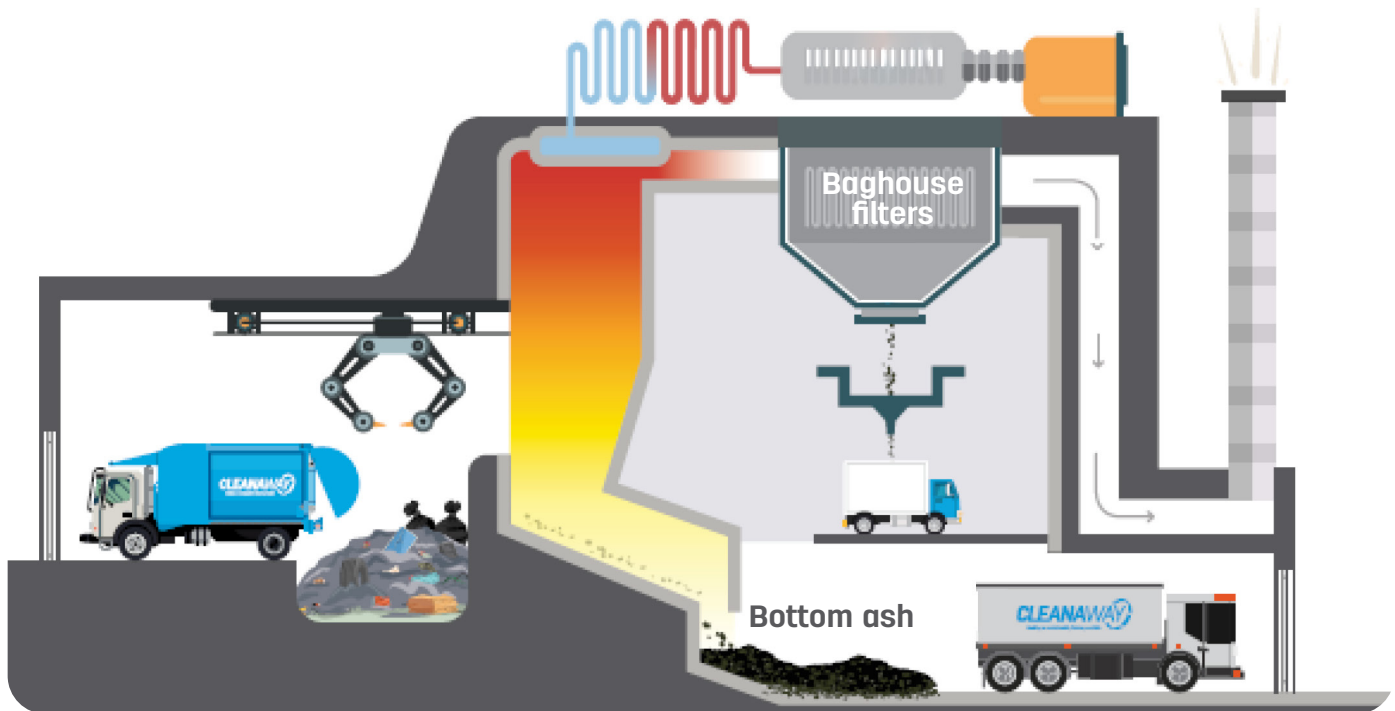


Ash and residue management

Where does the ash come from?

Waste-to-energy (WtE) is a process whereby residual general waste is thermally treated at very high temperatures. Although the thermal treatment (also known as combustion) destroys the majority of pollutants, fly ash and small quantities of pollutants are still present in the flue gas.



In general, two types of solid residue are produced in the thermal treatment process:

BOTTOM ASH

Bottom ash is comprised of inert, non-combustible materials such as glass, ceramics and metals.

WHAT HAPPENS TO THE BOTTOM ASH?

Bottom ash is processed to remove metals for recycling. The remaining bottom ash can be used for construction. By recycling the metal and reusing the bottom ash, we expect the MERC can divert more than 95% of waste from landfill!

AIR POLLUTION CONTROL RESIDUE

A mixture of flue gas and fine ash will be produced during the thermal treatment. The fine ash is called fly ash. In the waste-to-energy facility, fine ash will be removed in the baghouse filter, similar to how dust is trapped inside a bag in a vacuum cleaner. There are many filter units inside each bag filter, providing a large surface area to efficiently separate the very fine particles from the flue gas. The filtered flue gas will then be safe to release into the atmosphere.

WHAT HAPPENS TO THE RESIDUE FROM THE BAGHOUSE FILTER?

The residue captured by the baghouse filter has relatively high concentrations of lime and heavy metals. First, the residue is collected in sealed silos. It is then treated on site to immobilise pollutant molecules into cement-like blocks, before the solidified ash is transported in the blocks, to an appropriate landfill for disposal.