life or are injured. The lecture will discuss the natural and artificial geological hazards that affect Britain. The difference between 'hazard' and 'risk' will be explained (even though all professional geologists should already know this!) Suggestions will be given as to how geological hazards can be mitigated and the risks reduced using the geological information already available to us.

Prof. Martin Culshaw: Visiting Honorary Professor, University of Birmingham and Honorary Research Associate at the BGS

Martin Culshaw is an independent researcher and consultant. Until April 2008 he was Director of Environment and Hazards at the British Geological Survey (BGS) and the Survey's Chief Engineering Geologist. He was a member of the BGS's Executive Committee and responsible for managing an applied geological research programme worth approximately £15 m. Previously, he managed the Survey's Physical Hazards Programme, the Urban Geoscience and Geological Hazards Programme, the Coastal and Engineering Geology Group and the Engineering Geology and Geophysics Group. He has been involved in engineering geological research, environmental and engineering geological mapping, geohazard assessment, site investigation, urban geoscience and the application of geology to land use planning for over thirty nine years. During this time he has spent a number of years overseas in Asia, Africa, Europe and Central America.

He is Visiting Honorary Professor in Engineering Geology in the School of Civil Engineering at the University of Birmingham and an Honorary Research Associate at the BGS. He has published over one

hundred and forty papers, books and articles and over a hundred and ten technical reports for the BGS, the UK, and overseas, government departments and private clients. He edited nine conference proceedings, as well as organising numerous meetings and conferences and serving on three journal editorial boards. He is currently an Assistant Editor of the Quarterly Journal of Engineering Geology and Hydrogeology. He received the Engineering Group of the Geological Society's Award for 1989, and was the Geological Society's Glossop Lecturer in 2004, receiving the Glossop Medal, and received the E B Burwell Jr Award from the Geological Society of America in 2006. In 2010 he was awarded the International Association for Engineering Geology and the Environment's Hans Cloos Medal. He has been an external examiner at the universities of Edinburgh, Imperial College London, Kwa-Zulu Natal, Manchester, Newcastle, Portsmouth, Pretoria and Sheffield and is currently a research project assessor at the University of Lisbon.

He has served on various committees and steering groups for the International Association for Engineering Geology and the Environment, the Geological Society, the Institution of Civil Engineers and the Construction Industry Research and Information Association. He was a trustee and member of Council of the Geological Society from 2005 to 2009 and a Vice President from 2007 to 2009.

Professor Culshaw was awarded The Hans Cloos Medal, the senior award presented by the International Association for Engineering Geology and the Environment (IAEG), at the IAEG Congress held in Auckland, in New Zealand. The Hans Cloos Medal is presented to an engineering geologist of outstanding merit in commemoration of the eponymous "founder of geomechanics". The recipient is a person of international repute who has made a major contribution to engineering geology in his/her written papers or to the development of engineering geology and/or the IAEG in their own area.

Geological Society of London National Events

A summary of national Geological Society events. This is by no means an exhaustive list so reference should be made to www.geolsoc.org.uk/events for further details and comprehensive listings of all Geological Society events across the UK and events organised by affiliated companies and organisations.

William Smith Meeting 2011

**Remote sensing of volcanoes & volcanic processes:
integrating observation & modelling**

4-5 October 2011

The Geological Society (Burlington House)

Poetry and Geology: A Celebration

10 October 2011

The Geological Society (Burlington House)

[Geological Atlas of the London Basin](#)

12 October 2011

The Geological Society (Burlington House)

[Exploring the Jurassic Coast](#)

13 October 2011

The Geological Society (Burlington House)

[Geological Disposal of Radioactive Waste: Underpinning Science and Technology](#)

18-20 October 2011

Loughborough University

[Earth's Atmosphere Trapped in Ice: 800,000 Years of Climate Change](#)

19 October 2011

[Lyell Meeting 2011](#)

[Islands: Palaeontology, Geology & Tectonics](#)

24 October 2011

[Founders' Day Lecture and Dinner 2011](#)

10 November 2011

The Geological Society (Burlington House & Le Meridien Piccadilly)

[Frontiers Meeting 2011: The coupling between tectonics and surface processes](#)

14 November 2011

The Geological Society (Burlington House)

[New Hydrocarbon Development Challenges and the Impact on Production Geosciences](#)

16 November 2011

The Geological Society (Burlington House)

[Carbon Capture and Storage](#)

22-23 November 2011

The Geological Society (Burlington House)

[Edinburgh Careers Day](#)

23 November 2011

Our Dynamic Earth, Edinburgh

[Geological Society Careers Day 2011](#)

7 December 2011

British Geological Survey, Nottingham

[Seismic Applications in Geotechnical Engineering](#)

13 December 2011

The Geological Society (Burlington House)

[Mineral Deposits and Their Global Strategic Supply](#)

14 December 2011

The Geological Society (Burlington House)

[Water Futures](#)

6-7 March 2012

The Geological Society (Burlington House)

[Rock deformation from field, experiments and theory](#)

[A meeting in honour of Professor E.H. Rutter](#)

30-31 May 2012

The Geological Society (Burlington House)

[Fermor 2012 : The Neoproterozoic Era; Evolution, Glaciation and Oxygenation](#)

19-21 September 2012

The Geological Society (Burlington House)

[Appreciating Physical Landscapes: Geotourism 1670 - 1970](#)

22-23 October 2012

The Geological Society (Burlington House)

www.geolsoc.org.uk/events

Our Friends in the North West

[Manchester Geological Association](#)

www.mangeolassoc.org.uk

Formed in 1925 to bring together professional and amateur geologists in and around Manchester, the Association is actively concerned in the conservation of key geological sites in the area. The Association organise field excursions during the summer to places such as the Lake District, Scotland, Peak District and North Wales. In the winter monthly lectures are held by expert speakers at the School of Earth, Atmospheric and Environmental Sciences at the University of Manchester. Quarterly newsletters giving full details of trips and other news are mailed to members.

[Liverpool Geological Society](#)

www.liverpoolgeologicalsociety.org.uk

Formed in 1859 the Society still flourishes, and is still composed overwhelmingly of ordinary people who have an interest in geology in all its many aspects - from volcanoes to floods, deserts and seas, mountains and glaciers, minerals and rocks, and fossils. Ever since the Society's first open meeting, on 10th January 1860, The Liverpool Geological Society has invited the knowledgeable and famous to come and tell all those interested in the wonders of the world and its even more amazing history, beginning some 4,600,000,000 years ago. All LGS indoor meetings are held the modern James Parsons Building at Liverpool John Moores University, Byrom Street Campus. The LGS offers programme illustrated practical sessions and field trips.

[North Wales Geology Association](#)

www.ampyx.org.uk/cdgc/cdgc

The North Wales Geology Association was established in 1994 to act as a focus for geologists in the North Wales area, to focus attention on the geology of North Wales and to promote the understanding of Geology within North Wales. The Association and draws upon the rich international experience of members, both amateur and professional, to create a wide-ranging programme of events. It is a branch (Local Group) of the Geologists' Association, an organisation that has existed for almost 150 years promoting the cause of the informed amateur geologist. Meetings are held along the North Wales Coast area on a monthly basis, indoors during the Winter and outdoors as appropriate during the Spring and Autumn. The Association also co-operates closely with the North Wales branch of the Open University Geological Society, whose meetings are primarily field-based.

[North West Branch of the Open University Geological Society](#)

www.ougs.org

The North West Branch is one of the largest OUGS branches, in terms of membership, with 238 members at the end of 2010. The branch covers a large geographical area from North Wales to the Scottish Border and includes the Isle of Man. However, the

majority of the branch members live in the central urban region, around Merseyside, Greater Manchester and Preston. The group is very active, organising monthly field trips from late February to October and lectures and/or social events during the winter months. If you are new to geology, one of the best ways to gain experience is to come along to the field trips where you will not only see real geology in its natural state but will also meet and learn from other members. If you are a more experienced geologist the group also looks forward to any input you are able to give. Over the past years field trips have taken the group to many parts of the British Isles (the Outer Hebrides in 2009) and they have also had the opportunity to visit more exotic geological areas worldwide such as Iceland, Italy (the Island of Elba in 2010), France and Hawaii. As well as providing interesting, enjoyable trips the group hope to provide useful practical experience for those involved with geological studies.

Geo-Conservation UK: The Association of UK RIGS Groups
www.ukrigs.org.uk

GeoConservationUK has a membership of over 50 Local Geoconservation Groups, lately known as RIGS Groups (Regionally Important Geological and geomorphological Sites) across the British Isles. GeoConservationUK exists to promote local "Geo" sites for education and public benefit and works towards a British Isles perspective, focusing on the common purposes and issues of local interest to Groups. Local RIGS Group details can be found online.

University of Manchester, School of Earth, Atmospheric and Environmental Sciences
www.seaes.manchester.ac.uk

Geology and related Earth Sciences have been studied at Manchester since 1851. Today the School is one of the largest Earth Sciences teaching and research centers in the UK, with around 30 academic staff and a similar number of specialist researchers and support staff. Research in the Department is funded by most of the major research councils (NERC, EPSRC, STFC, BBSRC), by the Royal Society, and by the petroleum, mineral and nuclear industries. The Department is housed in the Williamson Building on Oxford Road, at the centre of the campus, where the excellent facilities include lecture theatres, library- reading room, computer suites and laboratories for teaching and research. The latter include newly refurbished laboratories for isotope geochemistry, and for petroleum geoscience and (as part of the interdisciplinary Williamson Research Centre) new laboratories for high P/T work, geomicrobiology, geochemical kinetics, mineral and surface analysis, solution analysis and rock and mineral sample preparation.

University of Liverpool, Department of Earth and Ocean Sciences
www.liv.ac.uk/earth

The Department is highly rated for both teaching and research. In the most recent Research Assessment Exercise (Dec 2008) the department is rated as having 75% of academic staff as world leaders or of internationally recognised excellence in research. The department consistently achieves the highest ratings in government evaluations of teaching quality.

Geological Society North West Regional Group Contacts

Chairman: Andy Moore

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Andrew.moore@wspgroup.com

Secretary: Chris Berryman

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chrisberryman@terraconsult.co.uk, or
geologicalsociety.northwest@gmail.com

Website:

www.geolsoc.org.uk/nwrg

Email:

geologicalsociety.northwest@gmail.com

You can also join our groups on LinkedIn and Facebook where details of all events will be posted.



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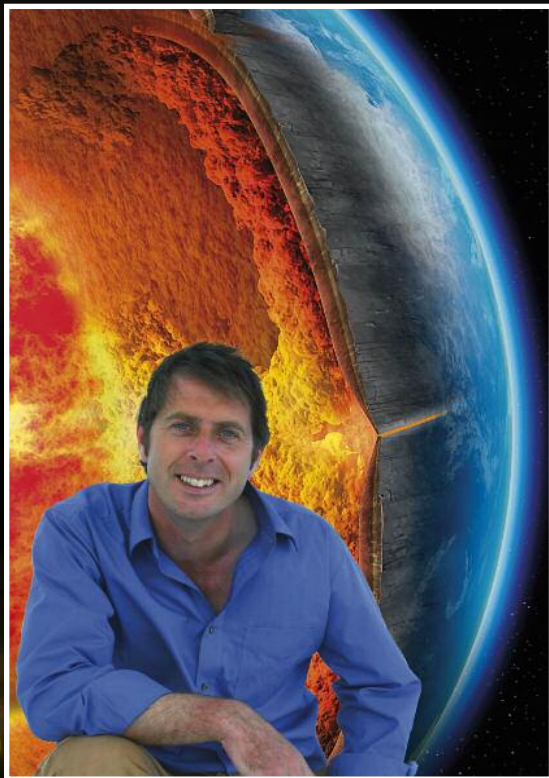


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Founders' Day

L E C T U R E & D I N N E R



Thursday 10 November 2011

Founders' Day Lecture

'A Succession of Worlds' – a journey through the foundations of modern geology

Speaker: Professor Iain Stewart,
University of Plymouth

Founders' Dinner

Venue: Le Meridien, Piccadilly

After dinner speaker: Professor Nick Petford,
Vice Chancellor, University of Northampton

Dress: Black Tie

Ticket price: £80

Timings:

18.00 Tea & coffee served, Burlington House

18.30 Lecture by Professor Iain Stewart

19.30 Drinks reception at Le Meridien

20.30 Dinner served

22.00 After dinner speaker

24.00 Carriages

Contact details:

Georgina Worrall,
The Geological Society, Burlington House,
Piccadilly, London W1J 0BG

T: 020 7434 9944

E: georgina.worrall@geolsoc.org.uk

W: www.geolsoc.org.uk/founders11

Booking form – please complete in capitals

Personal Details

First Name: _____ Surname: _____
Company: _____
Address: _____
Postcode: _____ Tel No: _____
Email: _____ Fellowship No (if applicable): _____

Registration Fees

Seats required – individual or table	Cost per place/table	Total number of places
Individual places	£80 each	
Table (10 places)	£800 per table	
Total	£	

DIETARY REQUIREMENTS

Do you, or any in your group, have special dietary requirements?

LECTURE ATTENDANCE

We will / will not be attending the lecture by Prof. Iain Stewart at Burlington House prior to the dinner.

Payment Details

I enclose a cheque for £ _____ made payable to the Geological Society

Please debit my Visa/Master/Amex/Switch card by the sum of £ _____

Card Number: _____ Expiry/Start Date: _____

Security Number (last 3 digits on black strip on back of card): _____

Issue number (if using Switch or Maestro): _____

Cardholder name / address if different from above: _____

Signature: _____ Date: _____

How did you hear about this event: _____

General Information

Full prepayment must accompany this booking form to guarantee a place/s. An email confirmation will be sent on receipt of your completed registration form. A VAT receipt may be issued **on request**. Notification of cancellation must be given at least 20 working days prior to the event for a refund to be given.

We would like to keep you informed about future meetings and other Society activities. Please tick here if you do not want to receive this information.

Please return this form to: Georgina Worrall, Conference Manager, Conference Office, Geological Society, Burlington House, Piccadilly, London, W1J 0BG. Tel: +44 (0) 20 7434 9944, Fax: +44 (0) 20 7494 0579. Email: georgina.worrall@geolsoc.org.uk