

## Section II.

*Chalk Marle.\**

These beds, which occur immediately beneath the chalk, graduate into the lowest strata of that substance, in such a manner that very often no distinct line of separation can be traced. The harder beds at the bottom of the chalk series, described in the former chapter, afford an example of this transition, and perhaps might have been placed with equal propriety under this head; it may therefore be necessary again in some instances to allude to them. On the other hand, the lowest beds of the chalk marle often pass into those of the green sand, and it is somewhat difficult to catch any precise characters for a formation which is thus rather intermediate between two others, than possessed of independent features. The following descriptions will be taken (unless when it is otherwise stated) from the appearance of these beds in Kent, Surrey, and Sussex, where their relations are most clearly developed.

(a) *Chemical and external characters.* The composition of these beds consists apparently of three ingredients, intimately mixed, but in variable proportions; 1st, cretaceous matter; 2dly, argillaceous matter; 3dly, sand. In the upper beds, near its junction with the chalk, the cretaceous matter prevails; and these usually appear as chalky beds, distinguished from the true chalk by a greyish or mottled character, and by a more laminated texture, and by falling to pieces when wetted and dried again. It greatly varies in hardness, but will not usually mark like chalk, and often acquires sufficient consistency for architectural purposes; its aspect is also more gritty than the chalk usually is.† Where the argillaceous matter prevails in excess, a tenacious argillaceous marle of the ordinary characters, and of a bluish grey colour, is the result. Beds of this character often underlie the former, as at Folkstone in Kent. Thirdly, where the sand prevails, a fine-grained greyish sandstone of loose texture is produced, which forms a link

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† A more detailed account of the character of the harder beds which are worked in Surrey for agricultural purposes, and afford a good fire-stone, will be found in the account of the Weald district in the second division of this chapter. That of the Isle of Wight (W.) is a good building stone, is soft when first taken out of its bed, but hardens by exposure. All the ancient Gothic churches on the north side of the island, have been constructed of it.