Geology and man

The Mendip landscape has been shaped through time by both physical and human influences. Much of the character and sense of place is dictated by the underlying geology, and its influence on the soil, land use, agriculture, construction materials and settlement patterns. The landscape draws many visitors to the gorges and caves, and to the area as a whole for recreation.

In addition to tourism, the Mendips have provided a valuable mineral resource, which has been exploited for centuries. The most valuable commodity was coal, mined around Radstock and the Nettlebridge Valley, and iron, lead, zinc and silver were exploited locally by miners.

Today, quarrying is the major extractive industry, and has had a major impact on the Mendip Hills. Until the beginning of the 20th century, most quarries were small local concerns producing agricultural lime and building stone. The Carboniferous Limestone, Quartzitic Sandstone, Dolomitic Conglomerate and the Lower Jurassic limestones have all been quarried for building stone, and can be seen in local buildings. Many of these old quarries, notably around Vallis Vale, are now important wildlife habitats and Sites of Special Scientific Interest for their geology. They provide many spectacular exposures of the underlying geology.

By far the most valuable product is the Carboniferous Limestone. It is an important raw material for a wide variety of purposes, both because of its physical properties and its chemical composition. Almost all the stone quarried is used as aggregates, mainly for making roads and concrete products. Smaller amounts of limestone are used for lime (used mainly in steel making), for soil conditioning on farms, and as a building stone.

Somerset ranks third after Derbyshire and Leicestershire in terms of aggregates output. Since 1974, Somerset's production of crushed rock has averaged about 10 per cent of the national output. In recent years, aggregate production has averaged around 11.5 million tonnes per annum, of which 62–70 per cent has been used within the south-west region. Between a third and a quarter goes to south-east England, from 11 million tonnes in the late 1980s to 5 million tonnes in the 1990s, and 7 million tonnes in 2001. The permitted reserves of rock in 2003 were about 671 million tonnes, equivalent to 54 years of production.

Quarrying is a sensitive and complex issue. On the one hand quarrying supplies raw materials to meet many of society's needs, creates employment and contributes to the local economy, but on the other hand it can have a significant impact upon the environment and local communities. In the mid 1990s the total economic value generated was estimated at £150 million of which £40 million went directly into the local economy. Today, about 500 people are employed directly in quarrying, with an equal number employed indirectly in haulage, maintenance and quarry servicing industries. The aggregates industry is now well regulated and planned, and has made enormous strides in recent years to mitigate the impacts of quarrying. For more information, see http://mendiphills.org/.

Figures

(Figure 12) Stone gang at Downside Quarry, Windsor Hill. Courtesy National Stone Centre.

(Figure 13) Dipping Black Rock Limestone, Whatley Quarry. © David Roche Geoconsulting.