

Visitors to the Eden Valley area frequently express surprise at the sight of the plumes of "smoke" emerging from the chimneys of a large factory at Kirkby Thore. The prospect looks altogether out of place but, as Ian Tyler, proprietor of the Keswick Mining Museum explained to a large audience of the Appleby Archaeology group at their March meeting, the plumes are of steam rather than smoke, and the factory represent the most recent phase of a local industry that dates back to mid Victorian time.

The Kirkby Thore plant, of course, manufactures plasterboard for the building trade and the raw material, gypsum, is still mined locally at the Birkshead mine on the outskirts of Long Marton. Gypsum occurs widely in Cumbria and its extraction has long provided valuable employment.

As Ian said, surprised visitors to the area would probably be even more astonished if they were able to visit the Birkshead mine itself. The workings are truly enormous, with gypsum being extracted on a vast scale using giant wheeled vehicles operating in "roadways" up to five metres high.

Although records show that alabaster, a pure white form of gypsum, was mined at Knothill, just southeast of Cotehill village as early as 1685, it was not until 1825 that industrial-scale extraction commenced here. The alabaster would have been crushed and mixed with water to form whitewash paint or, indeed, a crude plaster for interiors. As demand grew, however, so did the industry and by late Victorian times, a number of quarries were operating across Cumbria.

Gypsum was such a valuable commodity that it was known as "white gold". When Henry Boazman inherited Acorn Bank on the outskirts of Temple Sowerby in 1875 he was delighted to observe an outcrop of white gypsum exposed no more than 400 metres from his front door. A quarry was quickly established, with material being conveyed by rail from the equally convenient station at Newbiggin. Gypsum has a wide range of industrial applications and, in particular, is used in the manufacture of plate glass. Material from Acorn Bank went variously to Pilkington's at St Helens and to the Union Plate Glass company in Newcastle.

As work proceeded, the Acorn Bank operation grew too large to be operated effectively as a quarry and the excavations continued by means of mining. An inclined plane was dug to provide access to the underground workings and an engine and winding gear installed to haul out the gypsum. Workings here, as elsewhere, extracted material over a large area from seams up to three metres high. Large pillars of gypsum were left untouched in order to support the roof.

During the Second World War, demand for gypsum grew to enormous proportions. Gypsum is commonly found in association with a close chemical cousin called anhydrite. This takes the form of a dense, white rock. Early miners were uninterested in anhydrite but, as Ian explained, it was eventually discovered that by means of sophisticated chemical magic, one ton of anhydrite could be converted into one ton of sulphuric acid and one ton of cement. Both of these materials were of course vital to wartime industries and consequently, in 1939, several large new mines were developed, principally at Cocklakes (again near Cotehill), Sandwith in West Cumbria and

Long Meg near Little Salkeld. At the height of wartime operations, 12,000 tons of anhydrite were being shipped from Cumbria each week.

All of these mines have now ceased production but traces of the industry are still visible if you know where to look. By the side of the road from Acorn Bank to Newbiggin, for example, a corrugated iron structure with unusual bow-topped windows gives the impression of having at one time functioned as a chapel or, perhaps, a school. In fact it once housed the engine and winding gear for the Acorn Bank Boazman mine. Similarly the woods alongside the river Eden near Long Meg conceal many relics of the industry - long-forgotten sidings and signal boxes, workshops and explosive stores.

At Stamp Hill, near Kirkby Thore, the fields still show traces of a rather more sinister event. One Sunday morning in 1972, fully 13 acres of ground sank to a depth of fifteen feet. The entire Stamp Hill gypsum mine collapsed and it was only by the grace of God that no lives were lost – it is traditional that no mining should take place on a Sunday. As it was, two maintenance men who were at the entrance on their way to investigate an earlier roof fall had a very lucky escape. They were blown off their feet by the explosive rush of air emerging from the collapsed workings but were otherwise unhurt. The mine never re-opened.

Concluding his talk, Ian was warmly thanked for a highly informative lecture on an aspect of life in the Eden Valley which is now largely forgotten.

The next talk will be on Tuesday 12th April at 7.30pm, in the Supper Room, Market Hall Appleby when David Bowcock from Carlisle Records Office will speak on The Cumbria Archive Centre and Records of Appleby and North Westmorland.