

# Newsletter

## *Visit to Ampthill Park*

*Sunday November 6th*

*By Derek Turner*

**T**he sun was blazing down from a clear sky but a bitter wind blasted the Greensand Ridge as BGG members visited Ampthill Park in November. This was one of a series of walks commemorating the tricentenary of Capability Brown who was born in 1716 and went on to design landscaped parks all over England. Three members of the Friends of Ampthill Park, Kelvin Horton and Graham and Catherine Brown (no relation to the great man) kindly led us round in two groups.



Ampthill Park had already existed in some shape or form for four centuries when Brown first arrived in 1770 at the request of Lord Ossory. Since then, over half of the park has been destroyed and most of Brown's plans have not survived. Nevertheless, comparisons with other Brown landscapes prove that much of his impact survives here and features of it have been restored recently by clearing recent growth of trees and scrub. Our guides showed us the view from where his new carriage drive crested the Ridge's summit and offered visitors

their first glimpse of Park House standing on a low spur protruding into the Marston Vale below.

Brown is well known for impressing landowners and those they entertained by damming up streams to make lakes that dominated the view approaching many of his clients' homes. Here at Ampthill, there was no watercourse for him to manipulate but he still managed to insert skilfully a small lake between the view point and Park House. It occupies a fold in the side of the Lower Greensand scarp where



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*Wishing all our  
members and  
readers a very  
Merry Christmas  
and Happy  
New Year*



springs from a perched aquifer meet the surface- evident elsewhere on the site as seepages where the grass is lusher than elsewhere.

Elsewhere on the site, Brown's work is often difficult to spot. Such was his genius that his embellishments to the landscape and creation of vistas quickly blended in. However, our guides showed us clumps of trees, planted on and masking heaps of surplus soil. These continue to give visitors to the park the impression of extra height and depth to the scenery and those venturing inside them would have found their sight focussed through deliberate gaps between the carefully-sited trees onto landmarks and places where the hunting reached its climax.

We were told that much more of Ampthill Park's history is waiting to be rediscovered and not all of it is about Capability Brown's legacy. Recently, archaeologists have used ground penetrating radar to try and determine the exact site of Ampthill Castle which stood at the top of the park between 1372 and 1600 and must have had a magnificent outlook both to the north and south. What appear to be the buried footings of two buildings standing at right angles to one another showed up, but whether one or both of them are remains of the castle will have to wait until excavations provide more evidence.

Too often today, the actions of humans have an impact on the land that is damaging. Capability Brown showed what can be achieved when you understand an area and work in sympathy with it. The Greensand Ridge provided a grand background for him to embellish at Ampthill Park.



## ***Greensand Country Landscape Partnership. (GCLP)***

*Update from BGG project manager Bev Fowlston*

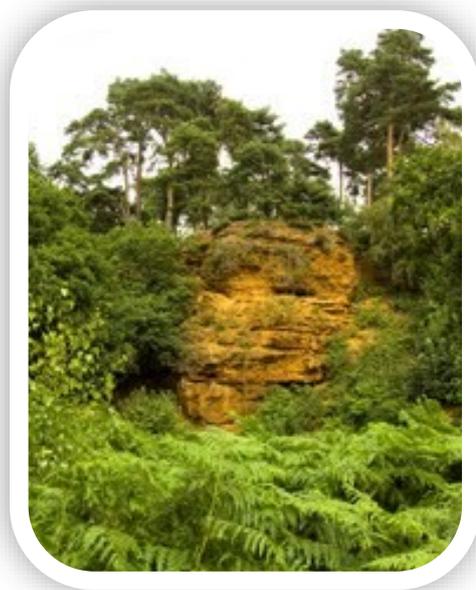
***And*** so, the work begins....

*In February 2017, we will be organising a trial walk of the new Eastern Geotrail. We need people to come along on the walk which is approximately 7.5 miles on public rights of way.*

*This walk will be a scouting walk to find out where and how many signposts there are on the route enabling us to calculate the number of new signage discs we will need. In addition, the walk will be a test of the route to see if any changes are required to make it more interesting.*

*The geologists and ecologists amongst you can help with the interpretation for the geotrail leaflet. We hope you will all help in some way. A date is yet to be approved but look on the website and Facebook page for updates.*

*Match-funding for the first year of the project is underway, so fingers-crossed we get the money!*



## What's been happening with the Higgins handling collection



*Fabulous mammoth tooth specimen from Willington*

*Impressive coal measures leaf fossil*



Anne Williams and museum volunteer Jean Griffith have been very busy identifying and cataloguing rock and fossil specimens from the museum handling collection.

The TMS database update is almost complete with just three weeks to go. They will then choose ways to present and store the specimens and write up their 'stories'.

The plan is to use the collection for educational activities in schools. There are some niches to smuggle earth science into the National Curriculum. Such a shame that Geology is rapidly disappearing at GCSE and A-level, with none currently being taught in Bedfordshire.

## Education at the Rothsay Centre

*By Bev Fowlston*

During September/October, Brian Kerr and I taught for a few weeks at the Rothsay Education Centre in Bedford, presenting a short course on the making of Bedfordshire's Landscapes.

Brian, as many of you probably know is a local soil expert and author of:

*"An Unassuming County: The Making of the Bedfordshire Countryside"*.



Exploring Silsoe quarry

Together, we showed our 20 or so students how the Bedfordshire landscape has changed and evolved over time, from the rocks beneath their feet to the man-made landscaping of Capability Brown.

Our students were all retired people who still have a love of learning. We took them out on a field trip to Silsoe Quarry, which they all thoroughly enjoyed and asked varying questions from my use of an umbrella to the Earth's cooling core! I really had to rack my brains to answer that from Year 1 at University!!

Brian and I used this opportunity to promote not just his wonderful book but BGG's extensive work and publications too. We are looking forward to doing it again next year.



Finding iron nodules and concretions

## Restoration of Leighton Buzzard quarries

*By Henrietta Flynn*

**A** meeting was held at Stockgrove Park on November 14th to discuss the restoration of the Eastern Way quarry complex in Heath and Reach, Leighton Buzzard.

Present at the meeting were representatives from The Greensand Trust, Central Bedfordshire Council, Wildlife Trust and Natural England.

Anne Williams and myself were invited as representatives of BGG.

This complex of quarries has been quarried for their high quality sands since the 19th century.

The quarries in question for restoration are Nine Acres, Double Arches, Churchways, Checkleywood and Munday's Hill. Whilst extraction and processing operations will still continue, Garside Sands are proposing a plan of restoration in areas where quarrying is complete. The scheme will create a mixture of agricultural land, woodland, planting and wildlife enhancement areas to reflect the surrounding landscape whilst enhancing biodiversity.

From a geological perspective the national and regional importance of these quarries which include



SSSI protection was discussed. Also the conservation of exposures that we (BGG) may or may not be able to manage. These quarries not only expose the Woburn Sands but also the elusive Shenley Limestone and gault clay—both very fossiliferous.

Jon Balsaam (Greensand Trust) is to set up a Sandstone Steering Group to respond to Central

Beds Council and the planning application from Garside Sands.

As it is difficult to visualise the extent and preservation of sites within the quarried areas, Jerry Smith of Central Bedfordshire

Council was tasked with arranging some quarry visits for those available to attend. This will be a great opportunity for BGG to further assess exposures worth preserving and have some say in boundary planting. Anne & I will report in the next newsletter.

In case you were thinking that Leighton Buzzard sand quarrying was winding up, apparently there's around 14 years of extraction left!

## And what about Ledburn Quarry?

*Bev replies to an enquiry from Ann May*

Following an enquiry at the AGM into Ledburn Quarry, an abandoned quarry in Leighton Buzzard, we thought an update on BGG's position on this previous RIGS (Regionally Important Geological and Geomorphological Site) was pertinent.

The site was first designated in 2004 by Dr Jill Eyers and later assessed by Dr Martin Whiteley in 2009 when the site was in decline. Ledburn was designated for its small (50 x 3m) exposure of Woburn Sands Formation. This exposure was never particularly noteworthy compared to other sites in the area, so it was decided to concentrate on other sites that were easier to manage and assess. As a result it was de-designated as a RIGS when the new LGS (Local Geological Site) system was instigated in 2010.

Ledburn's initial designation was made as it was part of the Tiddenfoot complex of disused quarries. Tiddenfoot Waterside Park is now a widely used public space with lakes and wooded walks, but the Ledburn part was never made into recreational space and has since been used as a waste disposal site.

It was sad to learn from the enquirer, Ann May, that the site has further declined with much of the exposure now collapsed. Ann did ask why Ledburn hadn't been included in the new GCLP project. Unfortunately, the boundary for the new Nature Improvement Area covered by the project does not extend as far as Tiddenfoot and Ledburn so these could not be included.

## *Our Great Geological Legacy*

*Harrold Odell Country Park* by Jan Munro

**H**ave you ever stopped to think about the precious legacy our geology gives us? All over the country there are beautiful places to visit. It could be spectacular scenery or the little places to be treasured on our doorstep.

Here in Bedfordshire, we are blessed with a plethora of different rocks. They all contribute in subtle ways to the landscape, flora & fauna. Over the years, it's been my privilege to have been involved with managing sites based on three rock types – the Chalk at Dunstable Downs, the Greensand around Rushmere Country Park and lately, the Gravels & Limestone at Harrold Odell Country Park.

Who would have thought that the latter, a former industrial site 40 or so years ago would now be an important County Wildlife Site hosting 250,000 visitors annually?

Orchids now flourish where gravel was once washed. Badgers & rabbits also inhabit this area. Swans and ducks nest in the silt pond. Grass snakes hunt frogs around the lake edges and woodlands have reclaimed the ravaged landscape. These in turn are inhabited by muntjac deer, owls and foxes.

Every rock type supports its own species - each area subtly different. Limestone species won't thrive on granite and vice versa. Next time you're out for a walk take time out to celebrate the different beauties to be savoured.

*Life is indeed good!*

*Thanks Jan for reminding us of the delights of Harrold Odell Country Park.*

*How about visiting the Park this Winter?*



*Gravel & limestone quarrying in the early 1970's*



*Beautiful kingfisher*



*Harrold Odell in Autumn, rich in wildlife habitats*

# *Not more earthquakes!*

*Global earthquake review*

by Henrietta Flynn

Italy

In the last newsletter I reported on the 6.2 magnitude earthquake in the Amatrice area of Italy. It appears that seismic activity is still happening here on a grand scale.

On Sunday October 30th the most powerful quake to hit Italy since 1980 (6.6 magnitude) struck in the Marche and Umbria region close to the town of Norcia, just days after it had been hit by two other smaller earthquakes.

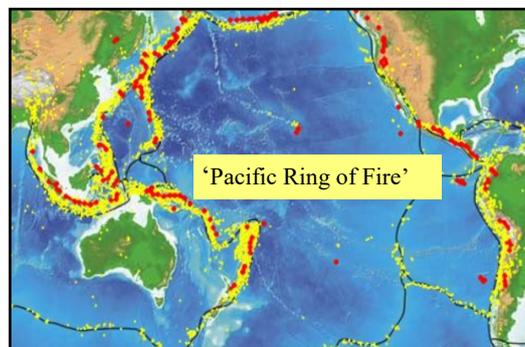
It appears that the process of faulting along this seismic gap in the Apennine Mountains is a relatively recent one in geological terms, starting 500,000 years ago. According to seismologist Ross Stein from Stanford University, these faults are now becoming more fractured and irregular, so more shaking occurs and more foreshocks. In this case the destructive shock was preceded by foreshocks by two hours, causing people to leave their homes before the larger shock occurred. So although earthquake prediction is difficult in the Apennines an awareness and understanding of foreshocks is critical in preventing casualties.

## Japan

On November 22nd a 7.4-magnitude earthquake struck east of Fukushima prompting urgent warnings for people to leave low-lying areas in Fukushima and Miyagi as a series of tsunami waves hit the shore. Thankfully all tsunami warnings were soon lifted as the risk passed. The region was also hit by a series of weaker quakes in quick succession.

It is thought that this earthquake may be related to the 9.0-magnitude event that devastated the same region in March 2011 with a massive tsunami and causing the world's worst nuclear crisis since Chernobyl.

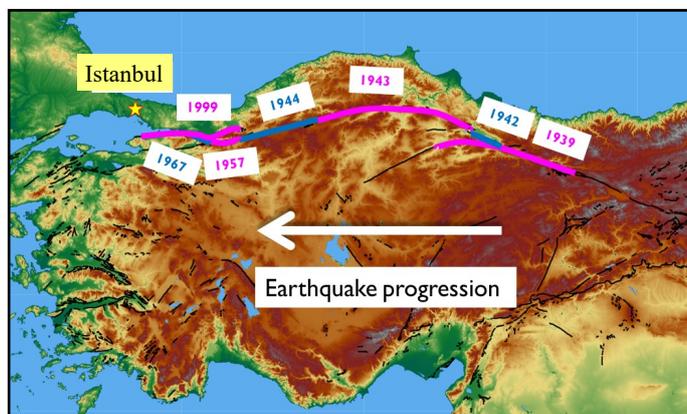
Earthquakes are common in Japan, accounting for about 20% of the world's earthquakes of magnitude 6 or greater. About 1,500 earthquakes strike the island every year with minor tremors occurring on a near daily basis. Japan sits along the 'Ring of Fire', a horseshoe-shaped area along the Pacific coasts of Asia, North and South America, where the faulted margins of tectonic plates meet.



## Is Istanbul next?

Istanbul lies along one of the Mediterranean's most dangerous earthquake faults. Turkey's North Anatolian fault, a 900 km crack, is Europe's answer to the San Andreas Fault. Over the last 60 years, successive strands of this fault line have ruptured, each event releasing stress on one part of the fault and passing it down to the next strand.

Like a set of falling dominoes, the ruptures of the North Anatolian fault have moved steadily westwards – in 1939, 1942, 1943, 1944, 1957 and 1967 – from sparsely populated parts of eastern Turkey to the industrial north-west. Then, in 1999, two of the strands just east of Istanbul ruptured in earthquakes that left over 35,000 dead, destroyed 15,000 buildings and cost \$10–25 billion in damage.



Seismologists are convinced that these quakes have added stress to the last remaining significant unruptured strand, the section of fault that lies in the Marmara Sea, directly offshore of Istanbul. If the pattern of the past continues, then Istanbul, is due for a direct seismic hit in the coming years or decades. ***Istanbul you have been warned!***

# 2017 Events

<i>Date</i>	<i>Event</i>	<i>Description</i>	<i>Time</i>	<i>Venue</i>
January 22nd	Talk at Higgins Museum	An Introduction to <b>Bedfordshire Geology</b> . A presentation by Bev Fowlston with samples and specimens to view.	2.30pm	Barbican Room, Higgins Museum, Castle Lane, Bedford MK40 3XD
February 25th	Walk	<b>GCLP (Greensand Country Landscape Partnership)</b> event: Eastern Geotrail investigative walk to confirm route and note geological interest and signage requirements.	10.30am	Meet at RSPB visitor lodge, The Heath, Potton Rd, Sandy SG19 2DL. Onsite parking chargeable.
March 18th	Quarry visit	A visit to a Leighton Buzzard quarry, probably <b>Munday's Hill</b> , to hunt for fossils and evaluate the quarry itself.	10.00am	Aggregate Industries, Eastern Way Heath & Reach LU7 9LF
April 8th	Clearance	A chance to help maintain one of our LGS at <b>Kensworth nature reserve</b> . This site has been neglected the last few years due to lack of support, so please come along if you can to help preserve this rare exposure of chalk.	10.30am	Cemex UK Cement Ltd, Kensworth, Dunstable LU6 2PR
May 20th	Quarry visit and walk	A trip into the stone pit at <b>Totternhoe</b> and a walk around Totternhoe Nature Reserve will hopefully reveal some interesting fossils and features of this ancient landscape affected by modern industry.	11.00am	NT nature reserve car park, Knolls View, Totternhoe. Map reference SP 986 217
June 17th	Vineyard visit	Members only: <b>Warden Abbey vineyard</b> tour. A chance to understand the geology of vine growing and a look at this community vineyard. COST £8 per person.	2.30pm.	Warden Abbey Vineyard
July	Clearance	As part of our commitment to <b>GCLP</b> we will clear the face at <b>Potton</b> and work on improvements to the site.	T.B.A.	Potton Scout Hut Quarry, Sutton Road, Potton SG19 2DS
August	Clearance	As part of our commitment to <b>GCLP</b> we will assist the RSPB in clearing small trees and shrubs to enhance the view of the quarry at <b>Sandy Warren</b> .	T.B.A.	RSPB Lodge.
September	AGM	<b>AGM</b> meeting and event to be decided.	T.B.A.	T.B.A.
October	Workshop	As part of our commitment to <b>GCLP</b> we will hold a public workshop aimed at informing the public about Bedfordshire geology.	T.B.A.	RSPB or Potton Scout Hut

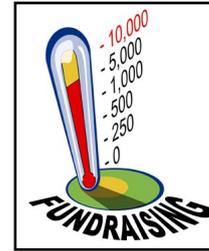
# News in brief

## **BGG Survey Results**

Thank you to those of you who completed our online survey. We had a 45% response from members.

The committee had the idea of holding regular meetings in Clophill for members and non-members, but this suggestion was not deemed popular by you so won't be pursued.

The survey also asked for your opinion on events. For indoor activities you ranked talks and presentations by experts as your top choice, whilst overall most members preferred outdoor pursuits.



## **Fundraising**

*Last newsletter we asked for your help in fundraising by voting online to the Skipton Building Society's Grassroots Giving Initiative.*

*Unfortunately we were unsuccessful this time but as a Group we will be continuing to apply for grants and funds where we find suitable opportunities. If you know of possible sources please contact the committee.*

## **Annual Social Event**

*In previous years we have held our Annual Social as a Xmas event. This year the committee has decided that with so many of us involved in other seasonal activities it would be best this year to hold a social event in January. We will still have a*  
*raffle, prizes, food, drink & quiz.*

*So don't miss it!*

*Watch out for an email shortly.*

*Did you miss the AGM in October? Apart from a walk in the Greensand woodland of Rushmere Park we had a guest speaker. Bev invited Claire Poulton, Programme Manager for the GCLP to address members.*

*She gave us an overview of this important countywide project which the BGG will be involved in for the next four years. (Please see Bev's report on page 2).*

## *Committee Member profile*

### *Tony Baker, BGG Membership Secretary*

**M**y first real geological memory was a school geography field trip to the Wren's Nest site in Dudley.

Outcrops of Silurian Limestone in the Quarry were chock full of Brachiopods, Trilobites and Crinoid Ossicles. Scrambling over scree slopes wielding a hammer and hunting fossils really got me hooked on Geology.

I did a combined Honours degree at Aston University and then joined the Industrial Petrology unit at Queen Mary college as a PhD student studying concrete (a man made rock!). I then spent 15 years inspecting rotting concrete structures for various companies and eventually ended up becoming a secondary school science teacher.



*Thanks Tony for an insight into your geological past and route to BGG*

## **BGG Committee**

Chairperson	<b>VACANT</b>	<b>could this be you?</b>
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If you wish to include an article, photo  
or share your geological interest in the  
next issue, then please contact me by  
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