

The Agglestone Rock near Studland

NGR: SZ 024 828



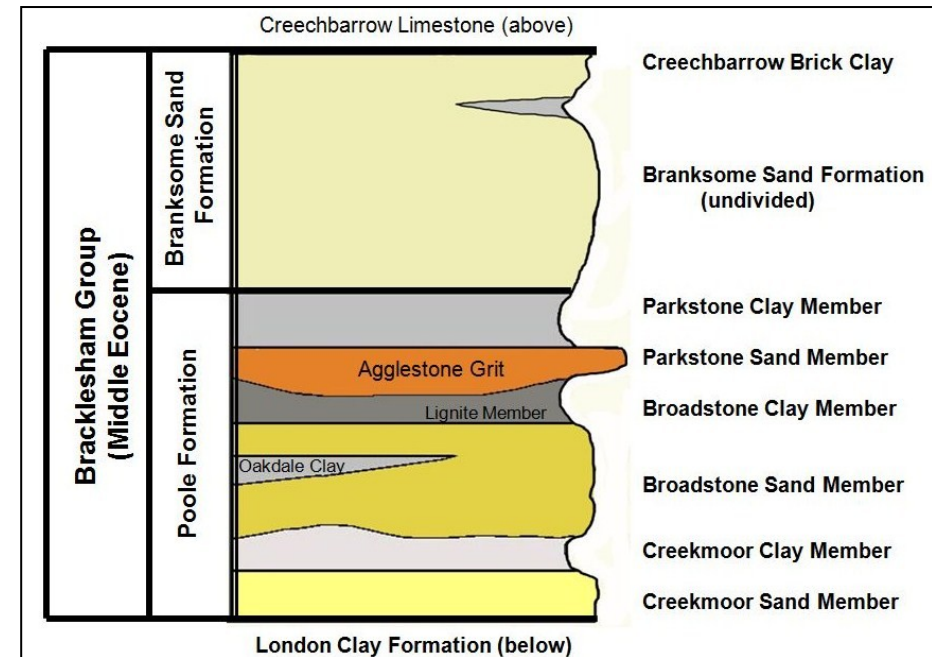
The rock in June 2008



A view before it tipped (Dorset County Museum collection)

This 400 tonne rock is an eroded relic of iron-cemented sandstone (Agglestone Grit). It is situated on a hillock on National Trust land at Godlingston Heath about a mile from Studland. The sandstone was laid down in the Palaeogene (formerly called Tertiary Period), during the

Middle Eocene Epoch (about 45 million years ago) and is part of the Poole Formation.



Lithostratigraphy of the Bracklesham Group (I. West)

The block was originally horizontal and anvil-shaped but has gradually tilted towards the south east due to the erosion of the soft sandstone beneath and finally toppled in 1970. The nearby Puckstone is of the same material. The heath is also dotted with similar loose gritstone boulders called Heathstone.



The Puckstone (photograph A. Holiday)

The material forming the Agglestone is a deltaic channel deposit. The block shows current bedded units of varying grain sizes from coarse grit to fine sands. The

river is thought to have flowed east from the area which is now Devon through uplands into a large delta in east Dorset. The bedload comprised mainly coarse pebbly grit derived from flint weathered from chalk uplands which were more extensive than today, and iron minerals in solution. The iron minerals, mainly hydrated iron oxide (limonite or goethite), cemented the grit into sandstone. The Agglestone is a remnant of these deposits which has proved more resistant to weathering, possibly because the cementation was greater at this particular point.



The softer rock beneath the Agglestone



Weathered out current bedding

Note that the bedding would have been laid down horizontally before the rock tilted. Weathering has picked out the more resistant bands of sandstone.