

# Geology

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## Chesil Bank and the Fleet Nature Reserve



The sedimentary rocks in the area date back to Jurassic times and were laid down in warm seas inhabited by ammonites and large marine reptiles. These rocks were folded into what is known as the Weymouth Anticline at the time when the Alps were being formed by the collision of the African tectonic plate with that of Europe. Subsequent erosion has exposed the bands of mudstones, clays and limestones, the hardness of which often has a bearing on the shape of the landscape, with bays forming where clay outcrops, and headlands where the more resistant limestones occur. Inland these rocks form a series of alternating ridges and vales stretching from east to west across Weymouth. The oldest rocks (Fuller's Earth) are in the middle of the anticline with progressively younger rocks outcropping to the south and north.



b) Forest Marble mainly consists of mudstones, and limestones.



c) Cornbrash outcropping at Butterstreet exhibiting honeycombe weathering.



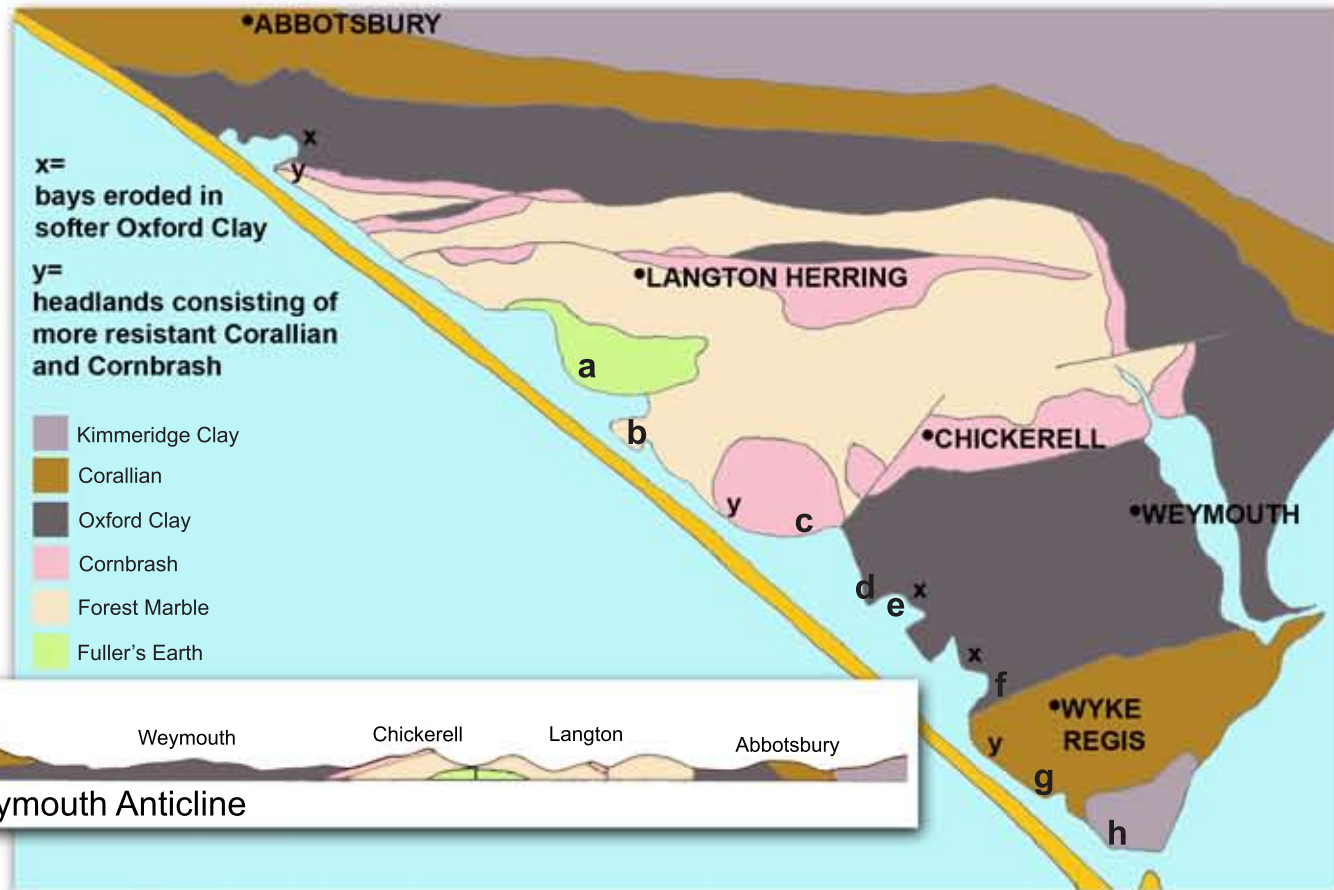
d) Washed out of the Oxford Clay at Chickerell Hive Point are septarian nodules, known locally as turtle stones due to the pattern formed by veins of calcite running through them. Some measure up to a metre.



e) At Cuttlevees the Oxford Clay consists of bituminous shale with distinctive yellow sulphur deposits occurring as a result of the high organic content.



a) At Langtone Hive Point the Fuller's Earth is made up almost entirely of millions of fossil oyster shells.



f) Oxford Clay was quarried at Chickerell to make bricks for many of Weymouths houses.



g) Corallian



h) Kimmeridge Clay



Ammonite from the Oxford Clay

It is interesting to note that few, if any, of these relatively soft rocks, would be here if it were not for the presence of Chesil Beach. This feature protects them from the forces of the winter storms coming in from the Atlantic. If Chesil Beach did not exist the coastline would almost certainly run directly east from Abbotsbury to Osmington, and Portland would be a true island several miles out to sea!

