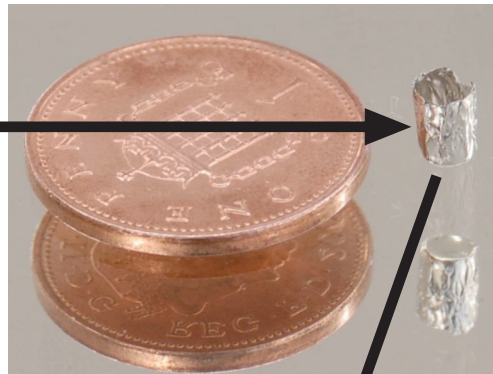


## Is Scotland's soil disappearing into thin air?

The Macaulay Land Use Research Institute sampled soil from all over Scotland approximately 25 years ago and is in the process of re-sampling soil from the same sites.

But how do we determine the carbon content of these soils to see if it has altered over this period?

Dried milled samples of soil are accurately weighed into tiny tin cups



These are then loaded onto an auto-sampler

Samples are dropped one at a time into the elemental analyser



Inside the elemental analyser the soil is burnt at 1020°C in a burst of oxygen. All the carbon in the soil is converted to carbon dioxide which is carried to a mass spectrometer where it is measured.

From the weight of the soil sample and the amount of carbon dioxide it produces, we can calculate the carbon content of the soil.