



Whitham Mills
ENGINEERING

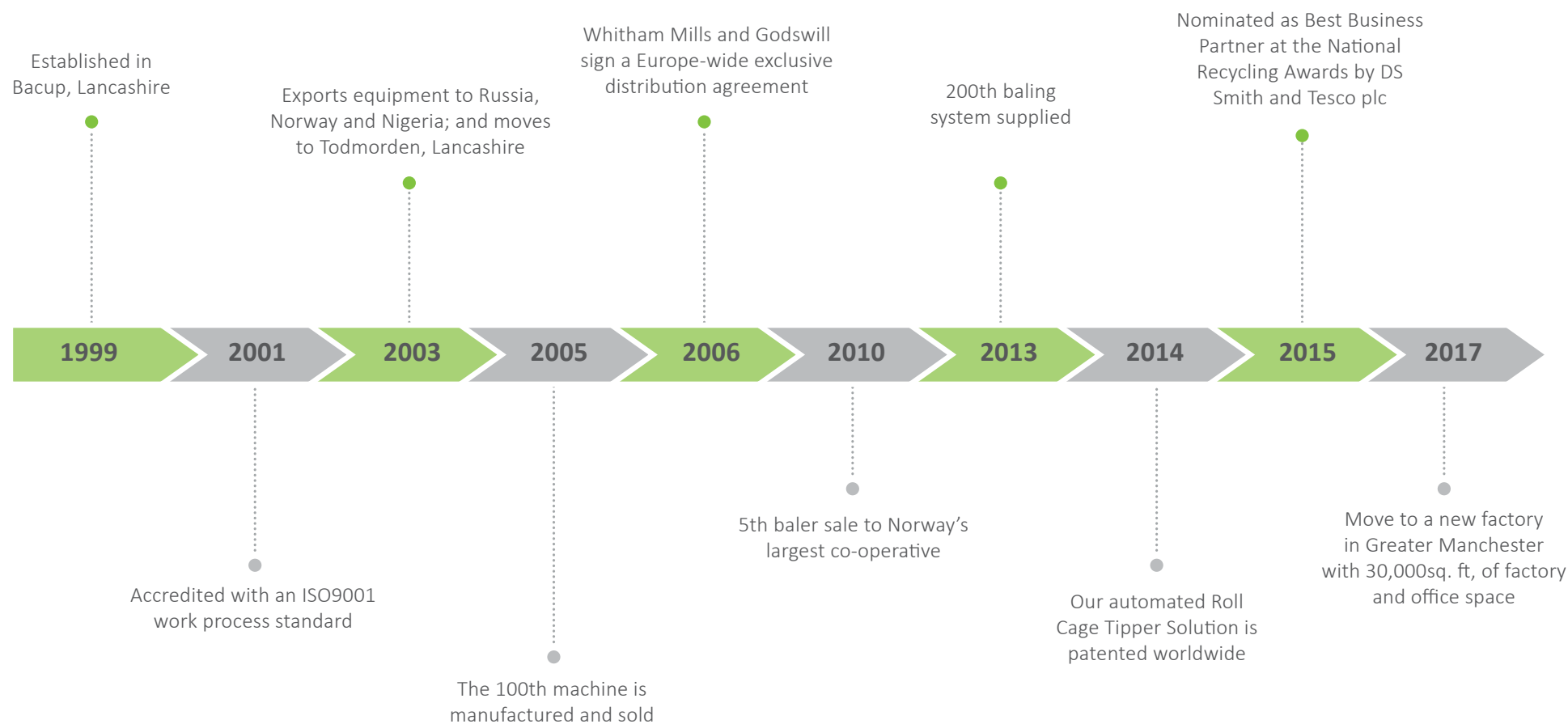
ONE STOP SHOP FOR BALING SYSTEMS
WITH THE HIGHEST QUALITY SERVICE





WHITHAM MILLS ENGINEERING – ONE STOP SHOP FOR BALING SYSTEMS WITH THE HIGHEST QUALITY SERVICE

TIMELINE





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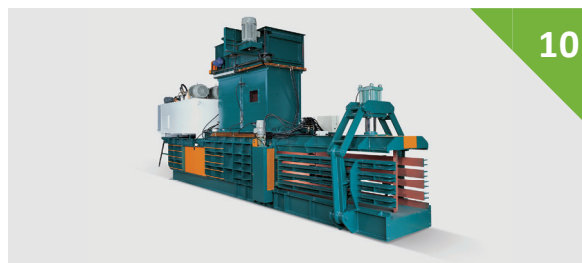
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WHITHAM MILLS ENGINEERING – ONE STOP SHOP FOR BALING SYSTEMS WITH THE HIGHEST QUALITY SERVICE

ABOUT US

Established by two baler engineers in 1999. We design, manufacture, install and maintain all baling equipment from mill size, semi-automatics through to fully automatic Channel and Twin Ram balers as well as full MRF (Material Recovery Facility) systems. With an extensive range of consumables and servicing options such as full operator training support and 24/7 breakdown by our team of nationwide service engineers, we are sure to keep you baling for longer.



At our heart is great service and we utilise every opportunity to go that extra mile to ensure our customers keep returning. We have a proven track record designing and manufacturing solutions for many high profile names such as:

- Tesco plc
- JD Sports plc
- Poundland
- Veolia
- Viridor
- Estee Lauder
- Local Authorities

We have helped our customers process all types of materials including Paper, Card, Plastics, RDF, MSW, Food Waste and many more.

Whitham Mills holds exclusive distribution rights for Godswill balers into Europe and designs its MRF systems to operate seamlessly with the full Godswill range.





Whitham Mills are one of the fastest growing baler and conveyor manufacturers and suppliers throughout Europe, supplying everything from semi-autos through to MRF systems with integrated Channel and Twin Ram balers. Delivering the whole package, from new equipment and baling consumables through to servicing and maintenance packages ensuring your equipment is consistently performing. We are the only supplier on the market to provide this one stop shop for baling systems.

A word from the MD

"We aim to be the only genuine one-stop-shop for baling systems, supported by the highest level of engineering service support. By being a single call for everything that bales, feeds a baler and ties, wraps and binds bales, our



Ben Smart, MD

customers can focus on their business. If you want to see our credibility then ask about who trusts us; if you want to see the high quality of service we deliver, speak to our customers; and, if you want to know about our reliability and longevity then ask the Whitham Mills customers that have returned time and time again, year after year. Our goal is to keep you baling for longer."



SERVICE

Whitham Mills aims to keep you baling for longer and meet all your recycling needs each and every year. We offer an extensive range of service and maintenance packages to ensure our balers are performing like the day they were first installed. We have a team of highly trained service engineers looking after customers throughout the UK who uphold our reputation as being the best in the business. For Whitham Mills our customer base is our priority, this is the reason why they keep coming back.



OUR 5 SERVICE PROMISES...

- 1) The customer has access to an extensive 'in-factory' training program
- 2) Skilled engineers on the other end of the phone as the first port of call
- 3) 90% of breakdowns we can attend site same day
- 4) 95% of breakdowns are first time fix
- 5) We have up to 10 engineers in 10 vehicles across the UK supporting our service team



Our Whitham Mills employed, specialist engineers carry a wide variety of stock and spares in their vans ensuring a quick and efficient repair, keeping downtime to a minimum. As a result of our Godswill partnership we are proud to have built an extensive spares department in our Manchester factory that the service engineers have 24/7 access to providing immediate backup for every part of the baler. Whitham Mills is the only supplier to offer this unprecedented yet vital service giving our customers added peace of mind.

Our expert team of installation engineers will fully train operator personnel in the safe use, machine function and basic maintenance of equipment. Whether the machines range from a simple semi-automatic to the MRF systems with fully automatic Twin Ram equipment, because safety is our priority.





WHITHAM MILLS ENGINEERING – ONE STOP SHOP FOR BALING SYSTEMS WITH THE HIGHEST QUALITY SERVICE

TWIN RAM BALERS

Proficient in baling a range of materials from cardboard and hard plastics through to RDF and LDPE film, our range of Twin Ram balers boast an impressively high bale density and throughput.

Compressing the materials against a reinforced steel wall maximises the density and vehicle payload, then the machine automatically secures the bale with steel wire, plastic strapping or wrap.





WHITHAM MILLS ENGINEERING – ONE STOP SHOP FOR BALING SYSTEMS WITH THE HIGHEST QUALITY SERVICE



	1175TR-2204	1175TR-2506	1175TR-2508	1175TR-2512	1175TR-3012
HP/Kw	40HP/30Kw	60HP/45Kw	80HP/2 x 30Kw	120HP/2 x 45Kw	120HP/2 x 45Kw
Feed opening (mm)	1600 x 710mm	1800 x 1020mm	1800 x 1020mm	1800 x 1020mm	1800 x 1020mm
Bale size (mm)	1100 x 1350 x 750mm	1100 x 1350 x 750mm	1100 x 1350 x 750mm	1100 x 1350 x 750mm	1100 x 1350 x 750mm
Ram force (tons)	90	118	118	118	170
Ram face pressure (m ³)	14.3kg/m ³	14.3kg/m ³	14.3kg/m ³	14.3kg/m ³	20.6kg/m ³
Cycle time (seconds)	15.3	24.3	17.7	12.1	17.5
No. of wire ties	Can be programmed to apply extra wires				
Machine weight (tons)	22.4	32.2	32.6	33.3	37.4
Dimensions (H x W x L mm)	4600 x 2364 x 8000mm	5200 x 2845 x 9400mm	5200 x 2845 x 9400mm	5200 x 2845 x 9400mm	5200 x 2845 x 9400mm
Bale weight (OCC) (kg)	500kg	610kg	610kg	610kg	670kg
Bale weight (PET) (kg)	400kg	550kg	550kg	550kg	600kg
Throughput (OCC)	4 tph	9 tph	12 tph	16 tph	12 tph
Key feature	Up to 25 product settings				

	1175TR-3018	1575TR-2508	1575TR-2512	1575TR-3012	1575TR-3018
HP/Kw	180HP/3 x 45Kw	80HP/2 x 30Kw	120HP/2 x 45Kw	120HP/2 x 45Kw	180HP/135Kw
Feed opening (mm)	1800 x 1020mm	2100 x 1420mm	2100 x 1420mm	2100 x 1420mm	2100 x 1420mm
Bale size (mm)	1100 x 1350 x 750mm	1500 x 1100 x 750mm	1500 x 1100 x 750mm	1500 x 1100 x 750mm	1500 x 1100 x 750mm
Ram force (tons)	170	118	118	170	170
Ram face pressure (m ³)	20.6kg/m ³	10.4kg/m ³	10.4kg/m ³	15kg/m ³	15kg/m ³
Cycle time (seconds)	11.7	17.7	11.7	17.7	11.7
No. of wire ties	Can be programmed to apply extra wires				
Machine weight (tons)	38.1	31.7	32.4	36.8	38.7
Dimensions (H x W x L mm)	5200 x 2845 x 9400mm	5600 x 2845 x 9300mm	5600 x 2845 x 9300mm	5600 x 2845 x 9300mm	5600 x 2845 x 9300mm
Bale weight (OCC) (kg)	670kg	600kg	600kg	700kg	700kg
Bale weight (PET) (kg)	600kg	550kg	550kg	680kg	680kg
Throughput (OCC)	16 tph	13 tph	17 tph	13 tph	17 tph
Key feature	Up to 25 product settings				



WHITHAM MILLS ENGINEERING – ONE STOP SHOP FOR BALING SYSTEMS WITH THE HIGHEST QUALITY SERVICE

CHANNEL BALERS

Over 250 of our Channel balers have been installed across the UK and Europe. With a high throughput of up to 50 tph, our machines are suited to a 24hr operation with a fully automated feed conveyor.

Strong and robust, they are built to last and have been successfully installed in some of Europe's largest waste management companies, manufacturers and retailers making them the leading balers on the market.





WHITHAM MILLS ENGINEERING – ONE STOP SHOP FOR BALING SYSTEMS WITH THE HIGHEST QUALITY SERVICE



	1108FSSS-1803	1108FSS-2003	1108F-2204	1108F-2206	1108FL-2004	1111FS-2506
HP/Kw	30HP/22Kw	30HP/22Kw	40HP/30Kw	60HP/45Kw	40HP/30Kw	60HP/45Kw
Feed opening (mm)	1200 x 1020mm	1600 x 1020mm	1800 x 1020mm	1800 x 1020mm	2400 x 1020mm	1800 x 1020mm
Bale size (mm) (adjustable length)	1100 x 750 x 1500mm	1100 x 750 x 1500mm	1100 x 750 x 1500mm	1100 x 750 x 1500mm	1100 x 750 x 1500mm	1100 x 1100 x 1500mm
Ram force (tons) (m ³)	53	75	90	90	75	118
Cycle time (seconds)	26	40	35	18	42	26
No. of wire ties	4	4	4	4	4	5
Machine weight (tons)	11	11	12.5	13	13.5	22
Dimensions (H x W x L mm)	6600 x 4305 x 2362mm	7600 x 4305 x 2360mm	7943 x 4305 x 2660mm	7943 x 4305 x 2660mm	9600 x 4305 x 2660mm	8668 x 4305 x 3210mm
Bale weight (OCC) (dependant on bale length) (kg)	450kg	500kg	700kg	500kg	500kg	900 - 1100kg
Throughput (depending on material.)	3 tph	4 tph	7 tph	11tph	8 tph	15 tph
Key feature	Lower priced small fully-automatic	Small fully-automatic Optional faster motor	Most popular mill size baler		Large feed opening Optional faster motor	Export size bales High throughput

	1111FS-2508	1111FS-2512	1111F-2506	1111F-2508	1111F-2512	1111F-2518
HP/Kw	80HP/2 x 30Kw	120HP/2 x 45Kw	60HP/45Kw	80HP/2 x 30Kw	120HP/2 x 45Kw	180HP/3 x 45Kw
Feed opening (mm)	1800 x 1020mm	1800 x 1020mm	2400 x 1020mm	2400 x 1020mm	2400 x 1020mm	2400 x 1020mm
Bale size (mm) (adjustable length)	1100 x 1100 x 1500mm	1100 x 1100 x 1500mm	1100 x 1100 x 1500mm	1100 x 1100 x 1500mm	1100 x 1100 x 1500mm	1100 x 1100 x 1500mm
Ram force (tons) (m ³)	118	118	118	118	118	118
Cycle time (seconds)	28	20	36	33	22	15
No. of wire ties	5	5	5	5	5	5
Machine weight (tons)	22	23.5	23.5	24	24.5	25
Dimensions (H x W x L mm)	8668 x 4305 x 3210mm	8668 x 4305 x 3210mm	10479 x 4305 x 3210mm	10479 x 4305 x 3210mm	10479 x 4305 x 3210mm	10479 x 4305 x 3210mm
Bale weight (OCC) (dependant on bale length) (kg)	900 - 1100kg	900 - 1100kg	900 - 1100kg	900 - 1100kg	900 - 1100kg	900 - 1100kg
Throughput (depending on material.)	20 tph	25 tph	15 tph	20 tph	25 tph	30 tph
Key feature		170 ton available			170 ton available	170 ton available



SEMI AUTOMATIC BALERS

Our semi-automatic baler range is ideal for low volume baling because they are the middle ground between vertical, mill sized and fully automatic balers.

Specifically designed and manufactured for lower volume baling (up to 2-3 tph), they allow our clients to begin extracting value from waste and have been successfully installed into customers such as Kimberly Clark, GWE Biogas and Moray Council. If your business wants to start turning waste into profit we can design a tailor-made baling system specific to your needs.



	7511CSSS-1802	7511CSS-1802	1175CSS	1575CSS	1111CSS
HP/Kw	15Kw	15Kw	15Kw	22Kw	15Kw
Feed opening (mm)	1200 x 710mm	1600 x 710mm	1600 x 1064mm	900 x 1470mm	1800 x 1120mm
Bale size (mm)	750 x 1100 x 1200mm	750 x 1100 x 1500mm	1100 x 750 x 1500mm	1500 x 750 x 1050mm	1100 x 1100 x 1500mm
Ram force (tons) (m ³)	53	53	65	65	65
Cycle time (seconds)	34.2	34.2	45	28	49
No. of wire ties	5	5	4	6	5
Machine weight (tons)	5.5	7.5	8.2	9.1	10.2
Dimensions (H x W x L mm)	6400 x 1760 x 2562mm	7800 x 1760 x 2562mm	7965 x 2050 x 2012mm	5500 x 1962 x 1700mm	8900 x 2762 x 1500mm
Bale weight (OCC) (kg)	500kg	500kg	600kg	700kg	750kg
Throughput	3 bales per hour	3 bales per hour	3 bales per hour	3 bales per hour	3 bales per hour
Key feature	Compact size	Smaller products	Larger products	Wide mouth	Large feed opening



CONVEYORS

For over 20 years we have designed and manufactured a range of conveyors to suit our clients' needs.

Automated and efficient, our conveyors provide high throughput by delivering a consistent material feed. By choosing a Whitham Mills conveyor your business will save money by keeping your baling system fed, reducing downtime and even intelligently communicating to your baler system directly, increasing the volume of recyclable bales you produce.

From picking lines through to heavy-duty chain conveyors, we have designed, manufactured and installed conveyor systems to assist with innovative solutions. Our clients include Veolia, Tesco, Viridor and numerous local authorities up and down the UK.



Belt conveyors	
Standard widths	600mm
Light fast moving products	900mm
	1200mm
	1500mm
Fabric back rubber belts	
Optional chevrons or flights	

Medium duty chain & belt conveyors		C6K
Widths		900mm
Suitable for shredded paper and light plastics		1200mm
		1500mm
6000lb chains		
6mm rubber belts & 50mm flights		

Heavy duty chain & belt conveyors		C12K
Widths		900mm
High throughput heavier products, cardboard, paper and hard plastics		1200mm
		1500mm
		1800mm
12000lb chains		
10mm rubber belts & 80mm flight		

Extra heavy duty steel slat conveyors		C24K
Widths		1200mm
Suitable for large recycling companies very heavy use		1500mm
		1800mm
		2000mm
24000lb chains		
Steel slats with 80mm flights		



CONSUMABLES

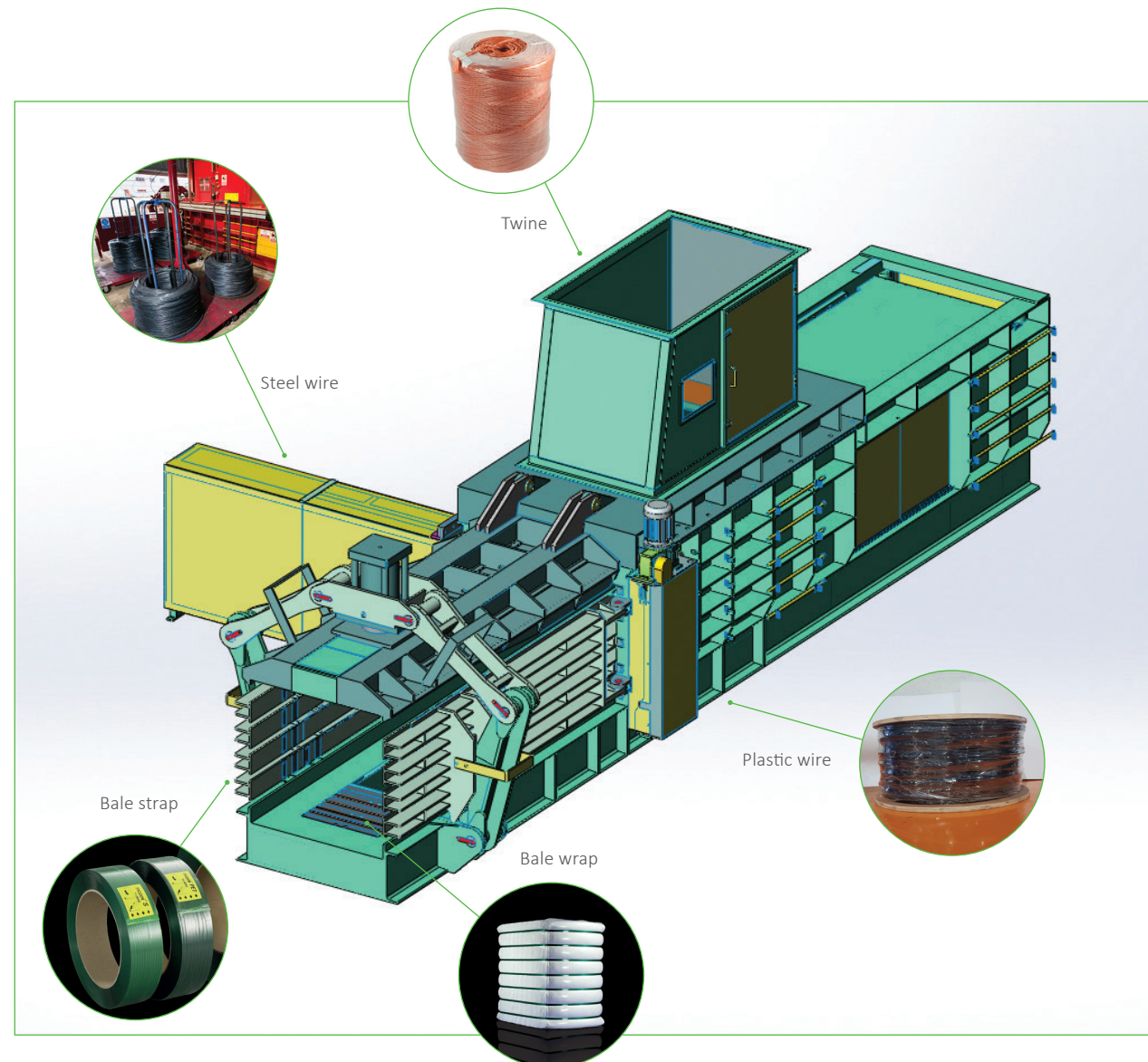
Whitham Mills understands how precious time can be for our customers, and that is why we provide a one stop shop service so there is no need for a long chain of suppliers.

With just one telephone number you can order everything you need to keep on baling, from steel wire to plastic wrap. We only source the very best products on the market that we trust to uphold the outstanding Whitham Mills reputation and consistently perform for our customers.

So let us do the hard work – we will source and deliver all of your consumable needs for an effective and economical recycling process.

RDF/ SRF	Bale wrap	High quality blown film	Green/white/black
	Bale strap	High tensile	Green embossed
		Green performance	
	Plastic wire	4mm square profile	Black

Baling wire	Black annealed	Formers
		Rewound coils
		Cut & loop
	Galvanised	Cut & loop
	High tensile auto galvanised	Formers





RECYCLABLES – CASE STUDY

Veolia, Armory Road

Veolia Environmental Services required a fully automatic baling solution for their Armoury Road site. This system would be required to process and bale large volumes of OCC and paper waste collected from Veolia's customers.



We designed a solution suitable for the capacity of material they were recycling and installed a large Channel baler capable of processing up to 25tph. Feeding this baling system was equally important to ensure an efficient and dependable supply of material.

A six inch heavy duty conveyer with a 14 meter long horizontal feed section was also successfully supplied,

allowing the seamless loading of material via Bobcat shovels from storage bays to deliver consistent feeding and baling.

As a result Veolia have been able to accommodate and exploit third party material as an extra revenue stream.



RDF AND MULTI MATERIAL RECYCLING – CASE STUDY

Twin Ram, UK

A new RDF and multi material recycling customer came to Whitham Mills with low bale weights from their existing Channel baler at one of their sites. The customer needed a baler that could increase bale weights and cope with a wide range of fibre, plastics and RDF materials.



We first surveyed the customer's site and their existing Channel baler which was not performing as required. Then we designed a solution that could manage their multi waste recycling needs which included a new Twin Ram baler and conveyor.

The Whitham Mills Twin Ram baler is built to deal with all types of material whilst still producing an exceptional bale



weight and efficient process. Alongside this we have also supplied a dual tying system for steel wire and plastic strap as well as a bale wrapper for their RDF bales.

The Twin Ram balers produce bale weights upwards of 1000kg- 1400kg (RDF) with a throughput of over 20tph.



MRF FOR LOCAL AUTHORITY – CASE STUDY

Blaenau Gwent Council, Ebbw Vale

Contracted by Blaenau Gwent Council to design and build a MRF system for their Ebbw Vale site after winning the project by tender.

The Council previously dealt with household recyclables by tipping the material onto the floor and then reloading into bulk trailers for sorting at a different location which was costly and inefficient. Our equipment was the first of its kind installed on the site and comprised of a Twin Ram baler with a large loading hopper and feed conveyor.



Sorting chutes and points along the system allow for different recyclable waste to be sorted in the most systematic and cost-effective way by removing contaminated material.

The throughput of this MRF system is circa 3tph. The system is versatile and durable baling with ease, material such as cardboard, mixed plastics, bottles, steel and aluminium cans.

The installation took a total of 4 weeks and the council can now sort and bale their recyclables rather than spending money and resources outsourcing this process. They are now extracting an extra revenue stream from the material that goes directly back to the council.



PATENTED FOOD WASTE HANDLING SOLUTION –RETAILER CASE STUDY

Tesco, 10 Sites Nationwide

Tesco's drive to divert food waste away from landfill required Whitham Mills to design and build an innovative hydraulic tipping and conveying system. The solution needed to empty roll cages directly into bulk carriers so the food waste could then be transported to an anaerobic digestion plant for energy recovery.

Costing £1.2 million, with installations across the 10 Tesco distribution sites, the project for Tesco plc, with assistance from DS Smith and XPO Logistics required us to not only design the tipping systems but also to prototype and trial. Whilst also successfully proving that our roll cage tipping system will save several million pounds whilst also being an DEFRA approved project.

The outcome being that the emptying process required half the number of operators and has reduced 'empty' time from 360 seconds per cage to just 48 seconds by automating the whole process.

Our unique hydraulic Roll Cage Tipper has now been patented, tested and installed in 10 Tesco distribution centres around the UK along with 1500mm wide chain conveyors.

- General waste bins receive 40% less waste
- 15% reduction in spend per annum
- 2,309 fewer bin collections per week
- 120,000 fewer bin collections per annum (saving 130,000 cubic metres of bin capacity)
- 382,000 fewer miles travelled as a result of removing bin lifts, which has saved 562 tonnes of carbon emissions
- 24% food waste per annum moved higher up the waste hierarchy

<http://www.dssmith.com/recycling/insights/case-studies/tesco-food-waste-case-study>



“How can we empty backhauled food waste from roll cages in bulk lorries?”



TESTIMONIALS AND DEFINITION OF TERMS

JCB

"I had the pleasure of working with Whitham Mills Engineering on a recent Waste & Recycling project, and was impressed with not only the quality of the products and passion for industry-leading service, but the knowledge, application and overall delivery of their engineering team was exceptional."

David Banks, General Manager at JCB World Headquarters

ISM WASTE - TWIN RAM BALER

"We placed our business with Whitham Mills after comprehensively sense-checking the market place and evidencing the various other build specifications on offer. Not only did they come out tops but they also brought a can-do approach with a bespoke solution to meet our needs. These people know about customer service, great product and fantastic service support. It's a pleasure to be associated with Whitham Mills."

Peter Allen, Director at ISM Waste

POUNDLAND - CHANNEL BALER

"Whitham Mills supplied us with two new fully auto balers and feed conveyors. I can say how pleased I am with the Whitham team's problem solving, 'can-do' attitude and the quality of the equipment and support service they provide. I would be happy to endorse that they do what they say they can."

Kevin McAndrew, Head of Procurement at Poundland

POWYS COUNCIL

"Whitham Mills designed and installed a fully automatic Twin Ram baler and sorting system, which now forms an integral part of the Council's recycling process. The level of design expertise and in-depth knowledge helped the Council achieve an optimum design solution that was further enhanced by the experienced installation & maintenance team who continue to provide an excellent service. I would happily recommend Whitham Mills as the product, assistance and knowledge has been exceptional."

David Armstrong, at Powys Council

DEFRA *Department of the Environment, Fisheries and Rural Affairs*

HDPE *High Density Polyethylene*

LDPE *Low Density Polyethylene*

MRF *Materials Recovery Facility*

MDR *Mixed Dry Recyclables*

MSW *Municipal Solid Waste*

OCC *Old Corrugated Cardboard*

RDF *Refuse Derived Fuel*

SRF *Solid Recovered Fuel*

TPH *Tons Per Hour*

WME *Whitham Mills Engineering*



Whitham Mills
ENGINEERING

ONE STOP SHOP FOR BALING SYSTEMS
WITH THE HIGHEST QUALITY SERVICE



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