



# FOOD WASTE RECYCLING: WHAT IS ANAEROBIC DIGESTION?



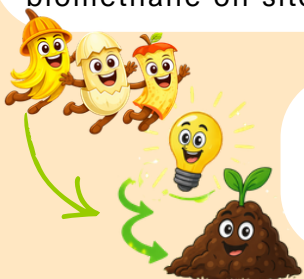
You will have heard that South Derbyshire District Council, alongside all other Councils in England, must now start collecting food waste as part of the government's Simpler Recycling scheme. You may have seen that your food waste will be going to an Anaerobic Digestion (AD) facility to be recycled – but what does this actually mean, and what exactly will be happening to your food waste? Severn Trent Green Power kindly invited members of the SDDC team to visit their AD facility on Megaloughton Lane in Derby (see photo, left), where South Derbyshire's food waste will be processed, so we could see firsthand what will be happening to our food waste and the benefits it will bring.

Firstly, what is anaerobic digestion? Simply put, anaerobic digestion is a series of biological reactions. Microorganisms break down organic material (in this case, food waste) to produce biogas and digestate. Biogas is a renewable energy source that can be used in our country's gas grid to power our homes and digestate is a nutrient-rich fertiliser that is both cheaper and less harmful to wildlife than chemical fertilisers.



When your food waste is dropped off by our refuse teams at the AD plant, it is tipped into a bunker (see photo, left) which is like a giant conveyor belt to get the food waste moving into the anaerobic digestion process. The food waste is then separated from its packaging and chopped up into tiny pieces, before liquid food waste (such as fats and oils) are added so the waste is more easily pumped through the digestion process.

The food waste is then pumped into huge digestion tanks (see photo, right) and heated up to body temperature to mimic the digestion process that takes place in our own bodies – the tanks act like giant human stomachs. The food waste breaks down and releases valuable biogas, which is captured in the tank roofs before being converted to biomethane on site, ready to be transferred directly into the gas grid.



The biogas produced will be used by our gas grid to help power homes and help decrease reliance on fossil fuels. The digestate is sold as a fertiliser to local farmers and helps reduce the use of harmful chemical fertilisers.