



British Plastics Federation

# BPF Recycling Group

Proposal to Amend the  
PRN/PERN System for  
Plastics

**Stronger**  
**Together**

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# History

In the beginning (1997) was the PRN (Packaging Recovery Note) and the PRN was the only admissible evidence that a tonne of Packaging Waste had been recycled and nobody believed this to be in any way anti competitive.

The idea behind the PRN system was that it was to be used as a floating currency that transferred monetary value from Companies 'obligated' under the Waste Packaging Regulations through to 'Reprocessors' who were to use this monetary value to increase the volumes of waste packaging they recycled. Each material sector was initially set arbitrary tonnage 'targets' by Defra and the theory went that the material sector required to achieve the greatest improvement in its recycling rate would be set the toughest targets driving the PRN value higher and transferring money from the Obligated Companies through to the Reprocessors who would invest in additional capacity until the supply demand balance was restored at which time the PRN value would subside at least until targets were again increased.

For the Plastics sector, this meant that towards the end of the first year, PRN values had escalated to over £100/Tonne as the targets had been set far too high and demand (obligation) far outstretched supply (reprocessing capacity). Obligated Companies naturally cried foul as this level of contribution had never been intended and would prove unsustainable over the long term. To the rescue came SEPA who accepted shipping documents as evidence of overseas 'recycling', and so the EPRN (Export Packaging Recovery Note) was born and with this added 'volume' the supply demand balance was redressed and the PRN/EPRN value fell back to acceptable levels. Since that time the export market for our waste plastics has effectively provided the means whereby all subsequent increases in plastic recycling targets have been met and remains critical in ensuring that we meet our European recycling targets.

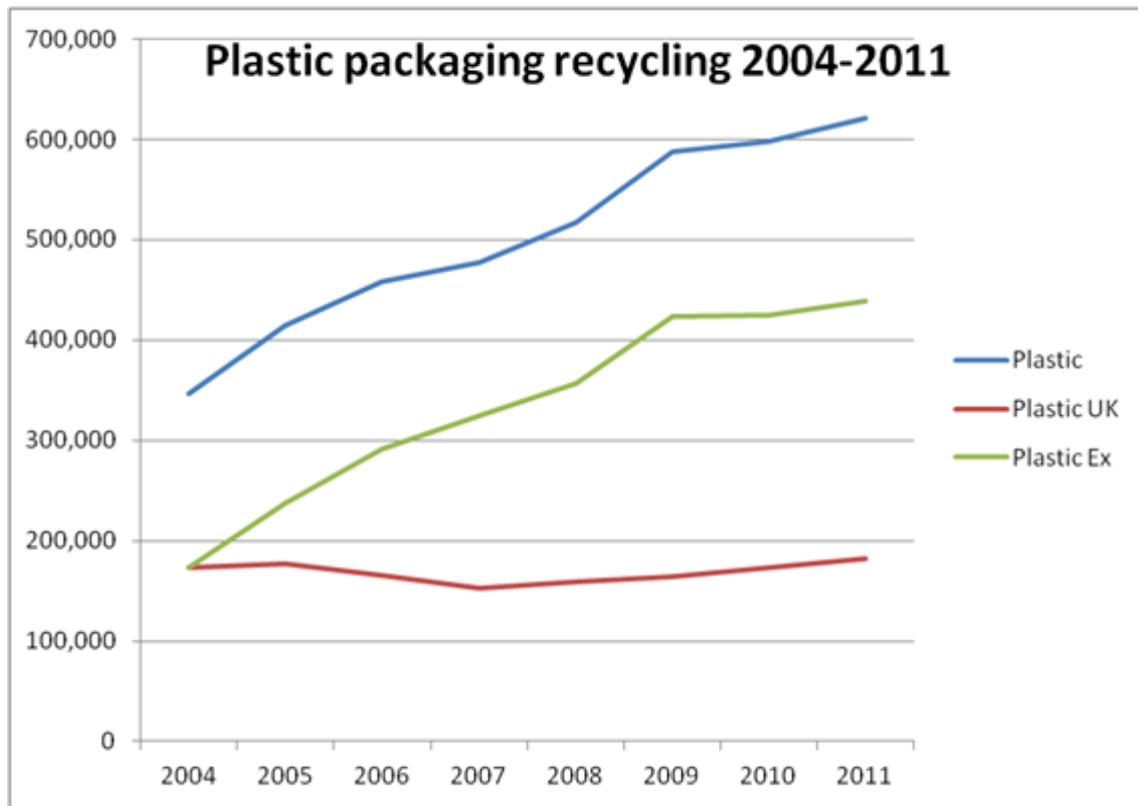
## The Current Debate

So why is such a fuss now being raised over the EPRN by UK reprocessors?

For the Plastics sector in particular, the simple weight based recycling targets adopted by Defra have over time denuded the quality of waste packaging materials collected from both Commercial & Industrial as well as Domestic sources. In year one of the regulations, most UK plastic reprocessors had direct access to feedstock for their plants either from Businesses or Local Authorities who collated recyclable plastics in separate material streams. Today most UK plastic processing plants are at least one if not two or three steps removed from their sources as the Waste Management sector has intervened offering a 'one stop shop' solution to industrial and commercial waste. For domestic recyclables, Single Stream Comingling is fast becoming the preferred collection methodology for Local Authorities and their chosen contractors on the grounds of economy. In essence, 'collect it together for sorting out later' has become the preferred option for collecting the UK's packaging waste. The quality of recyclable plastics presented to the market has inevitably become a casualty of this operational shift.

What is clear from the graph shown below is that the export of UK plastic packaging waste has grown dramatically over the last decade whilst the volumes processed within the UK have remained largely static. Whilst this stagnation of UK plastic reprocessing activity is proven fact, it is crucial to understand that the commercial drivers created by the existence of the EPRN favour exporting plastic waste over UK plastic reprocessing. Furthermore, without reform of the current commercial drivers,

increasing targets will merely cause a further step change towards export and away from UK reprocessing as EPRN prices inevitably rise.



In order to understand how the current PRN/EPRN system delivers such a massive boost in favour of an export solution to the UKs packaging waste we list the advantages and disadvantages in turn:

### Positive commercial drivers delivered by the EPRN favouring the exporter over the UK reprocessors are:

- All contamination within collected and exported waste material earns EPRN income.
- The levels of contamination contained within a shipment of plastic packaging waste are of no concern to the exporter, so long as there exists a demand and the cargo remains legal.
- The costs for disposing of shipped contamination are not born by the exporter, but by the overseas 'recycler'.
- The costs faced by the overseas exporter/reprocessors for disposing of non target contamination are negligible compared to those experienced in the UK.
- A UK plastic reprocessor has to achieve better than 75% yield to claim a full PRN, yet there is no corresponding requirement for the yield of exported material to be measured. There is therefore neither a regulatory driver nor a commercial incentive to ensure the quality of exported material.

- Accredited Waste Management companies and Exporters have a choice to supply either Overseas or UK reprocessors. However, to supply a UK reprocessor they will:
  1. Lose their EPRN income
  2. Have to bear the costs of sorting to a much higher quality specification.
  3. Bear the UK cost burden of disposing of the contamination
  4. Lose the income they could expect to earn from exporting the contamination
- Exporter EPRN income contributes solely toward the costs of collection and (sometimes) sorting of waste; it is never required to support the additional costs associated with investment in high technology reprocessing equipment, the energy required to carry out this process, the highly skilled labour force required, the disposal of non target contamination and the associated regulatory burden.
- The costs associated with exporting are therefore massively lower than for UK processing.
- Exporters EPRN income therefore goes much further in covering per tonne costs allowing 'spare' cash to be used to 'buy for export', pushing up prices for UK packaging waste.
- Exporter's 'buying' power is enhanced whilst that of the UK reprocessor is reduced because PRN income has to cover the far higher costs associated with collecting, sorting, and melt reprocessing in the UK.
- Fraudulent abuse of the system is relatively easy given the lack of resources available to the EA, from their own figure 97% of inspected containers did not contain what they were meant to. What about the ones not inspected?

### The positive commercial drivers delivered by the PRN favouring UK plastic reprocessors over exporters are:

- None!

However the negative commercial drivers for the UK quality reprocessors are:

- Availability of high quality feedstock decreases as all materials flow out to export, and therefore the costs vastly increase for such good quality material as remains.
- The poorer quality material may be a bit cheaper, but the costs involved in bringing it back to a quality that can be reprocessed are very high in the UK. Extra sorting equipment may be needed and all costs of disposal of the unwanted contamination have to be borne by the reprocessor.
- All of their PRN income must be used in price support. Why? Because most waste in the UK is now controlled by accredited exporters/waste management companies. Because they do not earn an EPRN if they sell to a UK reprocessor, the UK reprocessor has to pay for the load PLUS the value of an EPRN on top to compensate the exporter for their lost EPRN. **So when the UK Reprocessor gets the PRN, it has simply all been spent on securing material. No extra income for infrastructure, no extra income for process improvement, no extra income to incentivise or develop end markets.**

The whole debate is central to the last point. The problem of both the EPRN and the PRN having the same value is that one delivers extra income and support to its sector, whilst the other one cannot deliver any extra income or support to its sector, as it is swallowed up in merely trying to prevent material from going overseas.....

So long as these deficiencies in the current PRN/EPRN system remain, the desired outcomes originally conceived for the UK when the PRN system was first introduced are unachievable.

## Concerns about the sustainability of Asian markets

In 2010 WRAP estimated that approximately 4% of the plastic waste processed in China originated from UK. Chinese industry sources estimate that in 2011 the total volume of plastic recycled in China was 23 million tonnes of which approximately 14 million tonnes was received from the local market. Therefore whilst China plays a significant role in the UK plastic recycling strategy, the UK is but a small bit supplier to China's plastics recycling industry. Plastic waste collections in China already accounts for circa 60% of total plastic waste processing.

It is estimated that China is currently only recycling approximately 20% of its total plastic packaging waste, yet it has announced its intention to recycle 70% by 2017. To achieve this China will require rapid expansion of its plastic recycling infrastructure. It estimated that China will require in excess of 25 million tonnes of new plastic collection and reprocessing capacity to meet this target over the next 5 years.

By any standards this represents a colossal undertaking and even a rudimentary understanding of the principles of economic theory should provide some guide as to the impact and commercial consequences such an increase in supply of plastic waste to the Chinese recycling sector would have on those countries that are reliant on China as an export market.

The BPF Recycling Group (RG) therefore urges the government to implement a strategy to future proof markets for plastic waste by encouraging brand owners and retailers to develop and specify products containing recycled plastics which will in turn act as a catalyst for the growth of UK recycling and reprocessing.

How, therefore, can the PRN/PERN system be amended to remove the inherent commercial disadvantages suffered by UK reprocessors whilst at the same time delivering the desired recycling targets through an increasingly self sufficient UK processing sector?

## Suggestions for Reform of the PRN/PERN System

According to the Defra consultation document, tonnage of plastic packaging expected to be delivered by targets in 2012 is quoted as 606,085 Tonnes. It is estimated that UK has processing capacity to recycle 350,000 tonnes of packaging waste into a form suitable for direct use in manufacturing.

This indicates that abolition of the EPRN and a return to year one status where only a PRN exists is fanciful and that the export markets and the EPRN should continue to play a significant role in securing compliance with plastic recycling targets. That said, from a resource efficiency perspective the UK is already missing the opportunity to create sustainable jobs in its emerging 'Green' economy, by adding value to waste resources and wealth to the nation.

A simple adjustment to the PRN/PERN mechanism could bring about a significant shift in favour of such UK based processing adding value, jobs and wealth in the process. There need be no root and branch reform, merely a modest change to the regulations following the same precedent that has already been enacted within the Glass sector to address a similar issue.

As with Glass, where there are differential recycling targets split between re-melt recycling and aggregate recycling, we recommend the adoption of the same principles for Plastics. Using a mechanism of differential targets, obligated businesses, through their Compliance schemes, would be required to obtain an increasing percentage of their evidence from UK reprocessed tonnage and a decreasing percentage of evidence from unprocessed export. In this way, an EPRN and a PRN would each find its own value over time.

If correctly modelled, such differential targets for plastic would allow UK reprocessors to spend more of their PRN revenue on sorting and processing equipment without the risk of losing their feedstock sources to their export competitor. In addition the clarity of such a policy would lead to greater confidence to invest in the UK recycling sector which, as it increases supply side capacity, would in turn lead to lower PRN values. Indeed, if demand in China for waste imports evaporates over this decade as we predict, EPRN values may exceed PRN prices. The ideal would be to create a balanced playing field with no clear advantage either way but critically the floating currency of the current PRN/PERN system would be maintained albeit with two currencies now in play.

An annual review of the previous year’s pack flow data and average differential pricing between PRN and PERN would enable Defra to monitor and adjust the differentiated targets if necessary to guarantee a gradual movement toward UK self sufficiency without either the risk of missing targets or the wild swings in PRN/PERN values that currently prove so injurious to both obligated businesses (who have to pay) and UK reprocessors who are disadvantaged commercially in direct relation to increased PRN/EPRN values.

For anyone in Government aspiring to see the UK plastics reprocessing industry playing a major role in the growth of UK manufacturing output over the forthcoming decade, doing nothing is not an option.

The BPF RG therefore recommends that separate targets be created for:

1. UK reprocessed tonnage
2. Unprocessed export tonnage

We would suggest the following route map.

Year	PRN	EPRN
2013	50%	50%
2014	55%	45%
2015	60%	40%
2016	65%	35%
2017	70%	30%

For the purposes of clarity, the BPF RG would suggest that the definition of UK reprocessed tonnage should be those tonnes processed within the UK in accordance with the latest guidance notes issued by the Environment Agency that set down the processes that confirm the right of a UK reprocessors to become accredited to issue PRNs.

Critically such a strategy would drive investment. As has been explained, the disadvantages which UK recyclers endure are a barrier to investment. These factors often mean that companies fail to meet their business plans. The effect of such a manageable shift as has been proposed would be to provide a platform for new investment which would in turn enable the UK to embark on a journey which will see its plastics recycling industry in the vanguard of the emerging low carbon manufacturing revolution, which will not only create wealth and employment, but facilitate the development of knowledge and technologies which can be exported around the world.

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