



Manchester Geological Association

President: Dr Margaret Hartley

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www.mangeolassoc.org.uk

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Quick Diary

Outdoor Meetings

- Sun 10th July** starting at 10.30 am at a location near Clitheroe.
- Sunday 11th September** Fred Broadhurst Memorial Field Trip
- Saturday 2nd October** Castleton area led by Cathy Hollis

Indoor Meetings

- Saturday 8 October** - Joint with the British Cave Research Association. An all-day event
- Saturday 19 November** - The Broadhurst Memorial Lectures – Spectacular British Fossils.
An afternoon event
- Saturday 10 December** – Geology in Industry.

Who's Who in the MGA

Officers

President: Dr Margaret Hartley

Vice-President: Vacant

General Secretary: Sue Plumb BSc

Membership Secretary: Ken Jacobs

Treasurer: Jennifer Rhodes BA

Indoor Meetings Secretary: Vacant

Field Excursions Secretary: Peter del Strother

Newsletter Editor: Lyn Relph BSc

Webmaster: Peter Giles MSc

Other elected members of Council

Prof. Ray Burgess

Nicola Fowler BSc (Hons)

Dr Steve Donovan

Steve Daniels

Ex officio members of Council

The Immediate Past President, Manchester Geological Association: Niall Clarke MSc

RIGS Representative: Dr Chris Arkwright

The Association's representative on the North West Geologist's editorial team: Peter del Strother

President of the Student Geological Societies of the University of Manchester

MGA Archivist: Dr Derek Brumhead MBE

MGA email addresses

To contact our President: president@mangeolassoc.org.uk

To contact our Vice-President: vicepresident@mangeolassoc.org.uk

To contact our General Secretary: secretary@mangeolassoc.org.uk

For membership enquiries: membership@mangeolassoc.org.uk

For field visit enquiries: outdoors@mangeolassoc.org.uk

For indoor meeting enquiries: lectures@mangeolassoc.org.uk

For newsletter correspondence: newsletter@mangeolassoc.org.uk

For other enquiries: info@mangeolassoc.org.uk

Trefor Rocks Llangollen

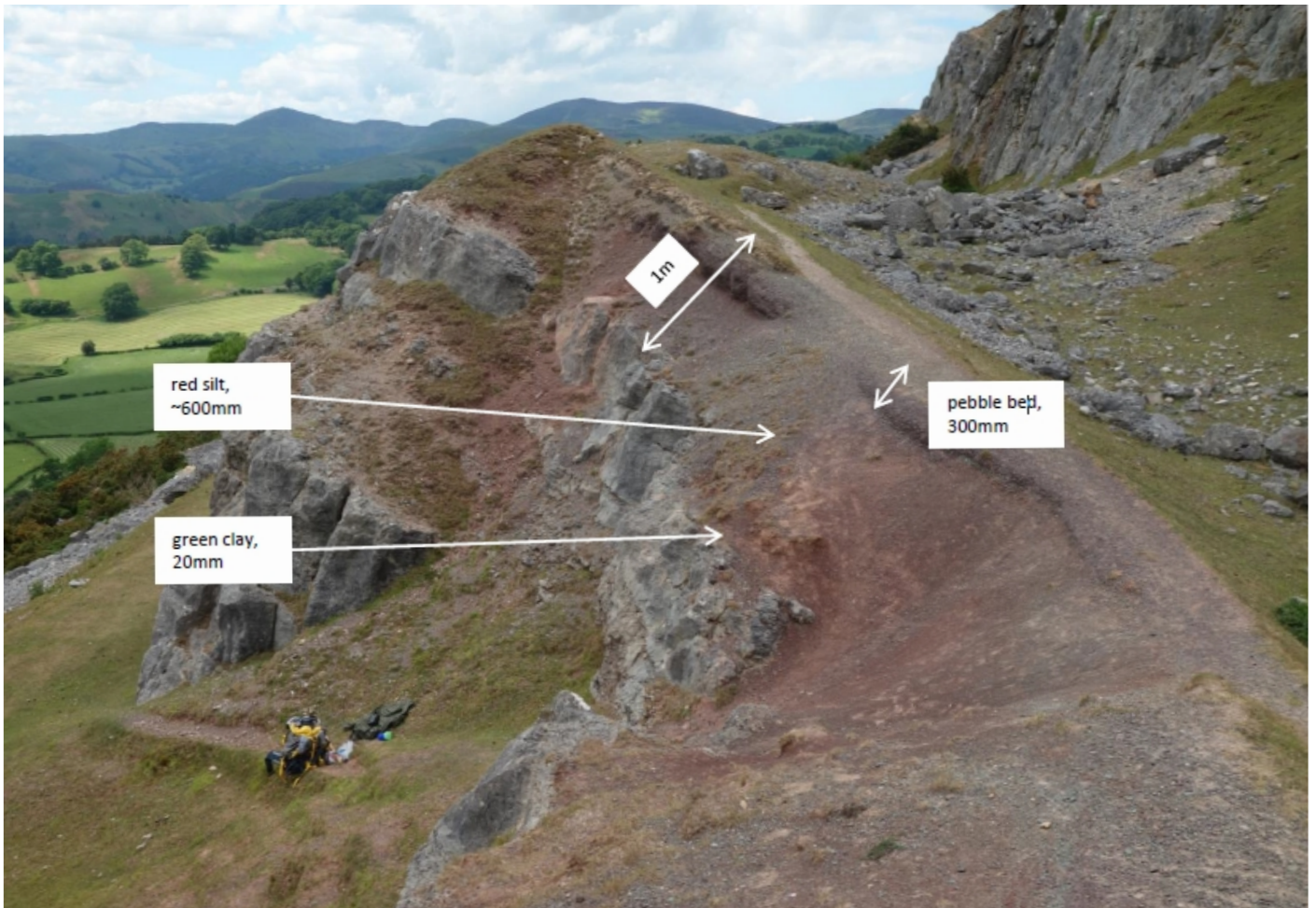


View of Trefor Rocks from Castell Dinas Brân

Introduction

In bright sunshine the group of twelve people visited the Asbian and Brigantian shelf limestones at Trefor Rocks. The outcrops are equivalent to the Loggerheads Limestone Formation and Cefn Mawr Limestone Formation respectively and are described in the 2004 Flint memoir. The outcrops examined included:

- A probable palaeokarst limestone surface overlain by clay, mud rock and a flat pebble conglomerate. The succession coarsens upwards with sharp boundaries between clay and silt and silt and conglomerate. The clasts in the conglomerate were found to be thin fissile fine-grained micaceous sandstones, characteristic of the Silurian Elwy Formation, a succession of turbiditic mudstone, siltstone and sandstone described in the Flint memoir. Rocks of the Elwy Formation crop out about 2km NW of Trevor Rocks. Imbrication in the conglomerate suggested depositional flow from the south, but imbrication could only be seen in one plane so the direction could not be estimated with any precision. Possible Interpretations of the succession were discussed.
- The approximate position of the Asbian / Brigantian boundary was located. Fracture surfaces of the underlying Asbian limestones were pale while those above were black. The Brigantian was also characterised by more frequent mudrock partings.
- A small quarry to the south (NGR SJ233433) contained colonial rugose corals; confined to a couple of adjacent limestone units. The corals tended to be associated with mudrock partings between limestone units. The units containing corals could be traced laterally for about 200m along Trevor Rocks. They have been used on a wider scale to correlate strata across North Wales. Hypotheses for such widespread simultaneous coral abundance were discussed. At the same location some enigmatic sedimentary structures were observed.



Trefor Rocks, Llangollen at NGR SJ22854335, looking west



Pebble bed; in the green clasts the iron has been reduced; quartz clasts (centre) are uncommon



Colonial rugose coral, probably in life position; £1 coin for scale



A boss of limestone from the upper unit has penetrated the lower unit; the mudrock parting between the units appears to continue under the boss which is about 200mm diameter

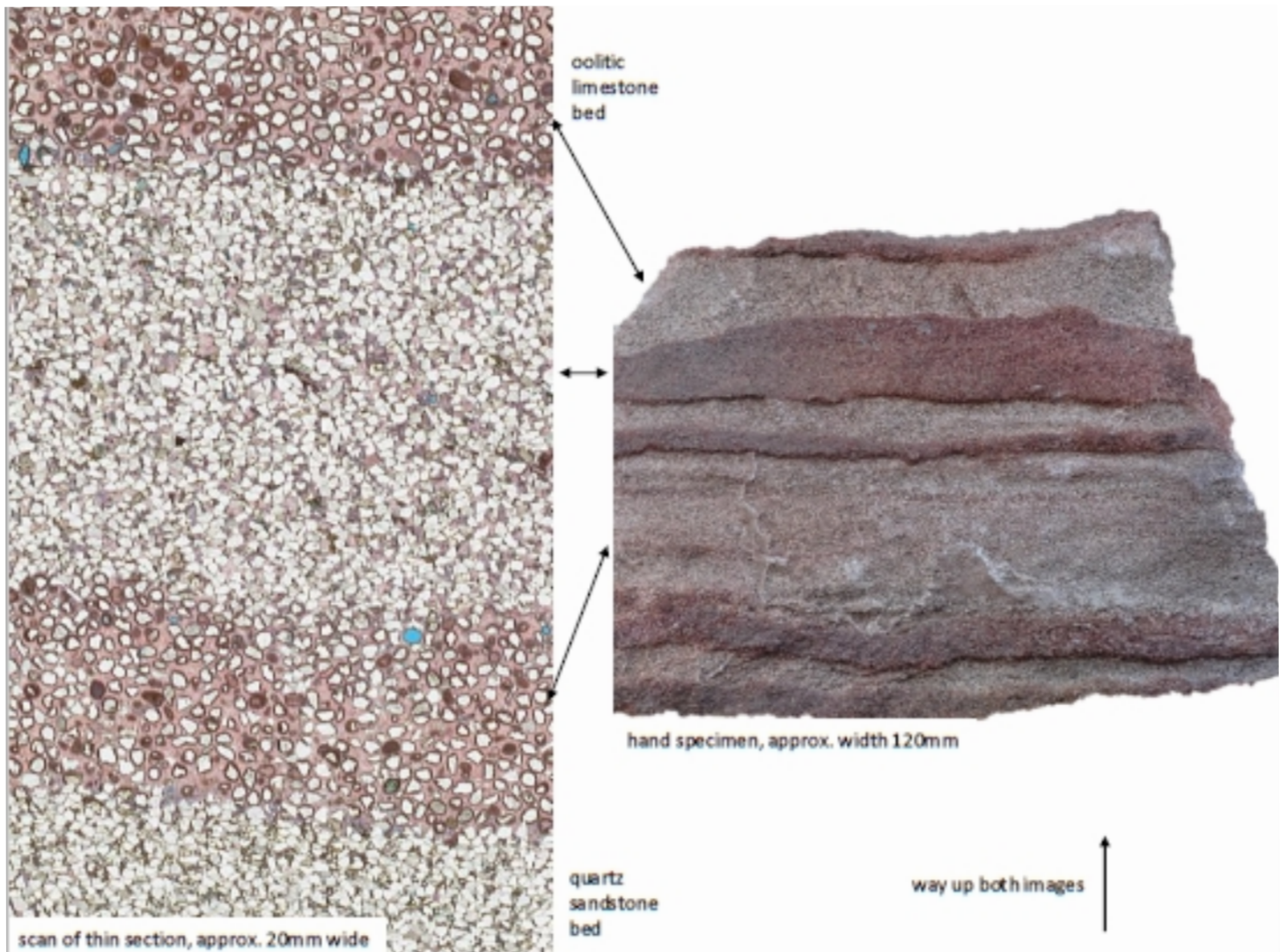
- In a roadside outcrop, circa NGR SJ240430, cross sets of alternating ~25 mm scale beds of oolitic limestone and quartz sandstone were examined. The leader showed photomicrographs illustrating these. In the photomicrographs the quartz grains are separated by sutures, implying over compaction. However the superficial ooids, which have quartz grains at their cores, are not always in contact, have no interpenetrative boundaries and are therefore interpreted as under compacted. Two questions were raised. If the carbonate between the ooids is cement, then why aren't the ooids in contact and showing at least some evidence of interpenetration prior to cementation, and why was the porosity between the ooids occluded and the porosity between the quartz grains not? If the carbonate was lime mud then how were ooids and mud transported together? The energy required to transport well-sorted quartz sand grains would certainly have removed lime mud. What is clear is that the cross-sets are at an angle to the regional bedding and ooids could not have formed in situ on such a slope. The processes of deposition must have involved relative high energy to transport the well-sorted quartz grains from the hinterland. The ooids must have been transported from their place of origin on the shelf, potentially perpendicular to the direction of transport of the quartz grains. Today marine ooids are typically formed in environments where energy levels are sufficient to winnow mud away and where the seawater is carbonate saturated or nearly so. In Florida, for instance, ebb and flood tidal currents crossing a shallow sea floor provide a suitable environment. The outcrop is part of what used to be known as the 'Transition Beds' between the Brigantian Limestones below and Namurian sandstones above. Carbonate cemented sandstones are common in this part of the succession. No conclusion was reached about the depositional environment of these facies. They remain enigmatic.

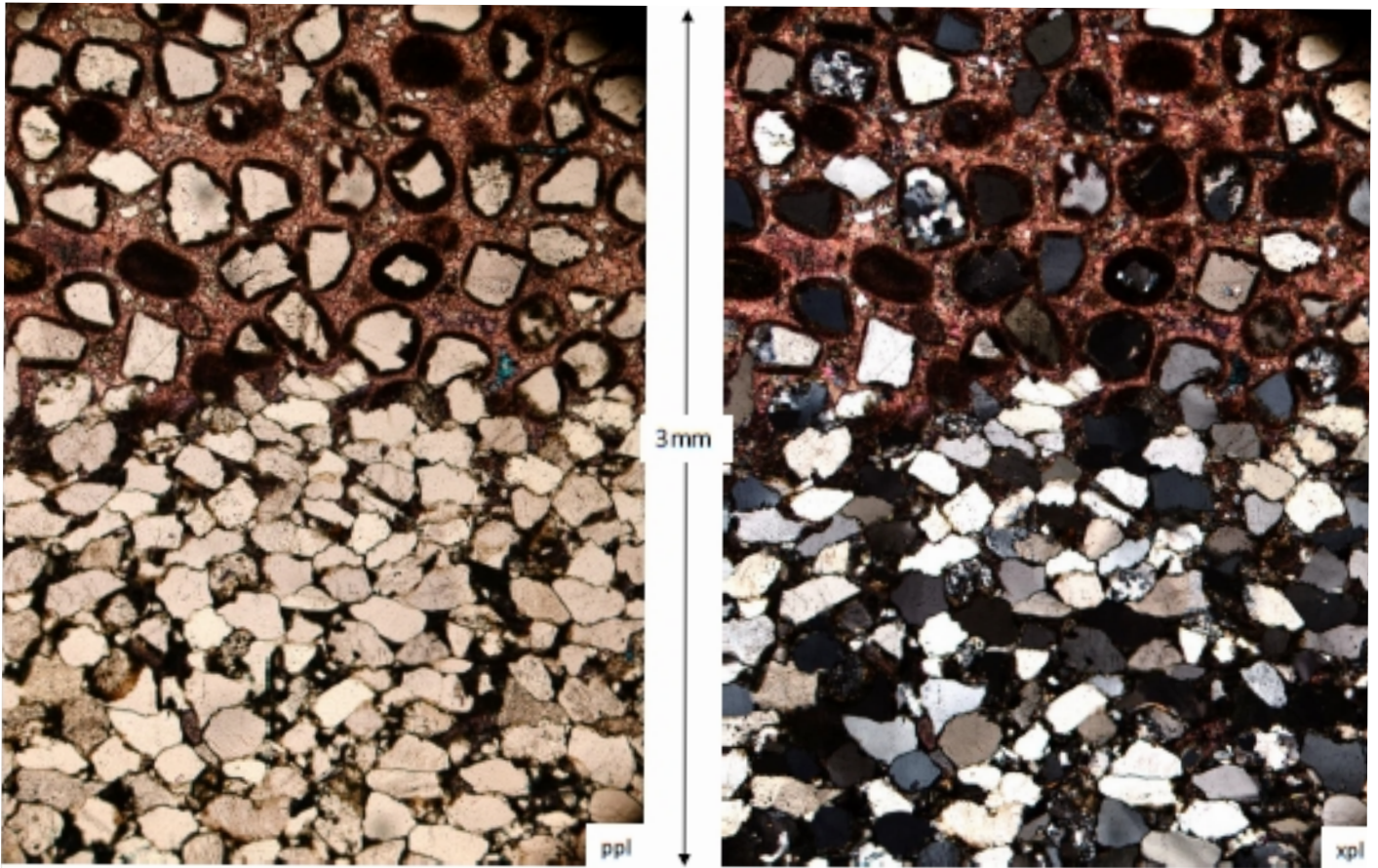


Alternating beds of quartz sandstone and oolitic limestone are components of the cross-set illustrated; wooden scale rods 1m long;



Close up of outcrop with 1 pence coin for scale





photomicrographs of oolitic limestone;
 lower half of image - compacted quartz grains; upper half - superficial ooids with quartz grain cores in calcite cement

way up both images

The group returned to the car park and decided unanimously not to attempt the demanding walk up the nearby steep hill to Castell Dinas Brân. Examination of the Silurian rocks on the hilltop would have to wait for another day.

Text and graphics by Peter del Strother from a joint MGA/NSGGA/GeoLancashire field excursion of 26 March 2022



Compare this photograph with the one on page five above; it was taken in 2008

It is interesting to see how little this feature has changed in 14 years especially as limestone is usually considered to be quite soluble.

Children's Fossil Competition

The Etches Collection – Museum of Jurassic Marine Life, located on the Jurassic Coast World Heritage Site in Dorset have just launched the Inaugural Children's Fossil Competition, together with our proud sponsors PetroStrat.

If you know any budding palaeontologists, geologists, earth scientists or fossil hunters out there in the UK between the ages of 5-16 years old, please let them know about this fun and unique competition for the chance to show off their knowledge and fossil collection to the world! (Please see link and details below). Please can you help us by sharing this information with your colleagues and members?

This competition is for children to earn the chance to display their fossil finds alongside the collection on display at The Etches Collection – Museum of Jurassic Marine Life.

The competition will be open to all UK residents between 5 and 16 years old. (Must have parent/guardian permission to enter)

Every child who enters the competition will receive a personal annual pass to the museum. (Valid from September 1st 2022 - September 1st 2023.) and an e-certificate

The competition has two age ranges 5-10 and 11-16. There will be 6 winners in total, 3 from each age range.

The competition window is open from Monday, March 28th, 2022 until Friday, August 5th, 2022, where the children will have time to submit their entry form along with a written paper, presentation or video explaining where the fossil was discovered, what it is and why they believe it should be on display at the museum. No fossils are to be submitted at this stage in the process.

We wholeheartedly encourage families to lend their support to a child's entry into the competition, especially in relation to the technical/digital support, such as email and creating viewable files.

<https://www.theetchescollection.org/fossilcomp>

Registered office: The Etches Collection Museum, Kimmeridge, Wareham, Dorset, BH20 5PE

Registered in England No. 05140821. Registered Charity: 1106638

OTHER SOCIETY EVENTS

BCGS <http://bcgs.info/pub/>

- 6th July** Evening Field Meeting - The Geology and Landscapes of Barr Beacon
- 4th August** Evening Field Meeting - The Geology, mining heritage and landscapes of Himley Hall and Baggeridge Country Park
- 7th September** Evening Field Meeting - The Geology of the Rowley Hills Geosite

Yorkshire Geological Society <http://www.yorksgeolsoc.org.uk/>

- 30th June** Greenhouse to icehouse and back? Antarctica's future in a 400ppm world

Leeds Geological Society <http://www.leedsga.org.uk/>

- 17th July** – Roundhay Park Geology Trail. Geology: Millstone Grit and Coal Measures Groups, folds and faults. Leader: Bill Fraser, LGA.
- 13th August** – Halifax area, relationships between geology and industry. Geology: Millstone Grit & Coal Measures Groups. Leader: Michael Wood, LGA.
- 11th September** – Scaleber Force, Settle. Geology: Great Scar Limestone Group, Bowland Shales, reef belt, South Craven Fault. Leader: Bill Fraser, LGA.
- 7-9th October** Residential field trip. Duns (Berwickshire). Geology: Devonian Old Red Sandstone and Carboniferous. Leader: Alison Tymon, West Yorkshire Geology Trust.

GeoLancashire <https://geolancashire.org.uk/lectures-and-excursions/>

OUGS North West Branch <https://ougs.org/northwest/>

- July 9th** Worsley Woods & Worsley Delph, Lancashire Mining Museum Worsley, Greater Manchester. Leaders: Ken Jacobs (am) & Ged Maloney (pm)
- July 10th** Jumbles Country Park, Bolton. Leader: Ken Jacobs
- October 2nd** Castleton Area, Derbyshire. Leader: Prof. Cathy Hollis

**Fred Broadhurst Memorial Field Trip
Sunday 11 September 2022
Lyme Park Part 2: Fossils and Features**



This year, we will be investigating further glacial features in the western part of the Park plus looking at fossils and rock formations. Yes there are rock exposures and fossils but you do have to seek them out! The walk will be based round Walk 11 in Rocky Rambles in the Peak District but also including elements of Walk 10 if there is time. We may also see deer although the 'rut' will not have started.

I am intending to undertake this trip as an all day : from 10am until probably 3.30pm so we will be 'eating out' in the field (let's hope it doesn't rain!).

For further information and a copy of the Itinerary and Risk Assessment, please email

me at gmicsch@gmail.com. Please note that non-National Trust members will have to pay entry to the park that does not include entry to the house.

**The Extractive Industry Geology Conference 2022 is being held at
the University of Exeter from the 5th to the 9th July.**

The principal event for training and CPD for industry geologists, and associated disciplines, again promises to be a great conference with well over 150 delegates already registered.

With excellent technical lecture sessions and workshops, the event also offers great social and networking opportunities, with an ice breaker reception and conference dinner, all set within the beautiful surroundings and world class facilities of the University of Exeter.

With less than 6 weeks remaining until the event, now is the time to register! See the website (www.eigconferences.com) for booking details.

Manchester Geological Association

Outdoor Meetings 2022

Sun 10th July starting at 10.30 am at a location near Clitheroe.

We will visit the site of the lead mine at Skeleron, of indeterminate date but it might have been operated in Roman times as it is very close to the Roman Road. The main evidence is in the form of bell pits. There is no spoil heap but baryte can be found in the local stream bed. There is an exposure of Chatburn Limestone, in which the mineralisation has taken place.

The mine is on private property so will those interested please get in touch with pjdsconsulting@gmail.com

Time permitting we will later examine turbidites in the Pendle Grit, at Nick of Pendle, and the nearby remains of another lead mine for which we have very early documentary evidence. It is also located in a fault zone in the Chatburn Limestone.

Sunday 11 September Fred Broadhurst Memorial Field Trip: Leader Jane Michael.
Lyme Park Part 2: Fossils and Features. See page 11 for more information.

Saturday 2nd October (This is a joint event with the OUGS(NW))

Castleton area led by Cathy Hollis to look at, Mam Tor landslip, Mam Tor beds (deep water clastics/turbidites), Windy Knoll (hydrocarbon seep), Winnats Pass (carbonate platform reef front), Treak Cliff Cavern (karstification and mineralization)

There is a charge of £11 for Treak Cliff Cavern which is payable on the day. Numbers are limited so booking is essential.

For further information, risk assessment and to book, please contact Ken Jacobs
info@mangeolassoc.org.uk

Indoor Meetings 2022-3

Saturday 8 October - joint with the British Cave Research Association. An all-day event

Saturday 19 November - The Broadhurst Memorial Lectures – Spectacular British Fossils. An afternoon event

Saturday 10 December 2022 – Geology in Industry. An afternoon event

Wednesday 11 January 2023 - topic to be announced, Zoom only. An evening event

Saturday 11 February 2023 - AGM followed by two talks. An afternoon event

Wednesday 8 March 2023 - topic to be announced, Zoom only. An evening event

Bring Your Own Reusable Mugs

Would Members please bring a cup to use for tea/coffee when attending lectures, where refreshments are provided. It would be much appreciated. The MGA will be using biodegradable cups when our supply of polystyrene ones runs out, but these do cost more.