What Happens to Your Waste & Recycling?

Anaerobic Digestion

Anaerobic Digestion

Anaerobic digestion is a sophisticated biological procedure in which organic matter is broken down in the absence of air in sizable, insulated, sealed vessels with carefully regulated heating and mixing.

Food waste is introduced into a temperature-controlled, sealed building where it is treated into a liquid before being injected into digesters. Bacteria feed on the food waste in this area to make biogas. Biogas is harvested and used as a fuel in CHP engines since it typically contains 60% methane and 40% carbon dioxide.

By using anaerobic digestion to recycle food waste instead of burying it, between 0.5 and 1.0 tonne of CO2 is kept out of the atmosphere.

Anaerobic Digestion produce renewable energy and fertiliser for farms.

Anaerobic Digestion (Continued)

Food Waste

Anaerobic Digestion Plant

Food Waste

Anaerobic Digestion is a process where food waste is recycled into renewable energy and fertiliser for farms.

Energy Recovery

Energy Recovery

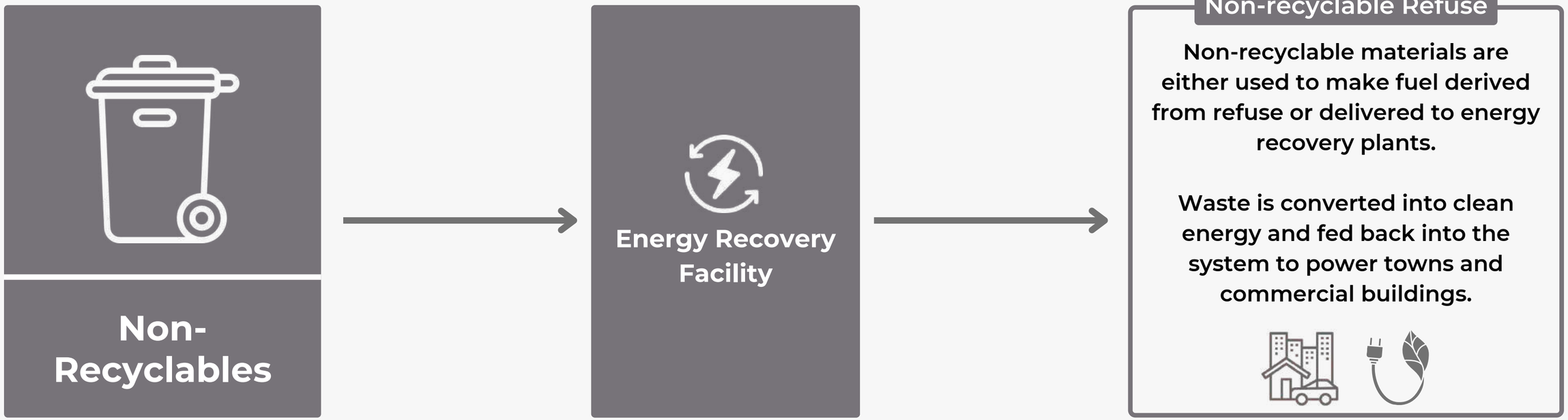
Waste sent to an energy recovery facility undergoes a sophisticated process that maximizes resource utilization while minimizing environmental impact.

Residual waste, which would consist of General Waste items which typically can’t be recycled often ends up in landfill sites - with energy recovery, non-recyclable materials undergo thermal treatment.

This treatment involves incineration at high temperatures in a controlled environment, where the waste is converted into energy-rich gases. These gases are then used to produce steam, driving turbines to generate electricity. The heat generated during this process is also harnessed for district heating or industrial applications, enhancing overall efficiency.

Advanced emission control systems ensure that no harmful byproducts are released, adhering to strict environmental regulations. The resulting energy contributes to the local grid, reducing the dependency on fossil fuels and promoting sustainable waste management practices.

Energy Recovery (Continued)



Glass Recycling

Glass Recycling

The process for recycling glass depends on the type of glass you need to recycle, if you have broken glass, window panes and glass bottles and jars all to recycle at the same time you will just need to separate your waste glass into individual glass bins.

The glass is then taken to a Material Recovery Facility (MRF) where it is separated from other products such as tin, paper or plastic.

The glass is then sorted by colour and washed to remove any contaminants.

Once it is clean it is crushed, melted and moulded into new products like bottles and jars. Glass that doesn't make it into bottles and jars is often used for other purposes such as glass wool, building aggregate and fibre optic cables.

Glass Recycling

Glass Recycling

Glass Recycling Plant

Glass

Glass waste items are initially cleaned to ensure that no impurities are present. The glass is then sorted by size.

Smaller pieces are recycled and used to make aggregate for road surfaces.

Larger pieces are organised by colour and processed to create new products.

Materials Recovery

Materials Recovery

Waste sent to a materials recovery facility (MRF) undergoes a comprehensive sorting and processing procedure to extract recyclable and reusable materials efficiently.

Upon arrival, the waste is unloaded and passed through conveyor belts, where manual and automated sorting techniques are employed to separate different types of materials like paper, cardboard, plastics, metals, and glass.

Advanced machinery including screens, magnets, optical sensors, and air classifiers further refine the sorting process. Once separated, the recyclables are baled or compacted for transportation to recycling facilities.

Any remaining non-recyclable waste is typically sent to landfills or undergoes additional treatment for energy recovery. MRFs play a crucial role in diverting waste from landfills, promoting recycling, and conserving valuable resources. Their efficient processes contribute significantly to sustainable waste management practices and environmental conservation efforts.

Materials Recovery

Metals & Plastics

Materials Recovery Facility

Plastic and metal items are separated.

Plastic

The plastic items are separated further into different grades, which are processed into pellets and used in the creation of new plastic products.

Metal

The metal items are similarly separated into types of metal, and processed to create new products.

Sorting Facilities

Sorting Facilities

Waste sent to a sorting facility undergoes a systematic process to segregate and process different types of materials for recycling or proper disposal. Upon arrival, the waste is unloaded and conveyed through various stages of sorting equipment.

The first step involves manual sorting to remove large items and hazardous materials. Then, the waste passes through screens and separators that separate materials based on size, density, and composition. Magnets and eddy current separators extract ferrous and non-ferrous metals, while optical sorters identify and separate plastics by type.

After sorting, the recyclable materials are baled or compacted for shipment to recycling facilities. Any residual waste is further processed or sent to landfills using environmentally responsible methods.

Sorting facilities play a crucial role in diverting recyclable materials from landfills, promoting recycling, and supporting sustainable waste management practices.

Sorting Facilities

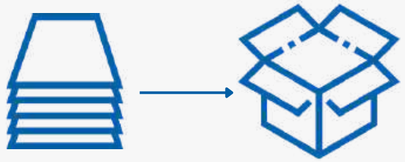
Cardboard & Paper

Sorting Facility

Card and paper items are separated.

Cardboard

The cardboard items are baled into new packaging to be sold to manufacturers.



Paper

The paper items are separated further into different grades, and delivered through to paper mills to create new paper products.

Wood Shredding

Wood Shredding

Wood waste sent to a wood shredding facility undergoes a specialized process to transform it into valuable products and reduce environmental impact. Initially, the wood is sorted to remove contaminants like nails, plastics, and other non-wood materials.

Next, the clean wood waste is fed into powerful shredding machines that break it down into smaller pieces or chips. These wood chips are then processed further depending on the intended use. They may be used as fuel for biomass energy production, mulch for landscaping and soil enhancement, or raw material for producing composite wood products.

By shredding and repurposing wood waste, these facilities help divert material from landfills, reduce greenhouse gas emissions associated with decomposition, and support sustainable practices in the forestry and construction industries. This process not only minimizes waste but also creates valuable resources for various applications.

Wood Shredding

Wood

The wood items are sorted into grades, which are then shredded into wood chips. The wood chips are processed into panel board, and sold to manufacturers to create new products.

What Happens To Your Waste & Recycling?

Download your free guide:

What-happens-to-your-Waste-Recycling

Waste Management Process

Waste Collections

No matter the type of business or type of waste they produce, our customers are advised on how best to manage their waste streams and receive timely waste collections through our network of suppliers.

Waste Transfer

Also referred to as a Material Recycling Facility, Waste Transfer Stations are where waste is taken once it is collected.

Waste is divided into their separate types at the station before being moved once more to a specific treatment or disposal facility.

Disposal, Recovery & Recycling

Each waste type will need to be treated or disposed of in different ways at specific facilities.

Whilst some waste types can be recycled, others can still be recovered to produce clean energy.

How to separate and sort your waste streams for recycling.

Download your free guide:

Your-waste-recycling-guide

Your-waste-recycling-guide-for-the-new-regulations (Wales)

Contact us

T: 0300 303 4856 E: info@greatwesternrecycling.co.uk W: www.greatwesternrecycling.co.uk

@greatwesternrecycling

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