

Advisory Committee on Packaging

Task Force 2 – PRN Transparency

PRN System Guide

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1. Executive Summary

This document is produced by the Advisory Committee on Packaging, an independent committee appointed by the Secretary of State for the Environment. It describes the UK PRN (Packaging Waste Recovery Note) system which is the mechanism used in the UK to implement the requirements of the European Directive on Packaging and Packaging Waste 94/62/EC. The system was jointly developed by industry working with Government and is designed using the principle of “Producer responsibility”. This means that packaging producers are required to contribute to financing the recovery and recycling of packaging materials so that UK as a whole achieves the European packaging recycling targets.

In practice this means that packaging producers are required to provide a financial incentive to the packaging recycling industry to collect and reprocess (or export for reprocessing elsewhere) sufficient material to meet the targets set by the Government. The system does not finance the full cost of recycling or recovery but instead it provides a “top up” subsidy over and above market prices to incentivise reprocessors to process sufficient material.

Packaging producers are all businesses (above certain size limits) that place packaging or packaged products on the UK market and include importers, brand owners, packaging and packaging material manufacturers as well as distributors and retailers, regardless of whether the material supplied is for household or business consumption. Each stage in the supply chain is assigned a set share of the financial responsibility.

The UK Government sets annual targets for UK producers to achieve for each of the materials concerned (paper, glass, steel, aluminium, plastic and wood) plus general recycling and recovery targets. Businesses are not required to recycle their own packaging, but to ensure that an equivalent amount of packaging waste of the relevant materials has been recovered and recycled to meet their obligation. This is done by acquiring unique evidence of recycling or recovery - a Packaging waste Recovery Note (PRN or PERN for material that is exported) - from properly accredited reprocessors (or exporters for recycling overseas) in exchange for a financial transaction.

Reprocessors or exporters have to be specifically accredited for this purpose by the relevant enforcement agency. The funds raised are used by the recycling industry to incentivise increases in capability towards reaching future targets.

Most producers meet their obligations by joining a collective service provider called an approved compliance scheme. Several of these exist providing various levels of cost and service. Competition amongst compliance schemes is thought to be one of the main reasons why the UK system costs are considerably lower than those in other parts of Europe.

Since the UK regulations came into force in 1997 the UK has significantly improved its packaging recycling performance to the point where we now achieve over 60% overall recycling and are amongst the best performers in Europe.

The precise use of PRN funds by reprocessors and exporters is difficult to quantify, but this guide presents several case studies to illustrate a range of projects and activities to increase collection and recycling which would not have been possible without PRN financial support.

2. Introduction

This document describes the UK PRN (Packaging Waste Recovery Note) system. This system is the mechanism used in the UK to implement the requirements of the European Directive on Packaging and Packaging Waste 94/62/EC. It is implemented through the Producer Responsibility Obligations (packaging waste) Regulations 1997 (as amended).

It is unusual in Europe being one of only two approaches to compliance that use a tradable permit mechanism to achieve mandatory recycling and recovery targets (the other being in Poland which was modelled on the UK system). It is not a fully free market system, but uses market mechanisms and competitive pressures within a regulatory framework to achieve the targets in the most effective way.

The system was jointly developed by industry working with Government and is designed using the principle of “Producer responsibility”. This does not mean that packaging producers are required to physically collect or recycle their own packaging (although they can do so if they wish) but instead means that these so called “obligated producers” are required to finance the recovery and recycling of equivalent tonnages of packaging materials so that UK as a whole achieves the European packaging recycling targets.

In practice this means that packaging producers are required to provide a financial incentive to the packaging recycling industry to collect and reprocess (or export for reprocessing elsewhere) sufficient material to meet the targets set by the Government. The system does not finance the full cost of recycling or recovery but instead it provided a “top up” subsidy over and above market prices to incentivise reprocessors to process sufficient material.

This document is produced by the Advisory Committee on Packaging, an independent committee appointed by the Secretary of State for the Environment. It is intended to provide an overview of the system and its operation for a range of audiences which are not familiar with the details.

3. General description of the PRN system

3.1. Principles

The PRN system was designed to enable the UK to increase its packaging recycling and recovery performance in order to meet European targets. It was not intended to set up a fully funded separate collection system, as operates in some other Member States, but rather to provide a sufficient financial incentive to existing packaging collectors and recyclers (for example Local Authorities, private waste management companies, reprocessors and material exporters) to increase their tonnages.

In order to do this the UK Government sets mandatory recycling targets on affected businesses requiring them to prove that they have financed a prescribed tonnage of packaging recycling each year. These so called “business targets” are set in the regulations for each year and periodically reviewed by the Government. They may be increased to meet new requirements from Europe or in line with the UK Government’s policy objectives.

The way that affected businesses have to prove their compliance with these requirements is set down in legislation and requires them (or their compliance scheme – see later) to acquire a prescribed form of evidence that the required tonnage of each material has been reprocessed during the year. This evidence is called a PRN (Packaging waste Recovery Note) or PERN (Packaging waste Export Recovery Note) and is described in more detail in later sections.

3.2. Affected Businesses

Businesses that handle packaging are called “producers”. They are affected by the regulations if:

- (i) Their turnover exceeds £2 million, and
- (ii) They handle over 50 tonnes of packaging material annually.

Smaller producers below either of these thresholds do not have any obligations under the regulations. This means that the targets on larger businesses that are affected have to be slightly higher in order for the UK as a whole to meet its requirements.

Packaging is classified into the following main material types:

- Paper and cardboard
- Glass
- Steel
- Aluminium
- Plastic
- Other (textiles, ceramics, etc)

Businesses also have to be performing a relevant activity on the packaging. The UK interpretation of the E.U. Directive is based on the concept of 'shared producer responsibility', ensuring that the responsibility for recycling packaging is shared between all businesses in the packaging supply chain. Each activity throughout the supply chain carries a different proportion of the responsibility as shown in the table below (note: many businesses will perform more than one activity):

Activity	Example	Share of Responsibility
Raw material manufacturer	Sheet steel manufacturer.	6%
Converter	Can manufacturer.	9%
Packer / filler	Food manufacturer.	37%
Seller	Retailer selling goods to the public.	48%
Importer	Bringing in packaging or packaged goods from outside the U.K.	Rolled up obligation

A business’s individual obligation is calculated by working out their share of responsibility and then multiplying this by the UK's relevant business recovery or recycling target and the tonnage of packaging upon which they carry out a prescribed activity.

$$\text{Packaging Handled (t)} \times \text{Share \%} \times \text{Business Target \%} = \text{Obligation (t)}$$

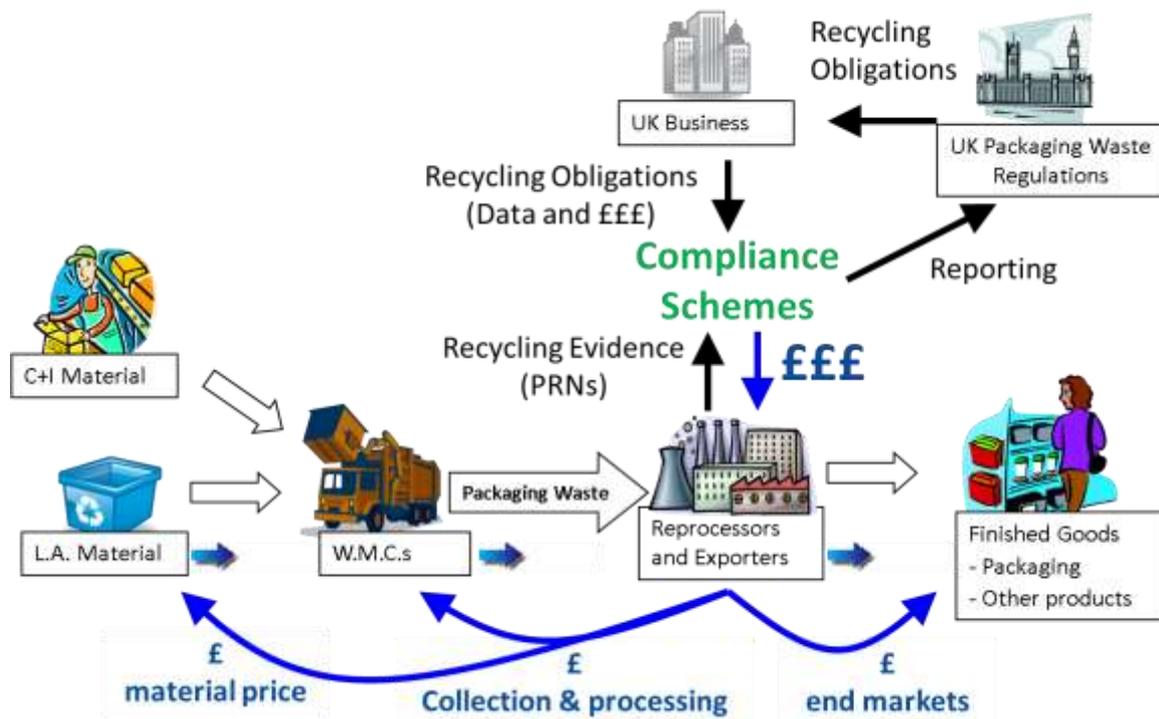
If they use more than one material or carry out more than one activity (as most businesses do) then each material and activity obligation is calculated separately and added together.

3.3.Meeting Targets

Businesses are not required to recycle their own packaging, but to ensure that an equivalent amount of packaging waste has been recovered and recycled to meet their obligation. This is done by requiring obligated producers to acquire unique evidence of recycling or recovery - a PRN (or PERN) - from properly accredited reprocessors (or exporters for recycling overseas). This is usually in exchange for a financial transaction at a price and under other terms as negotiated between the parties.

They can only do this from reprocessors or exporters that have been specifically accredited for this purpose by the relevant enforcement agency (the Environment Agency in England, the Scottish Environment Protection Agency, Northern Ireland Environment Agency or Natural Resources Wales). The Accredited reprocessors therefore receive additional funding for every tonne of packaging waste they reprocess and have a resulting incentive to acquire further tonnage, thereby driving up recovery rates.

The overall system is illustrated in the following diagram:



This results in funding being directed to help relieve the bottleneck process in that particular material recovery chain, be it material collection, sorting, reprocessing or supporting end use markets. In this way sufficient confidence can be generated in the resulting business and financial relationships to contribute to supporting the necessary long-term investments.

3.4. Compliance Schemes

As an alternative to registering themselves and taking responsibility for acquiring their own evidence of recovery, producers can decide to join an approved Compliance Scheme. These organisations are approved by the relevant enforcement agency to carry out all the legal requirements on behalf of their member companies. They operate as a kind of contracting out service provider but with the key difference that they actually take on the legal obligation for meeting targets on behalf of their members. In other words a producer which is a member of an approved compliance scheme is no longer legally liable for meeting their targets as long as their membership of the scheme continues.

There are a number of different Compliance Schemes in existence which provides choice to producers. Details are kept centrally by the enforcement agencies (see section 3.6).

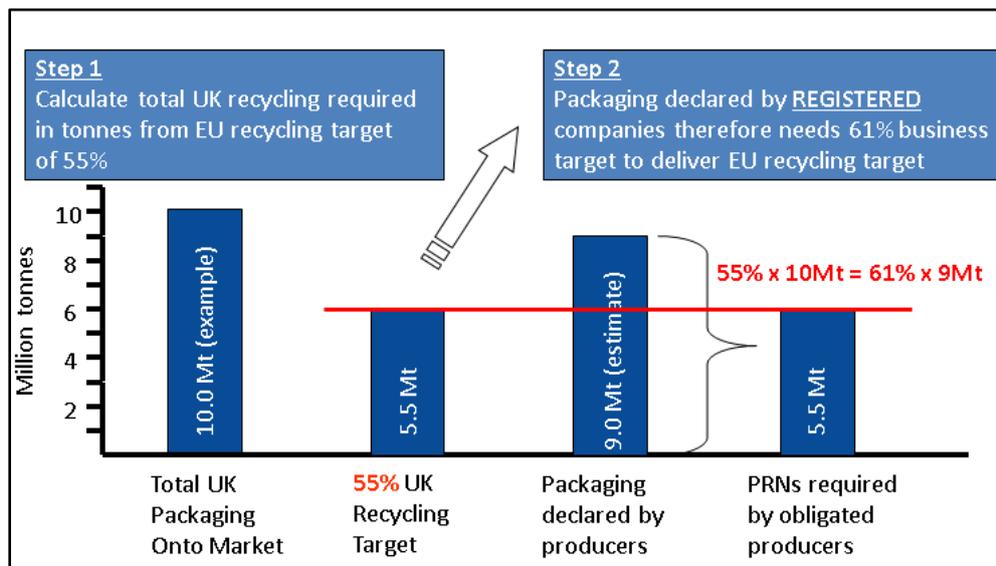
3.5. Current Targets

The European Directive on Packaging and Packaging Waste includes targets for the weight of packaging waste to be recycled. The Directive currently specifies that Member States must achieve between 55 and 80% recycling rate for packaging, by no later than 31 December 2008. There are also material specific targets which are as follows:

- 60% for glass, paper and board
- 50% for metals
- 22.5% for plastics, and
- 15% for wood.

Future targets are currently under review, and are likely to be set in response to the European Circular Economy Package.

As mentioned previously the UK business targets are calculated in order to at least meet the minimum EU recycling targets. Due to the fact that not all UK producers are registered (due to the presence of thresholds within the UK Regulations and also due to non-compliant producers), the UK business recycling targets have to be set slightly higher in order to meet the EU requirements. The diagram below illustrates this further:



So in this example a 55% national target requires 5.5mT of packaging to be recycled which translates to a 61% target on registered businesses (assuming approximately 10% of packaging is from un-registered producers).

This procedure is the same for each of the material specific targets.

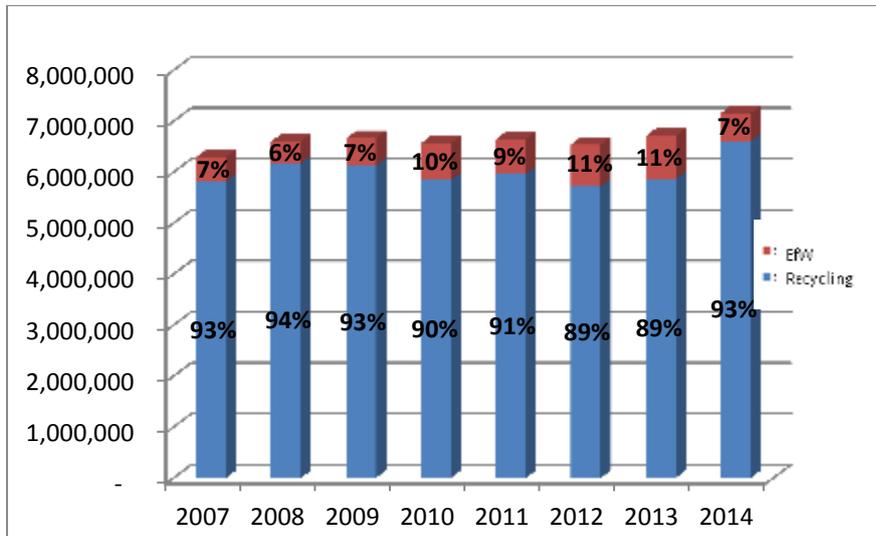
The current business recycling and recovery targets set by the UK government based on the above calculations are shown below:

Material	2014 (%)	2015 (%)	2016 (%)	2017 (%)
Aluminium	46	49	52	55
Glass*	75	76	77	77
Glass by remelt*	65	66	67	67
Steel	73	74	75	76
Paper/board	69.5	69.5	69.5	69.5
Plastic	42	47	52	57
Wood	22	22	22	22
Total Recovery	76	77	78	79
Of which Recycling	69.9	70.8	71.8	72.7

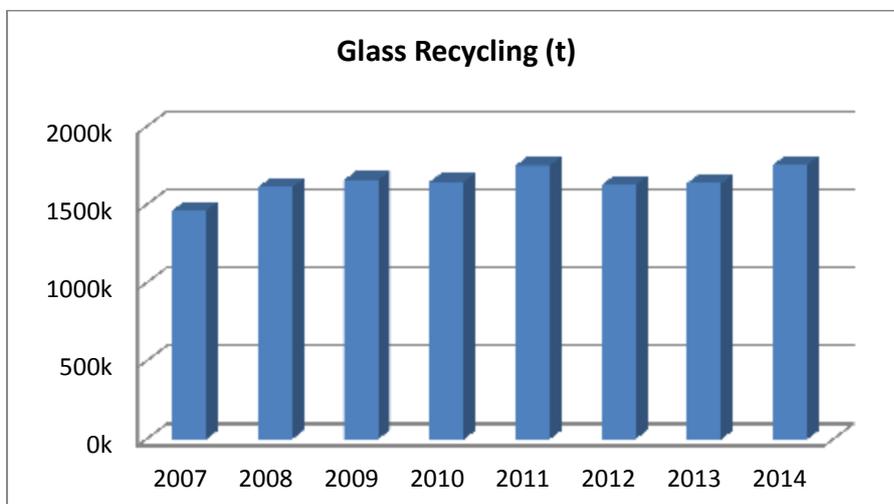
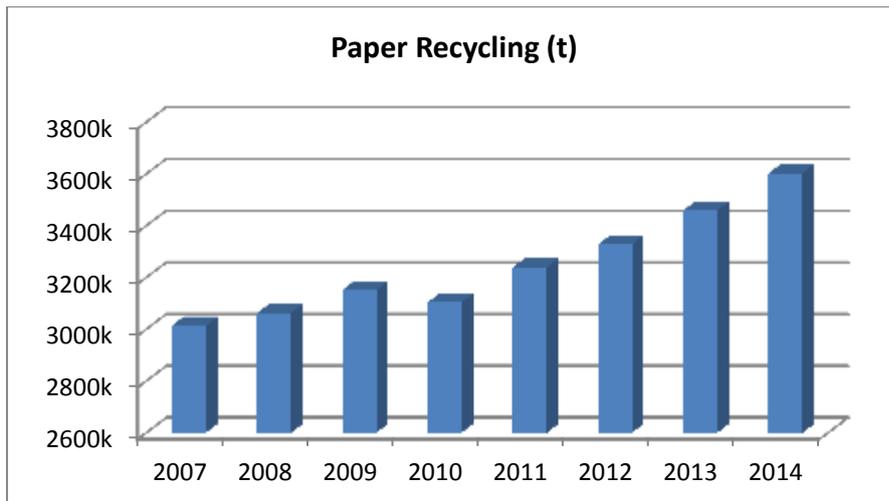
*new glass targets were announced by Defra in 2014 following a consultation period

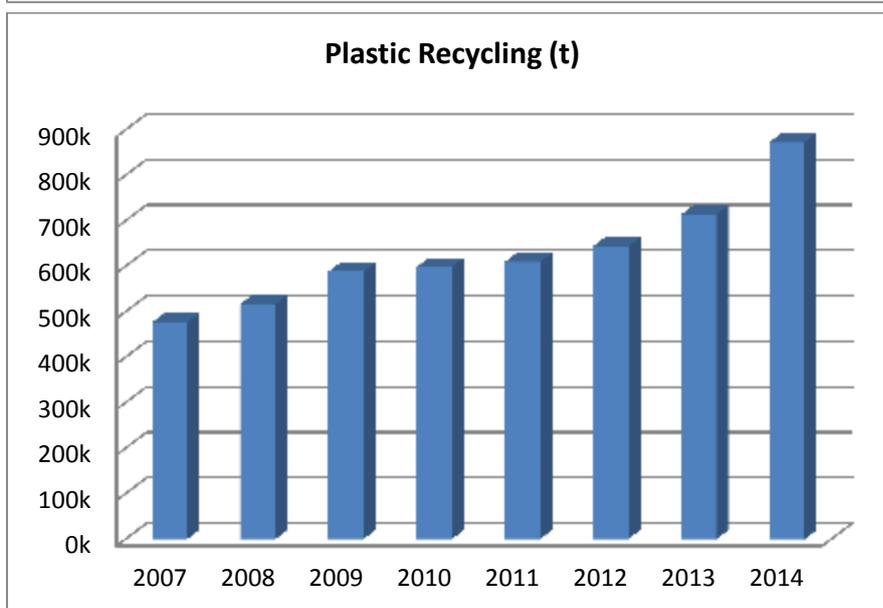
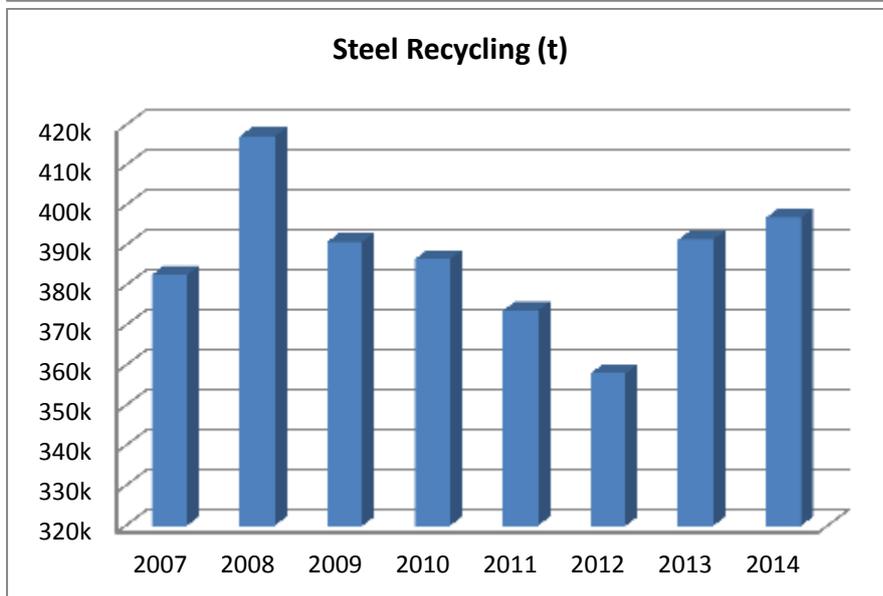
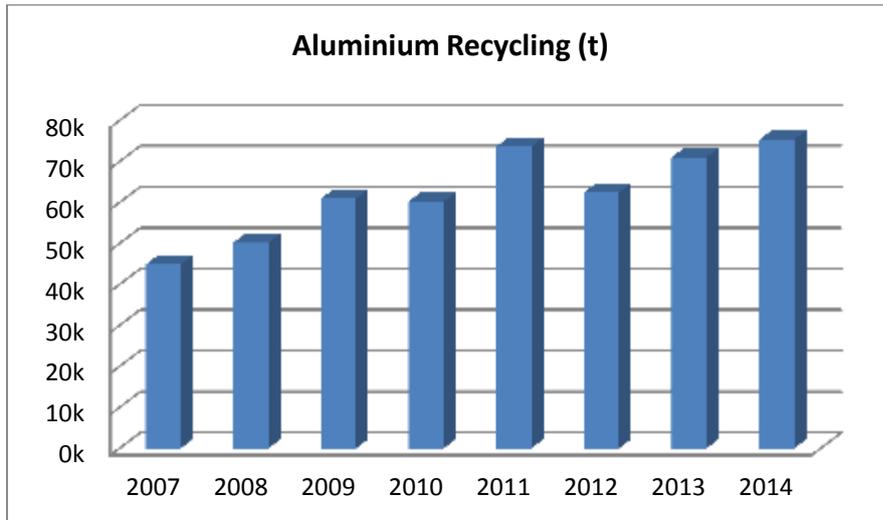
3.6. Performance to Date

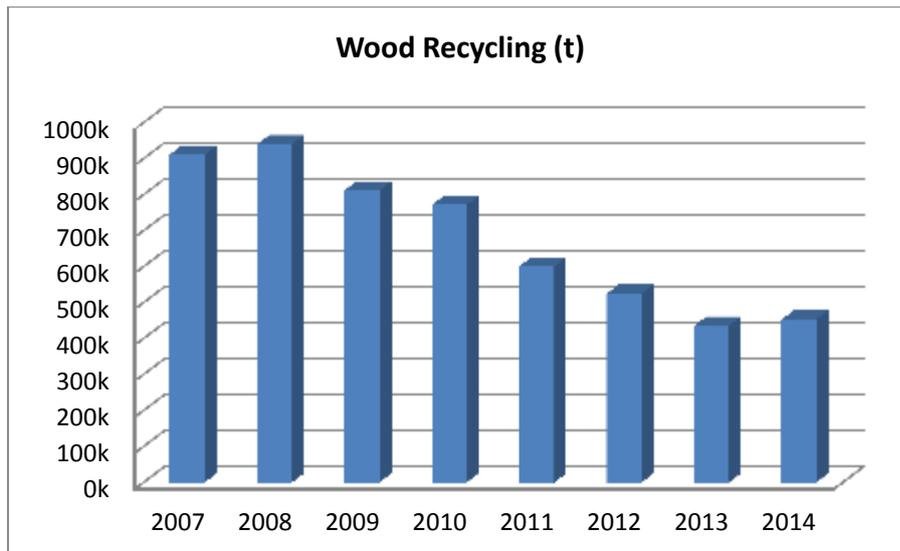
Total UK Packaging Recycled and Recovered



Performance of each material since 2007 is shown in the charts below.







3.7. Practical Operational Impact

The market based nature of the UK compliance system leads to a number of practical implications which producers, compliance schemes, waste collectors and reprocessors/exporters need to bear in mind.

1. Cost can vary, sometimes quite considerably.

The price of PRNs varies with the market perception of relative supply and demand. For example if targets rise unexpectedly or there is a significant cut in evidence supply (perhaps as a result of a reprocessor losing accreditation) then prices will rise. Conversely if supply increases, for example when a new reprocessor or exporter becomes accredited, then prices can fall. Whilst these changes are usually relatively small and over a period, sudden events can lead to dramatic and unpredictable swings which makes forecasting costs difficult.

For example at the end of 2014 there were some changes to the accreditation process for aluminium reprocessors which, although predicted, caused some unexpected delays. This led to a shortage of evidence in the first half of 2015 and a consequent increase in price.

2. Focus on lowest cost sources first

If there is demand (for example by increasing targets) the system provides an incentive for reprocessors to increase their throughput, thereby generating more evidence and revenue for themselves. This encourages them to seek and acquire the next lowest cost sources of additional material and recycling route rather than dictating any particular preference. So for example it may be preferable to invest in further collection facilities, install additional material processing equipment or develop export markets for material.

3. The system responds best to planned gradual change

Just as sudden changes can cause unexpected cost variations, the system is most stable and predictable when gradual change is implemented over a reasonable time. For example when the Government sets future targets gradually rising over a period of years then the industry can plan and invest steadily to achieve them, thus minimising longer term costs.

4. It is difficult to track funding precisely

Although there is no regulatory requirement to track funding or provide a financial audit trail, producers and other stakeholders have an understandable interest in knowing how the funds are used. The market nature together with understandable commercial sensitivities means that it is not possible to precisely trace specific PRN funding. PRN funds are not isolated from other sources and reprocessors and exporters use them together with other resources such as material value and their own capital to make strategic investments as they see fit in a competitive marketplace.

This paper attempts to give selected case studies which illustrate the sort of improvements which have been achieved but cannot provide an exact audit trail.

5. Meets but does not exceed targets

The nature of the system means that incentives are generated to increase throughput to meet targets, but once they are achieved the incentive reduces. This means that further increases in collection and recycling are unlikely to occur without increased targets unless material markets provide an independent commercial driver anyway.

6. Accurate market data

Experience has shown that the provision of accurate and timely market data is essential to allowing all stakeholders to monitor and manage the system. This applies to compliance schemes and producers, reprocessors as well as regulators and Government.

The main vehicle for providing this is the national Packaging Waste database which is described in the next section.

3.8. National Packaging Waste Database (NPWD)

NPWD is the central national packaging waste database. It was originally funded by industry but is now operated and maintained by the Environment Agencies. It has been expanded to also cover WEEE and Batteries.

<https://npwd.environment-agency.gov.uk/>

NPWD fulfils several functions, including:

- Satisfying a legal requirement of the Packaging Waste Regulations to display a public register. The public register section includes a register of accredited reprocessors, registered producers and approved compliance schemes.
- Facilitating the issue of ePRN/ePERNs electronically from reprocessors/exporters to obligated producers and compliance schemes as evidence to demonstrate they have met their recovery and recycling obligations
- Allowing schemes to make producer registrations to the Agency and submit associated data returns. In addition, allowing producers to register directly with the appropriate Agency and make their individual data returns.
- Making available various public reports, such as UK producer obligation tables; breakdown of PRN/PERN revenue data; quarterly packaging recycling and recovery data and quarterly data on packaging waste exported and accepted for reprocessing.
- Holding up to date Public Registers of producers, compliance schemes, accredited reprocessors and exporters.

3.9. Monitoring and Enforcement

The relevant enforcement agencies hold specific powers and duties as outlined within the Packaging Waste Regulations. These include:

1. Monitoring

The appropriate Agency is required to monitor compliance with the Regulations of both producers and compliance schemes. They must monitor the registration of producers, the accuracy of information provided by producers and schemes (including auditing of producers) and monitor the approval of scheme registrations and submitted scheme operational plans.

2. Accrediting reprocessors and exporters

Reprocessors and exporters will apply directly for accreditation through NPWD and the relevant Agency will review the required documentation, including;

- business plans,
- sampling and inspection plans,
- details of the recovery and recycling processes used and
- evidence regarding export sites to show equivalent environmental standards

The appropriate Agency may also carry out inspection of business premises.

Public registers of accredited reprocessors and exporters are kept on NPWD.

3. National performance reporting: the Agencies report on data quarterly

The reporting summarises the UK's packaging recycling and recovery, to show waste accepted for UK and overseas reprocessing and total PRNs/PERNs issued.

They are provided on NPWD.

4. Enforcement of free riders and reprocessing/export standards

The Agency can carry out enforcement of non-compliant or unregistered companies using several means, including enforcement undertakings, variable monetary penalties or prosecution. Accredited reprocessors and exporters must also comply with various conditions. If they fail to comply, their accreditation may be suspended or cancelled, or further enforcement action may be taken.

Monitoring and enforcement is funded through registration fees which are specified in the regulations. This includes registration fees paid by both packaging producers and schemes, alongside accreditation charges from reprocessors or exporters. This ensures that monitoring and enforcement activity is not subject to reductions in times of public finance pressure as the funding is effectively "ring fenced".

4. Roles and Responsibilities of Key Players

4.1. Introduction

This section describes the roles and responsibilities of a range of key players who have a direct involvement in the packaging system.

Other parties, for example Trade Associations, also have an important role including providing advice and information although they are not direct participants.

4.2. Key players

Organisation	Roles and responsibilities
Government	<ul style="list-style-type: none"> • Introduce regulations and amendments as required to achieve the national goals • Set recycling and recovery targets in line with Government policy and European requirements • Represent the UK in discussions in the EU on the Packaging Directive and any potential changes • Report national performance to Europe • Consult with industry and other stakeholders on any proposed regulatory changes • Provide non-statutory guidance to assist stakeholders with compliance • Establish the Advisory Committee on Packaging and provide support • Monitor implementation of the regulations and UK performance and propose any necessary changes or improvements
Producers (packaging material manufacturers, converters, fillers and retailers)	<ul style="list-style-type: none"> • Ensure they comply with the regulations and finance their correct share of the national requirements • Register with the enforcement agencies or a compliance scheme • Provide accurate information on the tonnages of packaging they handle • Minimise the use of packaging as far as possible consistent with product protection requirements • Increase the use of recycled materials in their packaging where possible
Enforcement Agencies	<ul style="list-style-type: none"> • Monitor compliance with the regulations amongst producers, compliance schemes and reprocessors/exporters • Provide advice and guidance • Take enforcement action in line with their policies as appropriate

	<ul style="list-style-type: none"> • Provide data and registration systems (National Packaging Waste Database, https://npwd.environment-agency.gov.uk/) • Provide collated reports and data on UK registrations
Local Authorities	<ul style="list-style-type: none"> • No formal obligations under the packaging regulations • Provide collection and recycling services to their residents • Supply collected material to reprocessors and/or exporters for processing • Communicate with their residents to promote recycling
Waste Management Companies	<ul style="list-style-type: none"> • No formal obligations under the packaging regulations • Provide collection and recycling services to their customers – either commercial businesses or Local Authorities • Supply collected material to reprocessors and/or exporters for processing • May also operate their own recycling and/or export businesses and if so can become accredited to generate PRNs.
Packaging material reprocessors	<ul style="list-style-type: none"> • Receive collected material from Local Authorities, waste management companies or their own sources • May become accredited under the regulations, but do not have to • If accredited then can issue evidence and must provide necessary undertakings and reports to enforcement agencies • Enter into contracts with compliance schemes or individual producers for sale of their evidence • Expected to invest proceeds of PRNs in increasing collections and capacity for the future.
Packaging material exporters	<ul style="list-style-type: none"> • Similar to reprocessors
Compliance schemes	<ul style="list-style-type: none"> • Provide secure and cost competitive compliance services for their members • Ensure member data reporting is accurate and on time • Maintain their conditions of approval with the relevant agency • Provide advice and support to members as required • Provide advice and input to Government and regulators on potential improvements to the regulations and guidance

5. PRN Spend Breakdown

5.1. Introduction

This section provides information on reported PRN spend and shown in various formats.

- Total PRN expenditure per year since 2007
- PRN expenditure by material
- PRN expenditure by category
- PRN expenditure breakdown per year

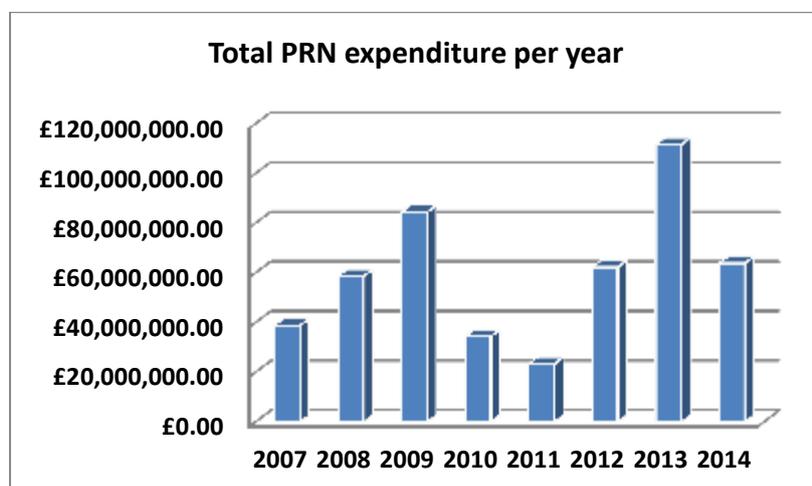
Reprocessors and exporters are required as a condition of their accreditation to report use of PRN funds each year. The categories of expenditure reported are:

1. Investment in infrastructure and the development of capacity for the collection, sorting, treatment and reprocessing of packaging waste;
2. Funding provided to other persons involved in the collection of packaging waste;
3. Reductions in the prices of, and the development of new markets for, materials or goods made from recycled packaging waste;
4. The costs of complying with obligations in these Regulations;
5. Funds retained for future investment; and
6. The development of a communications strategy for consumers of packaging made from recyclable materials.

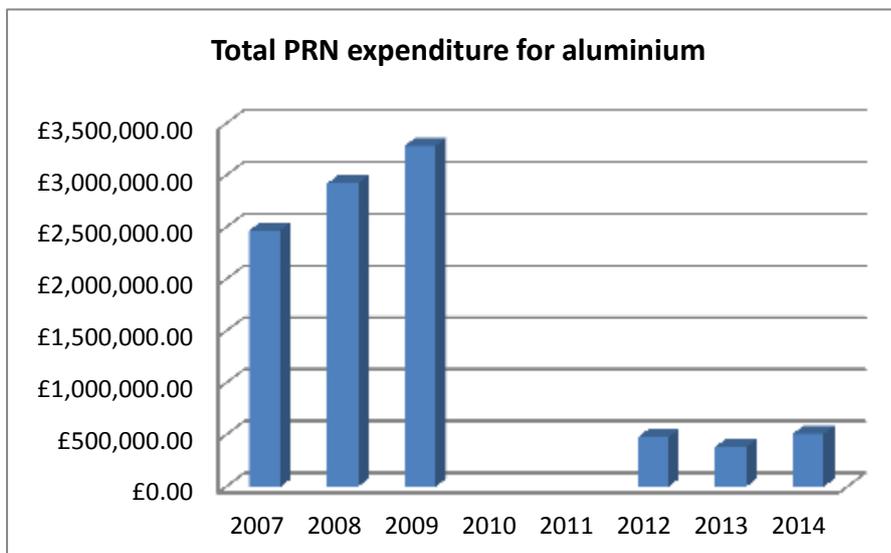
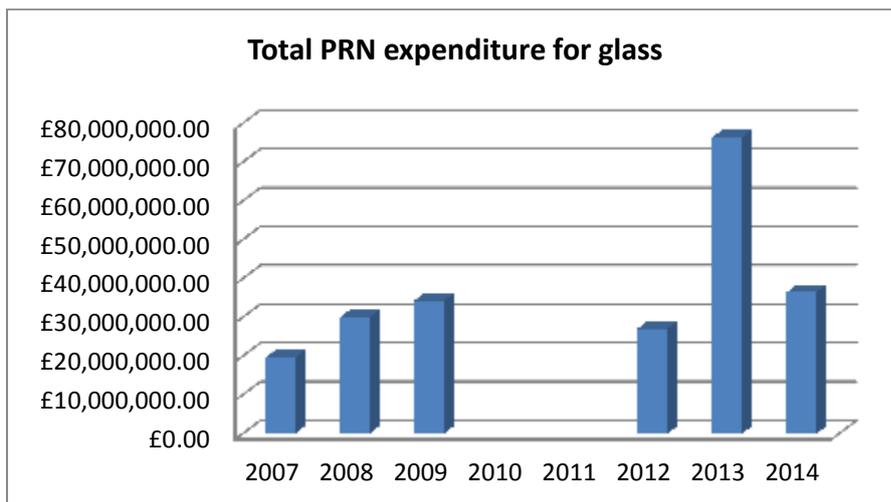
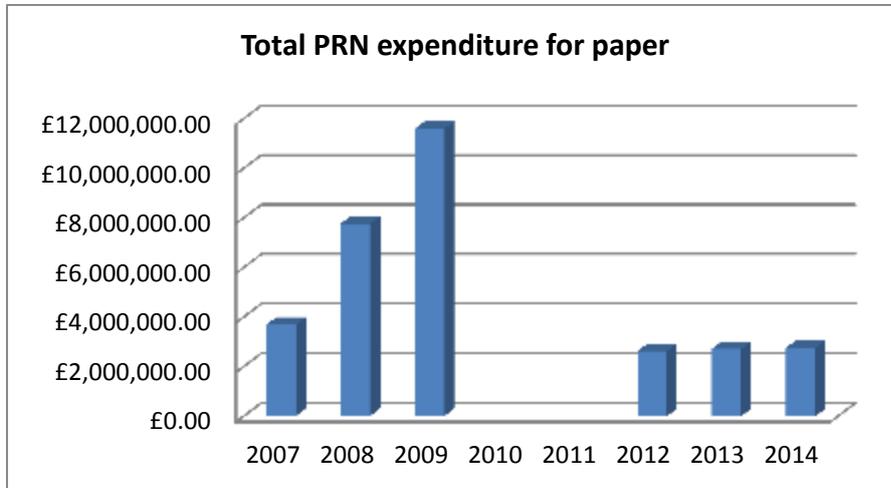
Notes to assist with understanding some of the graphs:

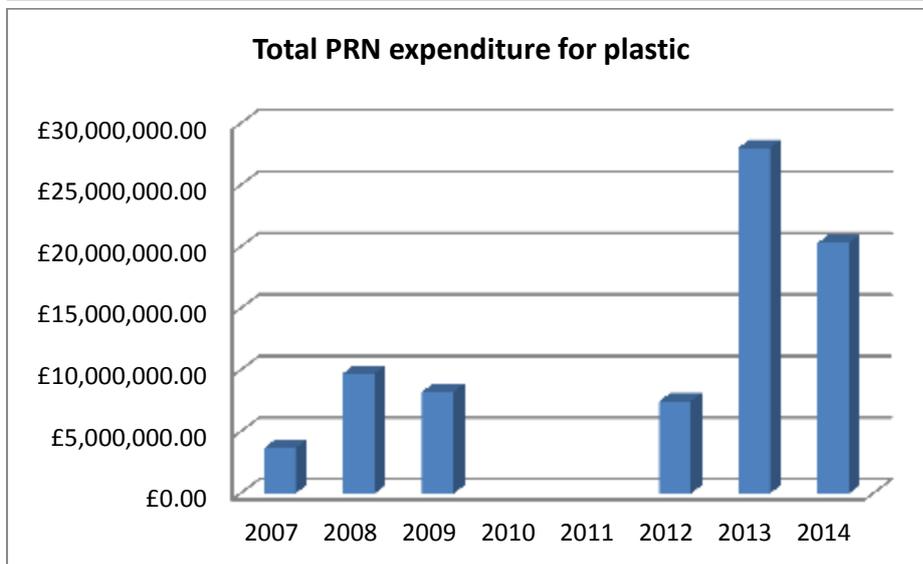
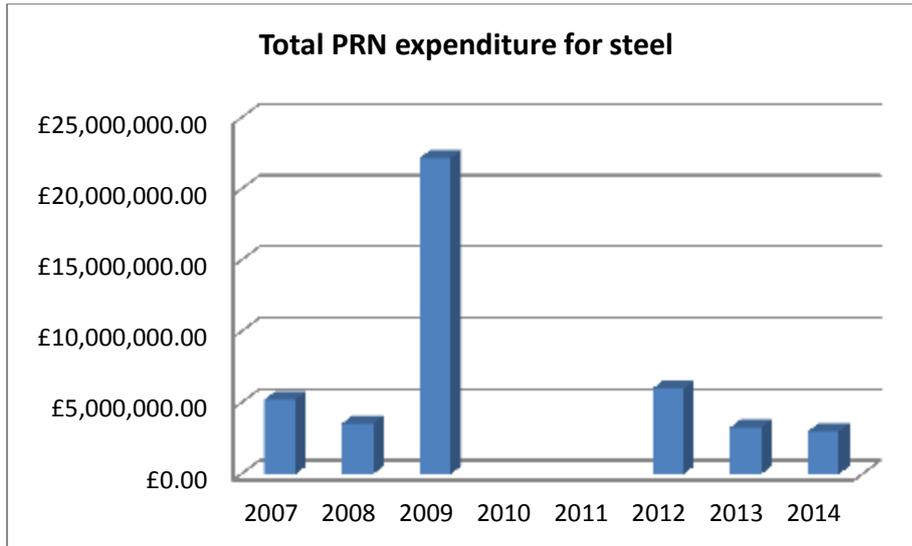
1. The requirement to report expenditure was introduced in 2007 and so records are only available from that date.
2. Material breakdowns are unfortunately not available on NPWD for 2010 and 2011.
3. The expenditure reporting categories have varied slightly since 2007. Categories for ‘developing new markets’, ‘complying with the regulations’ and ‘communication’ were only introduced in 2010, before then this expenditure was classified as ‘other’.

5.2. Total PRN expenditure

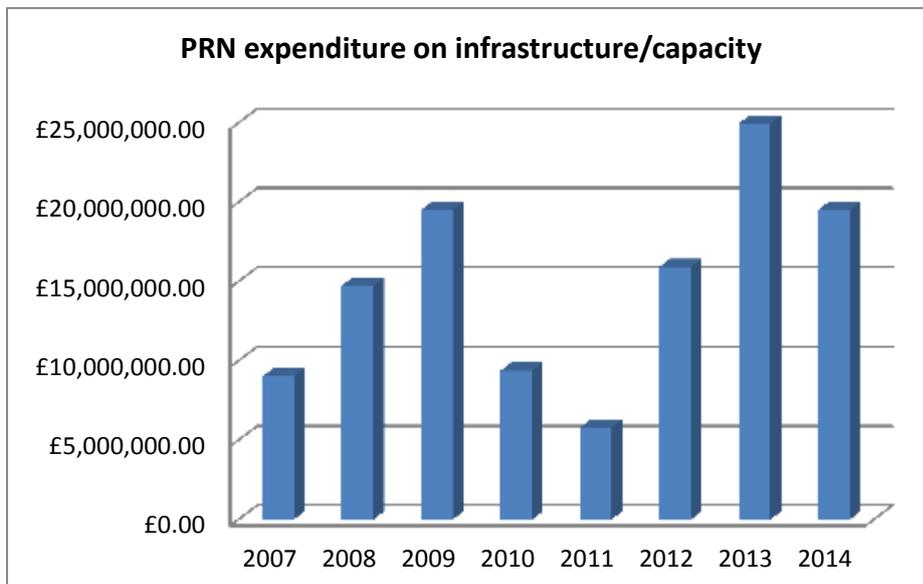


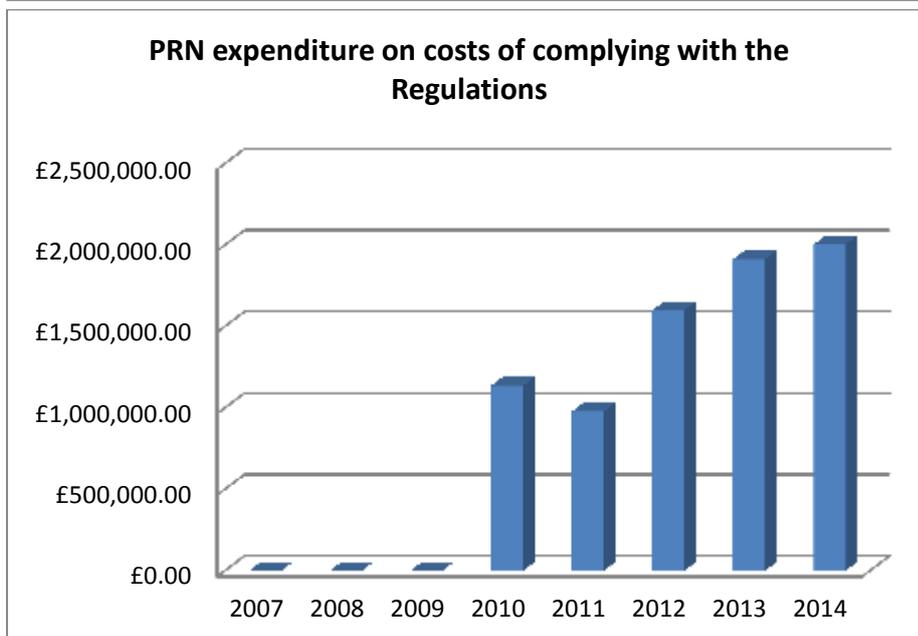
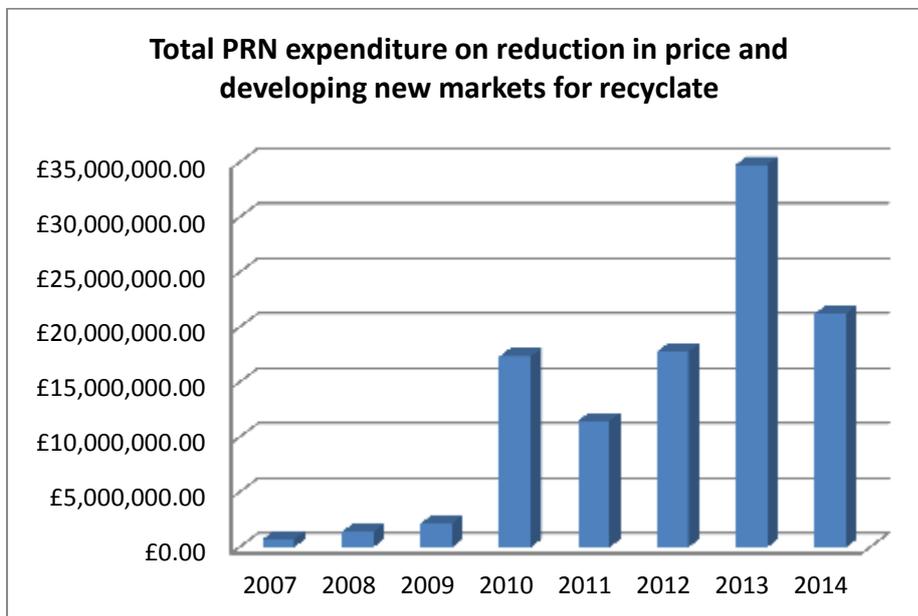
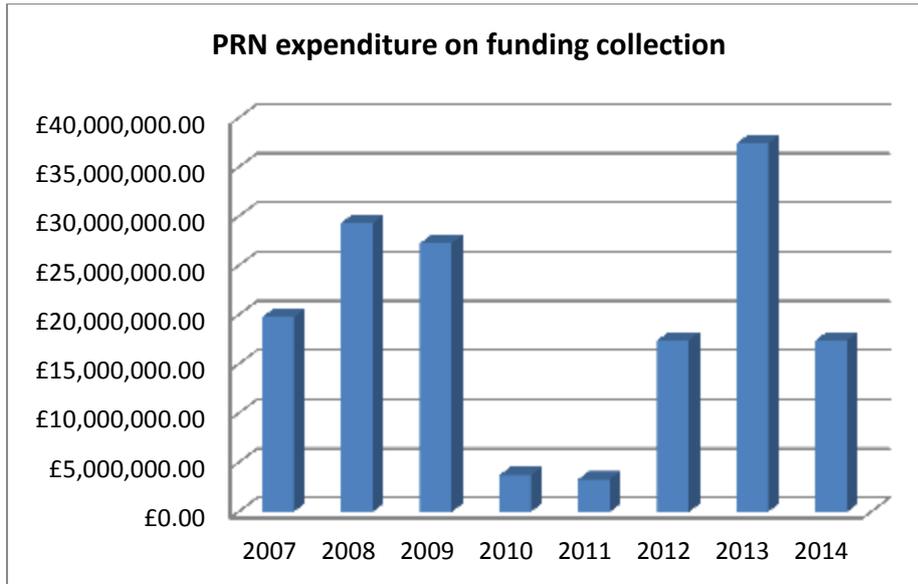
5.3.PRN expenditure by material

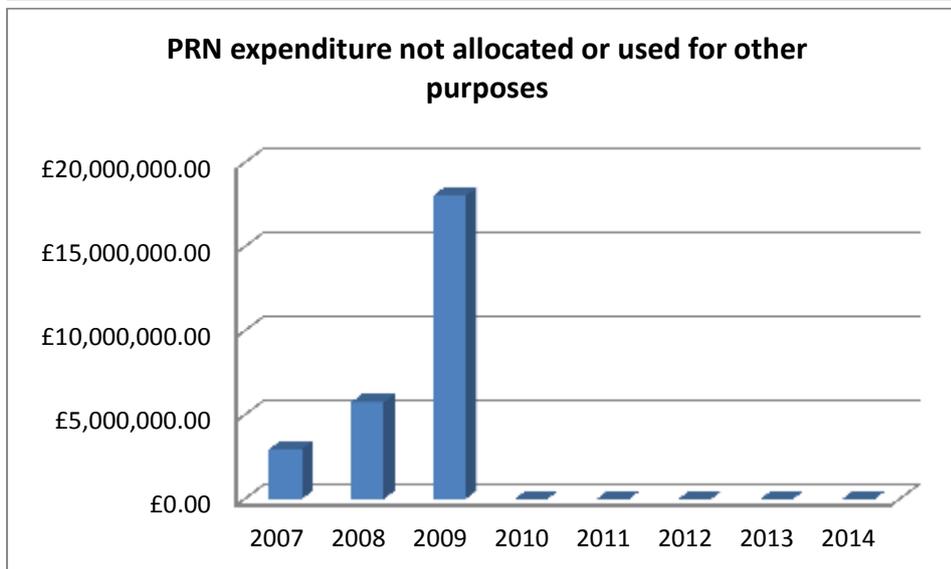
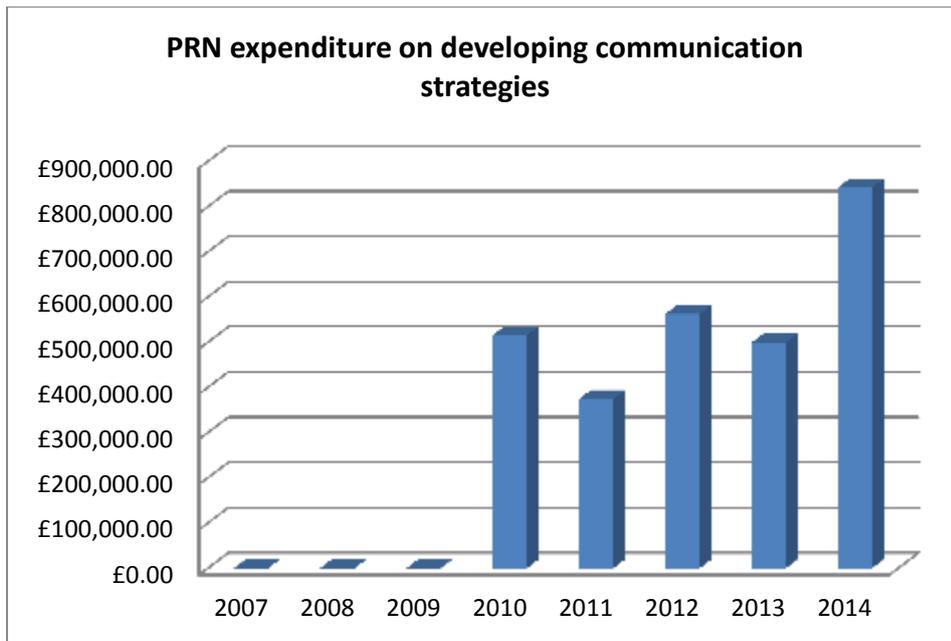




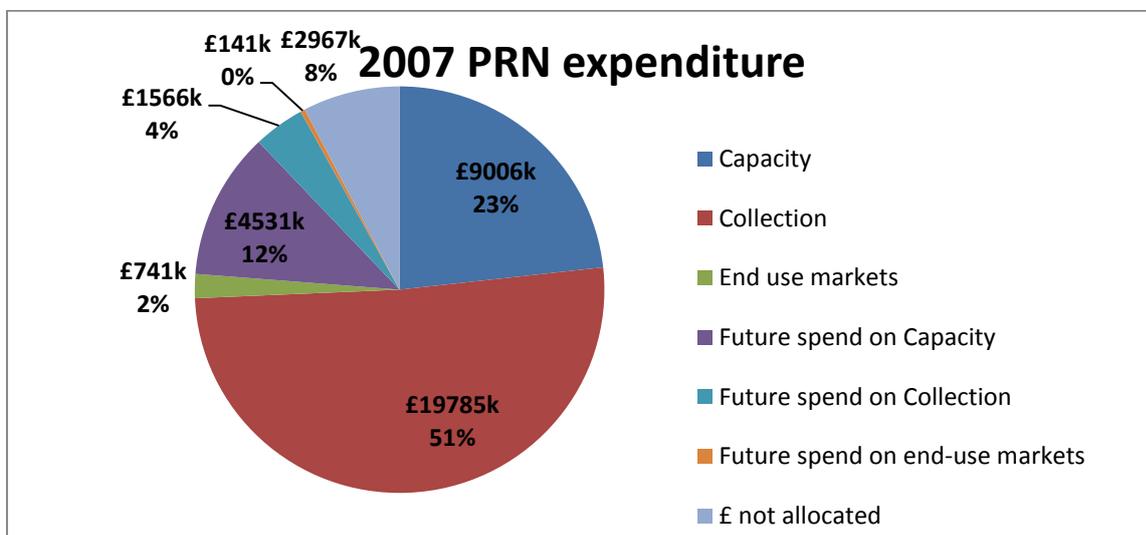
5.4. PRN expenditure by category

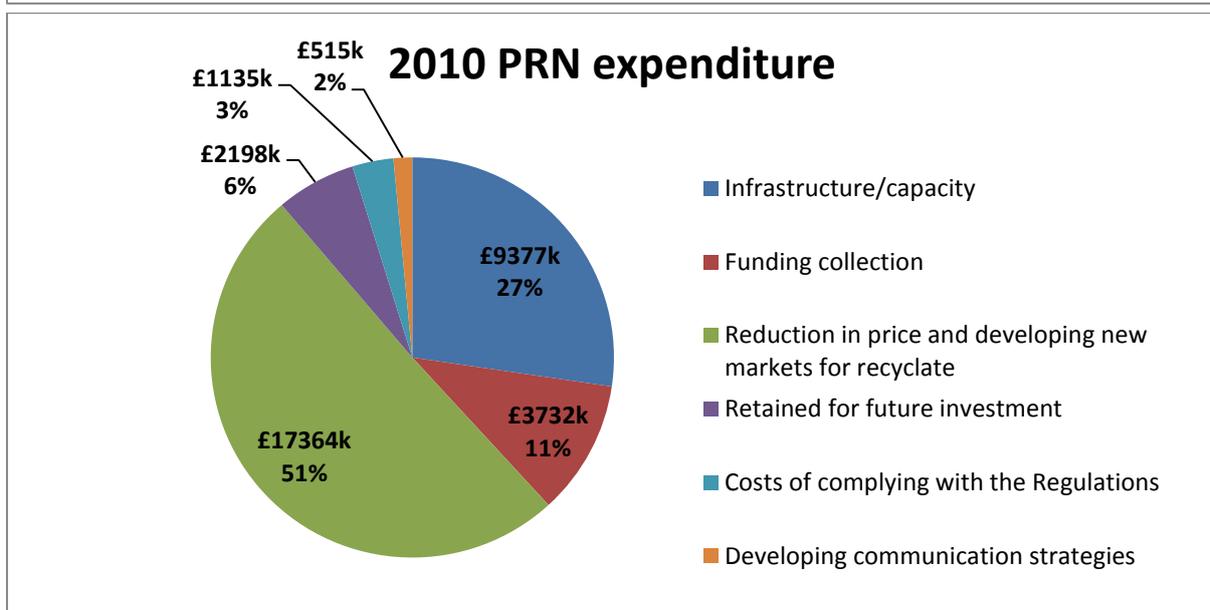
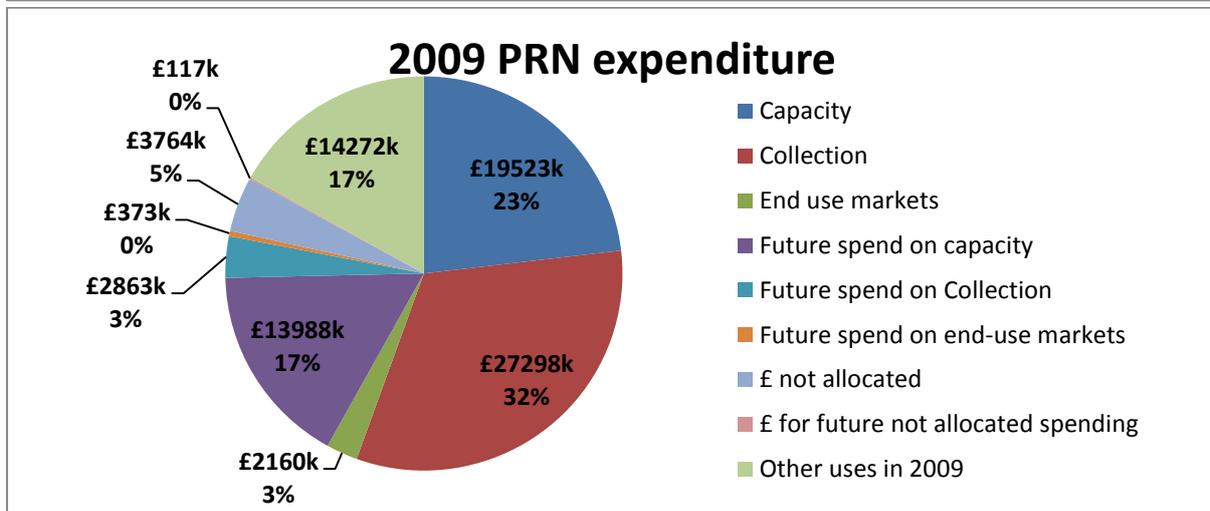
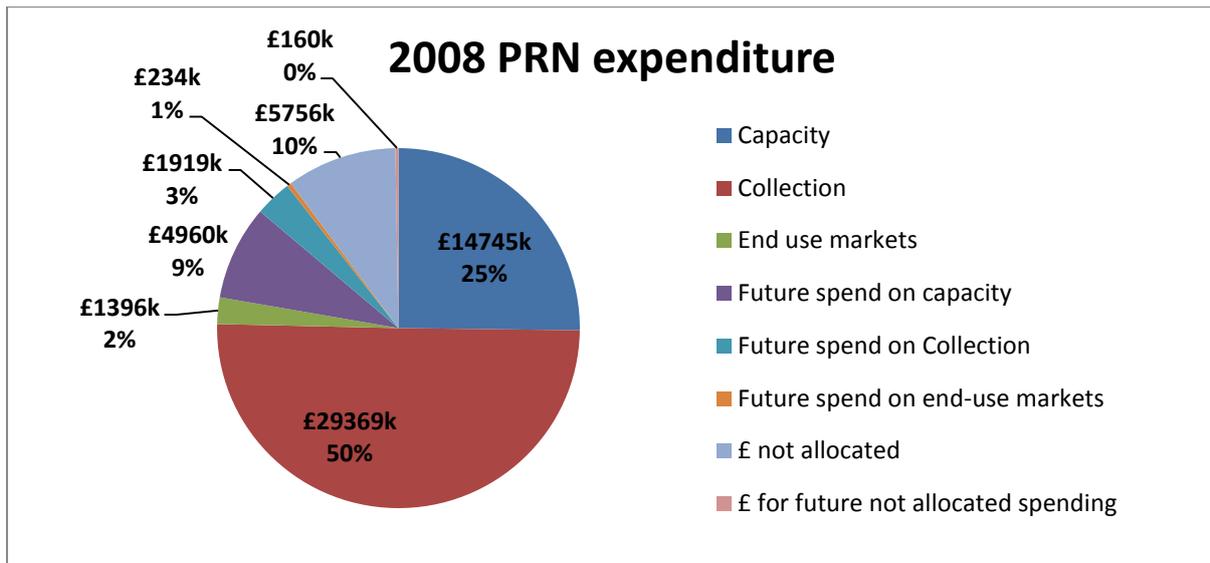


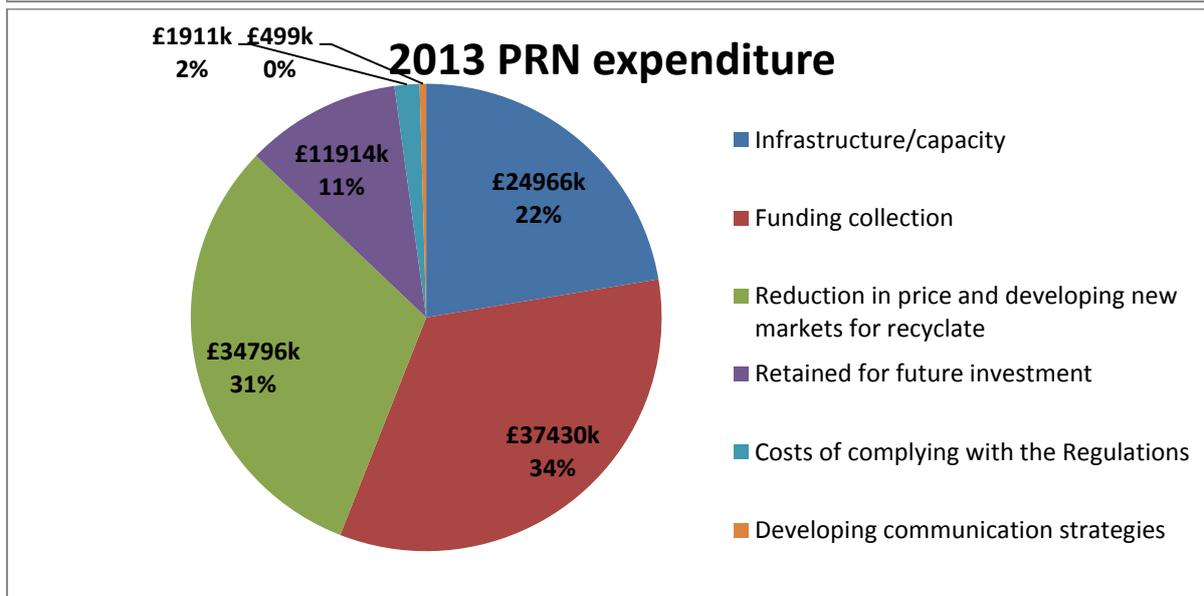
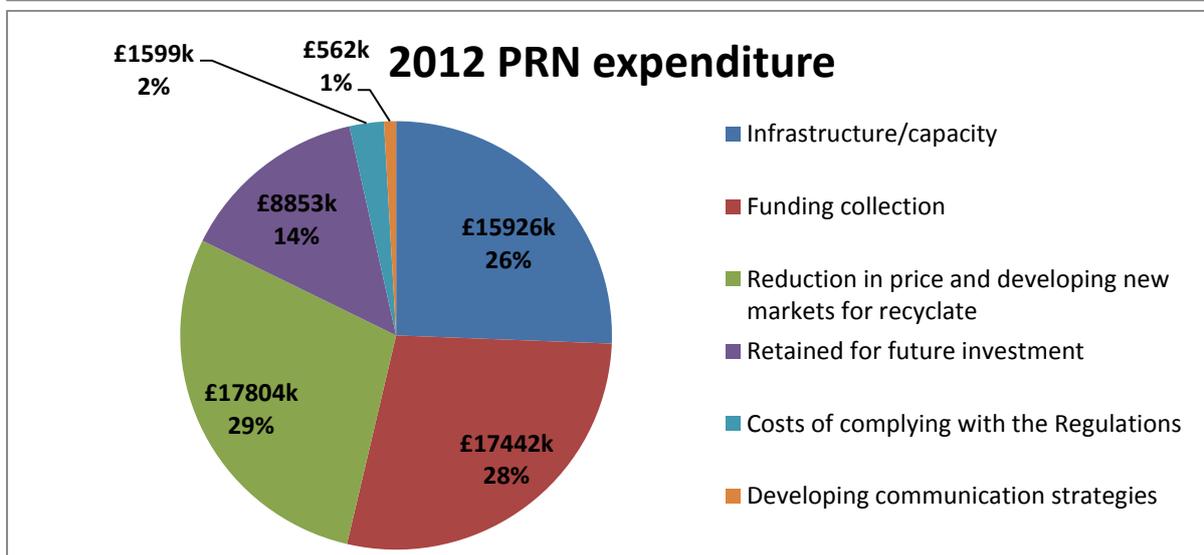
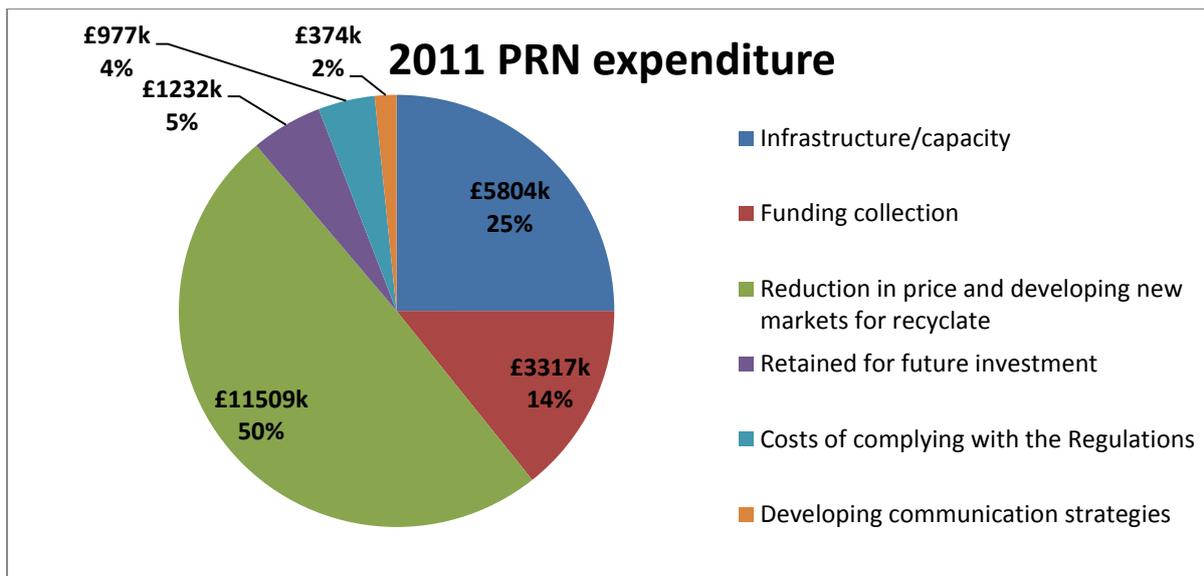


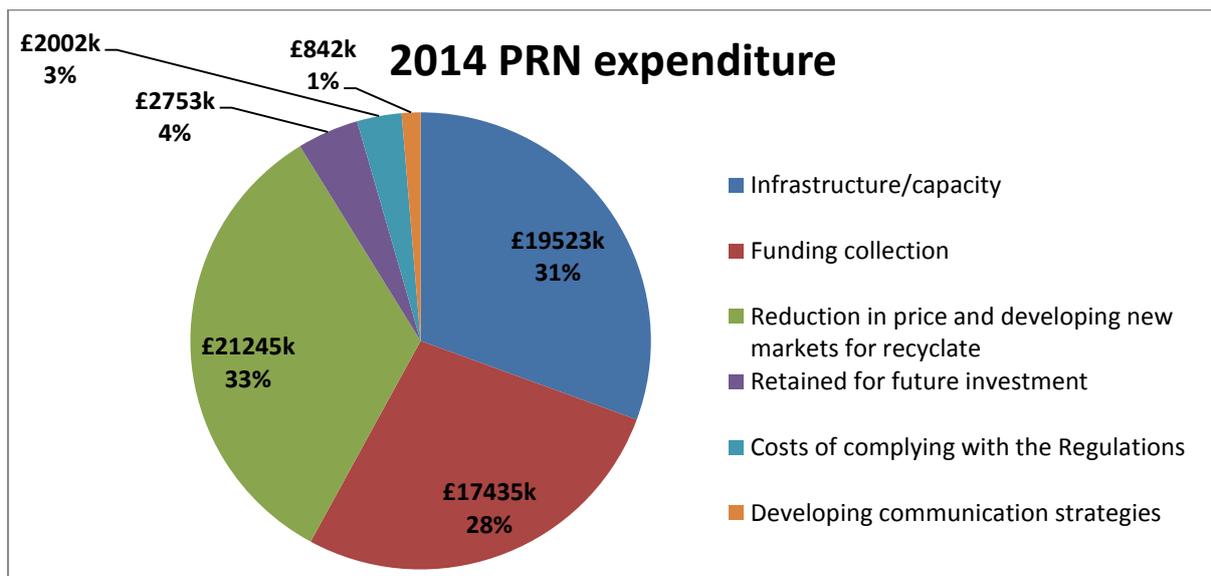


5.5. PRN expenditure breakdown per year









6. Benefits and Criticisms of the PRN System

This section describes some of the commonly mentioned benefits and criticisms of the UK system when compared to other implementation approaches used elsewhere in Europe.

Benefits	Criticisms
Provides low cost compliance to producers (and therefore consumers) compared with most other European alternative systems.	System does not specifically target given material sources, for example household packaging.
Offers producers choice of compliance options, either individual or via a number of competing schemes.	Funding can be difficult to trace and demonstrate impact, particularly for Local Authorities.
Proven to achieve national targets for Government.	Does not encourage national performance in excess of set targets.
Funds and provides strong and even levels of enforcement.	Does not guarantee absence of fraud or evasion of responsibilities.
Provides accurate national data for Government reporting to Europe.	Does not give preference to UK reprocessing over export unless a cost advantage.
Channels funds efficiently from producers to bottleneck recycling activity as necessary.	Can be subject to significant and unpredictable cost variations.
Allows for material export where market conditions or lack of UK capacity dictate.	Does not require all reprocessors and exporters to become accredited so can lead to underreporting of total recycling.

7. Regulatory Requirements

Guidance

Detailed guidance covering producer responsibilities, becoming a packaging producer compliance scheme and applying to be an accredited reprocessor or exporter is all available on gov.uk.

Key legislation regarding the EC Directive on Packaging and Packaging Waste can be found on the European Commission: Environment website.

The implementing UK Packaging Regulations and amendments can be found on legislation.gov.uk.

Timelines

Producers must ensure that registrations are completed on or before 7 April in the relevant year. If an applicant is to become a producer in relation to a certain year, they must make an application for registration within 28 days of the occurrence. An operator of a scheme must also inform the appropriate Agency in relation to occurrences such as changes in the named operator of the scheme and scheme material changes within 28 days also.

Applications for accreditation as a reprocessor or exporter must be made by 30 September in order for the accreditation to begin on 1 January the following year, subject to approval.

Charges and fees

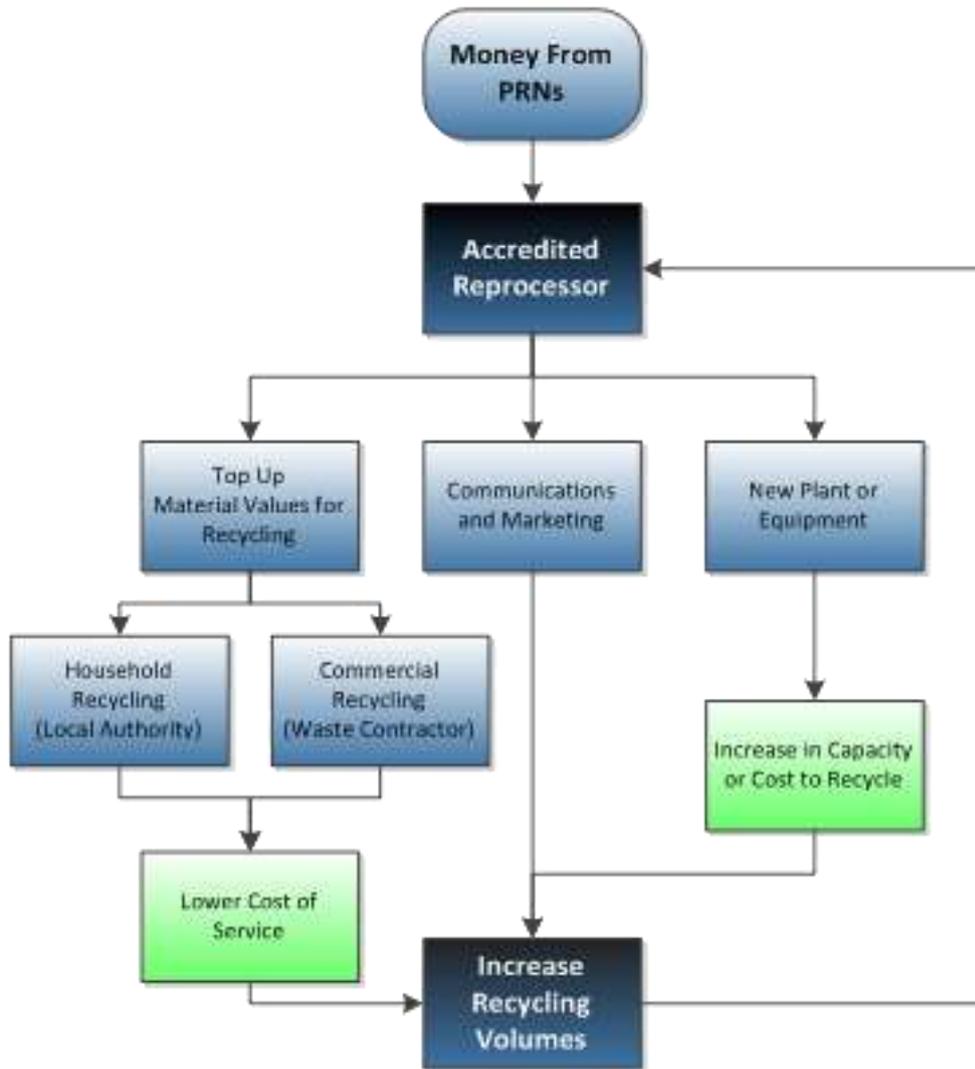
The Environment Agency has in place a producer registration fee of £564 for members of a compliance scheme, or £776 for direct registrants. There are also subsidiary charges in place for group registrations. Any resubmissions required by producers will be charged at an additional fee of £220.

Those who wish to be accredited as a reprocessor in the UK or as an exporter will be charged £505 if they issue PRNs/PERNs of not more than 400 tonnes per annum. Those who exceed this threshold will be charged £2,616 per annum.

8. Use of PRN Funds

8.1. General description

A key question that obligated companies ask is “what happens to the PRN money?” It is not possible to produce a fully audited analysis but this basic illustration gives a general idea of the flow of funds and how they are normally used.



8.2. Investment Case Studies

This section contains example case studies from a range of reprocessors and exporters showing the variety of uses for PRN funds.

Paper

DS Smith invests PRN revenues in a number of ways to help boost collection and reprocessing capacity

DS Smith is a leading provider of corrugated packaging in Europe and of specialist plastic packaging worldwide, operating across 34 countries. It employs 24,700 people, with a turnover of £4,035 million and is a constituent of the FTSE250.

The Company is organised into 4 Divisions, Recycling, Paper, Packaging and Plastics. The Recycling Division – that previously traded as Severnside Recycling is responsible for collecting paper fibre for its Group Mills.

Since the creation of the PRN DS Smith has used the PRN Funding to develop recycling in the UK in the following ways:-

- **Funding Collection Infrastructure**

Funding of capital investment of on-road mobile compaction vehicles which collect small quantities of recyclate and containers and balers placed at customer locations to increase the capacity for collecting recyclate at sites.



- **Increasing recycling capacity**

Infrastructure investment in the form of investment in its recycling depots situated throughout the UK.

- **Reduction in reprocessing costs & developing new markets**

Kemsley Mill has undergone significant investments eg a £35m investment programme to upgrade one of the machines in 2012/2013. That enabled the production of white and brown paper from recycled paper for use in corrugated boxes that delivered improved strength and printing characteristics so that customers could substitute virgin paper for recycled supply. The project also increased the machine's capacity by 10,000 tonnes.

In the wider market place this has led to a greater level of recycled corrugated paper usage in the UK market.

The Mill has also invested in equipment to be able to handle a greater proportion of mixed papers that has been generated from the increased collection of household papers.

News clip from Letsrecycle.com :-

DS Smith announces 104m investment for Kemsley mill

Packaging firm DS Smith announced a £104 million investment programme today for its Kemsley cardboard mill at Sittingbourne, in Kent.



- **Costs of Complying with the Regulations**

Application fees amount to £2,616 per year plus additional administration costs

- **Developing Communication Strategies**

DS Smiths Recycling Division promotes the greater use of recycling material. This is in keeping with the stated strategy of DS Smith Plc which is: "To become the leader in recycled packaging for consumer goods". Initiatives such as funding an exhibition trailer for a local authority so it could promote its recycling services and the Report.



The Power of Less[®] Report

Where packaging's role in a circular economy becomes clear

Launches 3rd March for download

“

\$1 trillion could be saved by organisations adopting circular business models

”

Plastic

Article from Intelligence: RECYCLED PLASTICS HELPED BY HIGH PRN PRICE, METALS SEE SOME PRICE RISES - 12 Oct 2015

Last week's Intelligence price report found a largely stable market for the price of recycled commodities, but with some price increases.

Plastics were supported by the higher PRN price for plastic packaging that rose dramatically by around £15. This meant that most packaging grades were unchanged in price, halting recent falls.

But in the case of LDPE 98/2, it actually led to a price increase of £5 per tonne.

Author: Paul Sanderson

Avanti Plastic Recycling

The bulk import of wine, for bottling in the UK, is now seen as a more cost-effective and environmentally sound alternative to bottling at source and then shipping. It can reduce CO₂ emissions and is a very efficient system of moving volume product of this nature. The wine is simply packaged inside plastic flexitanks, which sits within shipping containers and delivered to UK bottling plants.

Until recently, these huge plastic bags ended their life in a landfill site or exported to Asia for recycling, even though they contained residual wine. Now Avanti, working with bulk bag suppliers, has installed a reprocessing system which delivers an end-to-end solution for bulk bag recycling.

Avanti Environmental Recycling Division group senior development manager Paul Rendle-Barnes explains: "Our system extracts any leftover wine residue through the Avanti waste transfer station and then separates the varied layers constituting the bag. The next step is for the bag to undergo an automated hot wash. As part of Avanti's recycling and compounding process, this produces a high grade recycled polymer suitable for UK manufacturers to use in non-food applications such as bubble wrap, plastic bags and packaging films. The recycled plastic is then sold to supermarkets such as Tesco to close the loop and contribute to a circular economy.

The ongoing investment in our bespoke integrated wash line reprocessing technology has been significant, the financial support received from the Packaging Recovery Note [PRN] revenue has directly been invested in increasing capacity, and allowed business expansion to leap forwards ahead of anticipated organic growth.

An open loop recycling solution takes plastics away from landfill. Producing a new plastic item from recycled material uses only two-thirds of energy when compared to the energy it takes to make something from raw materials. Recycling just one tonne of plastic saves 16.3 barrels of oil, 98 million of Btus of energy and 30 cubic yards of landfill.

Choice Packaging Solutions Ltd – Plastic exporter

Choice Plastics is a long established exporter of plastic for recycling since June 1997 to markets in China, Vietnam, Malaysia, Thailand, India, The material is acquired from a variety of UK industrial

and commercial sources including waste management companies. When exported, Choice uses part of the income generated from PERNs to underwrite the value paid to purchase waste material so that the collectors can continue to operate and extract material from sources which would otherwise not be commercially viable.

Newport CH UK Ltd – Plastic exporter

Newport has collections in the UK of producing a grade of HDPE Color bottles + PP Trays. This mix grade needs to be sorted before being reprocessed & pelletized in PP & HDPE Colored. The resulting material is exported to reprocessors based in the south of France & in the North of Spain.

The PERN revenue is used permit to absorb part of the cost of the haulage and to deliver the material at a competitive price for the end-user and offset the additional processing costs. This operation would not be viable without the PRN system.

Steel

Tata Steel (UK reprocessor)

Tata Steel use revenue from the sale of Packaging Recovery Notes (PRN's) to further enhance the school curriculum. As a commitment to the future generation, Tata Steel visits schools and carries out recycling specific lessons which can be linked to the national curriculum. Pupils from all over the UK aged 7-18 have the ability to interact with a member of the Tata Steel Recycling Team. To date, Tata Steel recycling department has had direct contact with over fifty thousand students.

Many schools are keen to develop their knowledge of packaging recycling and sustainability in more detail and Tata tailors the School Recycling Workshops to give insight into the recycling of all packaging materials but with an emphasis on steel. Customers of Tata Steel are also able to request that a visit be made to a school within their locality as part of their community engagement activities.

Aluminium

Aluminium Reprocessors and Exporters Investing PRN Revenue to Boost Collection Levels

The Aluminium Packaging Recycling Organisation (Alupro) represents the producers, converters, packer-fillers and reprocessors/exporters of aluminium packaging in the UK. Alupro's reprocessor/exporters members use revenue generated from the sale of PRNs to fund membership subscriptions to Alupro, which in turn supports the development and delivery of programmes and behaviour change campaigns aimed at increasing the recycling of used aluminium, and all metal, packaging.

Alupro campaigns:

MetalMatters is the largest industry-funded communications programme in the recycling sector. The programme works with local authorities and their service providers to boost capture rates from kerbside recycling collections and so increase revenue derived from metal packaging collections.

Alupro has developed and managed the MetalMatters programme since 2012. By the end of 2015 MetalMatters campaigns had been launched in 57 local authorities, directly targeting over 3 million households with specific messages about why and how to recycle metal packaging.

Two leaflet drops, typically six weeks apart, inform and remind householders about the metal packaging they can recycle from home, and explain what happens to the metal after it is collected. The communications are tailored to fit with existing local authority or waste partnership-branded campaigns. In addition to the distinctive campaign leaflets there is an extensive range of communications materials available, meaning that a 'bespoke' campaign can be created and delivered, saving on the usual development costs. Campaigns typically cost around 27p per household. Thanks to the value of the additional metal packaging collected and landfill avoided, MetalMatters campaigns typically recover the financial investment within 12 months, delivering outstanding return on investment for local authorities.

MetalMatters helps local authorities communicate to residents about the benefits of metal packaging, but results from campaigns shows that the volume of all dry recyclables can increase as the result of a campaign. Detailed case studies are available at www.metalmatters.org.uk

Every Can Counts is the beverage can industry's programme to encourage consumers to recycle the drinks cans they use outside the home. Developed by Alupro in 2009 the programme offers advice and practical support to organisations wanting to start or improve their recycling. The Every Can Counts brand is being used by the beverage can sector, and drinks can fillers, as the main brand for promoting drinks can recycling in workplaces, universities and at events in 10 countries across Europe. For more information visit www.everycancounts.co.uk

LearningAluminium.co.uk is a resource hub for teachers and pupils, providing interactive teaching materials and activities for children aged seven to 14. Resources include the [Alu D&T Challenge](#), which links aluminium to the Design & Technology curriculum for 11-14 year olds. The Challenge features a national competition which Alupro project manages on behalf of the wider aluminium industry, and gives students the chance to share their ideas for using aluminium in a design for a sustainable building, vehicle or packaging solution. For younger children the Aluminium Lifecycle

explains the endless recyclability of aluminium packaging, as experienced by three animated characters.

Glass

Biffa invests £3.1m in MRF glass cleaning – June 2015

Biffa has invested £3.1 million into glass cleaning technology at its two 'super' MRFs at Aldridge in the West Midlands and Edmonton in North London, aiming to boost material quality and "reduce the risk presented by the volatile onward glass market".

Biffa's Aldridge MRF has had glass cleaning and fibre optic sorting technology installed to boost the quality of its glass output. The multi-million pound investment has seen upgrades made to the two materials recycling facilities, enabling the output of glass from commingled material to be cleaned to produce "a better grade of glass" while ensuring "increased and sustainable profitability and growth for the business".

According to Biffa, the new cutting-edge equipment will help the company to "create demand in and target new markets, as well as open up new sales channels for the business".

Describing the complex process of glass recycling as "one of the most problematic areas of waste management faced by the sector", the firm said that the upgraded technology would enable the firm to reduce levels of contamination often found in the material.

With mixed MRF glass commonly commanding gate fees as high as £30 at present, Biffa hope that better cleaning of its own MRF glass will "significantly" boost the quality of its output to reprocessors, thereby boosting revenues by lowering or even removing its gate fee for the material

The Edmonton MRF is licensed to process up to 350,000 tonnes of mixed recyclables annually, a maximum of around 95,000 tonnes of which is glass. It also handles a further 150,000 tonnes a year of mixed recyclables through its waste transfer station.

The Aldridge MRF, meanwhile, has the capacity to process up to 300,000 tonnes of mixed recyclables each year. Of this material, the MRF is able to process up to around 65,000 tonnes of glass each year.

In addition, the upgrade at the Aldridge MRF has also seen the installation of NRT fibre optical sorting technology designed by Bulk Handling Systems (BHS), which according to Biffa is 'first design of its kind in Europe'.

The optical sorting technology removes paper fibres from the glass, which has enabled Biffa to increase its fibre recovery by 7% at the facility.

With thanks to letsrecycle.com for inclusion of this article

Beatson Clark increases capacity with amber glass furnace – December 2014

Glass packaging manufacturer Beatson Clark has increased its capacity to reprocess glass cullet with the opening of a new amber glass furnace at its site in Rotherham, Yorkshire.

The company has replaced its former amber furnace with one which has a melting area which is more than 6m² larger and can produce around 200 tonnes of glass per day. It was developed in response to growing demand for amber glass from the craft beer market, both in the UK and overseas.

Approximately 40% of the company's amber glass is produced from recycled glass – otherwise known as cullet – including material collected under Beatson Clark's contract to manage recycling collections in Rotherham, which was renewed earlier this year.

Beatson Clark produces glass packaging for a number of niche markets including the pharmaceutical industry and food and drink sector and its glass is used to make products for household brands including Bell's Buttercup, Lyle's Golden Syrup and Lemsip.

The amber furnace is part of a £10 million investment in plant and equipment by Beatson Clark in plant and equipment at its South Yorkshire site this year. While the company said it no longer receives packaging recovery note (PRN) income directly, as this is received by the processors, it acknowledged the role that PRNs play in growing the market for recycled glass cullet, which in turn has helped to increase the recycled content of the containers it produces.

The PRN system requires packaging producers to pay towards the costs of recycling packaging by buying PRNs from accredited reprocessors and exporters.

However, the company said it wished that all PRN income for glass was channeled entirely into re-melt to incentivise the activity, as opposed to the recycling of glass into aggregates. Ms Taylor said that if this happened: "there would be more available quality cullet in the UK, thereby increasing the recycled content of our containers – reducing the amount of raw materials we use and helping to reduce emissions, as the cullet melts at a lower temperature."

Beatson Clark operates a recycling plant on Greasborough Road, which employs nine people, receives 6,240 tonnes of metal, textiles and glass from Rotherham every year, of which 4,734 tonnes are glass.

The glass is recycled and used to make new bottles and jars at the Rotherham factory, while the textiles are sent to Bag It Up who support the Great Yorkshire Air Ambulance charity and metals are recycled at Morris & Co and Alutrade.

With thanks to letsrecycle.com for inclusion of this article

Recresco glass recycling plant set for Kent – April 2013

Glass recycler Recresco has announced that it is currently developing a glass recycling plant on an industrial site in Swanscombe, near Northfleet in Kent.

The three-acre development is being supported by a 5.5 million finance package from bank HSBC and will be the firm's fifth UK plant, following Recresco plants at Ellesmere Port, Southampton, Cwmbran and at its head office of Nottingham.

The plant will be able to take 40 tonnes of glass an hour for cleaning and sorting, before removing materials such as ceramics and paper to produce furnace ready cullet to distribute to glass manufacturers. Clear and brown glass will remain predominantly with UK manufacturers and green glass will be exported to European glass producers.

Recresco will create 40 new jobs as a result of the expansion and expects the plant to help increase its current turnover of 18 million a year to more than 28 million, according to HSBC. Export sales of processed glass currently account for a quarter of Recrescos sales, but it expects this to increase to 50% as a result of the Swanscombe plant.

Recresco was started in 1978 by Alan Gent and is now managed by his four sons. As well as glass, the firm also processes cans, plastic and Tetrapak and currently employs 120 people.

Recresco director, Tim Gent, said: This processing plant will be best in class, with 90% of what we put into the process ending up as furnace ready cullet that we can distribute to manufacturers. We learn something new from each plant we develop so the Northfleet plant is the culmination of many years' experience and hard work.

With thanks to letsrecycle.com for inclusion of this article

Waste Management Companies (provided by Biffa)

PRN Price Support

The function of price support within the PRN system allows reprocessors to direct funds down the collection chain into a different area other than just infrastructure projects. On the surface the benefits of this option may not be apparent, however the option has a major role within the system.

Price support would typically be used to top up the commodity value paid to collectors for a particular material so that the reprocessor may attract more material of a certain grade required for their operation. In the case of inherent low value commodities such as mixed glass cullet, the PRN price support becomes the only real element of value attributed to the glass, which would otherwise be a cost material without PRN support.

An example of this price support delivering benefit could be seen in action during the 00's, when landfill tax was at a much lower level compared to current rates. At that time the incentive for commercial businesses, in particular SME's to recycle was greatly reduced as the cost of an additional recycling service and the time to sort recycling often had negligible benefit compared to the convenience of using one bin. For waste management companies, setting up a new recycling collection service needs investment, as this often leads to an increase in headcount, a requirement to purchase a bespoke truck, containers, fuel and associated costs to promote and implement the new service. The role of price support to create some value in mixed glass cullet at that time meant that waste management companies were able to offer a commercially viable service to separately collect mixed glass bottle cullet from commercial premises and therefore deliver a solution which would encourage companies to segregate their business waste. Without the PRN price support, this type of recycling service would probably not have been implemented at that time as it would have been too expensive.

9. Impact on Local Authorities

9.1. The local authority role

Local authorities do not have any specific duties or requirements within the Producer Responsibility legislation on packaging. However given that a large proportion of household waste is packaging the collection systems that local authorities have put in place can help recycle packaging and enable the UK to meet the targets that have been set.

In the UK the way in which the regulators know how much packaging has been recycled and if the targets have been met is through PRN's. For each tonne of packaging recycled one PRN can be issued to someone who has an obligation under the Packaging Regulations or to one of the packaging compliance schemes.

Local Authorities do not issue PRNs directly and do not receive them either. However they are a key player in the supply chain, being responsible for all household collections and sorting of the materials that the PRN relates to. The revenue raised by sale of PRNs can be reinvested to improve recycling infrastructure and the collection and sorting systems run by local authorities.

9.2. Impact on local authorities

The current PRN system has resulted in a number of concerns for local authorities. Lack of transparency is the primary concern. The system is designed to fund expansion of collection and reprocessing capacity, but because the system is not transparent, it is unclear if or how the funds are being invested in collection.

In the past, local authorities have been told that PRN money has supported the price of materials they sell to reprocessors. However details regarding the level of price support have not been widely known. It is hoped that this PRN System Guide will go at least some way to addressing these concerns.

In addition the total funding available through PRNs at around £50m to £100m per year is probably lower than many Local Authorities expected. This suggests that there is likely to be limited scope for the PRN system to directly fund increased collections or infrastructure.

Further, the current system may not necessarily capture all the evidence from material that has actually been recycled. It is thought that some PRNs might not be issued because the values of some materials PRNs are not high enough to cover the administrative cost involved: for example a tonne of steel might have been recycled, but the PRN that would prove it might not be issued.

Given that PRNs are producer responsibility legislation, local authorities have expressed the view that producers should be assisting them to expand collection and sorting services, rather than authorities funding it entirely themselves through their diminishing budgets. This support will become increasingly important as local authorities are extremely likely to become self-funding in the next few years. It is also noted that whilst support to help with collections is important, many Local Authorities are also working towards providing residents with collections of similar types of materials which is likely to assist in increasing recycling rates.

There is no mechanism by which local authorities can bid for PRN funding, so it remains at the discretion of reprocessors and exporters to allocate the funds as they see fit according to market

circumstances. This very rarely results in direct funding to local authorities so little visible direct benefit is occurring as a result.

9.3. Wider Implications & opportunities

With future increases in recycling likely, more household waste will be required for collection and thus more packaging materials recycled. With diminishing funding available to support household recycling at such high levels, greater alignment of packaging and household recycling targets could offer a mechanism for this to be realised.

10. The Advisory Committee on Packaging (ACP) and its Membership

The Advisory Committee on Packaging is an industry committee formed to advise the Government on packaging policy. It is appointed by the relevant Defra Minister for a 3 year term.

The current committee is chaired by Phil Conran from 360 Environmental and has 13 industry and Local Authority members:

Alison Bramfitt, Nestle	- Filler
Gordon Henman, Kingfisher	- Retailer
Andrew Bird, LARAC	- Local Authority
Roger Walton, Dover DC	- Local Authority
Rebecca Cocking, British Glass	- Trade body
Garvin Freeman, TATA Steel	- Reprocessor
Jonathan Short, Plastics Eco	- Reprocessor
Rick Hindley, Alupro	- Trade body
Simon Weston, CPI	- Trade body
Martin Cooper, Suez	- Waste Management Company
Simon Stringer, NIPAK	- Compliance Scheme
Adrian Hawkes, Valpak	- Compliance Scheme
Andrew Speck, Havi Global	- Packaging Consultant

Committee meetings are also attended by representatives from:

- WRAP
- Environment Agencies (EA, SEPA, NIEA, NRW)
- DEFRA and Devolved Administrations
- The Department for Business (BIS)

In 2015 the committee has established three Task Forces to consider specific subjects for improvement:

Task Force 1 (Andrew Bird Chair) – Consider how the Packaging Regulations could assist in the UK meeting the 2020 household waste recycling targets.

Task Force 2 (Adrian Hawkes Chair) – Consider opportunities to make PRN revenue flows more transparent.

Task Force 3 (Phil Conran Chair) – Consider packaging related opportunities to complete the circle as part of the debate on the revised EU Circular Economy Package.

An operational Technical Liaison Group (TLG) has also been set up that will meet on an ad hoc basis when issues arise that need round table discussion. Chaired by the ACP, this includes ACP members, representative from other relevant industry bodies, the 4 Agencies and Defra

Agenda and minutes of meetings are held on NPWD:

<https://npwd.environment-agency.gov.uk/Public/GenericContent.aspx?CategoryId=595F40C2-76C4-49E3-8FC8-396CCDB77A9E>

11. Useful Links

Department for Environment and Rural Affairs/Environment Agency:

<https://www.gov.uk/guidance/packaging-producer-responsibilities>

Packaging Regulations:

<http://www.legislation.gov.uk/uksi/2007/871/contents/made>

Essential Requirements (Packaging) Regulations:

<http://www.legislation.gov.uk/uksi/2013/2212/regulation/2/made>

Scottish Environment Protection Agency:

<http://www.sepa.org.uk/regulations/waste/packaging-waste/>

Northern Ireland Environment Agency:

<https://www.doeni.gov.uk/articles/producer-responsibilities-regarding-packaging-waste>

Natural Resources Wales:

<https://naturalresources.wales/apply-for-a-permit/waste/packaging/?lang=en>

Advisory Committee on Packaging:

<https://npwd.environment-agency.gov.uk/Public/GenericContent.aspx?CategoryId=595F40C2-76C4-49E3-8FC8-396CCDB77A9E>

Compliance schemes public register:

<http://npwd.environment-agency.gov.uk/PublicRegisterSchemes.aspx?ReturnUrl=%2fPackagingPublicRegisterLinks.aspx%3fReturnUrl%3d%252fdefault.aspx>