
60 Watchtree

Theme: Heritage and mining

Location

60 Watchtree — Jurassic/Lias and burial. There is a car park beside the nature reserve visitor centre [NY 310 539].

Description

We are lucky in Cumbria to have so much bedrock at the surface and in plain sight when, in the rest of England, geology is often hidden from view. But here, west of Carlisle, there is no bedrock to see, so why include this site?

Near the village of Great Orton is a new nature reserve on an old airfield. It has two concealed geological tales to tell, one recent and awful, the other about rocks that are unique in Cumbria. In 2001 Britain faced a national crisis, the foot and mouth outbreak. Millions of farm animals were destroyed. After disposal by burning failed, they were buried in mass graves; this airfield was one of these places. Understanding the geology of these pits and the way that groundwater would move was crucial if they were to be engineered so that substances leaching out did not contaminate the environment and water supplies. Monitoring of the site continues; out of sight is not out of mind.

The top layer beneath the surface of the airfield is a stony clay; glacial till (or 'boulder clay') deposited by the ice sheets 20,000 years ago. But underneath that is a rock that is only found in this small part of Cumbria. It is Jurassic and it has fossils from the time of the dinosaurs. Over 100 years ago geologists found a few scruffy bits of limestone in nearby ditches. They contained ammonites and other sea creatures (just like those in Dorset); animals which had died and been buried over 180 million years ago. In 2001 when they were excavating the foot and mouth burial pits those same fossiliferous limestones were revealed.

The potential for using the rocks beneath us (the 'geosphere') for burying things is a contentious subject. In the past our use of quarries and pits for landfill has not always been successful. But we face other challenges, like climate change and energy supply, which are linked. Both may require the use of the rocks beneath us for storage of carbon dioxide and nuclear waste. Science must underpin the evaluation but it is society which has to weigh the risks.

Photographs

(Photo 60-1) 60 Granite erratic boulder at the entrance to Watchtree Nature Reserve.

(Photo 60-2) 60 Watchtree.

