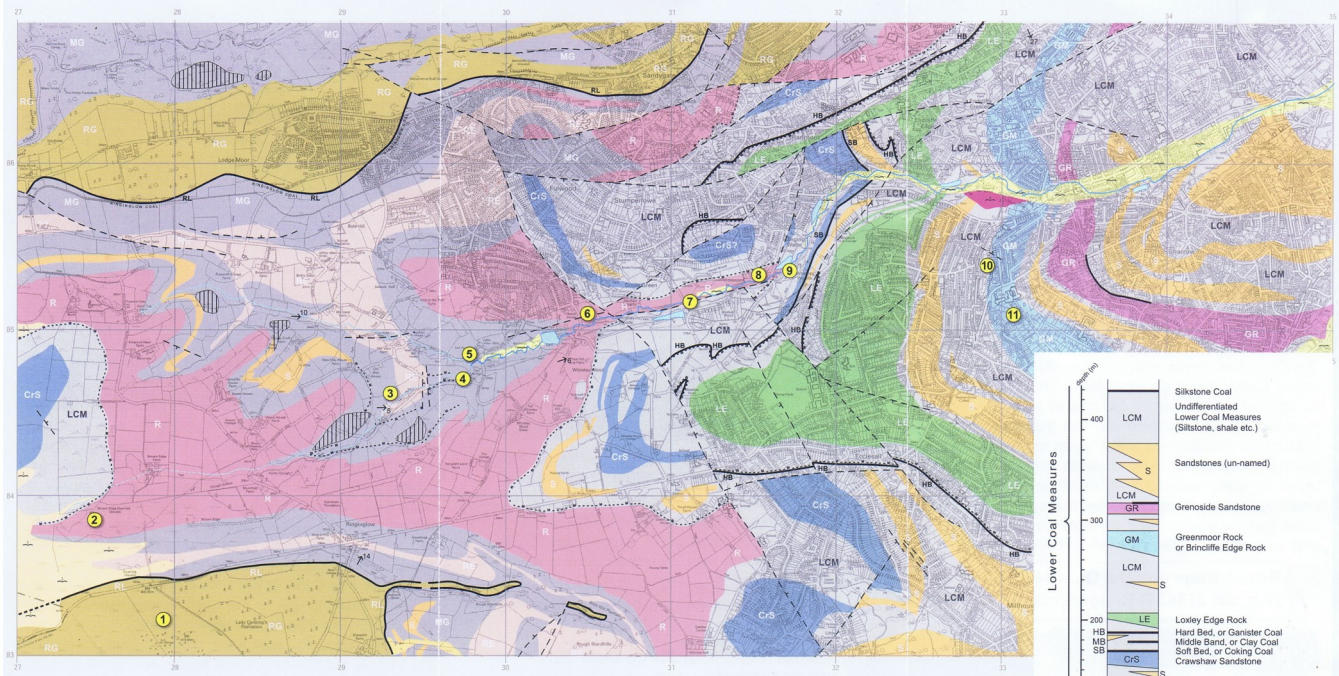
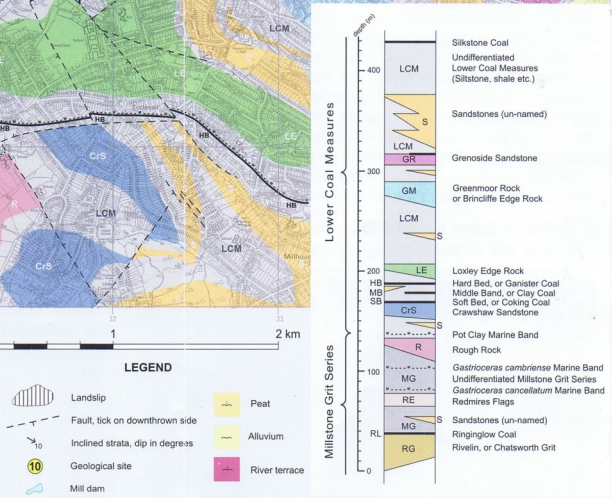
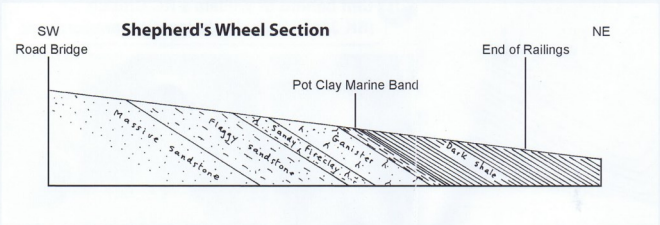


The Geology of the Porter Valley, Sheffield





LEGEND

- Landslip
- Fault, tick on downthrown side
- Inclined strata, dip in degrees
- Geological site
- Mill dam
- Peat
- Alluvium
- River terrace

Geology redrawn by Peter Kennett on behalf of the Friends of the Porter Valley, 2006. The geology is based on 1:10560 maps of the BGS - unpublished coloured sheets, OYK 294SE, 1955 and OYK 294SW, 1956, and published black and white sheets SK38SW, 1962 and SK 28SE, c.1962; IPR/76-14C British Geological Survey. © NERC. All rights reserved.

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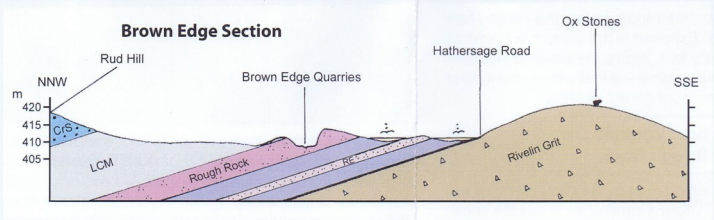
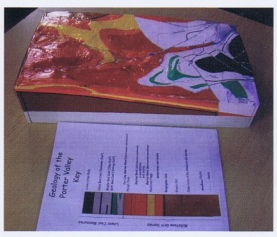


Introduction

"The Porter Valley is as well travelled as many of its inhabitants, albeit considerably older!"

The rocks which underlie the valley are as much as 300 million years old and contain evidence of former tropical forests, muddy seas and vast river systems. When the rocks were laid down, as loose sediment, "Britain" was on the Equator and formed part of a huge super-continent. It has since migrated northwards at the rate at which your fingernails grow.



Erosion by the River Porter and the effects of a cold climate in the Ice Age have produced the modern landscape, which is mostly free for all to explore and to enjoy.

This leaflet shows where you can go to follow the story of the Porter Valley in the geological past. The geological map shows some key sites to visit. Because the strata mostly dip (slope down) towards the northeast, the sites 1 to 10 are mostly in order of decreasing geological age, i.e. the rocks get younger as you walk down the valley, even if you don't! The geological column shows the strata in sequence, with the oldest at the base.

As you descend the valley, note how the resistant sandstones of the Rough Rock (dark pink on the map) form the hilly ground, with steep slopes overlooking the valley, as at Jacob's Ladder, near Ringinglow. By contrast, the weaker shales form the lower lying boggy ground and are only rarely glimpsed in the river banks. Landslips form hummocky ground where sandstones have slid over the shales, especially near Porter Clough. At Banner Cross, the resistant sandstones of the Greenmoor Rock form the prominent scarp slope of Brincliffe Edge. Here and there, minor sandstone units form bumps across roads, some of which are notorious accident spots.

The energetic will be able to visit all the sites on foot in the space of a day: others may investigate them in piecemeal fashion.

This leaflet is based on a full 45 page report, *The Geology of the Porter Valley- what lies beneath our feet?*
There is also a leaflet entitled *"Delving into the Past - Mining and Quarrying in the Porter Valley"* and a full report on the same topic. The reports are available from the Friends of the Porter Valley for the cost of the printing. They are aimed at the general reader, and may be obtained from the Hon. Secretary, Flora Owen, 42 School Green Lane, Sheffield, S10 4GQ

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Printed by: The University of Sheffield Print Service - March 2007