



## Response to Defra Review of Waste Policies - Call for Evidence

This document is the RECOUP formal response to the document issued by Defra in July 2010 titled 'Review of Waste Policies'. This is referred to within this RECOUP response as the 'consultation document'.

### Introduction

Recoup (Recycling of Used Plastics Limited) is the UK's leading authority on plastics packaging waste management, providing expertise and guidance to a wide range of clients and members across the plastics supply, use and disposal chain. Set up in 1990 as an independent not for profit organisation, Recoup is built on a combination of in house expertise and it's extensive network of members and contacts.

Recoup also owns and operates a plastic recyclables trading business, Recoup Services Limited. This provides a marketing and collection service to suppliers of baled plastics, and gives Recoup direct experience of plastic markets, values, trends, issues and opportunities.

### Background

In March 2010 Recycling of Used Plastics Limited (RECOUP) issued a paper 'Plastics Packaging Recycling in the UK a Position Statement + Initial Comments on the Defra 2011 – 2020 targets'. The key elements of this document were developed in discussion with the Recoup network and the wider plastics supply and recycling chain, leading to submission of a formal response in May 2010 to the Defra consultation titled 'Implementing the Packaging Strategy: recovery and recycling targets, funding transparency and technical changes'. This identified and discussed five key points which relate to Recoups primary interests and expertise in plastics packaging, with a focus on the material which enters the domestic waste stream;

1. *Recycling targets to be based on packaging that can be recycled.*
2. *Individual recycling targets for plastic packaging types;*
3. *Clarification of the 'collection' responsibility for quantity and quality.*
4. *Packaging Data – the need for accurate data both for regulatory and operational management.*
5. *Plastic Packaging Specialists Support - full time team*

Further details on the above points can be found within the consultation response which Recoup can supply on request. The current consultation covers a wider range of topics associated with waste policy across the waste hierarchy. The information provided below responds to the items considered relevant to plastics recycling by the appointed Recoup response panel, as agreed with the full Recoup board, and also re-iterates the relevant key points from the aforementioned consultation response.

## **General Policy Considerations For Household Plastics Recycling**

Household plastics are a complex mix of formats and polymer types, and the recycling opportunities will develop over different time periods. But as an overview, there is a need for policy to consider infrastructure, market development, and communications as three key themes.

### **Infrastructure**

The 2009 UK plastic bottle collection rate was 45%, or 263,000 tonnes. Kerbside collections account for 80% of this tonnage and generally recover higher tonnages than bring collections. Approximately 23 million UK households have access to a kerbside bottle collection service. An equivalent service needs to be provided to every UK household, supplemented by bring schemes if deemed appropriate.

After collection and handling stages, plastic bottles are supplied to reprocessors either mixed together, or separated by plastic type/colour. It has always been accepted that this fraction will not be perfect, but a threshold of 5% contamination (including other recyclables) was set in a Recoup specification document produced over 10 years ago as an industry and local authority collection and sorting guide. Whilst this is still met in some cases, today, many other material supplies demonstrate higher levels of contamination, either due to inadequate plastic sorting provision, or the collection of a wider range of plastic packaging such as pots, tubs and trays. The primary requirement for plastic bottles is more collection and an acceptable quality output from the handling and sorting facilities, as dictated by UK reprocessors.

Where the pots tubs and trays are actively requested and collected from consumers, they are often retained with the bottles as the handling and sorting facilities do not have adequate provision to separate this fraction. However, to maintain bottle quality, this fraction must be seen as a separate commodity and not mixed together. The primary requirement for non bottle rigid plastic packaging is the installation of suitable facilities to separate bottles from non bottle plastics, unless sold to an appropriate market that can specifically handle and recycle the two combined together. The separation activities can be completed at the primary MRF sorting stage, or at a plastics reclamation facility (PRF).

There must be evidence that there is sufficient capacity to do this BEFORE encouraging wide spread collection of non bottle plastics. There are 84 local authorities already collecting a combination of bottle and non bottle plastics, and this is set to increase.

Some of these wider plastic collections are inclusive of plastic films and carrier bags, which can cause significant technical issues within the sorting facility. This is widely acknowledged, and evidence of a film sorting test at AWS Ecoplastics has been circulated and also provided to Defra. Therefore it will be essential to avoid flexible plastics within existing local authority managed kerbside and bring collection schemes. A separate solution is needed.

The UK needs to have an evolving but sustainable approach to developing UK plastics packaging collections. We do not want to maximise collection in the very short term at the expense of developing a least cost sustainable approach which meets plastic packaging recycling targets in the medium to long term. Much will depend on the impending confirmation of UK plastic packaging targets from 2011 onwards, and the mechanisms and policies adopted to achieve this.

### **Markets and Development**

The controlled development of collection, handling and reprocessing infrastructure needs to be supported by appropriate markets for the non bottle plastic output. Better audit trails are needed to ensure that all plastics packaging collected for recycling are actually recycled, in an appropriate manner, whether this is in the UK or abroad.

Some market development is still required for the bottle fraction, particularly to ensure that the new developments in food grade reprocessing are supported where possible.

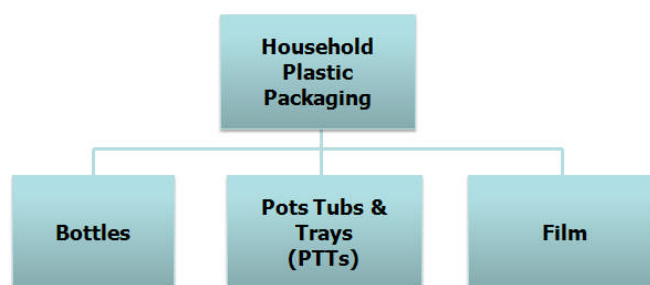
Material quality needs to have minimum voluntary specifications, irrespective of whether it is to be sold to UK, EU or Far East markets for reprocessing and recycling. This also needs to be linked to a fair approach to the issuing of packaging recovery notes, in terms of the definition of waste where

plastic reprocessing does not use a melt process, and also relating to the issuing of packaging export recovery notes. Recoup accept that there must be free and open markets for material trading, but minimum quality and PRN/PERN requirements must be harmonised.

## Communications

Firstly, there needs to be a standard approach to plastic definitions. The term 'mixed' has traditionally been used within the plastic recycling industry to describe mixed plastic bottles. However the introduction of wider plastic collections has also led to the adoption of the term 'mixed plastics'. This may include or exclude a number of plastic packaging formats including bottles, some or all rigid items, flexible plastics, and even non packaging plastics. Recoup view 'mixed plastics' as an ambiguous term. The terminology should be updated to reflect the four household plastic fractions of; bottles, non bottle rigid packaging, flexible, and non packaging items. Furthermore, the non bottle rigid plastic packaging can be more easily referred to as 'plastic pots, tubs and trays' (PTTs), as this appears to best describe the non bottle material in question. Recoup has recently requested that the WRAP definition for mixed plastics is revised (see below) and the term 'mixed plastics' dropped in favour of the descriptions shown. This will not only be helpful to industry but also helpful in communications to other stakeholders and the general public.

### *Recoup Proposed Definition For Plastic Packaging Fraction*



Recoup are aware that 'mixed plastics' is already a widely used term, but the approach outlined is critical to developing industry and consumer understanding of this material stream. It has been drawn to the attention of Recoup that plastic recycling communications between reprocessors and contractors, contractors and local authorities, and local authorities and consumers is often inconsistent, leading to confusion and potentially undermining the recycling opportunity. We accept there are different collection schemes, but they are generally supplying material into the same if not similar markets whose specifications should be relatively consistent. Standardising recyclables collection and sorting systems may not be practical in all cases, although any initiatives to improve material quality are welcomed and necessary.

The on pack labeling system which has been introduced to inform the consumer is found to be frequently misleading, with inconsistencies between similar packs, green ticks denoting 'not recyclable everywhere' and use of the phrase 'check with local recycling' where evidence suggests that the local authorities are often not able to provide accurate information in this specialist area.

Plastic bottles should be labeled as widely recyclable, but adopting on pack labeling for the non bottle packaging items is a marketing tool which is not helping the development of a sustainable recycling system for these materials. Some packs even break down the pack components, so the recyclability of a lid may be classed differently to its tub. Whilst technically accurate, reprocessors have been well equipped to deal with low levels of contamination for a long time, and it is the presence of the non bottle plastics which causes the biggest contamination problem where not requested.

A key and important issue is the need for a national approach to adopting the same practices and basic instructions throughout the country for collecting and handling bottle, non bottle rigids, and flexibles. This is because collected and sorted material is handled by a relatively small number of reprocessors and traders all of whom have similar input quality requirements. A common approach to instructions will not be achieved unless there is clear guidance, identified requirements and leadership from central government and key organisations.

## **General Policy Considerations For Commercial Plastics Packaging Recycling**

Commercial plastics recycling has developed as a direct result of recognition that this is generally a clean homogenous waste stream which has an inherent value. This has evolved further as environmental awareness has grown, leading to more efforts in understanding waste streams and applying sustainable practices. But this does not always transpose, particularly into SME businesses who may not be able to collect and store enough material for the recycling option to be feasible. It is felt that localism and a big society approach could be used to develop this opportunity. Gaining a better understanding of commercial waste arisings from local areas and joining up the recyclables collections would encourage engagement in recycling schemes. This should not be viewed as an additional income opportunity by the collection service providers who often charge per lift, even if new units are installed close to an existing collection point. A business community approach may help to resolve this.

Trade recyclables collections, whilst developing, are still polarised according to a survey produced by BREW. As with general commercial recycling opportunities, trade waste recycling needs to be more standardised, include plastic bottles and other packaging where available handling facilities exist, and needs to engage the wider trade community.

For example, Recoup are aware of public facilities such as hospitals realising savings between £5k and £10k in one year after a rationalisation of the existing waste collection systems, which included the introduction of a recyclables collection service. Note that these saving are inclusive of initial capital outlay (purchase of recycling units) so savings will increase in subsequent years. There is a need to gather and disseminate more of this type of information to target audiences. As more is understood about the trade waste composition, it empowers those organisations to make their waste and recycling systems more efficient.

## **Responses to the relevant questions set out in section 2 of the consultation document**

### ***What should the nation's ambition for waste management be? What do we need to do to achieve a 'zero waste economy'?***

Recoup view the term 'zero waste' as an acceptable aspirational aim. However, plastic is a key element of packaging, and whilst much good work has helped to minimise pack weights, and evolve a recycling culture, there will need to be suitable incineration or landfill options available. The move away from landfill towards incineration for the unrecyclable plastic fraction must be based on policy which adheres to agreed parameters.

Efficient incineration options need to be made available with combined heat and power, including an identified heat load which, in turn, in many cases means promoting district heating systems. If not, then the CO<sub>2</sub>/MWH electricity is actually greater than the CO<sub>2</sub>/MWH it displaces.

### ***What should the role and nature of local authority waste management collection and disposal services be?***

The arrangements in terms of responsibility for collection and for the quality of material collected needs to be clarified. It is our view that the service provider or their agents are responsible.

The packaging targets proposed requires a level of householder participation as well as deposit efficiency. Who is responsible for achieving the identified participation, and for the deposit efficiency? This question is fundamental in terms of meeting the proposed recycling targets and developing efficient and sustainable plastic packaging recycling.

We feel that central government need to clarify who has direct responsibility for 'hh participation levels', 'put out efficiency' and material quality for collected hh packaging. The need exists to establish a procedure to ensure clear, accurate and easily understood recycling instructions to consumers are available and widely accepted and used.

## **Responses to the relevant questions set out in section 4 of the consultation document**

### ***2 How to maximise the contribution that waste management in England can make to UK energy and climate change goals, both renewable energy targets and the long term goals for greenhouse gas emission reduction by 2050.***

Improve the financial support to biodegradable treatment technologies, especially to anaerobic digestion (AD) and MBT with anaerobic digestion, when treating municipal solid waste (MSW). Such technologies have been used for several years in other European countries and are capable generating renewable energy, as opposed to in-vessel and windrow composting that only consume energy. Composting technologies should be applied preferably to waste streams that are more challenging to be treated in anaerobic conditions, such as green waste (wood, grass cutting, hedge pruning, leaves, etc).

As the UK does not have plans to introduce landfill bans, and landfill tax escalator is the main driver for the waste diversion from the landfill, there is a need to incentive the implementation of state-of-the-art energy from waste (EfW) technologies such as gasification and pyrolysis, which are capable of treating various waste streams including MSW. Such technologies are able to produce energy and also support decreasing the reliance on landfill disposal.

If the overall aim is to reduce greenhouse gases emissions, the processing systems for non bottle plastic packaging which is generally more contaminated may need to be considered, particularly if significant additional cleaning and therefore energy is required compared to processing other packaging eg plastic bottles. Furthermore, this could also result in the reduced quality of commonly recycled plastic bottles, such as PET and HDPE, which have a strong market demand.

### ***3 The need for waste evidence, including the necessary data to consider likely waste volumes and characteristics in the future.***

Despite the quality of data being improving over recent years, there is still a need for more detailed information to evaluate waste and material composition on a regular basis. Such data would clarify waste arisings and is paramount for the decision making process when new technologies and reprocessing capacity are to be improved.

The packaging data on which the proposed targets are understood to be based relies on, in part, the the Wrap work commissioned on bottles & mixed plastics and the Packflow data referred to in the consultation document (both contributed to by Recoup) as well as Waste Data Flow information. Whilst we would agree that this provides the best data currently available it is being used to set targets based on primary data which by then will be, in some cases, twelve years out of date.

The need urgently exists to establish a reliable data base for UK plastics packaging usage which will be needed to provide accurate usage tonnages for the sub-group classifications on which targets and separate PRN values are proposed. This would assist capital investment in reprocessing and end market development. Recoup has suggested that use could be made of the reporting procedure provided by obligated companies under the producer responsibility regulations annual returns. This data would provide an important update in terms of packaging usage and provide an 'evergreen' data source each year.

The compliance reporting format could also be modified to reflect the proposed individual sector targets suggested for bottles, PTT's, film, etc. Any such revised format could also identify a number of key packaging description sectors. This would allow the waste management sector and businesses the ability to assess potential recycling level parameters, and provide government and industry with significantly more accurate and useful information. The need for better data is an essential requirement to establish, regulate and efficiently manage plastics packaging recycling/recovery.

In terms of the reporting procedure proposals noted under section 4.7 pg 39/40 of the consultation document. We support the need for more information but feel that some additional requirements should be identified in terms of export plastic packaging reporting.

Exported domestic rigid packaging should be identified as:

- HDPE Bottles
- PET Bottles
- Mixed Polymer Bottles
- Non Bottle Rigids

C & I packaging should be shown as two elements and not as indicated as Crates and other C & I packaging but as C&I Rigid Packaging and as a separate sector 'C&I Flexible Packaging'.

#### ***4 Actions to ensure the cost-effective contribution waste management in England can make to the green economy is maximised, including the impact on the finances of both households and businesses, on job creation and on green industries themselves.***

At a Recoup meeting at Defra on the 12<sup>th</sup> March the need for a small, permanent, specialist team of staff with specific knowledge of plastics packaging recovery and recycling was highlighted. This group would inform and assist relevant stakeholders in helping to plan, least cost, sustainable plastics packaging recycling. It was expected that this small group would effectively realise net savings in compliance costs and provide a level of technical knowledge and detail which would be invaluable to helping to achieve increased efficient plastic packaging recycling and recovery.

It is felt that such a group should directly interface with DEFRA and liaise with the wide range of businesses, trade groups, local authorities, waste management companies and the plastics reprocessing sectors all of which have direct interests in the efficient recovery of plastics packaging. Recoup sees little value in replicating the contribution already available from existing trade associations who would, nevertheless, need to play an important role in this process.

We do not believe that a task force of part-time attendees with day jobs of competing priority would be able to provide a clear voice of practical authority for plastics packaging recycling. It is important to establish a small specialist team seen to be the repository of best practice knowledge and advice that will allow the plastics packaging sector to achieve compliance with recycling regulations at least cost.

Recoup recommend that a small 'specialist full time plastics packaging team' be formed to assist all stakeholders with interests in plastic packaging recycling and recovery. This group should be established as soon as possible, ideally by mid 2011. The group would inform and assist all relevant stakeholders in helping to plan, least cost, sustainable plastics packaging recycling. The team would have a detailed understanding of packaging materials and formats, collection and sorting technologies, available waste management infrastructure and its planned development, as well as plastics reprocessing and associated material end markets knowledge.

#### ***12 How best to understand and encourage or incentivise individuals, businesses and communities to produce less waste and recycle more.***

On the business level, landfill tax escalator has played an important part on the waste diversion. Emphases have to be placed for business to comply with packaging reduction according to the Packaging Regulation. At a consumer level, Recoup support provision of suitable incentives for those who do recycle and minimise their waste instead of punishing those that don't.

The 'recycle on the go' opportunity is developing through both local authority and private initiatives who are providing convenient collection points to engage consumers in the activity of recycling. Industry organisations and companies have come together to form a 'Recycle On The Go' platform (ROTG). Formal support and funding from government to support this activity will help to ensure successful projects continue to develop. The first meeting of the platform was held in August, to discuss objectives including the development of ROTG in the UK and globally, engagement with key organisations to share learning's and international good practice, capture of additional materials in

'away from home' locations, stimulating behavioural change and attitudes, and communications. Recoup are involved in a number of recycle on the go projects which include the collection of plastic bottles and other recyclables such as cans.

#### **14 Whether greater emphasis should be placed by Government on using recyclable/recycled materials in manufacturing, construction and production.**

The manufacturing industry is moving towards increased use of secondary materials which meet their specifications. This can be encouraged further by addressing the quality and quantity issues already raised.

Recoup would welcome a greater emphasis being placed on using recyclable/recycled materials which is believed to provide several benefits;

- Reducing the carbon footprint of new plastic packaging – using an average figure of 1.5 tonnes of CO2 savings per tonne of plastic recycled a new bottle / food tray made from 100% recycled PET can see its carbon footprint reduced by 50% (against using 100% virgin resin).
- Consumer engagement – if consumers see that the materials they place into the recycling stream are being returned to the market as new food packaging it provides tangible evidence of the benefits and effectiveness of the UK recycling efforts.
- Retail and brand-owner demand – increasingly large retailers and brand-owners are prepared to specify recycled content targets for the packaging they procure.

Furthermore, encouraging the use of domestically produced recycled content in new products provides the market demand for these high-value materials to be produced and will assist in driving the investment required to build infrastructure to deliver these materials. Contributing to the development of the UK green economy and maximising the economic potential of the waste management industry. It would also contribute towards the domestic market of collected recyclables, allowing the UK to lessen its dependence on the export market for recyclables. There are a number of avenues which could be explored to encourage the specification of recycled content, such as :

- A mechanism by which recycled content is treated differently than virgin content under the packaging obligations, i.e. a tangible cost benefit for specifying the maximum practical recycled content. This could also take the form of a system similar to the aggregates levy, where the use of recycled materials does not attract a levy.
- Mandatory recycled content target, certain categories of products could have a minimum required recycled content.
- Multi-stakeholder programmes – specific industry sectors could be brought together to agree recycled content targets. A good example is the current UK Milk Roadmap project, where the entire industry has worked together to achieve a 10% recycled content in all UK HDPE milk bottles with this target set to rise to 30% by 2015 and 50% by 2020.

There does need to be significant market development for the non bottle plastics which are currently underdeveloped in the UK. Latest information suggests that there may be more capacity coming online to sort this fraction, but significant tonnage markets will still be needed for the various outputs. This does not necessarily need to be premium applications such as food grade processing in the short term.

There is a need to control newly developed packaging that could pose a risk to the plastic market, especially for biodegradable and degradable packaging, including terminology and best practice regarding its application. For instance, packaging that contain additives to rapidly degrade (e.g. oxo degradable) are often mistakenly treated as biodegradable or considered to be fully recycled when mixed with traditional plastics.

Biodegradable plastics packaging are often trying to replace well established plastic packaging, such as PET, which will result in contaminating good quality PET during reprocessing. Additionally, biodegradable plastics are often promoted as fully compostable when placed in commercial scale composting plants. However, the reality is that these plants operate at different material retention times, sometimes shorter than the minimum required to degrade the bioplastic. As a result, the compost can present residues of bioplastic that are only partially degraded, or may be still fully intact.

Further emphasis and research should be placed on opportunities such as the newly developed bio (plant) based plastic that are being introduced in the market, which contains the same properties as a petrochemical plastic and are believed to be compatible with traditional PET during the reprocessing. Unfortunately this material is also being referred to as bioplastic by some groups.

**15 *How government can work with local councils to increase the frequency and quality of rubbish collections and make it easier to recycle, to tackle measures which encourage councils specifically to cut the scope of collections; and to address public concerns over the civil liberty aspects of inappropriate enforcement practices associated with household collections.***

There are good examples of most different types of recyclables collection system. Whilst standardisation of material types collected and consumer communications can be developed, a degree of flexibility is required in prescribing collection services as they will be dependent on existing contracts, availability of handling infrastructure, and how scheme success is defined – cost, consumer satisfaction, tonnage recovered, carbon footprint, material quality etc. This will not be the same for all local authorities.

In some instances there appears to be a lack of opportunity to add plastic to existing collection systems, particularly when there is an efficient system already in place. Simply adding this lightweight voluminous material to an existing system can add significantly to costs and require significant capital outlay via collection vehicles and materials handling equipment. This issue is reducing as contract breaks occur, or a full service review is completed, but it still remains that while most local authorities offer some form of plastic bottle collection service, up to 25% of UK households cannot recycle their bottles through kerbside.

In contrast, Recoup also feel that local authorities should not be pressured into collecting plastics where an audit trail is not available, or a clear recycling opportunity does not exist. The implementation of more standardised material types collected and subsequent communications will assist in reducing genuine errors in plastic material set out for recycling.

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