



The
Geological
Society

North West Regional Group Newsletter

Autumn 2012

Your guide to Geological Society events in the North West - 2012/13

We welcome you back to the regional group for a new season of lectures and fieldtrips. Although there has been a change in personnel within our committee, we hope that the transition has been fluid.

Looking Back at 2011/12

We had a great set of lectures which spanned the 2011/12 season, with many talks spread across the geosciences disciplines, and an excellent stand in lecture by Professor Brassington on the 'Geology of Beer'.

In February 2012, during the AGM, Chris Berryman stood down from his position of Group Secretary due to landing a very good job in Shrewsbury with ESI International. As he was moving out of area, Chris did not consider he could dedicate the time required to stay as Secretary. Andy Moore also stood down as Chair of the Group, but will remain within the committee. Both members have been stalwarts of the regional group over the many years they have been leading the committee, providing excellent seasons of lectures and fieldtrips. We hope that Chris will not be a stranger and hope to see him in the audience of lectures as well as on field trips. Mark Parkin was retained as Group Treasurer.

Malcolm Henderson was elected as the new Chair of the group and Nik Reynolds as the new Secretary. The committee was also boosted by the inclusion of Emma Stienne, Craig Wilkinson and Robert Hunt, bringing the number of committee members to 10. It should be noted that all members of the committee are volunteers.

Between the election in February and the summer recess the committee has been busy arranging a bumper season of talks for the new 2012/13 season, which we hope will be of interest to the majority of members.

We will have an unprecedented 10 lectures this season as well as the re-run of the Rankine Lecture. Within this season of lectures we will be linking with the Northwest ICE, North Wales Geologist Association and the Liverpool Geologist Association. The list of lectures has been added to the end of this newsletter with selected abstracts.

Our aim this season is to have pure geological lectures to remind us why we became geologists in the first instance; industrial lectures to keep those in industry up to date with advances in the geotechnical and environmental fields; as well as a chance to attend a meeting regarding becoming a scrutineer for the Chartership process.

We hope there is something for everyone here! If you have a subject that is geologically based and you think would be of interest to our members, please feel free to contact me and you will be considered for the 2013/2014 season.

It has been noted that many of the lectures during the 2011/2012 session have been sparsely attended with the lowest number being 4 members (excluding the speaker and the Group Secretary and Chair), and the greatest being 68. Considering we have over 700 members on our books, we presume that our members may be wanting something that we are not currently providing.

As noted on all fliers that are sent out, all of our lectures may be used as points towards Continued Professional Development (CPD) which is essential for progression through, as well as following, Chartership.

We appreciate the economic environment at the moment is somewhat in the doldrums; however, all of our evening lectures are free to attend, with attendance also open to non members.

For fieldtrips we do request nominal donations either to cover the cost of the fieldtrip if run by a third party, or to supplement our funds if we are running the fieldtrip. We are a charitable society and although we do not charge you for our lectures, we are charged for venue hire as well as, on occasion, for subsistence costs from speakers.

We will be looking at sending out a questionnaire soon to help us gauge what our members want from the regional group. We would appreciate this being completed as we would like to involve more of our members in the events we put on. At the end of the day, this is your society - tell us what you want!!

We look forward to seeing you at the events we provide during this season.

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, please do keep us up-to-date if your contact details change so we can keep you abreast of any changes to events. We are also on Facebook and LinkedIn, which are kept up to date with events.

Best Regards to you all, on behalf of the Committee.

Nik Reynolds
Secretary to the Geological Society
North West Regional Group



Field Trips 2012

Alderley Edge

We organised a tour to visit the copper mines of Alderley Edge on the 3rd of May 2012. Unfortunately, due to health and safety requirements, only 14 members were permitted to attend. Due to very high demand, we ended up organising a second trip the following week.



Having met at the Wizard our guide Nigel (of the Derbyshire Caving Club) took us for a surface tour of the Edge showing us faulting, shafts and quarrying.



Both tours were then taken down Engine Vein Mine. The trips, lasted approximately an hour each and we were shown the multiple phases of mining from Roman times to the late 19th Century/early 20th Century. Our guide's knowledge of the mineralogy and geology was second to none and was tested on many occasions. Within the mines we were shown fault planes and mineralised veins, as well as geological features, such as desiccation cracks and other sedimentary features associated with the Triassic age bedrock.

All members had a great time down the mine and we are currently considering taking a follow on tour of Wood Mine as an event for 2013/14.

Photographs of both events have been included on the Group's Facebook page. We would be pleased to include other photographs taken by members whilst down the mines on the Facebook page.



Engine Vein Seam at Alderley Edge

Mam Tor

9th September 2012

The Committee have decided to also run a summer field trip to Mam Tor to learn more about the infamous 'Shivering Mountain'.

Our fieldtrip will be loosely based on the IAEG fieldtrip run by Dr Laurance Donnelly in 2006. We are privileged to have Dr Ernie Rutter (Manchester University) accompanying us. Dr Rutter is currently monitoring the movement of the infamous landslides which are still active.



(Source: BGS website for Mam Tor)



We have e-mailed out Health and Safety forms with the flyer for this trip. If you wish to attend the trip and have not received the e-mail for any reason, please contact the group and we will forward the document. Due to the nature of the field trip, we cannot take people who have not filled out the health and safety form.



(Source: BGS website for Mam Tor)

Chartership Services

The Society are currently looking for mentors and scrutineers to guide prospective candidates through the processes to become Chartered. Dr Bill Gaskarth, will be presenting his guide to prospective scrutineers/mentors on the 8th November 2012. It should be noted that prospective CGeol candidates are likely to get a significant amount of useful information from this lecture.

We have been informed to date that within our region (Northwest England and North Wales), there are 786 members, of which 146 members are chartered as CGeol, with 19 members also chartered as CSci through the Geolsoc.

It should be noted that members may also be chartered for CSci through other societies and have not been included within the data. Of those members who have achieved CGeol status, 123 members have held this Chartership for more than 5 years. Currently there are only 5 mentors and 26 scrutineers.

If you are a CGeol, we will look forward to seeing you at this lecture and hope that the number of mentors/srutineers may be boosted to aid prospective CGeol candidates.

Demographics

From the data sent with the Chartership information we have also been able to assess the rough demographic spread of members across our remit area. We have condensed the data to the following:

Manchester - 303 members (including Blackburn, Bolton, Oldham, Stockport, Warrington and Wigan)

Chester/Liverpool - 126 members

Lancaster - 83 members (including Blackpool and Preston)

North Wales - 65 members (it should be noted that several areas of Northeast Wales are included within the Chester postcode area)

Crewe - 45 members

With regard to specialisations, over half the membership appears to also be within the engineering/environmental and hydrogeological groups, with more than half the membership having expertise in contaminated land, engineering and geotechnical engineering.

We do aim to be as inclusive as possible, and are attempting to spread the lecture series as best as we can, however we do need to know of about suitable venues to hold lectures. Should you know any reasonably priced venues within your area which we currently are not servicing (Lancashire/Crewe and North Wales) please contact us with your suggestions and we will look at hosting lectures within these regions.

The reason for locating many lectures in the Williamson is that we have a very reasonable agreement with the University, which can cater for 80 members, and the majority of members are within circa 30 minutes of centre.

For those members who are unsure about attending this venue due to parking, there are plenty of street parking positions around the University as well, as multi-storey car parks with reasonable evening rates.

Social Media

Just a reminder that we also have an active Facebook and LinkedIn webpage which we encourage you to visit. We try and keep these sites up to date with information regarding meetings and other relevant interesting geological bits and bobs we find!!!



<https://www.facebook.com/groups/geologicalsociety.northwest/?ref=ts>

and

http://www.linkedin.com/groups?gid=2737408&trk=hb_side_g



[Alderley Edge Copper Mine Explorers \(May 2012\)](#)



3rd May 2012



10th May 2012



Selected Abstracts for 2012/13 lecture season

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.

Potential reactivation of faulting due to former coal mining.

Thursday 13 September 2012

Williamson Lecture theatre, Manchester

Faults located in areas prone to mining subsidence are susceptible to reactivation. This may result in the generation of a scarp along the ground surface (also referred to by mining engineers, subsidence engineers and land surveyors as a 'step' or 'break line'). The surface expressions of reactivated faults, their geometry, morphology and size vary considerably. They range from subtle topographic deflections and flexures merely recognisable across agricultural land or road side verges, to distinct, high-angled fault scarp walls several metres high and a few kilometres long. More commonly, reactivated faults are less than a metre high, less than a metre wide and can be traced for considerable distances along the ground surface. Fault reactivation has in the past resulted in severe damage to surface structures (buildings, houses, industrial premises, bridges, dams, pylons and towers), services and utilities (sewers, water conveyances, gas mains, pipelines and communications cables) and transport networks (tracks, roads, motorways, railways, rivers and canals).

Frequently, reactivated faults have also disrupted agricultural land (through alteration of drainage and gradient). Fault reactivation may cause the first-time failure of natural slopes, high-walls in opencast mines, engineered cuttings, embankments and can influence stream flows, aquifers and the reactivation of ancient (post-glacial) landslides. Where Coal Measures are concealed by younger Permo-Triassic rocks, such as the Sherwood Sandstone and Magnesian Limestone formations, fissures may appear during construction, the development of the ground or following prolonged heavy rainfall.

Parts of the South Wales Coalfield contain huge fault scarp walls up to 4m high and several kilometres long and complex dilated fissure networks have dramatically disrupted the moorland slopes.

The disruption of the ground continues along valley crests and escarpments where deep seated rotational landslides have developed. But when and how did these striking morphological features occur and are they still active? Can fault reactivation be predicted and how may the associated ground deformation become mitigated?

Dr Laurance Donnelly is a professional, chartered geologist, with a First Class Honours Degree in Applied geology & Mineral Exploration and a PhD in Engineering Geology & geohazards.

Rankine Lecture - Performance-based design in geotechnical engineering

Joint Lecture with the ICE Northwest Group

Wednesday 10 October 2012

Renolds Building, Manchester

Engineering design consists of a sequence of decisions which should satisfy the client's objective performance requirements. This lecture will argue that an assessment of geotechnical performance must involve ground displacements, and that the traditional approach of specifying safety factors is potentially wasteful. In particular, the Limit State Design (LSD) approach adopted in the Eurocodes will be shown to lack objectivity and therefore to be inadequate to the needs of clients and society at large. Improvements will be proposed through the adoption of Mobilisable Strength Design (MSD) principles in which the designer explicitly considers the stress-strain behaviour of the ground.

Central to the MSD approach will be an assessment of the possible deformability and strength of the soil that lies within the anticipated deformation mechanism of the proposed geo-structure. Displacements are then calculated by applying the principle of conservation of energy to the deformation mechanism. This leaves the designer with an implicit assessment of deformations before any other checks which might later be made by Finite Element Analysis (FEA), and ensures that the intended design performance can always be checked by monitoring during construction. Examples of the application of MSD will include earth retaining structures, slopes and foundations.

Malcolm Bolton is Professor of Soil Mechanics at Cambridge University, Director of the Schofield Centre for Geotechnical and Construction Modelling, and head of the Geotechnical and Environmental Group in the Department of Engineering.



The Big Chill... Life, death, and destruction, a story from the end of the Ordovician

Joint Meeting with the North Wales Geologist Association

Thursday 25 October 2012

Chester University, Chester

Global warming, extinction episodes and rising sea levels are not new concerns for planet Earth. Whatever your position on the extent to which these phenomena are happening today, the evidence that such events happened some 444My ago seems unequivocal.

This talk will describe changes in the palaeogeography and palaeoecology recorded in the Hirnantian strata, focussing primarily on the Iapetus and Rhieic Ocean shelf sediments, seen in Scotland, Brittany and last, but by no means least, across the Welsh Basin.

Keith Nicholls will be known to many of the audience as a consequence of his "day-time" geotechnical role as Principal Engineer with Geotechnics Ltd in Saltney. Keith is however a "proper" geologist at heart, and two years ago registered at the University of Chester as a part-time PhD student undertaking a Research Project supervised (internally) by Professor Cynthia Burek and Dr Lottie Hosie, and with external supervision from Dr Kate Reynolds (Grosvenor Museum) and Professor Jerry Davies MBE (British Geological Survey). The title of his thesis is "A Geoconservation Perspective on the Trace Fossil Record associated with the Hirnantian Glaciation and Extinction Episode in the Welsh Basin" – due for completion in 2017.

Mentoring and Sponsors for Chartership - Geological Society of London.

Thursday 8 November 2012

Williamson Lecture theatre

The numbers of people applying for Chartership (CGeol and CSci) show no signs of falling, and so we need to increase the number of available Scrutineers. Anyone who has been Chartered for five or more years may apply to become a Scrutineer. The more recruits we get, the less often you will be asked! We hope to call on your services once (maximum twice) per year.

Chartership applicants of all kinds are encouraged to look for a Mentor within their employment organisation and to have him or her act as a Sponsor. Many candidates have found it impossible to locate an in-house Mentor and so have struggled to appreciate fully what is involved applying for Chartership.

This is an excellent opportunity to learn what will be required to become a mentor, as well as what is expected of prospective applicants.

Dr Bill Gaskarth is the Chartership Officer for the Geological Society of London.

Earthquakes, Volcanoes and God: Theological Perspectives on Natural Disasters

Joint Meeting with the Liverpool Geologist Association

Thursday 22nd November 2012

Liverpool University, Liverpool (TBC)

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.

This talk was originally billed for the 2011-12 season of lectures, however due to illness has been rescheduled for this season. We have had much interest in this talk when it was billed within the previous season of talks.

New Developments in Ground Gas Risk Assessment

Thursday 6th December 2012

Birchwood

Steve will present a summary of the current developments surrounding ground gas, its investigation and remediation. A number of case studies will be used to demonstrate how to achieve cost effective investigation of ground gas on Part IIA sites.

A new approach to gas risk assessment on low risk sites has been developed that removes the need for gas wells and monitoring on many sites. It will also reduce the amount of time required to undertake a ground gas investigation and risk assessment. The approach is an extension of the methods used in CIRIA C665 and BS8485 and provides an alternative method of determining the characteristic situation for a site.

A current CIRIA project is working to produce guidance on the verification and testing of gas protection measures. Steve will highlight some of the key findings of the project so far including the results of a laboratory test to assess the effectiveness of tracer gas testing.

Steve will also discuss a forthcoming British Standard on ground gas investigation and other developments.

Steve is a Chartered Engineer and Environmentalist with 30 years professional experience of geotechnical and environmental engineering. Steve has contributed to much of the UK guidance on ground gas assessment and remediation. He provides advice and designs for remediation schemes on gas affected sites around the world. He has successfully applied quantitative risk assessment to ground gas for both development and Part IIA sites over 20 years. He is co-author of the Local Authority Guide to Ground Gas and is currently a member of the drafting committee for a British Standard on ground gas investigation. He is also a member of the research team for a CIRIA project on the verification and integrity testing of gas protection systems.

Steve presents training courses on ground gas for the Chartered Institution of Environmental Health, CIRIA and Universities.

Subjects for 2013

The Gas Industry, its Social Importance and Environmental Legacy

Dr Russell Thomas

Thursday 17th January 2013, Venue tbc

Forensic Geology

Dr Laurance Donnelly

Thursday 13 February 2013, Venue Williamson Lecture theatre

Current Activities of the British Geological Survey in the Northwest of England

Ed Hough

Thursday 14 March, Venue Williamson Lecture theatre

Contaminated Land Lecture

TBC

11th April 2013, Venue Williamson Lecture Theatre

Current Activities of the Environment Agency with regard to Groundwater in the Northwest of England

TBC

9 May 2013

Please note that all dates and venues are provisional and may be amended due to unforeseen circumstances. The Northwest Regional Group will forward fliers nearer the date of the lecture to confirm both venue and date. Should events be cancelled, a notification will be forwarded via e-mail.

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.



The
Geological
Society

servicing science & profession

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

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(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



Combined Programme for 2012/13

09/09/12	Mam Tor	Craig Williamson/ Dr E Rutter	NWGS	Field Trip
13/09/12	Potential reactivation of faulting due to former coal mining.	Dr Laurance Donnelly	NWGS	Williamson
18/09/12	Fracking	Mark Miller, Cuadrilla	IMechE ICE	John Dalton Building, Manchester.
19/09/12	Misunderstanding, myth or might be? The discovery of upper Palaeolithic rock art in South Wales	Dr George Nash	NWGA	Pensychnant, Conwy (7:30pm)
10/10/12	Rankine Lecture -Performance based design in geotech engineering	Prof Malcolm Bolton	ICE/ NWGS	Renold Building
10/10/12	Carbonate deposition in the Cayman Isles	Dr Hilary Corlett	MGS	Williamson
25/10/12	The Big Chill - Life, death, and destruction, a story from the end of the Ordovician	Keith Nicholls	NWGS/ NWGA	Beswick Lecture Theatre, Chester University
26/10 to 05/11 Autumn Half Term				
6/11/12	Menai Bridge	Andy Fewtrell	ICE	Renold Building
7/11/12	SMiRT Soil Mixing Technology	Rob Sweeney	ICE	Birchwood
7/11/12	Plants through the ages	Nigel Brown	NWGA	University of Bangor
8/11/12	Chartership mentor and sponsorship	Bill Gasgarth	NWGS	Williamson
10/11/12	Some early Northwest Geologists (seminar)	Numerous (13:30)	MGA	Williamson
22/11/12	Earthquakes, Volcanoes & God - Theological perspective on natural disasters	Rev Dr Chester	NWGS	James Parsons Building,
05/12/12	Remediation of Sportcity Mineshaft	Jack Rowley	ICE	Renold Building
6/12/12	Early Iron Industrial Activity in South Cumbria	J Quatermaine	ICE	Crooklands Hotel
06/12/12	Ground gas mitigation	Steve Wilson	NWGS	Birchwood
08/12/12	A tour of the Outer Hebrides	Drs Doug Fettes & John Mendum	MGA	Williamson
TBC	Christmas social		NWGS	TBC
21/12/12 - 07/01/13 Christmas Holidays				
9/01/13	Foundations for Fuel 40 years of geotechnical experience (BP)	Mike Sweeney	ICE	Foster Building, Preston
12/01/13	Broadhurst Lectures - Palaeontology of China	Numerous (13:30)	MGA	Williamson
17/01/13	The Gas Industry, its Social Importance and Environmental Legacy	Dr Russell Thomas	NWGS	Birchwood
06/02/13	The next generation of wind farms	Paul Taylor	ICE	Renold Building
13/02/13	Forensic Geology	Dr Laurance Donnelly	NWGS	Swan, Winwick
13/02/13	AGM & Middle Jurassic of Ketton, Rutland	Peter del Strother	MGA	Williamson
15/2 to 25/2/13 Spring Half term				
06/03/13	Liverpool WWTW Wellington Dock Infilling (UU)	David Jones,	ICE	James Parsons Building
12/03/13	Icelandic Volcanoes	Prof Fiona Tweed	MGA	Williamson
14/03/13	BGS in the northwest in 2013	Ed Hough	NWGS	Williamson
28/03 to 15/04 Easter Holidays				
18/04/13	Contaminated Land Guidance	TBA	NWGS	Williamson
24/04/13	Site Investigation associated with the Mersey Gateway	Rombolt	ICE	Birchwood
09/05/13	Status with groundwater investigations	TBA	NWGS	Williamson
24/05-10/06/13 Summer Half Term				
TBC	Speedwell Caverns	Speedwell	NWGS	Field Trip

NWGS - Northwest regional group of the Geological Society of London MGA - Manchester Geological Association

ICE - Northwest regional group of the Institute of Civil Engineers NWGA - North Wales Geological Association



Venue Information

Northwest Regional Group of the Geological Society

Williamson Building, Oxford Road, Manchester M13 9PL (Building 52 on the below map).
This building is situated opposite the Manchester Museum.

Birchwood Centre, Birchwood Park, Warrington WA3 6YN
<http://www.thecentreatbirchwoodpark.co.uk/location.aspx>

The Swan, Golborne Road, Winwick, Warrington, Cheshire, WA2 8LF
<http://www.chefandbrewer.com/pub/swan-winwick-warrington/c1916/>

Lecture Theatre 137, James Parsons Building, John Moores University, Byrom Street, Liverpool L3 3AF
<http://www.liverpoolgeologicalsociety.org.uk/lgslocation.php>

Beswick Lecture Theatre, Chester University, Chester CH1 4BJ

North Wales Geological Association (all events usually start at 7:30pm)

Pensychnant, Sychnant Pass, Conwy, North Wales LL32 8BJ
<http://www.pensychnant.co.uk/page7.html>

Llandrillo Technical College, Llandudno Road, Rhos-on-Sea, LL28 4HZ
<http://www.llandrillo.ac.uk/the-colleges/coleg-llandrillo/rhos-on-sea/contactfind-us/>

Treborth Botanic Garden Laboratory, University of Bangor, Bangor, Gwynedd LL57 2RQ

Northwest Regional Group of the Institute of Civil Engineers

Renold Building, University of Manchester M1 3BB (Building 12 on the following map)

John Dalton Building, Manchester Metropolitan University, All Saints Campus, Oxford Road, Manchester M15 6BH

Crooklands Hotel, Kendal LA7 7NW

Foster Building, University of Central Lancashire, Preston PR1 2HE

James Parsons Building, John Moores University, Byrom Street, Liverpool L3 3AF
<http://www.liverpoolgeologicalsociety.org.uk/lgslocation.php>

