

Flushing out waste cuts energy use across plastics production line

BEAS

Business Energy Advice Service



£85,830

Estimated annual saving*
(£ exc. VAT/yr)



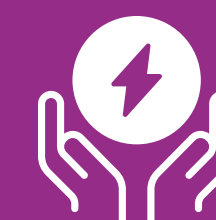
£410,200

Estimated cost to
implement*
(£ exc. VAT)



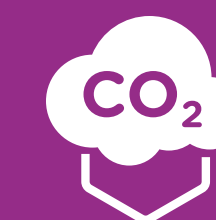
5.3 Years

Estimated payback
period*



778,261kWh

Estimated annual
energy saving*
(kWh/yr)



156.15tCO₂e

Estimated annual
carbon saving*
(tCO₂e/yr)



Manufacturing excellence, made in the Black Country

Thomas Dudley is a fourth-generation manufacturer based in the West Midlands. The group's five companies serve the construction sector, with a focus on foundry components and plastic plumbing systems. With 95% of products made in-house, the business is committed to UK manufacturing, local employment, and long-term sustainability.



"We've applied for match funding to invest over £400,000 in energy-saving upgrades. These changes could save us £85,000 a year – and bring us closer to net zero. The support from Pro Enviro and the BEAS programme made the whole process straightforward."

Martin Dudley

CEO, Thomas Dudley Group

Getting smart about savings

Amid rising energy costs, the company faced an urgent need to reduce energy use across its energy-intensive plastic moulding division. As part of its broader net-zero strategy, Thomas Dudley joined the Business Energy Advice Service to identify the most effective actions to support its goals.

Pro Enviro conducted a full audit of the company's plastics operations. With 36 injection moulding machines running daily, energy demand was high and variable. The audit highlighted five clear opportunities: upgrading heating systems, replacing fluorescent lighting, optimising compressor use, repairing air leaks, and replacing two older hydraulic moulding machines with energy-efficient servo-driven models.

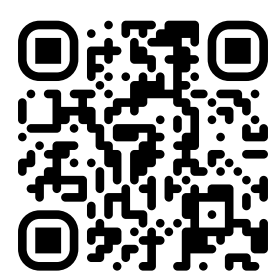
The data revealed excessive energy use during evenings and weekends, prompting behaviour change across the workforce. Maintenance teams and operators were retrained to shut off equipment properly and take responsibility for energy monitoring. A new online portal visualised live data, helping the team spot inefficiencies and act fast.

With guidance from Pro Enviro, Thomas Dudley submitted a grant application for matched funding to support delivery of the upgrades. They are now awaiting approval for a £100,000 grant toward the £400,000 investment.

More competitive, more sustainable

The planned upgrades are forecast to reduce energy usage by over 770,000kWh annually and cut carbon emissions by 156 tonnes. That's an estimated saving of £85,000 per year, helping to bring the payback period down and justify further investments.

Longer term, the savings will support reinvestment in automation, training, and product development – critical steps to keep Thomas Dudley competitive in global markets. The success of the plastics division has already encouraged the company to roll out energy assessments across other group businesses.



**Register today for
your FREE business
energy assessment**

✉ decarb@aston.ac.uk bit.ly/BEAS-RegisterNow

