



# Retrofit plastic strapping solution improves RDF capabilities for Biffa



Processing waste for Refuse Derived Fuel (RDF) economically and efficiently is part of Biffa's commitment to achieving zero waste to landfill. However, until now, baled RDF waste was tied using conventional steel wire, a costly resource and one that incurs a premium with Waste to Energy plants.

The obvious solution was to switch to plastic strapping using recycled PET (Polyester), an environmentally friendly material, 40% cheaper than wire and above all combustible – ideal for Waste to Energy applications. Was there a way of retrofitting Biffa's existing fleet of twin ram balers to take advantage of this technology?

Middleton Engineering has been supplying balers and recycling equipment to Biffa for over 15 years, so they were the obvious choice for a pilot scheme at Biffa's Dewsbury recycling plant in Yorkshire.

After extensive testing, the team designed and built a practical, cost effective solution that integrates plastic strapping with any of Biffa's existing twin ram balers – in fact any horizontal baler can benefit. At the same time, the team overcame the tendency of RDF material to expand when it exits the baler, with modifications and a specially engineered 'spout' to hold the material in place while strapping is completed.

The successful pilot is already delivering significant savings to Biffa's Dewsbury plant, which processes 60-70 thousand tonnes of waste per year (enough to power 10,000 homes) and should ensure that even more residual waste is diverted to useful energy production.

### Benefits

- Cost effective plastic strapping solution for baled RDF waste
- High quality solution engineered to Biffa's exacting requirements
- Easily retrofitted to existing horizontal balers

"Biffa is committed to enabling its customers to recycle as much waste as possible, and we are delighted to work with Middleton Engineering on this exciting development, which will ensure that waste can be processed as RDF more economically and efficiently.

Middleton's engineering skill ensures that this strapping system can be fitted to any of our twin ram balers and makes retrofitting a far more cost effective solution."

**Anthony Holley,  
Regional General  
Manager Yorkshire,  
Biffa**



Plastic strapping pilot at Biffa Dewsbury



Compacted and baled RDF waste using recycled PET strapping



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