**A Study of the Landscapes of Hetton-le-Hole**

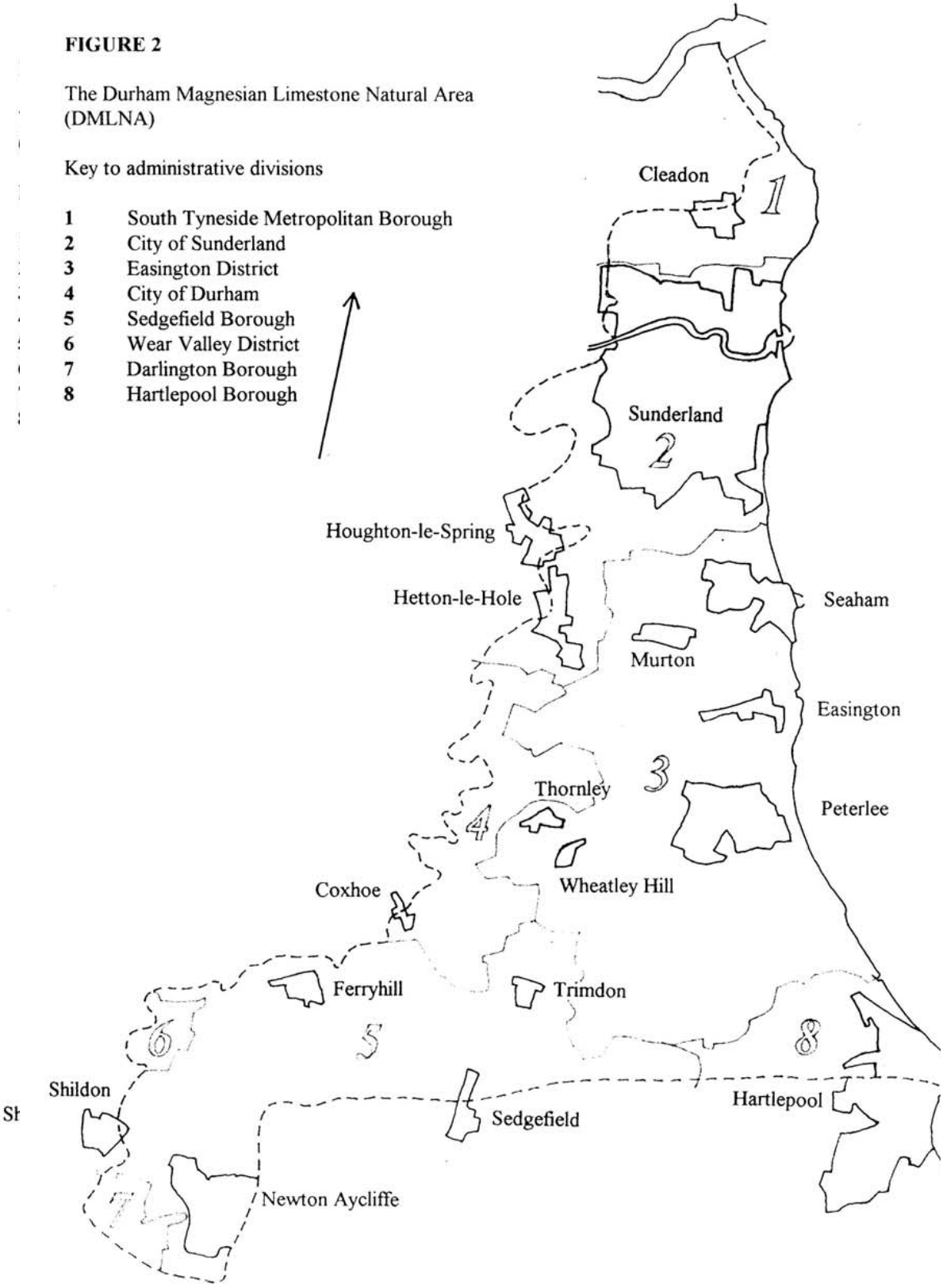
Hetton-le-Hole is a small town on the western edge of a limestone plateau which runs north east to South west through parts of Tyne and Wear, County Durham and parts of Cleveland

**FIGURE 2**

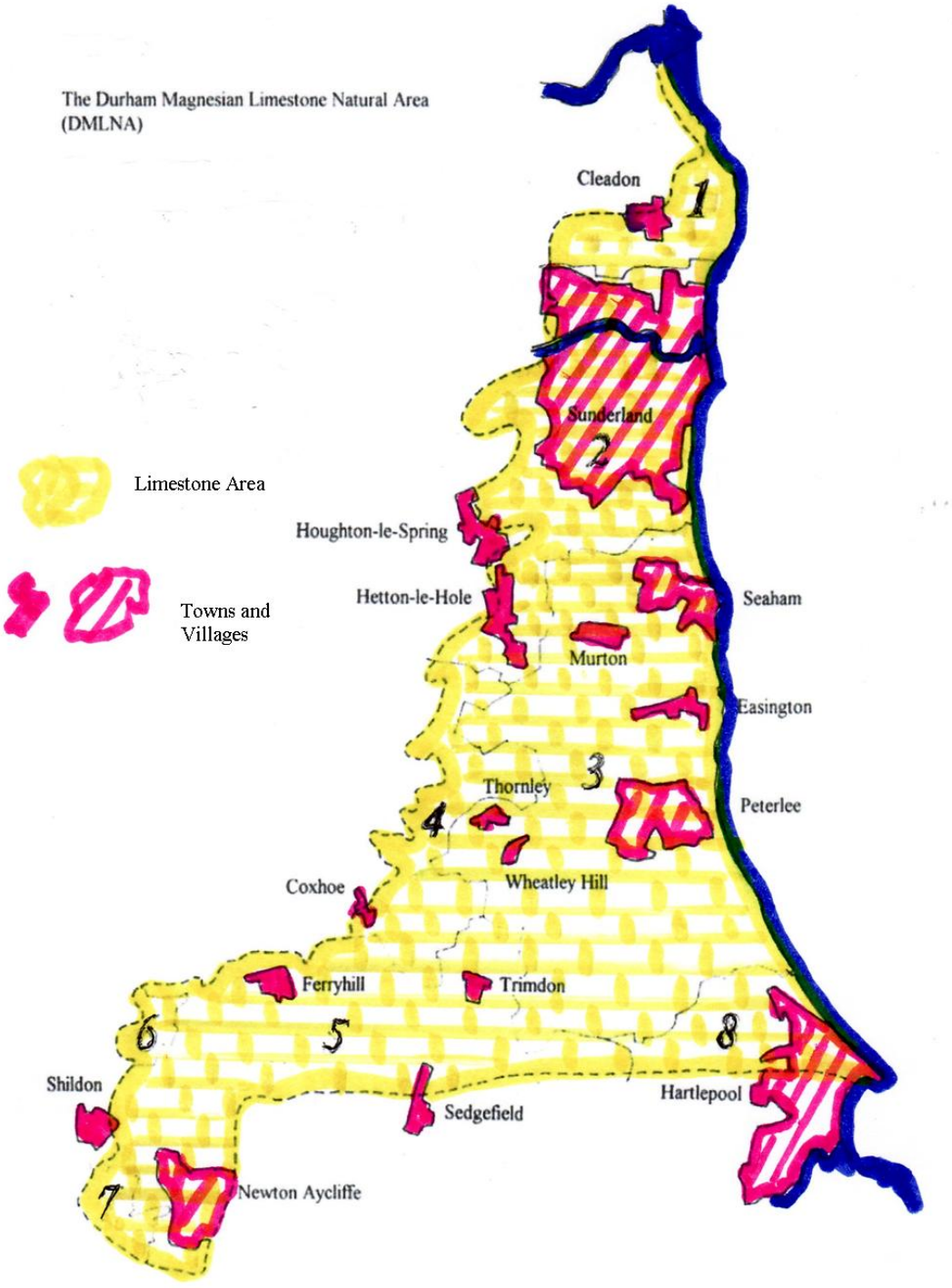
The Durham Magnesian Limestone Natural Area (DMLNA)

Key to administrative divisions

1 South Tyneside Metropolitan Borough
2 City of Sunderland
3 Easington District
4 City of Durham
5 Sedgefield Borough
6 Wear Valley District
7 Darlington Borough
8 Hartlepool Borough



# Magnesian Limestone area of North-east England



Hetton-le-Hole stands upon a rock structure which is different from many other places in the British Isles and indeed the world. Stretching from South Shields in the north down to Hartlepool in the south is a band of rocks on the surface which has the geological name of **Magnesian Limestone**. There is another type of limestone called **Carboniferous Limestone** but this is not found in this area.

Limestone belongs to a class of rocks called **sedimentary rocks**. These rocks have been laid down in rivers and shallow seas many millions of years ago. Sedimentary rocks are composed of different minerals but all contain **carbonates**. Carbonates are found in many other types of rock around the world. Along the Durham coast the rock strata is made up of carbonate rocks which include **magnesian limestone and dolomite** ( a yellow rock).

These rocks were laid down during a period of time **299 -250 million years ago**. They belong to a series called **PERMIAN** rocks and they lie on top of another series of rocks called **CARBONIFEROUS** rocks made up of layers of squashed plants and animals. The carboniferous rocks laid down on the surface of the earth between **350 and 310 million years ago** contain deposits of **coal** formed from the dead plants

Most of the magnesian limestone which comprises the dead skeletons of thousands of marine creatures was laid down in a shallow sea which existed all those millions of years ago. Also squashed between the layers of limestone are bands of bright **yellow sand** which came from deserts which formed when the sea dried up, as well as the occasional band of **marl shale** ( a greyish layer of soft mud like stone which was formed by ancient rivers.

**The diagram below shows a cross section across Northern England with the limestone plateau and the coalfoels in the east.** ***Draw this diagram in your books***

## The Durham Coalfield Geology