



What's in a View – and what makes it so special?

On 14th July 2021, Members of the Haywards Heath & District Probus Club and other invitees were treated to an interesting talk via Zoom. The speaker was Bill Avenell. He selected some of the iconic views of West Sussex and explored their geographical origins, their historical significance, their artistic value and other factors that make them so popular. The talk had plenty of good-natured humour and demonstrated some insightful local knowledge.

Bill Avenell has a passion for unusual features in the landscape. He is a specialist in topography and taught geography at a public school. Most of us were taught geography at school, but topography was a new one for me. I learned that it is a field of geoscience, studying forms and features of land surfaces.

The talk was about the iconic views available to us and had a subheading: “*To be Iconic, a view is impressive because it seems to be a symbol of something*”. The speaker explained the impact that physical geography has made on our daily lives and introduced us to some interesting features and places in West Sussex (in the first nine sections) and finished with one in East Sussex:

- ❖ Section 1 – The South Downs and Fulking Escarpment
- ❖ Section 2 – Sussex-by-the-Sea
- ❖ Section 3 – Hammer Ponds
- ❖ Section 4 – Chichester Harbour
- ❖ Section 5 – Arundel from the South
- ❖ Section 6 – Brighton's West Pier
- ❖ Section 7 – Balcombe Viaduct and the Ouse River
- ❖ Section 8 – Dry Valley
- ❖ Section 9 – Hunston and the Wey & Arun Canal
- ❖ Section 10 – The Seven Sisters

In the following text, I have put together some of what we learned. Not all Sections are covered here and I have included just a few of the many slides we saw. There was a lot to take in - I hope I have covered it accurately.

Section 1 – The South Downs and Fulking Escarpment

We learned that the Escarpment is some 200 metres high. We were told about *Dip*, *Scarp*, *UGS Ledge*, *Gault Clay*, *Spring Line*, *Barlavington*, and *Edburton*. Also pointed out were *Rounded Shapes*, *Downland Turf* and *White Rocks* – all very interesting and, if you have the time and interest to do so, worth looking up on Google, although some are expanded on below.

Fulking Escarpment is an area of open chalk downland. It runs along the steep north side of the South Downs near the village of Edburton. The wood there is small, composed of ash and elder trees and is not that accessible. Edburton is probably known to most people in the area (particularly if you buy your smoked Salmon and other fish from *Springs Smokery* in the village). Barlavington was new to me – it's a small village and civil parish about four miles south of Petworth, east of the A285 road.

After the talk, I looked up *Gault Clay* (at: <http://nora.nerc.ac.uk/id/eprint/20421/1/WN94031.pdf>) as the words were new to me. The Gault is a sequence of clays, mudstones and thin siltstones with bands of phosphatic nodules of Middle and Upper Albian age (more than 100 million years ago). Its outcrop stretches south-westward from East Anglia through Wessex to west Dorset and surrounds the Weald in an arc from North East Kent westwards through Surrey to Hampshire where it turns south and returns eastward through West and East Sussex. The Gault clay thickens to the south and reaches its maximum development of over 100 metres in the Weald and thins to the west as it passes into Hampshire and Dorset. The Gault clay contains both clay and non-clay minerals (quartz and calcite). Quartz usually makes up about 20% or more of the Gault and its distribution is fairly uniform. Calcite is present as fossil debris and as a cementing agent. In the north-east, the Gault is more calcareous (containing lime or being chalky) than in the south and west.

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Picture Credit/Attribution: FULKING SPRING Charlesdrakew at English Wikipedia (Original text: Charles (talk)), Public domain, via Wikimedia Commons

I learned afterwards that Spring Line settlements occur where a ridge of permeable rock lies over impermeable rock, resulting in a line of springs along the contact between the two layers. Spring Line settlements will sometimes form around these springs, becoming villages. If a settlement were to have been built higher up the hill, there would have been difficulties with water supply whereas building lower down would have taken the settlement further away from useful grazing land or nearer to the floodplain. I think I now understand why the smokery at Edburton is called *Springs*.

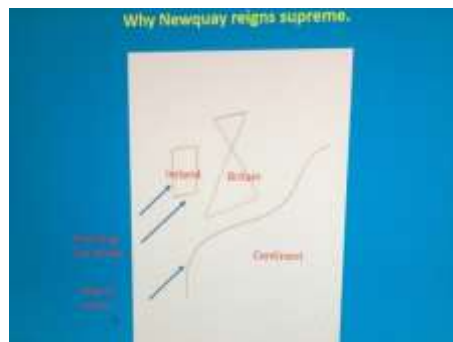
Rudyard Kipling described the South Downs as "*Our blunt, bow-headed whale-backed Downs*". He was talking about our landscape of rolling hills and valleys, all of which are underpinned by its geology. Thin soils and unimproved flower-rich grassland overlay white porous chalk (limestone) made up of dead marine animals laid down over millions of years. This

porous rock holds much of the drinking water the people of Sussex rely on to live. Clean chalk springs surge from the base of its scarp slopes, such as the one found at Fulking and Edburton. These spring-fed streams meander through the landscape supporting an unusual diversity of wildlife including important fish populations and many specialist insect species. Source: Sussex Wildlife Trust at: <https://sussexwildlifetrust.org.uk/what-we-do/land-management/downland>.

Section 2 – Sussex-by-the-Sea

Section 2 opened, appropriately, with the familiar music of "*Sussex by the Sea*" (also known as "*A Horse Galloping*"), the patriotic song written in 1907 by William Ward-Higgs. It is often considered to be the unofficial county anthem of Sussex. It is, if my memory is correct, always played before matches at the Amex Stadium for Brighton & Hove Albion supporters.

Various seaside locations with their beaches and groynes were mentioned. Some of the 'slides' are shown here.



Section 3 – Hammer Ponds

There are hammer ponds and hammer woods all over the south-east. Most of the waters are accessible, some more so than others, but all are home to a plethora of waterfowl and other wildlife. Hammer ponds are man-made - dammed streams and rivers, which were essential to the Tudor and Stuart iron industry that was established within the High Weald of Kent and Sussex, and parts of Surrey and Hampshire.

Long before the Romans came to Britain, the Weald was a major iron-producing region, due to its abundant clay ironstone deposits. From the end of the 15th century, new developments in the industry required many of these to be impounded, and the heads of water that built up were used to turn waterwheels.

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Section 4 – Chichester Harbour

This part of the talk came alive with pictures and maps of the area. We learned about the difference between a Riaa and a Fjord. Reference was made to the Wey & Arun Canal – we had another speaker talk to us on that subject a month or two ago.



Section 7 – Balcombe Viaduct and the Ouse River



The Balcombe Viaduct (or Ouse Valley Viaduct) is located north of Haywards Heath and provides a dramatic view over the Ouse Valley. A structural marvel, the 1,475 feet (450 m) long viaduct was originally built in 1838 to carry the London-Brighton line over the River Ouse. In its construction, it used 11 million bricks, which travelled up the Ouse River (via Newhaven and Lewes) from Holland. Unbelievably, it cost only £38,500 to build.

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The height of the viaduct is 96 feet (29 m), with 37 semi-circular arches, each of 30 feet (9.1 m), surmounted by balustrades. Each pier contains a Jack arch with a semi-circular soffit to reduce the number of bricks required. The towers at each end are faced with stone from Heddon Quarries near Newcastle-upon-Tyne.

John Urpeth Rastrick designed the viaduct with David Mocatta, who I believe, was the designer of Brighton Station. Known for its ornate design, the viaduct has been described as "*probably the most elegant viaduct in Britain.*"

We were warned to take our wellies if visiting the site as it is often very wet.

Section 10 – The Seven Sisters



With the talk drawing to its conclusion, we learned about the connection of the Seven Sisters between the towns of Seaford and Eastbourne (in East Sussex) with the *The Pleiades* (from Greek mythology) – see

https://www.greekmythology.com/Myths/Figures/The_Pleiades/the_pleiades.html.



Legend has it that the Pleiades were the seven daughters of the Titan *Atlas* and the nymph *Pleione*. They were in the service of goddess *Artemis*. The daughters were (1) *Maia*, mother of *Hermes*; (2) *Electra*, mother of *Dardanus*, founder of *Troy*; (3) *Taygete*; (4) *Alcyone*; (5) *Celaeno*; (6) *Sterope*; and (7) *Merope*. When their father was given the fate of carrying the heavens on his shoulders, *Orion* started pursuing the *Pleiades*; *Zeus* then transformed them into stars to help them to evade him. According to other myths, the *Pleiades* committed suicide after learning the fate of their father, but *Zeus* decided to immortalise them by transforming them into stars. That was myth. The names by which the Seven Sisters in Sussex are known are shown above.

Bill Avenell explained how the Seven Sisters came about. The cliffs (that is what they are) are made of sedimentary chalk limestone that formed where the South Downs meet the sea. It was no five-minute job – they were formed between 60 to 130 million years ago during the Upper Cretaceous Period, during which the dinosaurs died out and the evolution of birds as we know them began. Formation itself took between 20 to 30 million years, in warm, shallow seas at a time when

England and Europe were co-joined and the climate was similar to that of the modern day Sahara desert. The cliffs are receding by up to 40cm each year, on average, an intermittent process with major falls happening after heavy rain or rough seas, often two or three times a year. Where these falls occur they protect the base of the cliffs from the sea and usually there are no falls in the same places for eight or nine years until the sea undercuts the cliffs again.

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About the Speaker



Bill (William) is a specialist in Topography and is a retired Geography teacher from Christ's Hospital, where he was a Master for 31 years and the Deputy Head for five years. He lives in Pulborough, West Sussex, on the banks of the River Arun. He is a keen canoeist, walker, bell ringer, saxophonist and gardener.

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