

Bembridge and Binstead: but in the neighbourhood of Calbourne, and between that place and Thorley, several quarries are opened in it, and afford excellent stone. The rocks at Bembridge ledge and Whitecliff bay on the east side of the island, are referred to this formation. The beds of this formation, or more correctly of these formations, are now considered as generally occupying the northern half of the Isle.

(*c*) *Height, &c.* This bed occupies the upper part of Headdon hill, which is 400 feet above the level of the sea, and the summit of which consists of alluvium. In other parts of the Isle, the elevation is very inconsiderable.

(*f*) *Thickness.* This bed is described as being 55 feet thick in Headdon hill; but on it lies a stratum of clay, 11 feet thick, containing an unknown bivalve shell; above which is another bed of yellow clay without shells, and upon it a stratum of friable calcareous sandstone, also without shells. Above the latter lies another calcareous stratum enclosing a few fresh-water shells. These beds are occasionally very compact and of a porcellanous character. Other parts contain masses of loose chalky matter, most of which are of a roundish form, and among these also are many beds of a calcareous matter, extremely dense, and much resembling those incrustations that have been formed by depositions from water on the walls of ancient buildings in Italy.

(*g*) *Inclination.* This bed, in common with all the others of which Headdon hill consists, dip gently to the north.

(*h*) *Agricultural character.* (*i*) *Phænomena of water and springs.* On these heads we have nothing to observe.

(*k*) *Miscellaneous remarks.* The more compact parts of this stratum are durable, and have been long employed as a building material in the Isle of Wight, and in many places on the opposite coast, as at Portsmouth, Southampton, Lymington, &c.

Section III. *Lower fresh-water formation.*

(*a*) *Chemical and external characters.* In Headdon hill it consists of a series of beds of sandy, calcareous, and argillaceous marles, sometimes with more or less of a brownish coaly matter. Some of them appear to consist almost wholly of the fragments of fresh-water shells, many of which however are sufficiently entire to ascertain their species. In the quarries of Binstead near Ryde, the characters of the beds differ considerably from the above, and from each other, as the following section will evince. The strata of East Cowes quarries almost exactly resemble those of Binstead.