

Loss on Ignition testing explained

Fines are small particles of refuse created as a by-product of mechanical waste treatment processes.

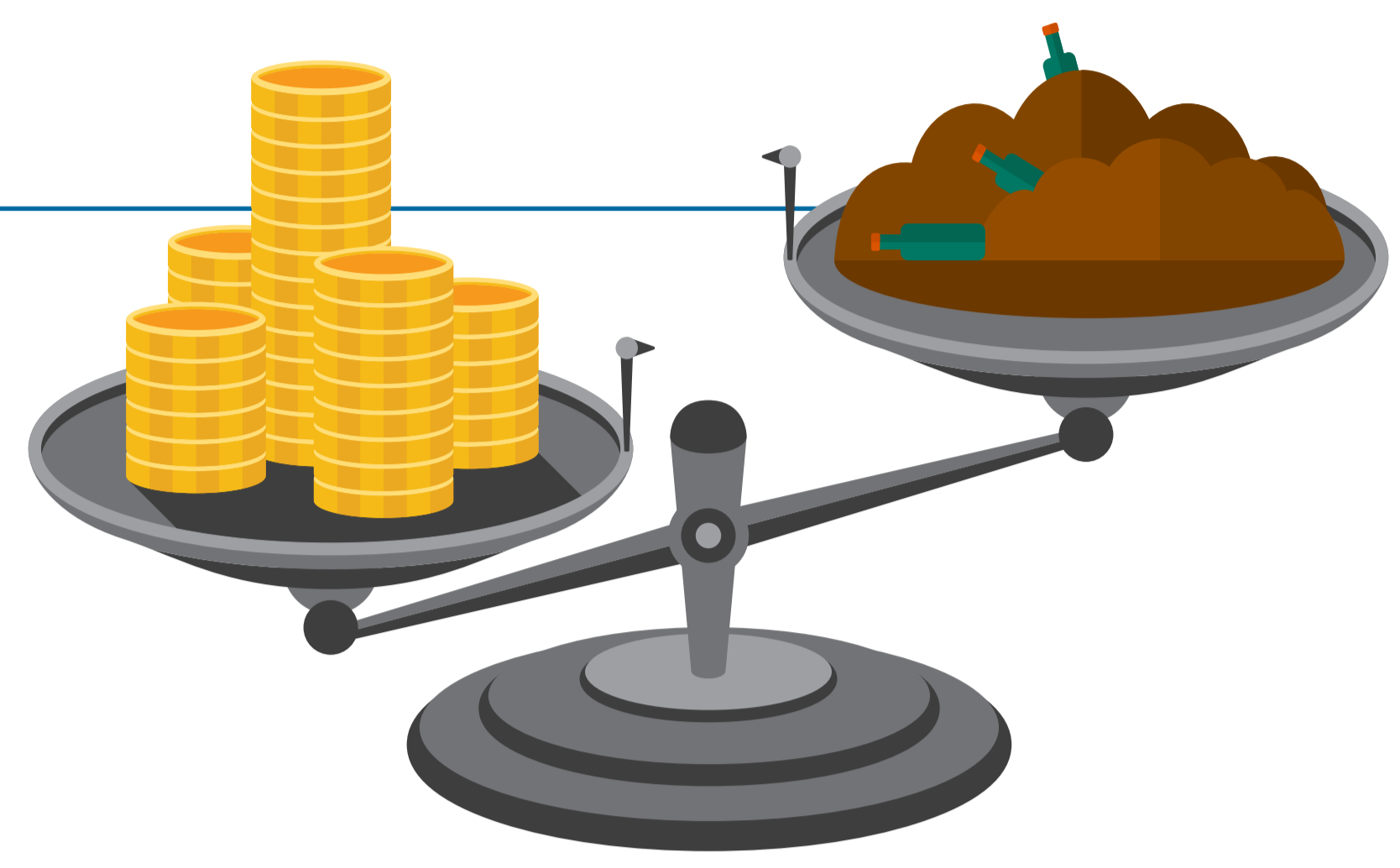
Fines containing more than **10%** organic matter are subject to a significantly higher landfill tax rate.

Landfill tax rates for fines

LOI of **10% or less**
£2.90*
PER TONNE

LOI of **More than 10%**
£91.35*
PER TONNE

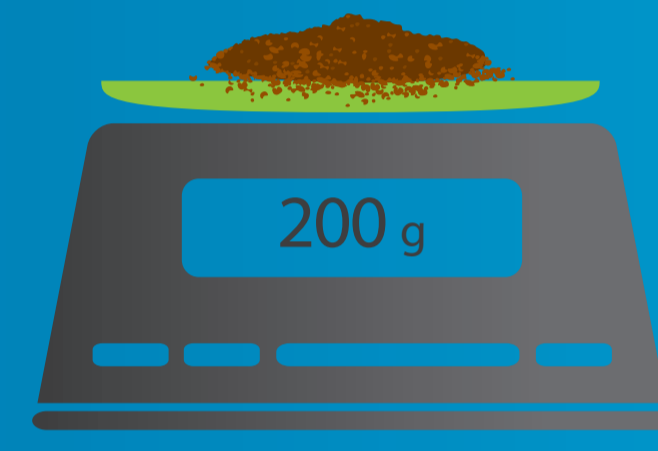
* CORRECT FOR TAX YEAR 2019/20



THE TEST USED TO MEASURE THE LEVEL OF ORGANIC CONTENT OF FINES IS CALLED LOSS ON IGNITION (LOI)

How do we test for Loss on Ignition?

A **1 kg** sample of the fines is dried at **30-50°C** until a constant weight is achieved. From this a **200g** subsample is created



Particles exceeding **20mm** are removed and the new weight is recorded



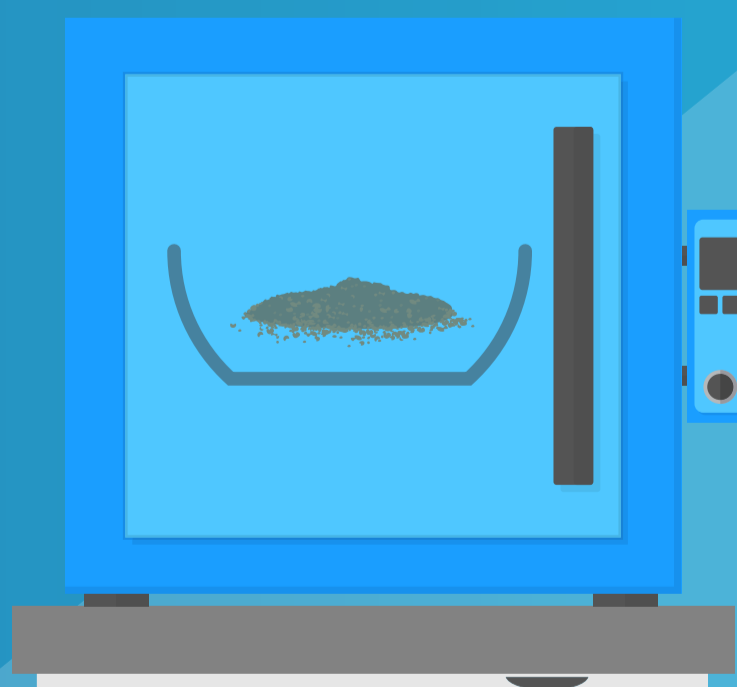
The sub-sample is ground to a particle size of **2mm** or less to produce a homogenous sample



20g of the homogenous sample is placed in a dish and dried in an oven at **180°C** until a constant weight is achieved



The sample is transferred to a muffle furnace and heated to a temperature of **440°C** for a minimum of **5 hours**. It is then cooled in a desiccator



The sample is weighed for the final time. Any organic matter should now be burned off, and the difference between the final weight and its original mass is the Loss on Ignition figure.



SOCOTEC provides UKAS accredited (No. 0001) LOI testing services to companies across the waste management sector. If you require more information or advice on LOI tests please contact salesuk@socotec.com