

# Case Study

Working in partnership with Birkby's Plastics to reduce costs and improve energy efficiencies



## In Brief

TH Plastics worked closely with Birkby's Plastics, an automotive supplier, to introduce a cost effective, in-house recycling system for their reject product. TH Plastics provided a complete turnkey solution, developing the entire line and testing it at their own site first before installation. The self regulated system has reduced energy consumption by over 40% compared to a standard system and reduced transportation costs by an amazing 90%. TH Plastic's solution has enabled Birkby's to turn, what was a considerable cost to the company, into a profit centre, increasing the value of the size reduced plastic by 170%, and at the same time helped them towards their goal of achieving 0% landfill.



## Overview of the challenges

Birkby's Plastics, based in West Yorkshire, is the UK's leading independent automotive injection moulding supply partner. They specialise in the design, moulding and assembly of plastic products for the automotive and specialist engineering industries. Their product capabilities range from high cosmetic interior automotive trim components through to large shot weight mouldings for specialist engineering applications. The ever changing supply demands of their automotive clients drive Birkby's continuous improvement activity in everything they do.

Birkby's wanted to improve their energy and cost efficiencies, particularly in the area of recycling. They were sending 40 tonnes of waste product for recycling 2-3 times a week which they knew could be dramatically reduced if they recycled on site. One of the key objectives was to ensure that any new system was simple and safe to use and had minimal running costs. They also wanted to integrate an existing granulator they already owned to keep the costs down even further.

Albert Kinder, Engineering Manager at Birkby's invited TH Plastics to come in to discuss the recycling project.

***Albert Kinder said, "We have built up a good working relationship with TH Plastics over the past few years. They are very cost effective and good to work with. What I particularly like is their flexibility to work together on a project. I will often have ideas and they will work with me to improve my suggestions until we have a workable solution for our needs. Most other companies will just give you a quote for individual components whereas I can rely on TH Plastics to work with us on an end to end solution."***

## The Solution

TH Plastics designed the size reduction project ensuring that it integrated Birkby's existing granulator into the line with a CMG shredder. The customer wanted to **"build it, see it and prove it before they moved it"** so TH Plastics set up the entire line at their premises in Hadfield, Derbyshire and tested it in an 8 hour trial. This gave Birkby's the confidence that the system would work the way they wanted from day one.

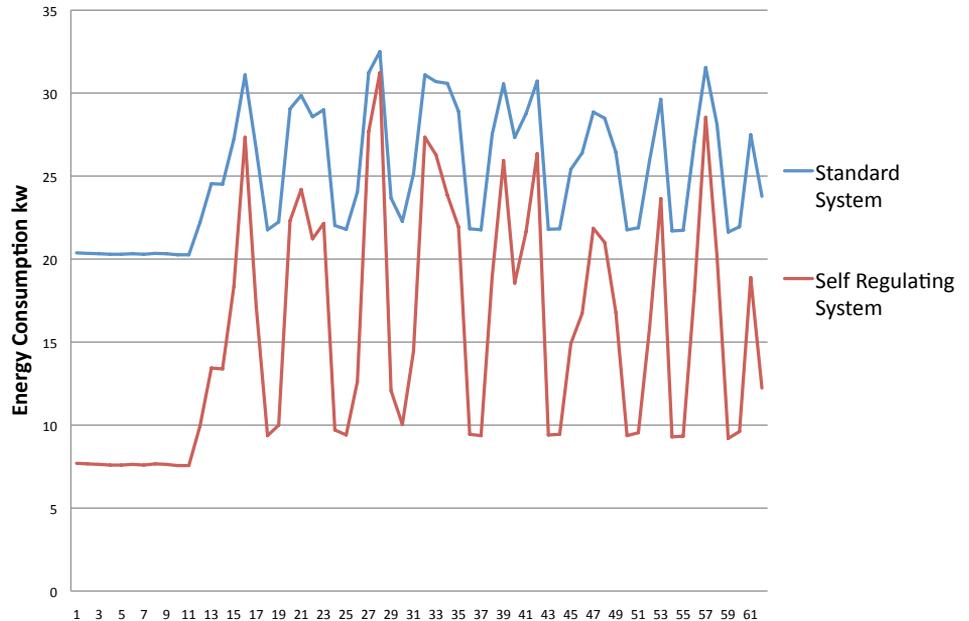
**Albert comments, "TH Plastics offer this service as part of their integrated solution, which is great added value. Not all companies do this but it makes my life a lot easier. We can do any tweaking and corrections during the trial and I know that it is going to work once installed and speeding up the time for installation."**

TH Plastics offered a full turnkey solution from system design, testing, power and lighting and integration of the systems to full training of Birkby staff once installation was complete. One of the key differences is that it is a self regulating system – making sure the line was set to self optimize to ensure that energy consumption was kept to a minimum. TH Plastics also provide a complete support and service contract 24/7.

## The Benefits

On completion of the system, TH Plastics carried out an assessment of the energy consumption of the system. With the self regulation system that had been put in, energy consumption had been reduced by over 40% when compared to a standard system. Birkby's have continued to monitor these figures and 14 weeks on energy consumption has reduced even further, up to 50%.

Shredder Energy Consumption Analysis



The immediate benefit of the new system has been the savings in transportation costs for their waste products. By size reducing the parts at source instead of transporting them as lightweight bulky items they have reduced 2-3 deliveries a week, to just one every 3-4 weeks, reducing costs by 90%. As well as the cost savings this has greatly reduced the impact they are having on the environment.

A further, added benefit is that the scrap parts have now been sized reduced to a granulated flake which has a much higher sale value. The sale value has increased by 170%! TH Plastic's system has turned, what was a major cost to the customer into a profit centre.

**Albert adds, "TH Plastics add a lot of value when they work on a project that you do not get with other companies. We have achieved amazing cost savings**

**from the new system that we are now making a profit from recycling. The system is being tweaked continuously to improve energy efficiency and we have already seen this improve from 40 – 50%. Lee and his team have provided us with a system that is easy to use – in fact it is very difficult to get wrong.**

**It is fully automated so our staff do not have to monitor it, they can start it up and it will work through to an automatic shut down, so they are free to get on with something else. We had originally wanted the system to totally shut down if metal got into the system, but TH Plastics suggested a metal reject system. This has worked really well, it means the system is much more efficient and reduced downtime by up to 20%. This didn't cost us any more, it's all part of the added value you get by working with TH Plastics."**