

How Geology has shaped our local industries – a talk by Robert McQuistan

2nd June 2021 (u3a Day)

Robert has done a number of fascinating talks for our U3A and this was no exception. This one focused on some of the key ways the land and people have interacted locally.

First he talked about granite, a hard stone that was formed several hundred million years ago from solidified magma. The first record of granite formally found in the area was in 1786 when James Hutton, the founder of modern geology, was touring the area to check for the existence of granite and saw the distinctive granite outcrop of Cairnsmore.

The granite was quarried outside of Creetown at the Kirkmabreck Quarry during the 19th century by a local company founded by Adamson, who's now memorialised in Adamson Square in Creetown. Granite was loaded on to boats and then transported to places, for example in a day and a half to Liverpool for the Merseyside Dock Company building the docks there.

As well as granite, there was the local excavation of lead, copper, zinc and a shot mill was built at Creetown, where the lead was taken to the top of the building, melted in vat, then dropped through the height of the building into a vat of water which hardened the spheres into lead shot, exported for use in wars.

Meanwhile local people learned the ways to build with granite by splitting it by making little peg holes in a row, battering in pegs to crack the granite then splitting it fully with a metal rod, so it became a source of wealth and employment locally until 1960s. Some granite was used for monuments and graves locally, and for hard-wearing sets in the road which were carved or chipped by hand and taken to places like Barnsley. Many of our houses are made of granite or whinstone, all possible to find locally.

The Effects of Glaciation

Robert described the effect of repeated glaciations on the landscape and the glacial till or sediment that was deposited when the glaciers retreated. Behind Creetown this meant there were piles of sand which was used by a company from 1945 and mixed with local granite dust and added to cement to make small and large pre-cast concrete forms for sale and building.

The sea level also rose after the last glacial period and it would have been around 10m higher than now and created channels for waterways. From the beginning of the 18th century water mills provided local power for industries and businesses like the cotton mills in Newton Stewart (which was briefly renamed Newton Douglas after their founder) and the woollen

manufacture and dying mills in Kirkcowan. Water mills also powered wood mills that provided the supplies like bobbins for the mills. And farms were often built near running water that could be used to grind grain.

Glaciation also deepened our valleys making them accessible to shipping of exports and imports, smuggling, ferries (like the one connecting Creetown and Wigtown which was used up until the 20th century but declined with the advent of the railways and increased road use), and pleasure crafts. There was also plenty of sea life, and huge catches of salmon with high stake nets that were packed in ice and sent to London by train.

It was clear from Robert's talk that the geology of the area has had a huge impact on the way we live, the trades we learn, the work we do, the companies and the connections we set up. And that climate change and its mitigation will continue to make changes to all of these, something we discussed in the final section.