

BPF Proposal:

To encourage and incentivise
the use of recycled plastics in
UK manufacturing

Contents

Introduction	3
Background	3
The Opportunity – creating end markets for recycled plastics	5
The Threat	6
Incentives to Boost UK Manufacturing using Recycled Plastics	6
Conclusion	7

Introduction

The British Plastics Federation (BPF) is the trade association for the UK plastics industry, and is affiliated to the key organisations representing the EU's plastics industry in Brussels. Its 450 members are distributed amongst some 20 business groups, representing the distinctive sectors of the whole plastic industry.

This paper, which has its origins in the BPF's Recycling Group (BPFRG), quickly won acceptance by the BPF's Packaging Group and its principles are shared across the whole Federation.

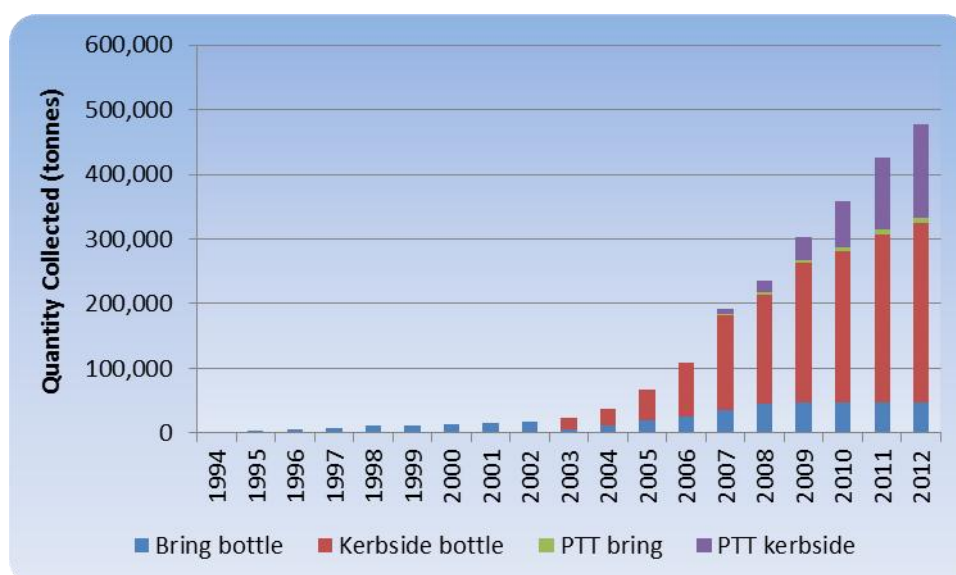
Background

A key property and advantage of plastics materials and products is their ability to be recycled at the end of life. The BPF's policy is aligned to the Waste Hierarchy which focuses on recycling as the priority for plastic waste wherever possible.

It is estimated that the total UK market for plastic products in 2011 was some 4.8 million tonnes. Approximately 2.5 million tonnes of plastics raw materials are manufactured in the UK, approximately 50% of UK consumption. The largest market for plastics is packaging which is also estimated at circa 2.5 million tonnes.

The EU Packaging Directive (1994) created the route map for recycling of packaging and over the past decade there has been a step change in collection of UK plastic waste and the emergence of technologies and methodologies, to separate, sort, and process plastic waste into recycled polymer for reuse in manufacturing.

In consequence the recycling rates for plastic packaging in the UK are amongst the best in Europe and the world. This is illustrated in the following graph:



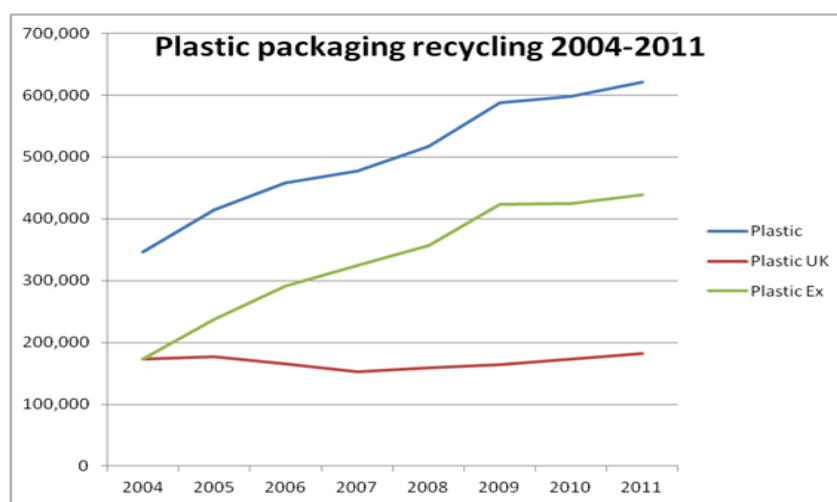
Household Plastic Packaging Collection Tonnage Over Time (Recoup, 2012)

In addition to packaging there are EU Directives in relation to the recycling of waste from the electronic (WEEE) and automotive (ELV) sectors which focus on landfill avoidance as well as recycling.

In 2012 the UK Government announced its aspiration to be the "greenest ever" and unilaterally set challenging recycling targets for the period to 2017. In respect of plastic packaging this will mean that in excess of an extra 0.5 million tonnes will need to be recycled to meet the target by 2017.

This target effectively represents a recycling rate of plastic packaging of 42% and it is in line with Plastics 2020 challenge, endorsed by BPF, with an objective to recycle 50% of plastic packaging by the end of the decade, driving used plastics from landfill.

Despite the success of recycling of certain waste streams such as plastic bottles the reality is that the packaging recycling targets to date have largely been achieved by the export of plastic waste, in particular to Asia. The following chart is based on the quantities of Packaging Recovery Notes (PRNs) and Packaging Export Recovery Notes (PERNs) and shows that despite rapid increases in collection rates, UK recycling has little better than flatlined in recent years. There is anecdotal evidence that there has been an improvement in UK recycling and in UK manufacturing using recycled plastics over the past 12 months and indeed this paper seeks to build on that momentum.



Source: 360 Environmental Ltd (2012)

In 2010 it was estimated that 684,000 tonnes of recovered plastic were exported to China for recycling (WRAP). This is the equivalent of approximately 100 containers leaving the UK every day. Whilst this represents a significant figure in terms of plastic waste exports for the UK, WRAP estimate that this figure represents just circa 4% of the volume of recovered plastic recycled in China. This demonstrates not only the over-reliance on the Asian market and the integrity of the UK's plastic recycling ambitions but also the scale of the missed opportunities that the export of such resources removes from domestic recyclers and UK plastics manufacturing industry.

The inequalities of the PRN/PERN system are the subject of BPF RG's proposal on the subject which was produced in April 2012. The current system has created commercial incentives that have favoured the exporting of plastic over UK reprocessing and recycling and a by-product of this has been a lowering of quality of sorted and separated material waste streams. This has been due to the hitherto largely unregulated Asian markets which have benefited from low labour costs, low dumping costs and less onerous administrative constraints and burdens on business. It is hoped that the MRF Code of Conduct and effective management of the Trans Frontier Shipments (TFS) regulations by the EA will help ensure that the quality of sorted waste for recycling will improve dramatically and prevent the export of illegal waste exports which only serves to undermine consumer confidence in recycling.

The single biggest issue to challenge both the EU and UK Governments' plastics recycling aspirations is the sustainability of the Asian and in particular the Chinese market. In 2011, China announced its ambition to recycle 75% of plastic by 2017. Accurate figures for plastic waste in China are difficult to obtain but it is estimated that for China to meet this target it would require between 15 and 25 million tonnes of additional recycling capacity. It is therefore likely that as waste collection and sorting infrastructure is developed in China, imports of waste will come under pressure. In other words the Chinese will have so much of their own waste to recycle they will hardly want ours.

Over the past few months there has been increased scrutiny by Chinese customs on plastic waste shipments. There is anecdotal evidence of a significant number of embargoed containers by Chinese customs. Indeed some containers of plastic waste have already been returned to UK. Although these shipments are legal in terms of TFS regulations it is clear that China is enforcing significantly more demanding import regulations for the import of plastic waste for recycling. The consequence is that markets for certain types of plastic waste in China have evaporated. Of great concern for UK plastics packaging sector is that plastic PRN prices have risen sharply over recent weeks.

We have major concerns about the viability of the Chinese market which has played such a major part in increasing the government's plastics packaging figures and in fuelling its ambitions for much higher growth.

The Opportunity – creating end markets for recycled plastics

The BPF believes now is the time to focus on the use of recycled plastics in UK manufacturing. Our waste and recycling strategy to date has concentrated on the “push” factors; in other words how to incentivise the collection of waste. The strong global markets have provided the traction for this approach. Given the questionable sustainability of these markets the BPF believes that we must now concentrate on the “pull” factors; in other words the further development of existing markets and the creation of new applications and uses for recycled plastics.

Such a policy is entirely in keeping with the UK and EU Government's “green agenda”. Recycling can only happen when there are markets for the recycled materials, therefore such a strategy would not only future proof plastic recycling by creating such sustainable markets but would boost innovation, and create new jobs and wealth. All this made possible through a dynamic plastics manufacturing sector predicated on using recycled plastics. Indeed the UK plastics recycling and manufacturing industry could provide a model of how a low carbon manufacturing economy can work promoting innovation and the development of technologies which can be exported around the world.

Increased use of recycled materials features heavily in the Corporate Social Responsibility programmes of major companies such as retailers, brand owners, car manufacturers and construction companies. There is a growing desire to attach a recycling story to products and increasingly there is a commercial advantage to make products which are made from recycled material or incorporate some recycled content. Therefore there is a clear opportunity for manufacturers, brand owners and retailers to engage with the plastics industry to deliver these aspirations.

At a macro level strategic documents from highly respected organisations and “think tanks” paint a picture for what our society should look like going forward. The 2011 State Of The Nation Waste And Resource Management Report from the Institution of Civil Engineers is a particularly good example and the following are some quotes which we believe resonate with this paper.

“The UK will need to shift rapidly to “a circular economy” in which the waste and resources sector continues to evolve from a disposal industry into a sector which collects surplus materials and reprocesses them into commercial quality products.”

“Driving up the quality of recycled materials emerging from the UK reprocessing infrastructure is essential to achieving a sustainable shift to resource management. How materials are collected and sorted before they are sent for reprocessing is the single most important factor driving the quality of recycled and recovered materials. It also affects the viability of many reprocessing technologies.”

“Increase the quality, not just quantity, of recycled and recovered materials. Move from the current “tonnage driven” to a “value driven” recycling culture which maximises the retention and the recovery of the value inherent in materials as they circulate around the economy.”

The Threat

Some plastics materials and products continue to be a target for criticism by certain media and NGOs based on a perceived lack of environmental credentials. Media reports of illegal waste exports or exposures of working conditions in certain Third World recycling operations do not enhance this view. The industry needs to be prepared for further scrutiny of the impact of plastics in the environment and particularly in the oceans.

Whilst there is strong evidence to support the value of plastics in all walks of life such as packaging where it prevents huge volumes food wastage worldwide, a robust plastics recycling model will be invaluable for the industry to demonstrate that Plastic is unquestionably a sustainable raw material.

Given the doubts that currently exist over the robustness of the current model, the BPF believes it is essential to future proof plastic recycling by driving up end markets for recycled plastics in UK manufacturing.

Incentives to Boost UK Manufacturing using Recycled Plastics

The plastics industry has shown itself to be highly entrepreneurial and innovative. The success to date of UK recycling has depended on the imagination, commitment and critically the investment of brand owners such as Coca Cola, venture capitalists such as Foresight and industry players who have been prepared to invest their own funds. To date, the existence of a largely undemanding, unregulated export market for plastic waste aided by an inequitable PRN/PERN system and sometimes ineffective implementation of TFS regulations, has served to undermine confidence in, and appetite for investment in the sector.

Further, the evidence shows that recycled plastics can save between 60 and 80% of CO₂ depending on the polymer, and its manufacture. Despite this contribution to the “green economy” those brand owners, retailers and manufacturers who use and specify recycled plastics are not differentiated in any way from users of virgin materials.

The BPF therefore believes it is necessary to create additional incentives to drive investment in recycling and in UK manufacturing to increase usage of recycled polymers. To do this, BPF recommends that the principle of “offset “ against obligation under the concept of “producer responsibility” in the waste sectors covered by EU Directives; Packaging, Waste Electronic (WEEE) and End of Life Vehicles (ELV). The EU Packaging Directive and subsequent UK legislation has provided clarity of targets and obligations for the Packaging Sector and whilst these are not yet crystallised in the WEEE and ELV sectors, the BPF believes that this same conceptual approach in all sectors will deliver the desired environmental and business outcomes.

- How would the offset work?

In the Packaging Sector the instrument which has been created to deliver the recycling targets is the PRN. Under this proposal, those organisations in the packaging supply chain; producers and manufacturers, packer/fillers and retailers would be able to offset their PRN obligation by using and specifying recycled polymers. In this way, we would propose that unlike virgin polymers, recycled polymers would not carry any obligation under the EU Packaging Directive. This mechanism would be both relatively simple to administer and cost neutral for the UK Government and would serve to further drive the use of recycled plastics in a sector where there is already a proven pathway. In addition, this would also provide the route map for sectors such as WEEE and ELV, where UK recycling is not so mature.

Conclusion

As we have seen, all the necessary ingredients are in place; a scaled waste collection and sorting system providing high volumes of plastic waste, a highly innovative plastic recycling and manufacturing sector, motivated brand owners and retailers; all led by a Government committed to sustainability.

In combination with our proposal these factors could enable the UK plastics industry to thrive at the vanguard of a green manufacturing revolution which will champion the use of recycled plastics as an alternative option to virgin materials.

Such a vision will not only depend on the existing and proven track record of recycling plastic waste streams such as plastic bottles from households and films from commercial and industrial origin, but will also rely on new and innovative technologies to recycle more difficult plastic waste streams such as non bottle rigid packaging, household films, WEEE and ELV.

It will be necessary to develop a range of markets for recycled plastics ranging from high quality applications in, for example, the packaging, electronic and automotive sectors through to less demanding industrial and construction applications which might serve as an alternative option to virgin materials.

The BPF believes that given the uncertainties of the global market the proposals contained in this paper will, in relation to plastics, deliver the UK Government's business development, wealth creation and sustainability agendas.

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