

and this is probably short of the truth ; since we have no evidence that the highest beds at Aldstone immediately succeed to the lowest at Hely. But the interval is probably not considerable, so that the above estimate may be admitted as tolerably correct. The prevailing rock of this series is shale, (known by the provincial name of *Plate*), with which various beds of sandstone, differing in hardness and texture, and according to these differences distinguished, as freestones, hazles, whetstones, grindstone, and millstone, occur : of the latter only one bed is worked ; the thickness of which is about 30 feet. This is one of the uppermost strata on the Derwent, where it crops out, and does not occur further west. A similar rock is found in the north-east of Northumberland at Scramerstone, four miles south of Berwick, and at Craster near Howick, it entirely agrees with the character given of this rock in the general account of the formations. The freestones of this formation frequently contain vegetable impressions.

Towards the lower part of this formation, two thin beds of limestone, each about one fathom in thickness, occur ; and alternating with them, some occasional seams of coal. In the mountainous tract dependant on Cross Fell, these seams are so thin as to be of little importance ; but in the flat country in the north, they appear to dilate considerably ; for several valuable coal-pits are worked on the north of the Coquet, in beds which must be referred to this formation. The feature which distinguishes these coal-measures from those of the principal coal-formation before described, is their alternating with strata of limestone. In one instance this limestone is said to contain bivalve shells, but the species is not mentioned : particular attention should be given to this portion of our strata, since, according to the views of some, they might be expected to present similar phœnomena with regard to the alternation of beds containing fluviatile and marine reliquia with those so strikingly exhibited by the most recent formations in the Isle of Wight,—it being generally asserted that the shells accompanying the coal-strata are fluviatile, while the limestone beds, which in this part of the series alternate with the coal, seem closely to agree with the inferior or carboniferous limestone, which is undoubtedly of marine formation. We have however already suggested our doubts whether the shells in the coal-measures are really fluviatile.

The collieries to which these remarks apply, extend over the whole of the flat country between the mouths of the Tweed and Coquet. Their stratification is less regular than that of the great coal-field, and undulates with the surface of the country.

To return to the rocks of this formation as exhibited in the