

Whitepaper - Improving Textile Bank Economics

Executive Summary

- Reducing the cost of collection is a variable that Textile Collectors can most easily address.
- Collecting more efficiently reduces the cost of collection per tonne and frees resources to do more and grow the business.
- Textile Collectors could increase their operating income by 39% without adding additional collection resources.



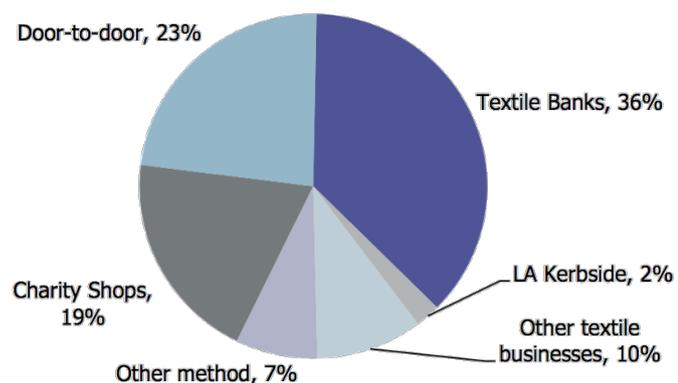
Textile Bank Collections

The business of textile recycling has been hitting the news recently with the highlighting of the amount of used clothing that ends up being thrown into landfill or incinerated. However, this is hardly a new problem as demonstrated by the industry itself which has been around for many years and often through multi-generational family businesses.

Over those years the players in the industry have increased but the core business of recycling textiles is still there. Now we see drop off points where the public can donate and even sell their unwanted clothing, door-to-door collection services, high street charity shops and of course the clothing donation banks.

All these services have their own merits but the great thing about the textile bank is they are conveniently located, very accessible, typically support a wide choice of local and national charities and are open 24hrs a day.

Data from a 2012 WRAP report shows that textile banks accounted for 36% of the total clothing and household textile collections.



Source: WRAP 2012 <http://www.wrap.org.uk/content/uk-textile-product-flow-and-market-development-opportunities>

When it comes to textile banks we typically see 3 main types of organisations involved in the start of the value chain:

1. The commercial textile collector
2. The charity shop
3. The Local Authority

The business drivers for these organisations are varied but it's worth taking a closer look:

The Commercial Textile Collector

The commercial textile collector provides a hugely important service to the community, to society and to the environment but at the end of the day they need to make a profit to stay in business and invest in the future. They collect unwanted clothes through donation banks (and other sources), sort and categorize, and then bulk ship appropriate clothing to developing nations for a price – which hopefully they eventually receive.

The commercial collector usually supports a number of local and national charities but receive a payment based on the weight of textiles collected from the banks that they support.

The Charity Shop

Several charities own and run donation bank services instead of collecting clothing to process and sell in bulk to developing nations, they usually process the clothing to re-sell what they can within their own network of stores. This involves a lot more work but can result in much higher income from individual clothing items than bulk international textile prices.

Ultimately, any unsold items may eventually find their way to the commercial collectors who in turn process them for bulk sale.

Both commercial collectors and charities has the complication of seasonality - processing and managing the clothing that they want versus what they are given. By the sheer nature of the industry spring time donations can be full of winter clothing which to the charity shop means having to consider storing clothes for 6 months until the seasonal demand changes and vice-a-versa in the autumn. For the commercial collector, a mass of winter clothing isn't much use anyway as the demand for an unwanted comedy Christmas jumper is limited at the best of times but even more so when the average yearly temperature of the destination market is 29°C. You can see the impact of seasonal clothing with commercial collectors sometimes paying as much as 3x the price for lightweight clothing as opposed to winter clothing.

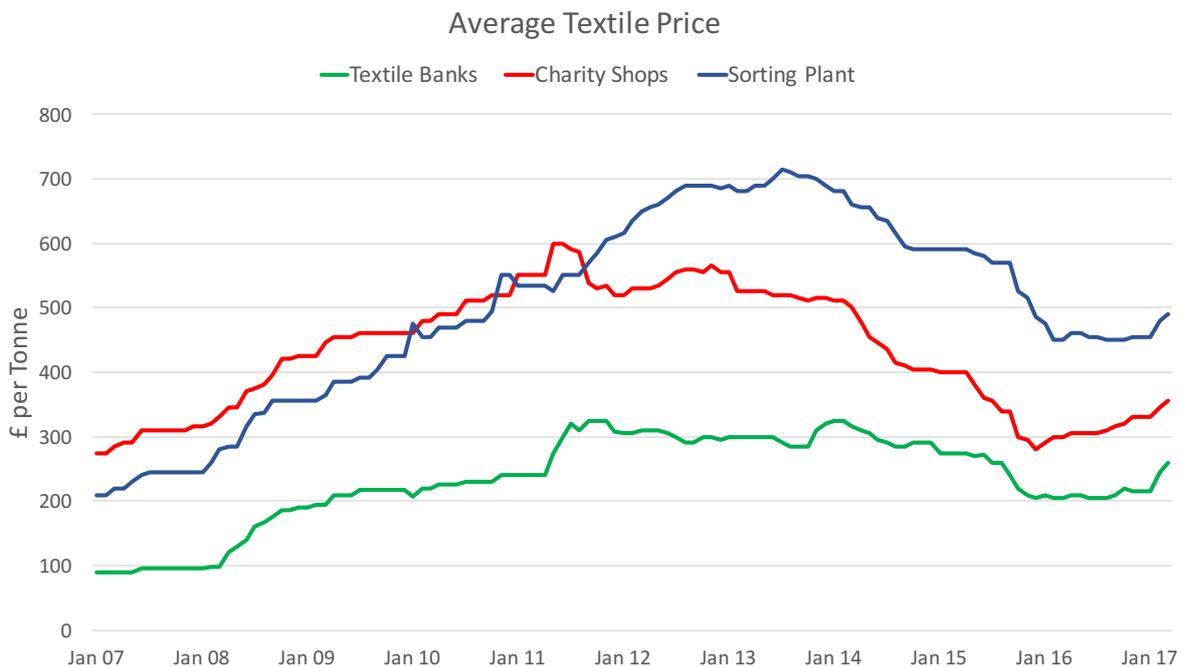
The Local Authority

Finally, there is the Local Authorities that also provide space and locations for clothing banks in return for a collection weight payment which is then ploughed back into local services. Local Authorities will usually partner with a commercial textile collector or outsource their waste services to a larger private waste management company who in turn will work with a specialist commercial textile collector.

Commercial Pressures

While the provision of textile collection points has been growing the economic pressures on the industry continue to fluctuate.

One of the key drivers in the commercial industry is the commodity value of textiles and data compiled by [Letsrecycle](#) shows how the overall prices for textiles have put pressure on the prices that textile collectors can afford to pay Local Authorities and Charity Partners from textile bank collections (Green line on the graph). Although a slight increase in recent months, the figures have decreased since the highs of 2012-14.

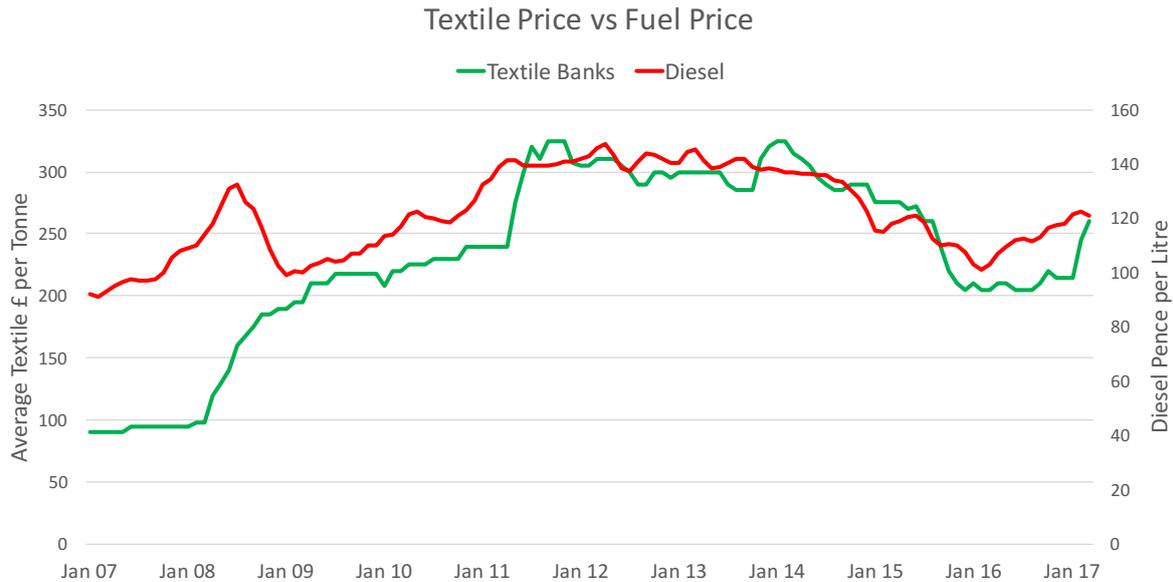


Source: Letsrecycle

The average price of textile bank clothing that can be paid by collectors should hopefully rise as the price of bulk material rises for the collectors when they process and sell on, and they are able to maintain margins that help grow the business.

Of course the wholesale price of bulk materials and the payments to textile bank partners are just two elements of the equation along with a whole host of other costs, expenses and income streams.

A cost for textile bank collectors, in particular, is supporting a fleet of vehicles, collection staff and fuel costs to service a network of textile banks across a geographical region. If we look at the monthly price of textile bank material against the price of diesel fuel, we see a surprisingly close correlation in the last few years.



Source: Letsrecycle and RAC

So what does this data reveal? One conclusion could be that as the price paid for textile bank clothing and the price of fuel increases then some of the margins (the difference between the cost of collection clothing from banks and the end income generated from sales) are being eroded. Perhaps this is a familiar story in the industry and compounded further as competition in end markets increases due to low cost, new clothing in developing countries, the rise of the “Primark” brands in home markets and the appearance of fake charity banks as highlighted by the [Textile Recycling Association](#).

What does the margin pressure mean for collectors?

If we simplify the business model to its essential variables (not including overheads) we have an income stream and expense streams. In the case of charity collections there’s also the costs associated with having physical store locations which can be balanced through higher revenues per tonne.



In data published by WRAP in their 2012 report: [Impact of Textile Feedstock Source on Value](#) they show that the cost of raw material from textile banks was about 60% of the total costs in this simple model and collecting and sorting accounted for 20% each.

If we extrapolate forward to current times, perhaps the lower average material price has moved the needle closer to raw material accounting for 50% of the costs and collection and sorting 25% each.

There's only so much that can be done to adjust these cost numbers:

The cost of raw materials is typically set for a contract or a fixed fee or based on a profit share or index linked price tracking. As highlighted in this [Textiles Collections Procurement Guide](#) from WRAP, that some collectors that entered into fixed price deals at the height of the price bubble have suffered from the falling wholesale value of textiles in recent years making some contracts untenable.

There is limited scope to influence the cost of sorting textiles. Higher donation quality can lead to easier sorting but due to the manual nature of the work the cost is mainly a factor of the speed of the workforce and the cost a labour.

However, there is some scope to lower the cost of collecting textiles through improved collection efficiencies. If the textile bank is visited for collection when nearly full as opposed to being collected on a static collection period, then any saved collections throughout the year will lower the overall cost of collection per tonne. As identified by WRAP in this [Textile Guide](#) where they stated "regular collection from banks infrequently filled can be costly."

"Regular collection from banks infrequently filled can be costly" – WRAP Textile Guidance 2016

Working Example

Let's look at an example scenario using industry numbers and the typical collection fill levels that we see at Enevo when working with textile collectors.

Cost per tonne of collecting textiles	£150*
Total weight collected per bank per year	9 tonnes**
Collection cost per bank per year	£1,350
Collection frequency	Weekly (52 per year)
Collection cost per visit	£26
Average fill level at collection	60%

* WRAP average 2011 estimate: [UK Textile product flow and market development opportunities](#)

** TRA and industry estimates in same report

What if you could increase the average fill level at collection to 80% ?

Total weight collected per bank per year	9 tonnes
Number of collections needed per year	39
Collection cost per bank per year	£1,012 (assuming £26 per visit)
Cost per tonne	£112.50

What if you have 500 banks in your business ?

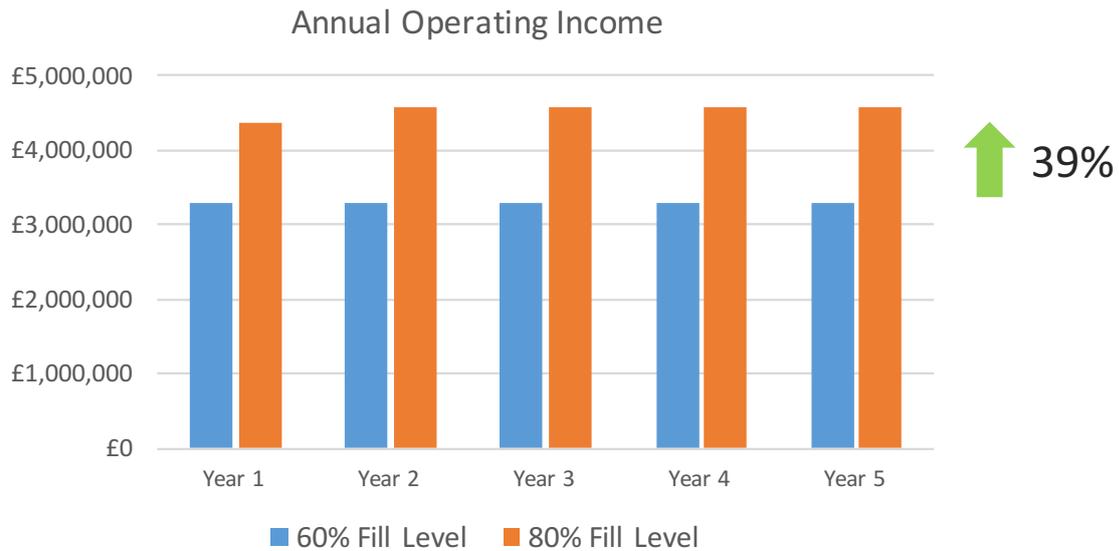
Total tonnage per year	4,500 tonnes
Cost at 60% fill level	£675,000
Cost at 80% fill level	£506,250
Annual Saving	£168,750

So now in this example we have generated a theoretical saving by collecting more efficiently and only visiting the banks when we know they are full. However, this is only theoretical as you still have the resources on hand (staff and vehicles) so the real benefit is to expand the number of operational banks and use the resources to collect from those in addition. In this example we've calculated the number of additional banks that could be serviced with the same resources.

How does this help expand the business ?

Freed up visits per year	6,500
Additional banks that could be collected	167
Additional tonnage collected	1,500 tonnes

Now we are using the same collection resources to generate an additional 1,500 tonnes of material. There will need to be an investment in additional banks as well as the platform but this additional material is all additive to the operating income of the business once processed and sold.



Source: Enevo prediction based on industry cost and efficiency assumptions across 500 banks

We estimate that increasing the collection efficiency from 60% to 80% could grow the operating income by a possible 39% including the costs of deploying additional banks.

The impact of increasing the fill level at collection can provide a huge opportunity to increase the business revenue or charity donations.

Enevo has been using its technology to monitor the fill level of textile banks around the world and based on our data, we see a very similar picture across the textile collection industry. The below example shows data from one of our textile collector customers that has seen a 46% increase in the collection efficiency.

Textile Collections

Textile collection customers have been using Enevo technology for several years and seeing big benefits.

Data used in this example is taken from 1 customer over two 12 month periods both before using the Enevo platform to plan collections and the operational improvements after using the platform.



Average KG per bank per month



↑ 23%

Average # days between visits



↑ 30%

Average % fill level at collection



↑ 46%

Conclusion

We've seen that the business opportunity to recycle more household clothing is huge when 680m items or 35% of all discarded clothing ends up in landfill or incineration. As the public becomes more aware of the social and environmental consequences of their actions and the options to recycle, we should see a continuing demand for all textile collection and recycling services.

Textile collectors are one of the originators of the circular economy and therefore it also makes sense to work smarter and look for opportunities to improve the efficiency within the industry and if this allows the business to grow to meet demand at minimal additional cost then that must be good for everyone.

Collecting at the optimal level not only makes environmental sense but allows businesses to prosper and grow.

To find out more about Enevo visit www.enevo.com