

Location MT12

SO 7427 6350

Old quarry just east of the Worcestershire Way

This small disused quarry lies just east of the gate from the lane onto the Worcestershire Way footpath at the north end of Cockshut Hill.

The quarry is on private land so you should NOT enter, but you can get some information about it from the photos below.





* The rock exposures have a clearly-defined bedding which is near vertical or steeply inclined in all parts of the quarry. This bedding comprises bands of closely-spaced flat laminations in some parts of the quarry (beds 40-80mm thick), with thicker (c. 200mm), structureless-looking layers in other parts.



* The rock contains many well-preserved fossil shells of invertebrate animals. The rock is sedimentary. The laminations are primary sedimentary structures, created as the sediment was laid down. The rock is a greenish-grey colour, and has a somewhat silky feel to it, indicating it contains a certain amount of clay minerals. Very small flakes of muscovite are also present.

If a drop of dilute (10%) hydrochloric acid is put on clean surfaces of the rock in this quarry, in some parts it will effervesce vigorously (such as the thicker bands), and in others (such as the thinner bands) the reaction is very limited. The reaction is characterised by the gas carbon dioxide being given off, and indicates the presence of calcium carbonate in quantity. In much of the quarry, the angular grains comprising the rock will be found, if examined under the microscope, to be tiny fragments of ground-down invertebrate shells. They are made of calcium carbonate and produce the acid reaction described. Those parts of the rock that react weakly to the dilute acid suggest greater quantities of siliceous materials such as quartz.

Based on this description and the photos, you should be able to tell that the dominant rock in the quarry is limestone.

* Measurements of the dip and strike of the rocks in the west side of the quarry are around 172 / 82E and on the east side 174 / 72E, so the strike of the rocks in this exposure is running NNW – SSE and the dip is almost to the east.

* There are plenty of fossil shells - some are closely-grouped and flat-lying, others are scattered and lying at various angles through the rock. Some of the original shells are preserved, but many shells have been dissolved away when the sediment became cemented to form the rock, leaving just their impressions. They are made of calcium carbonate. There are a lot of rhynchonellid brachiopods.

If you compare the information about this quarry with that which you have collected about other locations so far, you should see that the following statements are true:

- (a) The rock type in this quarry is generally similar in character to that of Location MT6
- (b) The dip of the rocks in Locations MT6, MT7, MT8, MT9 and MT12 is all in the same general direction
- (c) Locations MT6 and MT12 lie along the strike from each other, and are likely to be the same rock unit, with similar rock types found between

The long ridge of Cockshot Hill (seen from Location MT11) lies just to the south of Location MT12, and runs in a similar direction to the strike of the rocks here.

This suggests the rocks seen at MT12 underlie Cockshot, Rodge and Pudford Hills. This has been shown to be the case in detailed studies of the area.