



A gas well collects gas from deep inside the landfill



These generators convert the gas to electricity



Some of the electricity is used to charge cars and trucks



Any gas that can't be turned into electricity is burnt off in this flare

These images show how Kate Valley landfill makes sure that limited methane, a greenhouse gas enters the atmosphere from its waste. The Kate Valley landfill makes enough electricity to power 4000 homes.

In your groups discuss:

Why is it important that all the methane gets used up?

A carbon footprint is the amount of greenhouse gases produced by something. What size do you think Kate Valley Landfill's carbon footprint would be?

How does its carbon footprint compare to a traditional landfill that doesn't capture methane?

The waste trucks are going to be replaced with electric trucks. What impact will that have on Kate Valley's carbon footprint?

What other ways could a landfill's carbon footprint be reduced?



Waste is dumped out to be audited



This waste is about 8 years old – you can only see inorganic waste left

Organic waste is from things that were once alive, both plants or animals. Inorganic waste is from minerals like oil under the ground and other solids.

Both organic and inorganic waste produces CO_2 (carbon dioxide) when they decompose. Organic waste releases CO_2 that was captured while the plant or animal was alive, so it is carbon neutral. Inorganic waste

releases new carbon molecules so it increases the net amount of carbon in the Biosphere.

Methane gas is created when organic items decompose without oxygen. At the Kate Valley landfill, the waste is compressed or pressed together to squeeze out the air to produce methane.

Look at the images above and discuss what organic, inorganic, and recyclable items you can see.

In your group, do a waste audit on the waste from your classroom or school. Look through the waste and recycling bins and note down what you find, then write

or draw them into the table below. First, make sure you know which plastic products can be recycled where you live. Any plastics that can't be recycled need to go in the inorganic waste column.

Organic waste

Inorganic waste

Recyclable