30 June 2023

# Newsletter



### Bedfordshire GEOLOGY GROUP

bringing landscape to life

## Puddingstone search ends in success!



Puddingstone samples (İmage: Derek Turner)

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#### By Derek Turner

Although conglomerates are quire common in this country, most puddingstone is found in Hertfordshire. Many decades ago, I worked on a farm south of Bovingdon and had reason to curse it when I prepared a new seedbed in one of the fields. It was not unusual for the tractor to come to a shuddering halt as the plough struck a piece the size of a microwave oven. I had to dig it out and return to the spot with suitable equipment to move it to the field edge out of harm's way. My mother told me that she had read that there was less of it in the world than diamonds and took some home for her rockery, hoping to cash in when others realised and its value soared!

Our quest in April to locate any in Bedfordshire got off to a slow start. Thistles, nettles and hemlock were growing vigorously and conspired to restrict our view of the soil. They were aided by numerous flints of various shapes and sizes. Some were quite colourful where minerals had stained them during their 65 million years plus lifetime.



However, we persevered and found our first pieces - rather puny specimens with angular and rounded recycled flint pieces smaller than sultanas trapped in a pudding of grey silcrete.



Danielle, Owen and Laurence inspect the Puddingstone. (İmage: Derek Turner)

We were joined by three guests, Danielle, Owen and Laurence, who had found out about us on the web. Once we knew what to look for, more pieces soon revealed themselves. In many of them, the pebbles were much larger.

We prised several from the ground with the aid of my builder's trowel and Owen's geological hammer but some pieces over 30cm long refused to move and their flint pebbles were as big as plums.

Puddingstone has practical uses and plenty of folklore is attached to it too. In the absence of anything more suitable in this area, the Romans quarried puddingstone at Little Gaddesden and Radlett and made it into querns for grinding wheat into flour. Some people thought that puddingstone brought its owner good luck and carried pieces around with them but others believed it foretold tragedy and called it "Woestone". No matter how much you dug out of the ground, more seemed to appear before long. Some thought it had male and female forms and was able to breed!

This is the first time we've found any in Bedfordshire. We were in a field between the Luton Airport spur road off the M1 and Stockwood Park in an abandoned cornfield awaiting development and finding it there suggests that other areas of clay with flints along the Chilterns plateau are worth exploring for it. Let us know if you find any or see it used as a building stone when you walk in the area around Whipsnade or Caddington.

#### Fact File: Puddingstone

- $\Rightarrow$  Typically contains 97% silica.
- $\Rightarrow$  A silcrete
- $\Rightarrow$  Has no pores
- $\Rightarrow$  One of the hardest of sedimentary rocks
- $\Rightarrow$  Formed in 2 stages
  - $\Rightarrow$  As a shingle beach ~56 million years ago
  - ⇒ Silica-rich water percolated through the pebbles to form the cement during a hiatus ~55.6 million years ago
- $\Rightarrow$  Rarely seen *in situ*



Some wonderful examples of "Bedfordshire" Puddingstone. (İmage: Derek Turner)



## **GCLP Update**

#### By Bev Fowlston

Derek Turner has been active with Greensand Country Landscape Partnership (GCLP) on behalf of BGG. He has lead a wonderful walk (see next page) for the May Festival and has provided leaflets for GCLP to distribute.

Our Western Geotrail is GCLPs Walk of the Month so do download the leaflet from our website and explore it at your leisure.

A new project that you may wish to get involved in on behalf of BGG and GCLP is "Missing Pieces". We are looking for volunteers to help collate pictures and stories of the unique, significant, and memorable places in Greensand Country. This is part of a major national project to update the register of all nationally protected heritage assets across England including listed buildings, scheduled ancient monuments, and registered parks and gardens. Get in touch if you want to be involved.

GCLP continue to champion the area through various events and news. Take a look at their website for things that may interest you <u>https://</u> www.greensandcountry.com/



On the Western Geotrail look out for Dick Turpin's cave.

(İmage: Bev Fowlston)

## An opportunity for you ...

If you feel confident giving talks to some of the lovely groups that ask for presentations, then please get in contact with Bev Fowlston who can provide you with material for talks and presentations as well as holding our own (rather old!) projector and (enormous!) screen should you need it. Don't forget we also have a huge selection of recently-catalogued rocks and fossils for use in presentations.

## Monthly get-togethers

#### By Bev Fowlston

Our monthly get-togethers this quarter have been quiet. Probably due to everyone being wonderfully busy with life again! Do watch out for next month's Zoom get-together where you can sit and chat with fellow like-minded geology enthusiasts. Discover what's been going on locally, nationally and globally in the geology news.

#### Next Zoom Get-Together

Discover the latest global geological news and catch up with your fellow members

#### Thurs 20th Jul 2023 at 7.30pm

Email <a href="mailto:secretary@bedfordshiregeologygroup.org.uk">secretary@bedfordshiregeologygroup.org.uk</a> for Zoom link

## **Greensand Festival Walk**

#### By Derek Turner

This year's Greensand Festival saw us put on a geology walk around Woburn and Bernard Jones and I were joined by six people who had never attended one of our events previously. Like Ampthill which we've covered before, Woburn no longer has any rock exposures lingering in former quarries nearby and most of the buildings, as gracious and beautiful as they are, were built or rebuilt using brick after a disastrous fire in June 1724 destroyed 39 dwellings. Nevertheless, we were able to see around a dozen different rock types on a short stroll around the town.

We set the scene at the playing field from which the Greensand Ridge was visible to the north. This had provided the most local of the building stone that we'd see later on the walk and was also home to a significant operation extracting Fullers Earth for about 2,000 years from Roman times onwards. Mining might have continued to this day if planning permission had been granted for another pit in 2002. Not far beyond the playing field was the site of the first of Woburn's three (or more) churches. It was used until at least 1522 and its location suggests that many of the local people once lived in that area.

We walked back into town, noting that the name of Caswell Lane suggests the presence of springs. It is tempting to think that the water from the Cas well may have been a factor in the establishment of the village where it is today. It was not far from here to our first taste of the real geology in the original 1582 stone building at the school and next door in the second church which seems to have been constructed by the last Abbot of Woburn Abbey around 1535. Both of these fine buildings are made of local greensand with dressings of Totternhoe Stone (clunch)- some blocks of which have weathered better than others. All is not what it seems though for much of the church had to be rebuilt in 1864 after William, the 8th Duke of Bedford had pulled it down, much to the chagrin of many local parishioners. Indeed, the Diocese were on their side and ordered the Duke to rebuild it, even though he had just had a grand, third church erected on the edge of the Park. The second church was finally declared redundant in 1981 and is now home to the Woburn Heritage Centre which holds a fine range of exhibits. Before you visit it, check the limited opening times.



Guests on the walk stop to appreciate the variety of gravestones (İmage: Derek Turner)



Walkers pass the latest of Woburn's three churches (Image: Derek Turner)

At the rear, the graveyard is still very much in use and as a digger prepared a final resting place for a new occupant, we were able to witness changing fashions in the use of stone for grave markers. While we were there, we peeked over the churchyard wall to a now dry depression in a field which may have been the site of the Caswell spring.

As we walked on through the town, we noted that some of the paving slabs were made of natural stone and the presence of cobbled surfaces before turning towards the third church. St Mary's is undoubtedly a magnificent stone building with many architectural embellishments, but what stone is it made of? At first sight, it's a light grey-brown limestone containing some small broken pieces of shell. However, beneath the eaves and dripmoulds where it's had some protection from rain, the colour of the stone is a much richer brown.

There was not enough time left to get a distant view of the Totternhoe Stone-fronted home of the Dukes of Bedford, so we concluded our tour at the park entrance next to Lion Lodge where robust, rusticated, stone plinths on either side of the road support statues of lions. The plinths are clearly made of Portland Stone and the lions could be too. However, records show that they are made of artificial Coade Stone which has probably deceived many would-be geologists since it first appeared in the 1700s. Even so, it is made of natural products including ball clay from Dorset and Devon which is mixed with other ingredients and it requires careful firing over several days to avoid cracking as it cools down. We were fortunate to have a fine morning for the walk and we'll repeat it on another occasion at a weekend for those of you who missed it.

### The brick wall around Woburn Park

#### By Derek Turner and Dr Gerard Lynch

Mary Preen was one of those who joined me in Woburn and when I mentioned bricks, she told me about Gerard Lynch's research into the wall around Woburn Park. He has kindly given us permission to print the following:

The wall (around Woburn Park) has always interested me on several levels and, when time permits within my still busy professional life, I have been writing a paper about one particular section from Ridgmont Lodge to the one in Husborne Crawley.



(İmage: Derek Turner)

The vast majority of the boundary wall – which is claimed to be 11 to 12 miles long but actually thought to be closer to 8 miles - surrounding the 3,500 acres of the Bedford Estate, is original. It was started in 1792 and following the contours of the terrain along its length, was completed by the spring of 1798: and the overall cost is stated as being £20,000.

Those 18th century bricks, handmade by sandmoulding and wood-fired, were almost certainly made within the Estate itself, which developed a commercial side to production too, and 'Drakeloe Lake', next to the town of Woburn, was a former clay pit. This makes complete economic sense too, because bricks made on land owned by a client would typically be about half the price of those purchased from a nearby brickyard at that time. Also transportation of new bricks by cart added

further costs to a purchase: and, rather ironically, Bedford Estate records state, even in the early 1840s, that carting their bricks just 10 miles to the town of Bedford doubled their price.

The section of wall from Ridgmont to Husborne Crawley, that I briefly mentioned at the outset of this letter, I have known about and been interested in since I was an apprentice 50 years ago. By the latter years of the nineteenth century that long section of the boundary wall had become of concern to the Bedford Estate and deemed beyond repair, so it was completely disassembled and rebuilt, with just a paltry 15,000 bricks salvaged for reuse: considering the main wall is 13 1/2 inches (343mm) thick and that just 1 square yard of brickwork alone would need 186 bricks, so just working on that volume for the roughly 2,640 yards overall length of that section of new boundary wall, and only to that same 1 yard height, would require around 500,000 bricks!



the perimeter of the Park near Ridgmont village. The wall follows the straight section of the Husborne Crawley road coming in from the left and curves to meet the Lodge in the centre. In recent years I have added a great deal more to my ongoing research through undertaking a personal study of original Bedford Estate records for primary evidence, working towards setting time aside to conclude the draft of what will become a peer-reviewed paper on the materials and construction specified. Regrettably, though the names of the suppliers of various materials are mentioned, the final selected manufacturer and supplier of the bricks to build that entire section of wall is not confirmed: and by the time of its planning and construction, during 1898-1901, the manufacture of bricks on the Bedford Estate had ceased.

That they will have been locally made would appear to be beyond question due to the large numbers that were needed and the reasonably close proximity of a number of traditional hand-making brickyards operating at that time. Examination of the bricks used for that section of the boundary wall reveal them to be well-moulded and coal-fired to a relatively uniform orange-red colour.

The 'Dudley Brick and Tile Works' in Woburn Sands, which has been another area of my personal interest and where research indicates operated from the mid-1870s to 1959, certainly had a history of supplying bricks and tiles for "His Grace The Duke of Bedford", as they respectfully record within some of their original ledgers: but, regrettably, those I have had access to do not specifically cover the years for the period of the construction of that wall. So it is certainly not impossible they might have supplied the bricks due to stated past commercial business with the Estate, and the benefit of the, then, LNWR Bletchley to Bedford rail connection from the nearby station at Woburn Sands to transport them to Ridgmont Station: where records show most of the other materials were delivered to for taking by carts up to the wall.

Another brickyard that it has been suggested might have supplied bricks is the 'Braystone Brick and Tile Works', Salford Road, Aspley Guise That operated, under ownership of a Mr Higgins, from 1877 to 1906, and was also known to have had ongoing commercial business with the Bedford Estate: and, of course, that works also had close proximity to the railway at Aspley Guise Station to transport their bricks. If both brickyards were commissioned to supply those bricks it would have been essential that their clay types, as well as their manufacturing methods were similar, and that the final texture and colour of the fired bricks matched for uniformity. Another consideration is that as both yards followed the, then, traditional practice of seasonal brickmaking alongside firing their goods in 'intermittent kilns', there might be an issue of them being able to supply the final number of bricks that such a wall required has to be factored in. Of course, irrespective of manufacturing capacity, rural brickyards, like the two mentioned, also maintained large stocks of bricks and other associated goods for times of higher demand.

Over the intervening years I have observed with interest a number of further sections of this overall boundary wall brickwork that have been repaired, repointed, or completely taken down and rebuilt, and utilising a variety of brick types, classes of mortars and executed to widely varying standards of craftsmanship or workmanship: some reasonably satisfactory, others less so.

#### 'The Red Mason'

Dr Gerard Lynch is an internationally acclaimed and respected expert in historic brickwork, master brickmason, carver, educator, and author. He has been awarded the Silver and Gold Trowels from the Brick Development Association and is a Licentiate of the City and Guilds of London Institute (LCG). Gerard was formerly a senior lecturer as Head of Trowel Trades at Bedford College, Bedford, Bedfordshire. He is the author of Gauged Brickwork: a Technical Handbook and Brickwork: History, Technology and Practice 2 volumes; and 'The History of Gauged Brickwork, Conservation, Repair and Modern Applications.

## **Education News!**

### **Buckden Learning Group Field Trip**

#### By Bev Fowlston

I used to teach retired groups of people about geology and Earth science. Since finishing teaching I was approached to lead a day's field trip by one of the groups, Buckden Learning Group (BLG). I undertook this in June.



We started with a very leisurely tea, coffee and natter for about 15 minutes in the Scout Hut at Potton before embarking on the long trek to the outcrop!

Once at the outcrop, 5 minutes later, the dozen attendees attempted their version of field sketching the fabulous exposure of Woburn Sands Formation and all its sedimentary features. These include cross-bedding, unconformities and different thicknesses of layering within this sedimentary rock. I described the rock formation and its significance in the area as a building stone.

After a short tea-break, we then had a go at producing a graphic log of the outcrop, which seemed to go down well. Lots of rulers and tape measures were produced and frantic drawing ensued.

Some of the BLG students field-sketching (İmage: Bev Fowlston)

We finished up at the Scout Hut and walked part of the Eastern Geotrail that leads to The Rising Sun pub. We had a lovely lunch there before returning to collect our cars for the second half of our field trip.

Following a short drive to the RSPB in Sandy, we walked more of the Eastern Geotrail that takes us to Sandy Warren Lodge Quarry. Here we explored the vastness of the Woburn Sands Formation. We discussed its formation and geological history as well as the necessity to preserve these rare outcrops. The need to protect them from people and people from them, particularly here where erosion is dangerous due to the overhanging trees and vegetation.

The day ended back at the car park where the attendees said they had learnt a lot more by coming out in the field than just learning in a classroom as they normally do.

"Anyone who stops learning is old, whether at twenty or eighty. Anyone who keeps learning stays young. The greatest thing in life is to keep your mind young."

- Henry Ford

Image courtesy of

https://www.growthengineering.co.uk/70-quotes-about-learning/

Sandy Warren Lodge Quarry and one of the BLG students protected from the overhanging trees.

(İmage: Bev Fowlston)

### The Higgins workshops

By Diane Sutherland



During the half term, on Wednesday 31st May, Paul Hawkes, John Busby and I ran 3 geological workshops for children at The Higgins museum in Bedford.

The theme was 'Bedford Under the Sea' so we took the children on a time travel adventure, back 170 million years ago, to when dinosaurs ruled the lands and large marine reptiles ruled the seas in the Jurassic and Cretaceous periods.

We introduced the process of Continental Drift and how this changed the marine environments over a period of 100 million years. We explained the 4 main sedimentary rock deposits, limestone, sandstone, clay and chalk, that

we find here in Bedfordshire. We explored the abundance of marine life that dominated these ancient seas and how we see evidence of these creatures as fossils within the rocks.

The children then enjoyed a variety of hands-on activities including making their own ammonite trace fossil in clay, digging for fossils in sand, watching limestone effervesce and identifying and handling a large range of rock, mineral and fossil specimens.

The children were enthusiastic and engaged and we thoroughly enjoyed answering all of their wonderful questions. It was a delightful day spending time with these budding geologists of the future! Thanks to all who attended.

## Chemical analysis of sandstone

#### By Bev Fowlston

During our visit to Silsoe quarry earlier in the year, Dr Mike Kingdon picked up an interesting looking piece of sandstone. He wondered if it had cobalt in it. In the past we had been offered the services of one of the staff at Cranfield University to analyse any interesting pieces of rock we find.





Interesting piece of rock for analysis. (Image: Emma Fowlston) I contacted Dr Diane Johnson of the Cranfield Forensic Institute who had offered her services. She took our interesting piece of rock and put it through some testing - not all of which I understand (if any to be honest!).

Dr Johnson carried out mineral sample analysis by Scanning Electron Microscopy -Energy Dispersive X-Ray Spectroscopy (SEM EDS). Her report summary is "*The Compositional data detailed below for both areas analysed, is summarized as showing major elements of O and Fe although in patches (such as with area 2) Mn and Ag content was high in selected smaller areas, minor element content of C, Al, Si, Co and Ba were also present in selected smaller areas (Co and Ba particularly in area 2). Trace level chemistry was indicated for the following elements but these numbers will have high error values as they are at/around the instrument limit of detection: Na, Mg, P, K, Ca, Ti."* 

Dr Johnson's full report is available upon request and only for the use of individual educational purposes. Our thanks to Dr Johnson for taking the time from her busy schedule to help answer the question of cobalt or not?

Thank you very much to Cranfield University and to Dr Johnson.

## LGS Ranger News!

### Focus on Bromham Bridge

#### By Bev Fowlston

Bromham Bridge LGS was one of the first sites to be designated by BGG back in April 2006 by Dr Jill Eyers. It crosses the River Great Ouse between Bromham and A6 towards Bedford.

The full description from our designation form states "*This bridge presents a good opportunity to view the local limestones, although some stone has been imported from beyond the county to effect repairs. The wide variety of limestones here are useful for teaching purposes as they illustrate different petrology, fabric, fossil content and sedimentary structures. As an open access site it provides a better option for examining local building stones than is offered by private dwellings. It can also be used as a link to the River Great Ouse in terms of its origin, age and fluvial processes."* 



View of Bromham Bridge. (İmage: Derek Turner)

This site is already registered as a <u>scheduled monument</u> with Historic England but there are not many details as it was brought onto their list from an "old county number" (OCN). These records are some of the oldest designation records which are currently in the process of being updated via the GCLP project "Missing Pieces". If you want to get involved in updating the records, then please email <u>daniel@greensandcountry.com</u>

To learn more abut the history of the bridge then click on <u>this</u> <u>link</u> to Bedfordshire archives.

In March 2022, Derek Turner and I took a walk around the bridge as part of the LGS monitoring programme. The bridge is still in good condition as it is maintained by the Local Authority and Highways England due to it being a main thoroughfare for the village of Bromham.

Having read the designation form, some questions were posed by Jill that still require answers to - can you help?

When did quarrying start in this area?

Where were the quarries located?

What was the scale and importance of the industry?

Can a viable local source for stone be found to effect sympathetic repairs?

Please do get in touch if you can help, email <u>bev.fowlston@gmail.com</u>

### LGS monitoring

Your help is always welcomed. If you are visiting an LGS then let us know. Take some images of the features and record the position the image was taken from. Then tell us about the condition of the site.

Remember - many hands make light work!

## **Committee News!**

### **Committee meeting summary**

#### By Bev Fowlston

The committee met in June via Zoom and between us we held discussions on the group's normal activities and some more unusual ones. These included how we can get our members more involved in the important and interesting work we do for the better of Bedfordshire's geology.

Our finances remain healthy but still need to be audited.

Membership has decline this quarter with numbers at 29 for individual members including 3 life members, and about 21 for our corporate members from The Wildlife Trust, Central Bedfordshire Council and KDK Archaeology.

Our commitment to GCLP was supported on behalf of BGG by Derek Turner leading a walk and providing some of our leaflets for the May Festival.

Updates on the progress of the LGS monitoring were given with plans to continue the monitoring throughout 2023 and into 2024.

As usual planning for future events was undertaken. Preliminary details are given later in this newsletter and on our website as we finalise them. Do let us know of any new ideas for events that you may have.

Finally, discussions to try and get the Mary Anning Maquette to The Higgins in Bedford were undertaken - WATCH this space!

The next committee meeting will be on **Thursday 24th August 2023**, if you wish to add anything to the agenda, please email one of the committee members. Contact details on the back page.

#### Do get in touch in the normal way if you feel you can help out.

# Many hands make light work!





## **Membership Information**

Memberships are due on April 1st each year. They remain at £10 per person per annum or £25 for group membership (organisations with 4 or more employees).

Please pay online directly to the BGG account:

Account name: Bedfordshire Geology Group, no 45377413 NatWest, sort code 60-01-16

Please email membership.secretary@bedfordshiregeologygroup.org.uk to let us know you have paid.

If you are unable to pay via online banking, cheques can be sent directly to the treasurer at the following address: BGG Treasurer, c/o 9 Latimer Close, Wotton, Beds MK43 9QA.

Please let the membership secretary know, via email, of any changes in address, telephone no, email etc.

Your membership entitles you to 4 newsletters a year, free entry to all BGG events (nonmembers pay £2 per event to cover insurance), walks & talks and frequent communications.

## Quick Geology Brainteaser

Answers from Spring 2023

#### **Geological Word Scramble**

1. Cretaceous; 2. Jurassic; 3. Triassic; 4. İce Age; 5. pyroclastic; 6. sandstone; 7. granite; 8. brachiopod; 9. combe; 10. chalk; 11. Barton Hills



General Geology Terms crossword

#### Across

6. A palaeological descriptor of the number of taxa in a community. (8)
8. An isolated, crescentic dune. (7)
9. A nearly flat landform with a steep edge formed by a variety of processes. (7)
10. A Cretaceous succession in England. (5)
Down

1. Red, yellow and brown iron oxides formed by the weathering of iron deposits. (5) The total area of a drainage basin.
 (9)

3. A small tectonic plate. (10)

 Steeper slope of Greensand Ridge (10)

 An element formed by the radioactive decay of an existing element.
 (8)

7. Superficial deposit formed under periglacial conditions (4)

### Upcoming events ...

# Please join us for these planned events, details are available on the website or check out the regular emails from Derek.

### Book your place by emailing the event organiser or secretary@bedfordshiregeologygroup.org.uk

Monthly Zoom get-together : Every 3rd Thursday - email for link - Next one 20th July 2023

Thu 13th Jul, 10.30am: Visit to Broom South Quarry	Organiser: Derek Turner
Sat 29th Jul, 10.30am: Attend Dunstable Archaeology Day	Organiser: Derek Turner
Wed 9th Aug, 10.30am: Walk at Harrold Odell with BNHS	Organiser: Derek Turner
Thurs 14th Sept, 7.30pm: Microscope workshop and AGM	Organiser: Bev Fowlston
Sept TBC: Visit to Hill End Chalk Pit with HGS	Organiser: Diane Sutherland
Mon 6th Nov, 11am: Learning lunchtime talk at Forest Centre	Organiser: Paul Hawkes

### If you can help to plan, organise and run events then please do get in contact.

## COVID-19 UPDATE

All events are arranged with risk assessments including Coronavirus. Should Government guidelines change prior to the event and we have to cancel or postpone, we will inform you via email. All face-to-face events must be booked with the event organiser or our secretary.





Please let us know if you have other places or events you'd like to include in this schedule. You will receive an email on each of these events nearer the time with exact details so keep watching your emails and check our website.

### BGG Committee: Join us!

#### Our current committee members are:

Acting Chairperson:	Derek Turner	derek.turner@phonecoop.coop
Group Secretary:	Derek Turner	derek.turner@phonecoop.coop
Treasurer:	Bev Fowlston	bev.fowlston@gmail.com
LGS Coordinator:	Bev Fowlston	bev.fowlston@gmail.com
Membership Secretary:	Dr Christian Atkins	wyverns4@hotmail.com
Affiliated Groups Liaison Officers:	Paul Hawkes	paulhawkes04@gmail.com
	Glynda Easterbrook	glyndaeasterbrook@gmail.com
GCLP Rep:	Derek Turner	derek.turner@phonecoop.coop
Website/Social media/Newsletter editor:	Bev Fowlston	<u>bev.fowlston@gmail.com</u>
BNHS Recorder:	Bev Fowlston	bev.fowlston@gmail.com
Events Coordinator:	Diane Sutherland	diane_sutherland1@yahoo.co.uk

We are always looking for new members to join the committee and bring fresh ideas.

Please contact any of us if you'd like to join our friendly team.

We meet for quarterly meetings via Zoom.



Come and join us!

Newsletter compiled and edited by Bev Fowlston.

If you wish to include an article, photo or share your geological interest in the next issue, please contact me by email at

#### bev.fowlston@gmail.com

Deadline for copy is 23rd September for inclusion in the next issue.

Hope you enjoy the read!

Please look at our website for news of walks, talks and events. It's easy to download flyers & geotrails.

#### www.bedfordshiregeologygroup.org.uk

You can also find us on other social media platforms:

www.facebook.com/bedfordshireGeologyGroup/

www.instagram.com/bedfordshire\_geology\_group\_/

#### twitter.com/BedfordshireG