

tion through the middle of the isle, or more properly, peninsula of Purbeck, forming cliffs by its section against the coast, at either extremity of that isle, viz. at Whitenose on the west and Handfast point on the east. Remarkable circumstances attend this latter part of its course; the chalk, usually nearly horizontal, becomes, throughout the Isle of Purbeck, vertical; and exhibits at Handfast point some of the most singular and interesting phenomena in stratification which geology has yet recorded.

The chain terminates at Handfast point directly towards the Isle of Wight, which is distant about 15 miles, and appears to be there resumed by a similar chain of Chalky Downs; which, corresponding with the former in direction, and like it, having its strata forced (probably by the same convulsion) into a vertical position, traverses the island longitudinally; presenting, by its sections on the coast, magnificent cliffs at the Needles point on the western extremity, and Culver cliffs on the eastern.

An insulated mass or outlier of chalk, also forms the summit of the hills rising above the southern cape of the Isle of Wight; this is separated from the central ridge by a broad valley occupied by the regular substrata, and the horizontal position is here resumed. The phenomena of this formation are so beautifully displayed by the magnificent sections it exhibits on the southern coast, and they are often so highly interesting and important, especially in the Isle of Wight and Dorsetshire, that it appears desirable to consider them more in detail than the nature of this general article would allow: the concluding section of this chapter will therefore be dedicated to a particular review of them.

(e) *Height of hills, &c.* Chalk does not often bear the general character of a level or flat country, but on the contrary is subject to perpetual undulation of surface, the hills being remarkable for their smooth rounded outline, and for the deep hollows and indentations on their sides.

It may be affirmed that the most level tract of chalk in England is on the north-east and east of Cambridge. Near that place the Gogmagog hills stretch in the form of a full moon, and the flatness of the adjoining country gives an importance to their inconsiderable eminences. (G. Notes.)

The general character of the surface of the chalk, as will be gathered from the preceding observations on its range and extent, is hilly; the hills having on one side of them a precipitous escarpment, which in the long range extending from the coast of Yorkshire to that of Dorsetshire, is on their north-western side, while on the south-eastern they gently decline,