

Ematita' from the High Andes in Argentina (Photos K and L).

Underneath the side windows is a black, medium grained igneous rock from South Africa, known as 'Bon Accord' and about 750 million years old. Beneath the central windows is a popular igneous rock with iridescent blue feldspar crystals known as 'Larvikite' from Norway.

Fargate Court (8) two doors along, is faced with an unusual coarse-grained granite with large round feldspar crystals. This is known as 'Baltic Brown', from the Precambrian rocks of Finland, and is about 1500 million years in age. Granites with such round feldspars are known as 'rapakivi granites' (photo M).

Barclays Bank (9) displays a veritable museum of igneous rocks! (photo N). The pillars are of an attractive pink granite known as 'Rose Swede', from

quarries at Grafversfors in Sweden. The overall colour is due to the dark pink feldspar crystals, although the quartz crystals are an unusual pale blue, resulting from crushing by earth movements after the rock had crystallised. The bases of the pillars appear to be cut from Rubislaw Granite from Aberdeen, which is also used for the font in Sheffield Cathedral across the way. The dark variety of Larvikite is used for the walls and yet another granite has been used for repairs below the night safe. This rock shows evidence of the high temperatures at which it was formed, in that it contains dark grey blebs of highly crystalline material representing older rocks which got caught up in the molten granite and nearly melted out of recognition. Such 'rock strangers' are given the name '**xenolith**', which means the same thing in Greek!

Turn left at the corner into Church Street and walk across to the **Cathedral (10)**. Most of this building is constructed in local gritstone or sandstone. Recently, some of the pinnacles have been replaced, using gritstone from Stanton Moor. (photo O). The new paving stones for the forecourt are of Stancliffe Sandstone, from Darley Dale and the red sandstone strips are from Lazonby in Cumbria. The granite sets in the forecourt are of Rosa Porrino.

Walk round the outside of the Cathedral, noticing the many gravestones, now laid flat. These are nearly all cut from local Coal Measures sandstones, the best of which is known as the 'Brincliffe Blue', because of its blue-grey colour when fresh. (They may be slippery when wet!)

The walk provides a good opportunity to compare the response to weathering of several rocks: first the sandstone, then the pale granite forming the large memorial to James Montgomery and finally, close to the north wall of the Cathedral, a horizontal tomb made of alabaster (photo P). This is a variety of gypsum which would have been polished smooth, like some of the wall plaques inside the building. This slab was moved from inside the Cathedral as recently as the 1960s, but you have only to run your hand over it (gently!) to appreciate how much of the stone has actually dissolved in rain water.

Looking diagonally across Campo Lane from this tomb, is an excellent example of the use of stone to decorate a facade, above **Wake Smith's office (11)**. Large slabs of a metamorphic rock, serpentinite, have been cut in two and then matched up next to each other, rather like opening the pages of a book (photo Q).

Either circumnavigate the Cathedral, or retrace your steps to Church Street.

The buildings of Church Street were built to look impressive and the **Royal Bank of Scotland (12)** near the corner is no exception. The imposing pillars are of Peterhead Granite, (photo R) in much better condition than on St Paul's Parade. Again, they contain some excellent xenoliths. The rest of the building is constructed from Derbyshire Stoke Hall Sandstone and the doorstep is of white granite from the South West of England.

The Cutlers' Hall (13) next door is the focal point for the steel-based industries of Sheffield and the old region of Hallamshire. The left hand half of the classical facade was designed by

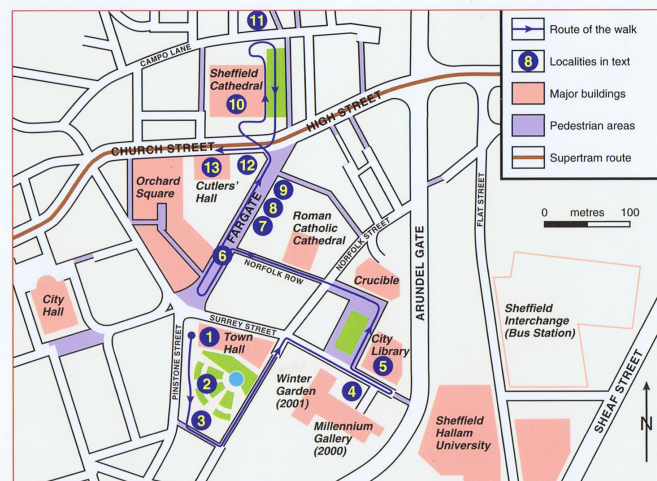
Samuel Worth and Benjamin Taylor and constructed in 1833 of Derbyshire sandstone (photo S).

In 1888, the width was virtually doubled, with an exact copy of the original design, using identical stone. The trim round the doors, of dark Larvikite and stainless steel, is later.

If you wish to explore the Don Valley, the source of much of Sheffield's industrial wealth and now also the home of the Meadowhall shopping complex, you have only to hop on a tram. The flooring of Meadowhall is mostly a brown rapakivi granite called the Giallo Veneziano..... but that is another story!

A trip in the other direction will take you to the University of Sheffield and the City Museum.

Alternatively, you could try out the activity sheet by working back up Fargate to the Town Hall and seeing the bits you missed on the way down. If the Town Hall is open, it is well worth studying the stones which have been used on the **inside** of the building.



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The BUILDING STONES of SHEFFIELD



A Geological Walk in the City Centre