
31 Shap Summit

Theme: Earthquakes and folded rocks

Location

31 Shap — A6 — deformed Silurian greywackes. The A6 is not busy but traffic is fast. Park near the memorial [NY 555 053].

Description

The rocks near Shap Summit on the A6 may look just as peaceful as the road is since the M6 was built. But, like vehicles attempting the infamous climb 60 plus years ago, these rocks have known tough times too.

You might want to drive as slowly as they did back then to see how buckled and broken these roadside rocks are. They look every one of their 425 million years. They are slates and sandstones from the Silurian Period and were once mud and sand that settled at the bottom of an ocean. They were buried under perhaps 8,000 metres of sediment. The pressure of burial at that depth makes rock capable of being warped and shattered. It was a long period of instability and mountain building in the Earth's crust around 400 million years ago that did the damage. Take a closer look at the rocks and you will see that many are almost vertical and some have been folded and virtually corrugated. All of them have a layered texture (geologists would say 'foliation' or 'fabric'). These layers are nothing to do with their original horizontal deposition as sediment in the ocean; this is yet more evidence of the huge pressures their constituent minerals have endured.

How come something that was buried eight kilometres deep is at the Earth's surface today? The answer is millions and millions of years of erosion and a little more mountain building. That's hard to believe but then so is the fact that until the 1960's attempting to take a car up and over Shap Summit was regarded by drivers as a tough challenge, with the expectation that you'd have to pull in at the top to let the engine cool down. Ask your grandad!

Photographs

(Photo 31-1) 31 Folded and faulted Silurian rocks beside the A6 just south of Shap summit.

(Photo 31-2) 31 Shap Summit.



(Photo 31-1) Folded and faulted Silurian rocks beside the A6 just south of Shap summit.



(Photo 31-2) Shap Summit.