

Visit to Materials Recycling Facility 9 October 2024

A knowledge share opportunity as part of our campaign Plastic Action

The Greenprint Forum was invited to visit the Materials Recycling Facility (MRF) in Great Blakenham, which has been operated by Biffa since 2021. This facility processes recyclable waste for the entire county of Suffolk, handling a significant portion of East Suffolk's waste output. The visit offered insights into how modern recycling processes work and the challenges involved in sorting and recycling waste, and was led by **Craig Renton, Waste Advisor for Suffolk County Council**.

Key Facts & Figures:

- ESC produces the equivalent of 3.34 million bins worth of waste annually, which amounts to **15,578 tonnes** of waste.
- The MRF processes **75,000 tonnes of waste per year**, receiving material from **14,000 bin lorries** annually.
- The facility employs **80 staff**, including **30 pickers** who manually sort through waste streams.
- There are **120 conveyors** that move materials through the different stages of sorting.



Waste Processing Workflow:

1. Tipping and Initial Sorting:

- Waste is first tipped in front of the plant, where it begins the separation process.

2. Separation Technology:

- The Trommel:** A machine that processes waste, filtering out smaller items (under 5 cm), which fall through and sent to the Energy from Waste Facility.
- Optical Sorters:** These infrared machines identify materials like plastic, paper and use jets of air to separate them.
- Magnets/Eddy Currents:** Used to extract steel cans / shoot aluminium upwards for separation.
- Ballistic Separators:** These help to sort materials based on their shape – using a 'walking platform' 2D shapes are redirected from 3D shaped materials.

3. Manual Sorting:

- After mechanical separation, **handpicking** is used to remove contaminants and ensure quality. Manual sorting also occurs right at the start of the process removing bags and other large obvious contaminants.

4. Baling

- Processed materials are then sent to be baled. These are then used to be shipped to companies that use recycled materials to produce goods.

6. Energy Savings and Materials Recycling:

- a. Recycling **aluminium** saves **95% of the energy** compared to producing it from raw materials. Aluminium can be recycled continuously without losing quality.
- b. All metals, totalling **2,566 tonnes**, remain in the UK for recycling.
- c. **5,910 tonnes of plastic** are processed, with most staying within the UK for further recycling.
- d. **26,608 tonnes of paper** are recycled, with only **20%** staying in the UK, as high-quality paper is the main material retained. A further 71% remains in the EU for lower-quality paper products and packaging.

7. Unrecoverable Material:

- a. Unfortunately, **26% of the material** received by the MRF cannot be recovered. This portion goes through a final step, where **25% of all waste** ends up being converted into energy via **Energy from Waste** (EfW) processes.

8. Overall Capacity:

- a. The MRF processes **285 tonnes** of material every day.

Recycling is crucial for reducing waste, conserving natural resources, and saving energy. By recycling materials like aluminium, plastics, and paper, we can significantly lower the environmental impact of production and waste disposal. To ensure you're recycling correctly and helping to improve the quality of recyclable materials, visit the website [Suffolk Recycling](#) for guidelines on what can and cannot be recycled in Suffolk. Proper recycling helps maximise recovery rates and minimise the amount of waste sent to landfills or for energy recovery.



A short informative film which guides viewers through the journey taken by items as they travel through this plant can be viewed here: [Where recycling goes - Suffolk Recycling](#)

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