



The  
Geological  
Society

North West Regional Group

# Newsletter

Autumn 2014



## **Your guide to Geological Society events in the North West - 2014/15**

### **Contents**

*Committee News*

*Looking back at 2013/14*

*What's happening in 2014/15*

*Social Media*

*Regional Statistics*

*School & University Commitments*

*Our Friends in the North West*

*Combined Programme for 2014/15*

*Venue Information*



## Committee News

We welcome you back to the regional group for a new season of lectures and fieldtrips. We are pleased to welcome Dr Laurance Donnelly in the fold of the committee. As many of our regular members are aware, Laurance has presented several great lectures over the last few years which have been well received.

## Looking Back at 2013/14

I hope you all enjoyed our previous season of lectures, and judging by the numbers of members attending, we seem to be doing something right! It seems we are tempting more and more members from their armchairs to attend the lectures we put on which is good news as a lot of hard work goes into organising these events.

We have continued with the joint ventures with our regional Geological Association groups and these have proved to be successful events. These lectures are not associated with a professional discipline, rather a traditional geological lecture which is not based on subject matter relevant to most of our '9 to 5' professional lives. If you have not had opportunity to attend these talks, I would strongly recommend that you take the plunge! These are based in Chester University (North Wales Geological Association) and John Moores University (Liverpool Geological Association).

We had a few problems with programme at the end of the season due to various reasons, however we consider the programme as run was very successful.

I also think we cracked our record attendance to a meet with our January lecture on the keenly awaited revision to CIRIA's publication on 'Construction over abandoned mine workings' with 160 No. people in the audience. I'm sure Malcolm's AGM was the real draw for the audience. We are currently discussing with CIRIA whether we organise a regional workshop to discuss the detail of proposed (and still not published) report. As this is likely to involve a longer time period (possibly half a day), with commercial time being taken by the authors, we anticipate that there will be a nominal charge for this event. Potential venues may comprise the Mining Museum in Wakefield (a bit out of area, but very appropriate), or the Centre in Birchwood.

## Family Day Out

The first event we held of the season was a family day at the National Coal Mining Museum. As we seem to meet in lecture theatres, leave promptly after with few opportunities to meet socially, we thought that it would be a good idea to provide a family day. The trip to Mam Tor held the previous year was held on a fantastic day which was cracking the flags and attracted a grand total of 15 members which was disappointing.

We had a full compliment of members for the drift mine tour which left pit head for what was to be an hour tour

underground via the back door. Due to the terrain, it was recommended that there should be an age restriction on this specific tour, although the standard tour which was running on a half hourly basis could be completed by those over the age of 5yrs old. I think we had our youngest geologist to date with Indiana Fairchild who had less than 15 weeks until she was born!!! Imogen Sibley was another intrepid explorer at the grand age of 13 (old timer after her visit to the Alderley Edge Mines!).

The drift entrance had a significant incline with plenty of opportunities to see the geology associated with the significant seams most of us only see through drilling records during drill and grout operations. The plant inside the mine was operational even though production had long since ceased. We were guided by both the Mine Manager (Willie McGranaghan) as well as a former miner who had worked for over 10yrs at this pit. The knowledge of both guides were phenomenal and allowed a greater appreciation to the conditions experienced underground by miners both during the 19<sup>th</sup> Century as well as during the more recent past, the dimensions of worked seams and roadways and the method of working directly from the coal face. As mentioned, this was a 1hr tour; 2 and a half hours later we saw daylight again! As the guides appreciated the interested given by the members of the tour, I don't think there was a corridor or room not explored!

Once at surface, we had the opportunity to explore the extensive exhibition before Willie provided a very insightful lecture on the methods of coal production at this pit, the coal industry over the last 40yrs, and the local mining situation.

There were plenty of activities such as the mining train, the pit ponies, the play area as well as the many displays and mining plant around the pit apron. We also had a face painter for children and adults!!

If you did not get the chance to visit the museum on our family day, we would strongly recommend that you try and experience this museum. It is well worth the visit, especially if you try the drift mine tour.

If there is interest for us to organise another family day, we would be pleased to organise this again. This is a great opportunity to introduce children to geology, to meet peers and allow partners to see that we are not the only crazy ones who like a day out in the country looking at geology!

Cover photograph: Carboniferous limestone stacked with crinoids used as a wall stone on Woone Lane, Clitheroe beneath the castle.



Intrepid explorers who went down the drift mine at the Mining Museum



Looking down the 140m deep mine shaft and playing with the mining plant!!!



### **Lecture Series 2013/14**

Our first talk of the season was by Dr Jacqui Malpas on her trip to visit the Burgess Shales as the joint lecture with the North Wales Geological Association. This was a well attended lecture with a fascinating insight into how to get to this remote site, the restrictions associated with visiting such a site and a description of the former environment and finds associated with this location.

The second talk in October was the joint talk with the ICE by Professor Bromhead on 'Reflections on the residual strength of clay soils, with special reference to bedding-controlled landslides'. As expected this lecture was entertaining, informative and again very well attended.

In November we were lucky to have Thomas Clifford from Atkins presenting a modified version of his Glossop Award Lecture on 'Assessment and Design Mitigation for Rockfalls in Quarries'. This talk was an excellent example of turning university projects to actual feasible commercial enterprises which provide important health and safety guidance for quarries. This project is applicable to any works undertaken where there is a rock slope.

One lecture I particularly wanted to bring to the Geolsoc was a talk I saw a few years ago with the Historical Group of the ICE given by Glen Atkinson on the underground Bridgewater Canal. Glen is a keen historian who has a second to none knowledge of the mining and industrial heritage of the northwest Manchester area. The underground Bridgewater Canal is a phenomenal industrial achievement of a bygone age. This system of canals comprises 26 miles of tunnels accessing worked coal faces on 3 levels, exiting in the Worsley Basin. This subject proved to be a big draw with members, with an interesting question and answer session to follow. If you missed the talk, Glen has several books/pamphlets in print which can be purchased at local bookstores.

Our January lecture proved to be somewhat of a draw. Malcolm had a bit of a surprise to find 160 eager members sitting in front of him for our quick AGM. The feature lecture was CIRIA presenting the new content of the 'Constructing over abandoned mine workings'. This is the only occasion to my memory where the venue had to stop the talk to provide additional seating, and people were still seated at the top of the venue as well as along stair wells. There were plenty of questions to finish the event with a star lined panel including Professor Bromhead, Dr Laurance Donnelly, Chris Chiverell (CIRIA) and the speaker.

In February, we held the joint meeting with the Liverpool Geological Association and were pleased to be hosting the editor of GeoScientist, Dr Ted Nield on his publication, 'Incoming - Learning to love the meteorite'. Ted gave a very entertaining lecture and fielded a diverse range of questions from the audience.

Our March lecture by Hazel Davidson was very well attended on 'Understanding VOC's and DNAPL's'. This

talk provided a tour de force on the subject, starting from the basic chemistry, to the methods of analysis and the problems associated with sample recovery.

The April lecture was held at the Swan in Winwick, and was presented by Railtrack on the Hatfield Colliery spoil slippage on to their infrastructure. This was a difficult subject matter as it is still undergoing litigation, however Claire Brint provided all the information with plenty of photographs illustrating the slippage and its affect on the rail infrastructure as well as mitigation measures.

Our final lecture of the season was provided by Stuart McDonald on the Sefton Meadows and the Part 2a investigation undertaken to determine mitigation with ever shrinking budgets. This was a very informative lecture on the area of concern, the methods of investigation, the methods of determination as well as the ongoing problems associated with budget and unforeseen issues over the significant period the works on this site were completed.

We put on lectures for all of our members, as well as any willing member of the public, and we try to please the majority where possible as this allows us to request for funds to put these talks on. There are few things free these days, and our talks at the moment are one of those.

Many of the talks presented last season usually have a high ticket value when presented as part of a conference, and it is an ideal opportunity to hear the speaker, to gain up to date information of the subject, to learn new subjects, to gain CPD points as well as to network and meet your peers.

### **Careers Afternoon**

In March, the Geological Society organised with Manchester University a careers afternoon for undergrads, post grads as well as those in or out of employment.

We had 8 No. speakers from many different geological fields of employment, including environmental (WSP), geotechnical (Atkins), forensic geology and exploration (Wardell Armstrong), petroleum exploration (BP), hydrogeology (ESI), mineral exploration (SRK) and alternative energy (iGas). We were also lucky to have Bill Gaskarth who gave a talk about membership to the Geolsoc to the audience, as well as a lecture on how to become Chartered in the evening after the careers event.

The concourse of the university was also used by the speakers as well as 2 No. other professional companies for recruitment.

Feedback was good from both attendees as well as speakers.

This event was very well attended by students and professionals and will be continued in 2014/15.



## What's Happening in 2014/15

The committee have been very busy this summer arranging the new programme for 2014/15. The programme this year is broad with pure geological talks which bring us back to why we studied geology in the first place, contamination, geotechnical engineering, industry guidance and much more!!

We have tried to run several fieldtrips this summer holiday, but have had problems with these coming through to fruition! We are looking for a September trip, so keep your eyes open on the e-mail!

The first lecture of the session will be held in the Catalyst Museum in Widnes, with Celtic Technologies discussing the industrial history of the area of the Catalyst Park and the resultant remediation required prior to development being able to commence on the Mersey Gateway.

In October we have members of SoBRA discussing their studies on the acute risk associated with contamination. Over the last 10 years the risk of contamination had been associated with long term risk (as calculated by CLEA/LQM/EIC), however acute risk had not been included. This new assessment is being undertaken to determine at what point the elements and compounds are considered as being toxic and will pose a significant risk to receptors in the immediate short term.

In November, we have a joint meeting with the North Wales Geologist Association at Chester on the Brymbo Forest RIGS site. This will be a very good talk on a local site of geological importance.

In December, we will be hosting the Environment Agency on the status of reports on aquifers, flooding, river basins and groundwater thresholds.

Our January lecture is to be by David Norbury on Eurocode 7 - current, and up and coming positions on EC7. This will be held at the Centre in Birchwood.

February will be another joint lecture, this time with the Liverpool Geological Association with a talk by Dr Gerry Lucas about the geology of Namibia. Namibia has a varied geology which covers rock of Archaean to Phanerozoic age covering more than 2,600 m.yrs, with nearly 50% of exposed bedrock.

In March, we will be hosting Julian Hughes who will be presenting a talk on slope instability along the Severn Valley Railway. 48 No. sections of were damaged with 9 major landslides and washouts.

As it is the 150yr anniversary of the William Smith maps we will be hosting Dr David Schofield to talk about how the BGS are looking at mapping after the recession. The BGS have had many types of mapping techniques progressing from paper maps, to iGeology, to the

impressive 3D mapping of Anglesey. It is also surprising to know that there are still areas of the UK which are still awaiting mapping. Many highly populated areas in the North West have not been re-mapped since the first edition maps in the late 1880's.

Our May lecture is to be confirmed closer to the date.

From the previous years good reception for the joint ventures, we have maintained the meetings with the North Wales and Liverpool Geological Associations. The inclusion of the regional geological associations has allowed us to expand beyond the central area of our membership area.

As ever the programme may vary from that which we have planned. With all our best endeavours, there may be occasions when venues need rearranging, speakers may need to be rearranged due to unforeseen events, or dates may need slightly amending. I will be sending out fliers well in advance of the meetings and these will be the confirmation of the event. Please ensure you keep your e-mail details current with both myself as well as the Fellowship Services Manager - Mohammed Jahangir.

We are also proposing another careers day with the opportunity for members who are in the job market, or will be entering the job market to hear from many key speakers on their varied experience in the geological world. We will be looking for companies who have active permanent job openings to be present for discussion with members at stands. This event is to be held at Manchester University.

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

For the programme, we have included the events from other groups which may be of interest to our members, and also to try and stop me double booking dates!

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.

We wish to thank again all the speakers who made our programme last year and hope you enjoy the programme for the up and coming year.

Best regards to you all on behalf of the Committee.

Nik Reynolds  
**Secretary to the Geological Society**  
**North West Regional Group**



## 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!!!

We have found that although members appear to have joined the LinkedIn service, no one is contributing or appears to see posts which have been made. We will post information regarding up and coming lectures, but will be keeping the Facebook page more up to date.



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

and

[http://www.linkedin.com/groups?gid=2737408&trk=hb\\_side\\_g](http://www.linkedin.com/groups?gid=2737408&trk=hb_side_g)

## Regional Statistics

It's that time of the GeolSoc cycle where the statistics for each area are rolled out (from 2012 data - but this is looking to be updated soon - probably by 2017!). Apparently we have the 6<sup>th</sup> highest membership out of the 15 regional groups operating from GeolSoc HQ, with the top 5 being the South East (1,504), Thames Valley (1,110), Central Scotland (870), West Midlands (840) and the Home Counties (822). We have a grand total of 786 members in our region of which 612 are male (78% male membership - where are all the female members??). We have 13 Junior candidate fellows (A-Level students), 29 candidate fellows (Undergrads), with 744 members who are Fellows. Of these 744 members, only 195 are chartered. As we are looking at statistics, it is unfortunate to see that only 21 (<10%) members chartered are female. Apologies for reviewing the sex question, but the numbers are rather concerning. We have (had as the data is old) 8 mentors for chartership and 29 scrutineers. The number of mentors is also concerning and requires addressing.

So, as we all love league tables, where does the North West come in the regional tally? We are 8<sup>th</sup> of 15 in the percentage of members chartered - with a grand total of 24%. The highest percentage was Hong Kong (41% - and yes I know this situation is different), with the 2<sup>nd</sup> to 4<sup>th</sup> places all having between 31% and 32.5% members chartered being East and West Midlands and Yorkshire.

Regarding my concern of female members, we are 6<sup>th</sup> in the league tables with 22.14%. The highest female contingent was Yorkshire with 24.9%, followed closely by Western with 24.6%. The lowest percentage was Southern

Wales with only 16% (of 409 members). Whilst we are on the female contingent, we are 12<sup>th</sup> of 16 in the proportion of female members who are chartered with only 10%. It should be noted that a recently published salary survey of members of the Institute of Environmental Sciences (which has a 20% membership within the contaminated land sector) has noted a glaring trending showing a decline in the salary of female members by over 8%, with a rise in male salaries below that of the national average. The salary report link is below: [https://www.ies-uk.org.uk/sites/default/files/reports/salary\\_survey.pdf](https://www.ies-uk.org.uk/sites/default/files/reports/salary_survey.pdf)

As a society, we are always looking at proving the opportunity to become chartered to members. Chartership is a badge of merit to be worn proudly by our members. This indicates that not only are you competent in the workspace, but this has been acknowledged by your peers and the society as a whole. There are many benefits associated with the Chartership, many of which enhance career progression and usually include financial betterment to salaries. This is also a route which is required should you wish to be on the RoGEP or becoming a Qualified Person (CL:aire CoP).

There are no tricks, no old school ties or other boundaries preventing members becoming chartered, however an element of hardwork is needed. The process is not overly simple and members are not guaranteed to become chartered, which I am sure most members would want as Charterships don't fall out of your Corn Flakes pack (other breakfast cereals are available and nope, I've checked, these don't have any either!). We will be having Bill back to talk to us about Chartership, but if you want to start looking at applying for Chartership, there is no need for us to provide the same old talk (which a handful of members attend). Click on the link below, download the forms and get filling them in!

[http://www.geolsoc.org.uk/Membership/Join-the-Society/~/\\_/link.aspx?\\_id=CA074320D21E46C588DABED4BF67BD06&\\_z=z](http://www.geolsoc.org.uk/Membership/Join-the-Society/~/_/link.aspx?_id=CA074320D21E46C588DABED4BF67BD06&_z=z)

Many years ago, the CGeol was seen as being a significantly poorer relation to the CEng, however the requirements to become chartered through the GeolSoc have stood this accreditation on equal measure with the CEng and is requested in a similar manner. It should be noted that the CGeol does have the most onerous CPD of chartership programmes, but this should not discourage applicants!

As a committee, we are not informed by GeolSoc HQ how many members are applying for Chartership on a yearly basis, but it would be good if at least 40 members become Chartered this year, with a high number of female members within that contingent.

If there are any members who have been chartered and wish to become mentors, please contact me and I can pass on your details to Bill/Geolsoc HQ.



Also, regarding membership numbers, please note typical attendance has been good to meets over the last few years, however 40 to 60 members of the 786 total membership is not as good as it could be. If there is anything you can recommend to the committee to improve the service we provide, please let us know. We would be happy to provide foundation/refresher level talks on geotechnical subjects, wow volcanic lectures, latest geological research from the regional universities, Martian geology... all you have to do is ask, and we can see what we can do. All speakers who present lectures for us are informed that the talks are not marketing tools and should not be commercial presentations.

We are also keen to hear from people who would like to put on a fieldtrip within the region (North Wales and North West England). We could even look at setting up a walking group to shed those summer and Christmas lb's whilst looking and trampling over our spectacular geology if there is interest!

## School and University Commitments

The Geological Society have recently extended membership to students studying for A-Level geology with a new Junior Candidate Fellow. We have recently had a lot of queries from A-Level students about lectures and events and have a few attending the careers afternoon as well the fieldtrips.

To date we have found that it is difficult to attract undergraduate students to our lectures as they are typically professionally based and they get a significant number of extra-curriculum lectures.

We are currently liaising with all the regional universities that provide geological degrees to provide a 2<sup>nd</sup> yr undergraduate lecture specifically for A-Level students. The subjects of the lectures will be on the A-Level syllabus to expand the knowledge base of the student, to assist with subjects that are difficult to grasp and provide an alternative aspect on the subject, as well to provide a university experience for the students. This event will not be run as an open day and will be purely educational.

This event will be completed on a monthly basis with each university tackling a different geological subject. All schools teaching A-Level geology will be able to attend these lectures. We hope that the geographical spread of universities will be suitable for the coverage of schools teaching this subject.

To date this type of event has not been attempted in the UK and should this be successful, there is a strong potential this will be rolled out in the other regions.

## Our Friends in the North West

### Manchester Geological Association

[www.mangeolassoc.org.uk](http://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](http://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](http://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 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**

<http://ougs.org/index.php?branchcode=nwe>

The North West Branch is the largest OUGS branch, in terms of membership, with 219 members at the end of 2013. 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 Liverpool, Greater Manchester and Preston.

This is an active group, 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 see how geology determines the landscape and study rocks in situ. You will also meet and learn from other members. If you are a more experienced geologist we look forward to any input you are able to give. Over the past years their field trips have taken them to many parts of the British Isles (Outer Hebrides in 2009, Devon in 2013) and they have also had the opportunity to visit more exotic geological areas worldwide such as Iceland, Italy (Island of Elba in 2010), France (Corsica in 2012) and Hawaii. As well as providing interesting, enjoyable trips we hope to provide useful practical experience for those involved with geological studies.

### **Geo-Conservation UK: The Association of UK RIGS Groups**

<http://www.nwgeo.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](http://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](http://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.

### **North Staffordshire Group of the Geological Association**

<http://www.esci.keele.ac.uk/nsgga/index.html>

The NSGGA is the regional group of the Geologist Association in North Staffordshire.

Lecture meetings are held monthly during the autumn and winter, at 7.30pm in the William Smith Building at Keele University, ST5 5BG. Field meetings are held at approximately monthly intervals over the spring and summer.



### Combined Programme for 2014/15

09/09/14	'Living in Europe's Supervolcano: Volcanic hazards and emergency management in the Bay of Naples'	Dr Martin Degg	NSGGA	WS0.06 William Smith Building, Keele University
17/09/14	A History of the River Ribble Navigation and Preston Dock	tbc	ICE	Preston, UCL
18/09/14	Influence of slope instability and marine landslides on hydrocarbon exploration.	Alastair Welbon	NWGA	RCA Conwy
25/09/14	Remediation requirements for the second Mersey Crossing.	Dr Jon Freeman	NWGS	Catalyst Museum, Widnes
08/10/14	Aspects of recent work in the Builth Inlier - exceptional preservation in the Welsh Ordovician	Joe Botting	NWGA	Pensychnant, Conwy
15/10/14	Dinosaur diversity in the British Isles	Dean Lomax (Doncaster Museum & Art)	MGA	Williamson
16/10/14	Acute risk of contamination? How safe is it to raise thresholds values?	TBA (SoBRA)	NWGS	The Centre, Birchwood
23/10 to 03/11 Autumn Half Term - may vary slightly with schools				
13/11/14	Earth after us!	Dr Jan Zalasiewicz	NSGGA	WS0.06 William Smith Building, Keele Uni
12/11/14	The preservation of plants as fossils - with particular reference to the Brymbo Fossil Forest, Wrexham	Prof Barry Thomas (Aberystwyth Uni)	NWGS/ NWGA	Chester University
15/11/14	Eden Valley Deposits	De Noel Worsley (Yorkshire GeolSoc)	MGA	Williamson
29/11/14	Winter Lectures and Social Afternoon The Last Glacial Stage in North West England Feet first at Formby: <i>A study of the footprints of a hunter gather coastal community</i> Meteorite Impact and Quaternary Extinctions	Dr Catherine Delaney Alison Burns  Prof Silvia Gonzales	OUGS	Rainhill Millenium Centre, Rainhill (L35 0LE)  £2 cost
04/12/14	Environment Agency	tbc	NWGS	Williamson
6/12/14	Ophiolites and Accretion Models for the Oceanic Crust	Numerous	MGA	Williamson
11/12/14	Christmas lecture	Eileen Fraser	NSGGA	WS0.06 William Smith Building, Keele Uni
19/12/12 - 05/01/13 Christmas Holidays - may vary slightly with schools				
15/01/15	Eurocode and Site Investigation	Dr David Norbury	NWGS	Birchwood
15/01/15	Dinosaur Embryos	Dr John Nudds	NSGGA	WS0.06 William Smith Building, Keele University
17/01/15	The Broadhurst Lectures - The Mineral World	Various	MGA	Williamson
11/02/15	AGM + Evolution of the Mars Atmosphere and Hydrosphere	Dr Ray Burgess	MGA	Williamson
13/02/15	The Geology of Namibia - 2,600m years of history! The travels of a roving geologist.	Dr Gerry Lucas	NWGS/ LGA	Liverpool John Moores, Lecture Theatre 137.
19/02/15	Sinking cities	Dr Tony Waltham	NSGGA	WS0.06 William Smith Building, Keele University
13/2 to 23/2/14 Spring Half term - may vary slightly with schools				
04/03/15	Coastal Dunes and Climate Change	Dr Paul Rooney	MGA/Geographical Assoc	Williamson
12/03/15	Tunisian Tales Pt II	Dr Patrick Cossey	NSGGA	
13/03/15	Severn Valley Slope Failure	Julian Hughes	NWGS	The Swan, Winwick
2/04 to 20/04 Easter Holidays - may vary slightly with schools				
17/04/15	The state of the Geological Map (Centenary Talk for the Williamson Map)	Dr David Schofield	NWGS	Chester University
09/05/14	tbc	tbc	NWGS	Williamson
23/05-08/06/13 Whitsun Half Term				

NWGS - Northwest regional group of the Geological Society of London MGA - Manchester Geologist Association  
 NWGA - North Wales Geology Assoc NSGGA - North Staffs Geol Assoc ICE - North West regional group of the ICE

## 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  
<http://www.chester.ac.uk/sites/files/chester/Open%20Day%20Campus%20Map.pdf>

### **North Wales Geology 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

**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>