



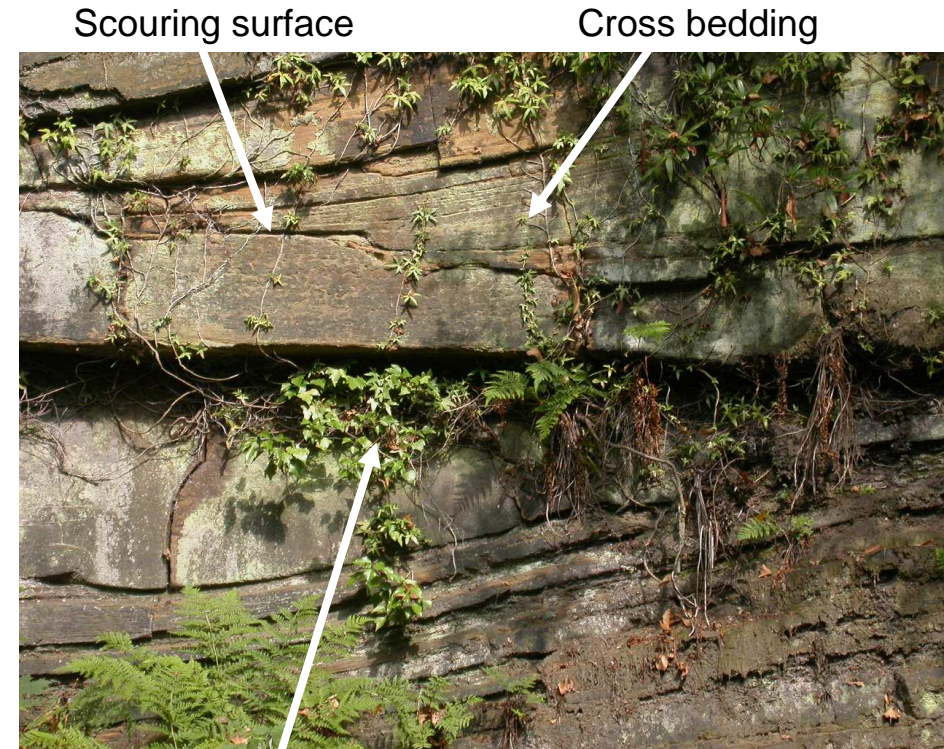
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A WALK AROUND BEAUMONT PARK, HUDDERSFIELD, TO LOOK AT ROCKS AND LANDSCAPES

Grid Reference for the gatehouse
SE 126 145



Scouring surface

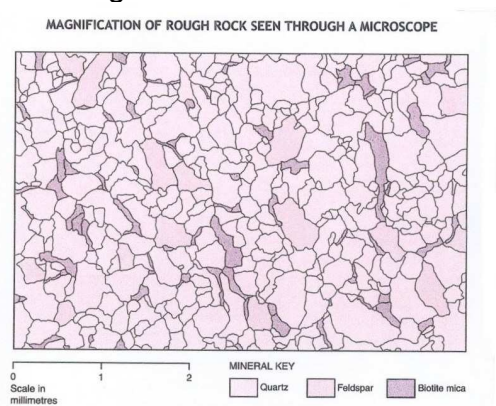
Cross bedding

Bedding planes

The rocks of the Beaumont park area are **Upper Carboniferous** (Yeadonian) in age, so they are about 315 million years old.

These rocks were laid down in **deltas** on the edge of a shallow sea, with mountains to the north and south. Sands and muds were deposited by rivers in shallow water. Because the continent was close to the equator, the climate was warm and wet so that tropical rain forest flourished. Dead plant material became trapped in stagnant swamps between river channels. Over geological time it was buried by muds and sands as the rivers in the delta changed position and built up more **deposits**.

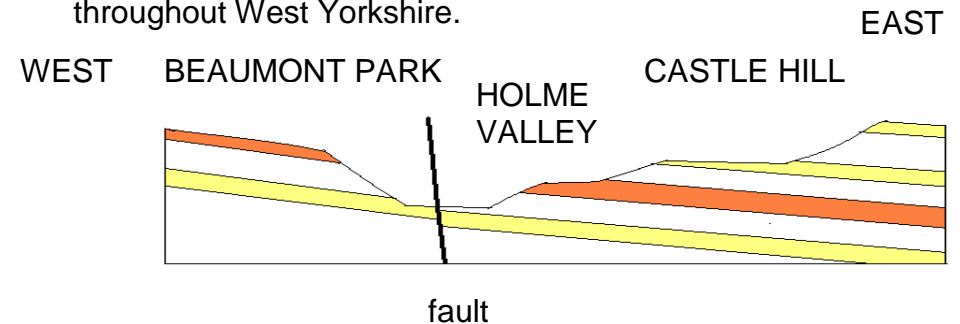
After the sediments were formed close to sea-level, they were buried by hundreds of metres of sediment and **compressed**. As the sea water moved upwards it carried minerals which **cemented** the sand and mud grains together to make **sandstones** and **mudstones**. The drawing below shows how interlocked the minerals of the Rough Rock are and why it is so strong and resistant.



The sandstones and mudstones form alternating layers which gives the Yorkshire landscape its distinctive Rock appearance. The sandstones are more resistant than the

mudstones and form the upland moors such as Wessenden Moor and Holme Moss. The mudstones are less resistant and are weathered and eroded more easily, so are usually only exposed in the cloughs or valleys. This pattern of erosion on the sandstones and mudstones is common and gives West Yorkshire its characteristic landscapes.

Crosland Moor is underlain by a sandstone called the **Rough Rock**, which has been quarried here for many centuries. The Rough Rock is a thick bed of sandstone which forms many gently sloping plateaux in the Huddersfield and Halifax areas. It can be worked into an excellent building stone so has been widely quarried throughout West Yorkshire.



Rough Rock sandstone in orange
 Other Carboniferous sandstones in yellow
 Shales/mudstones in white

Slopes below the disused railway cutting, right down to the River Holme, are a good example of landslip topography, as the more resistant Rough Rock slides over the less resistant shales at the base of the slope.