

skirting the foot of the chalk range on which stands Corfe castle, to the shore of the Isle of Purbeck, in Studland Bay, and again forms the shore of Poole Bay on the west of Poole to Christchurch head.

The surface occupied by these beds in the tract between Houghton hill in Wilts and Brighton in Sussex, does not exceed five miles for the first half of the way, but in the latter half it tapers off to a very narrow point at the latter place. South of the line between Houghton hill and Dorchester its breadth is more considerable, averaging perhaps eight miles, and occupying a considerable tract on the west of Poole harbour, termed the Trough of Poole.

It is again visible in the Isle of Wight, where the extraordinary appearance of this formation in the vertical and many coloured sands and clays of Alum Bay, will require further notice. In a word these sands and clays being seen nearly in the same position in that bay on the west, and in White Cliff Bay on the east, leads to the conclusion, that they range along the island between the London clay on the north and the Chalk on the south. (G. Map).

(c) *Surface of country.* The surface of this formation may in the general be said to be flat: on the north-east of London it is remarkably so, but on the north and north-west, as on the south-west of Hertford, it attains considerable elevation: between Deptford in Kent and its extreme point in the west, it assumes the form of gentle eminences. Between Houghton hill in Wilts and Brighton in Sussex, the country it occupies is very flat and even low; but between that hill and Dorchester its undulations are considerable: it rises into a range of considerable eminence some miles on the south-east of Salisbury, of which Dean hill is the westernmost extremity, and again a few miles on the west of Ringwood in Hants, as well as in the Trough of Poole.

(f) *Thickness.* The thickness of this formation does not appear to have been ascertained in many places. At Wormley End near Wormley Bury in Hertfordshire, and just beyond the boundary of the London clay in that neighbourhood, Sir Abraham Hume found chalk at 100 feet below the surface. (G. Notes.) At the sinking of a well at Liptrap and Smith's distillery, one mile east of London (of which the sinkings are given under the head of local details), the beds of this formation appeared to be 104 feet thick, between the London clay and the chalk; and from 100 to 200 feet seems the average thickness round Woolwich. But the thickness of these beds appearing in the vertical cliffs of Alum bay in the Isle of Wight (see Pl. 2. fig. 6) is no less than 1100 feet. It was however very possible (C.)