



Cambridgeshire Geological Society

Newsletter

December 2021

Cambridgeshire Geological Society



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Editorial : Reg Nicholls

As we move towards the end of the year, the continuing risk of the pandemic dictates that we have to continue with our **virtual** series of monthly talks for the foreseeable future. However we did still manage a number of “face to distanced face” events this year with a number of field trips: some reports are featured below.

We have had responses from many members suggesting that a post festive season lunch (in a suitable airy location) might be a good idea—especially as we have so many new

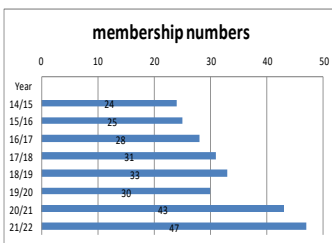
members to get to know. We will look into this possibility once the New Year begins.

In terms of membership, we now have 47 members—the highest that I can gather from older data and it would be good to be able to get to know everyone a little better than a disembodied face on a screen!

Our Geosites and Fen Edge Trail teams have also been out and about this past year, with a number of new sections of the Trail being published (see page 4) and begun whilst Orwell Clunch Pit has been added to the

pantheon of Local Geological Sites. Both teams have grown in number, but there is room for more volunteers!

As expressed at the AGM, the Society would benefit for some more volunteer committee members to help us push our reach and activities in the coming year, so we would welcome anyone who can devote a few hours per week to join us in an ad hoc manner until the next AGM. You do not need to be a trained geologist—just need to be keen on what we do!



Trip report: Swaffham Bulbeck to Reach



Some of the walkers at the ruined chapel in Reach

On the morning of 6th October, a group led by me set out from Swaffham Bulbeck to walk the Fen Edge Trail route to Reach. Just for a change, it was not raining! This section begins high up on the Chalk escarpment at Bulbeck for a view over the Fen Basin to the east and some old quarry workings still visible, before heading down to meet the 5m contour. We entered the village of Swaffham Prior sitting

along the scarp slope from which artesian springs flowed, probably encouraging early settlement. Indeed the first old stand pipe worked and a decent flow of water emanated! This village is also famous for the twin churches in close proximity, one of which has a large brown sandstone erratic in the wall. The route then follows the 5m contour along Barston Drove which curls round the big old

quarry on the edge of Reach before entering the village at the Hythe end via the Roman port. We then wandered through the back lanes to an open area fringed by the quarry walls where a top layer of Totternhoe Stone and then the underlying West Melbury was taken. The walk ended outside the ruined chapel of St John behind St Ethelreda, near the pub.

Geosites: LGS progress



Orwell Clunch pit: the latest LGS to be added



Image of Barrington Chalk Pit (courtesy of Cemex)

Local Geological Site designation: CGS recently put forward another site for designation, Orwell Clunch Pit. This was approved in October this year based on the visibility of its West Melbury Marly Chalk, the presence of periglacial features such as brecciated chalk and involution structures filled with Anglian Glacial Till, plus its historical interest associated with the village. Details are now on our website:

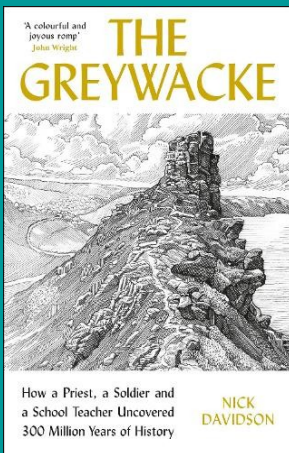
<http://www.cambsgeology.org/orwell-pit>

We have also had success, in October, in proposing 12 candidate LGS, which will now be mapped and recorded on the county sites database. Work is continuing to propose more of these candidate sites and we have recently increased the number of members volunteering to help with this important work (more welcome!). It is hoped that most, if not all, of these sites

will be taken forward for full designation at some stage. SSSI reviews: We recently arranged a visit for a small group to Barrington Chalk Pit, an important SSSI for its Chalk exposures and, previously, its associated periglacial features.

The Bedfordshire Geology Group obtained the contract from Natural England for an assessment of some SSSI in the local counties. They visited the Upware Jurassic sites and the Barrington Gravel pits.

Book Review: *The Greywacke* by Nick Davidson



This is the story of the one time friends who later turned to arch rivals—Adam Sedgwick and Roderick Murchison. They set about to characterise the succession of the “Greywacke” rocks in Wales: Sedgwick starting from North Wales and Murchison from South Wales. The

problems started when they met in the middle!

The third character in the story is Charles Lapworth who cut his teeth on the stratigraphy of the black shales in Dobb’s Lynn in the Southern Uplands. He applied himself to the problem of the Cambrian/Silurian boundary in Wales

which was causing the controversy and much anguish. So appeared the Ordovician period in between those two and the rest is history! The author is an amateur geologist and has captured the Palaeozoic wars with vividness—treating the protagonists as recognizable personalities.



Jurassic limestones in quarry wall in Dymmocks Cote, Upware

Potential field trips 2022

Following on from the successful series of local field trips this year, we need to turn our mind to what we can arrange for 2022! We are hoping to run a return visit led by Dr Simon Kelly to the Jurassic of the Upware area. This will be a joint excursion with Bedfordshire Geology Group., so numbers

will be limited. In return they are offering to lead us on a visit to the Greensand area around Sandy - more details on these as they develop.

We are also thinking of a visit to King’s Dyke Nature reserve near Peterborough: this site has an accessible

pile of Jurassic clay where amateurs can ferret around collecting various fossils—perhaps even a Leedsichthys. All of this is dependant on the Covid restrictions—so fingers crossed.

Keep watch for news in due course

Monthly Society Meetings

Meetings are still in **Virtual** mode with a Zoom link being sent to all members and other interested parties. **All talks are at 7.30 pm** on the 2nd Monday of the month (apart from July & August). Participants will be held in a waiting room before being allowed entry. A recording of each talk will be made available to Members for one month.

Monday 13th December

The Geology of the Lower Cam and Wicken Vision Area - From Horningsea to Upware in 10 Easy Steps

Dr Steve Boreham

This talk will describe the architecture of Holocene and earlier deposits in the Wicken Vision area, where the Lower Cam valley joins southern Fenland. This area has two disparate sedimentary systems. The deposits are sometimes cryptic, and outcrops and topography are often mantled beneath an overgrowth of late Holocene peat. The Wicken Vision is a hundred-year scheme by the National Trust to create a new 53 km² nature reserve between Cambridge and Wicken Fen. The area is characterised by its flat, low-lying topography and by soils developed on Holocene peat overlying clay-rich bedrock. However, such a simplistic description masks a wealth of geological complexity.



Sunset on Burwell Lode

Monday 10th January 2022

Jurassic Calamari: new research on fossil squid-like cephalopods from the Wessex Basin

Prof. Malcolm Hart *School of Geography, Earth & Environmental Sciences, University of Plymouth,*

In the Jurassic strata of the Wessex Basin there are a few lagerstätten with exceptionally preserved coleoid fossils. Many of these show the presence of ink sacks, arms and the hooks with which the animals caught their prey. In one unique specimen there is a 'life and death' situation in which an early Jurassic fish is being devoured by a predatory squid. A number of key specimens will be used to demonstrate the mode of life of these amazing fossils.



Courtesy Natural History Museum

Monday 14th February 2022

The geology of the Chilterns and the impact of HS2

Dr. Haydon Bailey *Geological Adviser, The Chiltern Society*

The Chiltern Hills are underlain by Chalk, predominantly what was traditionally called the Middle Chalk (now the lower part of the White Chalk Group) capped by the Top Rock - Chalk Rock complex. It is this series of chalk hardgrounds which effectively forms the spine of the Chiltern Escarpment. The Chalk dips gently into the London Basin, and the overlying basal Tertiary succession provides minor outliers around this northern rim of the basin. The other major geological event we have to recognise in this area is the re-routing of the Proto-Thames River during and following the Anglian glaciation, some 450,000 years ago. This created the landscape we currently see in much of the southern parts of the Chilterns. The planned route of the HS2 fast rail link passes straight across the Chilterns Area of Outstanding Natural Beauty (AONB) and the geology underlying this region needs to be considered carefully whilst tunnelling is being carried out; some concerns will be raised regarding the tunnelling proposed under the Chilterns, the geology it will encounter and its impact on the surrounding AONB.



Ivinghoe Beacon

Fen Edge Trail – Landscape Heritage project

Despite delays due to Covid, we have been able to progress several walks and start developing new ones this year and the **9th and 10th walks** have been published in the last 2 months

Earith to Needingworth : Having arrived at **Earith**, at the southern end of the **Ouse Washes**, the Trail turns south west to **Bluntisham** and **Needingworth**. Most of the walk is only a **few metres above** Mean Sea Level reaching a maximum of 21m. Partly following the River Great Ouse, the walk takes you through a gentle landscape that does not resemble the large, '**Ice Age**', **braided river** that formed the lower part of the valley as it reached the fenland basin. Extensive research by **Cambridge Archaeological Unit** has revealed many significant cultural sites showing that people adapted to changing water levels over the last few thousand years, in a dynamic delta-like landscape. The furthest extent of the sea incursion **c.3,400 years ago, during the Bronze Age**, saw marine conditions extend to just south of Earith and waterways were possibly tidal much further inland.

Sutton to Haddenham: this part of the Fen Edge Trail links the two villages of Sutton and Haddenham, which lie in the south west of the Isle of Ely. The Isle is better thought of as an archipelago, since it includes such separate 'isles' as Littleport, Coveney and Wardy Hill. Prior to the major draining of the Fens in the 17th century, the Isle was surrounded by freshwater marshes and meres. This walk follows ancient droves and ways, alongside the Catchwater Drain, around the edge of the Isle linking these historic villages that sit on key promontories where, once, our ancestors sat and looked out across marshes or, sometimes, even sea.

We have a further 4 walks that may well be published by New Year! 4 new people have joined the team and each started to plan their walks. We now have just a couple of areas on the main route that have not yet been started and a few on the 'islands' but a couple of these are held up due to lack of suitable footpaths. A summary is shown here: <http://www.fenedgetrail.org/overview/walks>



Other Society Meetings

Friends of the Sedgwick

To find out about these monthly talks, see

<http://www.sedgwickmuseum.org/index.php?page=friends-of-sedgwick>

for more information

CNHS lecture meetings

To find out about these monthly talks and other activities, see <http://www.cnhs.org.uk/> for more information

Local Fen Edge / Cambridgeshire museums

There are several museums with interesting fenland exhibits. Two that are now involved in the Fen Edge Trail are Burwell Museum www.burwellmuseum.ork.uk and Ramsey Rural Museum www.ramseyruralmuseum.co.uk. Out in the Fen Basin, are a number of other collections including those at Wisbech Museum www.wisbechmuseum.org.uk which has numerous natural history specimens including local fossils, Peterborough and Ely museum

