

## **UNTHA's turnkey package supports Avanti's expansion into Waste to Energy market**

**Avanti Environmental is no stranger to the recycling and waste management sector. The business has been trading for more than 20 years, operating mainly in the North West but with facilities from as northerly as Scotland, down to the South West of England.**

However, as is often the case with progressive companies in the evolving resource sector, the team couldn't suppress a hunger to do more.

The journey to create a new alternative fuel production line therefore began a little over 18 months ago at the firm's Kitling Road site in Merseyside. But with a very open mind – and facing so many opportunities in the modern waste to energy (WtE) sector – Avanti's options were plentiful.

Initial conversations unfolded with various manufacturers, each proposing different waste processing methods, but one particular shredding specialist highlighted an efficient way to treat the waste to produce a saleable resource. Based on the proactivity and level of interrogation provided by that firm, Avanti proceeded to procure a complete turnkey package from North Yorkshire headquartered UNTHA.

Now installed and fully operational, the solution comprises a bespoke in-feed conveyor which – once loaded by either a grab or wheeled loader – transports pre-shredded, high calorific material into the XR3000C waste shredder. The shredder's indexable cutters and interchangeable screens can achieve a precise, yet flexible shred, with a particle size as small as 30mm, in a single pass. The machine is also fitted with intuitive, ultra-responsive fire suppression technology and a touch screen control panel facilitates remote diagnostics to UNTHA's Austrian HQ.

The shredded material then continues up a discharge conveyor fitted with over-band magnets to extract both ferrous and non-ferrous recyclates. This quality control mechanism ensures a high quality 'on spec' end product and utmost waste hierarchy compliance throughout. An eddy current separator – which draws out any aluminium – completes the

UNTHA package. The homogenous, high calorific, confetti-like material is then baled and cross-wrapped for onward shipment to cement kilns in both in the UK and across Europe.

Talking about the process, Avanti's group recycling director Steve Kinley said: "UNTHA challenged us to think carefully about the input material, output speeds and the final product that Avanti wished to achieve. I believe this has ensured we build a more efficient, intelligent and profitable plant that is well equipped to produce best-fit fuels for the cement industry. The fact that the majority of equipment was supplied and commissioned by this one manufacturer was also a key deciding factor – they retained ownership of the project and ensured each component part would 'talk' effectively to the next."

It has been promised that the slow speed, high torque waste shredder will present uptime, maintenance and safety benefits without compromising throughputs. Operating as quietly as 70 dB(A) – a noise level previously unheard of for a shredder – the plant will also ensure noise compliance whilst protecting operator wellbeing.

Steve concludes: "Modern waste to energy plants don't just have to be profitable. There are so many other auxiliary factors to consider to ensure they are energy-efficient, safe and compliant.

"This has been a great, collaborative project, and we're already thinking 'what next'. We've always looked for ways to work smarter and achieve more. I can see our annual 50,000 tonnes capacity increasing as time goes on, and, because the shredder can handle an array of wastes – from pre-shredded material to bulky, rigid waste – we're likely to vary our feedstock too. This is important given the cement industry is constantly changing and specifications differ worldwide."

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**UNTHA shredding technology:**

UNTHA shredding technology develops and produces innovative and reliable shredding solutions for a multitude of applications. These applications range from shredding wood for thermal utilisation to processing waste to generate secondary fuels. The company was established in 1970 by Anton Unterwurzacher and is headquartered in Kuchl, Austria, near Salzburg. UNTHA shredding technology has more than 140 employees and a global distribution network with four independent distribution subsidiaries and partners in more than 40 countries.