



UK Household Plastics Collection Survey

2018

A publication to outline the collection
of household plastics in the UK.



UK HOUSEHOLD PLASTICS COLLECTION SURVEY 2018

This work was commissioned by RECYcling of Used Plastics Limited (RECOUP) using data, estimates and views gathered from UK Local Authorities and waste management companies. It also has the support of LARAC (Local Authority Recycling Advisory Committee).

The content and analysis contained in this document is based on the information received. While every effort has been made to ensure the accuracy of the contents of this report, RECOUP can accept no responsibility or liability for any errors or omissions. Opinions expressed and recommendations provided herein are offered for the purpose of guidance only.

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RECOUP is a charity and leading authority providing expertise and guidance across the plastics recycling value chain. Built on a network of valued members, collaboration is central to our activities, and we are committed to securing sustainable, circular and practical solutions for plastic resources both in the UK and world-wide.



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KEY DATA

Plastics Packaging Placed on the Market

- **2,260,000** tonnes of plastics packaging placed on the market
- Of these **1,119,000** tonnes of rigid plastics packaging consumed by households – **594,000** tonnes of plastic bottles and **525,000** tonnes of plastic pots, tubs and trays
- **New research** will provide revised estimates of the quantity of plastics packaging placed on the market

Plastics Packaging Collections Data

- Increases continue in reported household plastics packaging collections- plastic bottles increasing by the biggest annual total for **3 years**
- **527,010** tonnes collected for recycling- an overall **2.8%** increase
- **351,907** tonnes of plastic bottles- a **2.5%** increase
- **175,103** tonnes of plastic pots, tubs and trays – a **3.5%** increase

UK Plastics Packaging Recycling Data

- **1,044,363 tonnes** of plastic packaging declared as recycled from all sectors in 2017 – with **2,260,000** tonnes placed on the market this is a recycling rate of **46.2%**
- **66%** was exported and **34%** was recycled in the UK
- The **527,010 tonnes** of rigid plastic packaging collected for recycling from UK households makes up **just over 50%** of the total plastics packaging recycled
- The remaining **1,215,637 tonnes** is not collected for recycling and therefore goes in to landfill or energy recovery end destinations

Scheme Type and Plastic Format

- Bottles make up **67%** of household plastic packaging collections- pots, tubs and trays make up **33%**
- There is **new evidence** that there is an unaccounted number of plastic bottles in the plastic pot, tub and tray stream, and more research is needed to assess how this affects the quantities reported and collection rates for each plastic format

Household Plastics Packaging Collection Rates

- **59%** Plastic bottles
- **33%** Plastic pots, tubs and trays
- **47%** Rigid plastics packaging overall

Kerbside Plastics Collection Service Provision

- **391** Local Authorities in the UK
- **387 (99%)** Local Authorities offer a kerbside recycling collection service that includes plastic bottles- just **4** do not offer a kerbside collection service for plastic bottles, but all aim to have a service in place by 2019
- **310 (79%)** Local Authorities in the UK provide a kerbside service for collecting plastic pots, tubs and trays – there were **12** new kerbside collection services reported in 2017
- **67 (17%)** Local Authorities collect plastic film – **26** of these specifically state they only accept empty carrier bags for this service (**7%** of the Local Authorities in the UK) and **41 (10%** of Local Authorities) accept all types of plastic film

Performance Rate - Average Collection Rates per Household per Year

- Plastic bottles- **11.92 kg**
- Plastic pots, tubs and trays – **7.69 kg**
- All plastics packaging – **19.61 kg**

Facts & Statistics

- **13 BILLION** plastic bottles are used each year in the UK- that's **36 MILLION** every day – **1.5 bottles per household**
- Over **7.7 BILLION** plastic bottles were collected for recycling in 2017- that's nearly **21.2 MILLION** bottles every day
- Over **5.3 BILLION** household plastic bottles were not collected to be recycled from UK households- that's over **14.5 MILLION** plastic bottles every day
- Average UK household uses nearly **480** plastic bottles a year, but recycles just over **280** of them – around **200** bottles are not collected for recycling
- Since 1994 there has been nearly **80 BILLION plastic bottles** collected for recycling- that's over **3.5 MILLION tonnes**
- There were just over **9,000 tonnes plastic pots, tubs and trays** being collected when collections levels were first reported, and this has now reached nearly **175,000 tonnes**- in total there has been nearly **1.2 MILLION tonnes** collected

Budget Cuts

- **47%** of Local Authorities reported they had received budget cuts for providing waste and recycling collections or delivery of communications to householders about waste and recycling – this was **13%** in 2015

Kerbside Collection - Containers & Frequency

- **13%** of Local Authorities, who responded, report there been a change in collection service frequency in the last 3 years
- Changes generally delivered positive results- **64%** increased collection quantities and **92%** reduced costs
- **75%** of Local Authorities use fortnightly recyclables



collections, with **22%** using weekly collections

- Three and four weekly collections are increasing – 15% of Local Authorities, who responded, report they are looking at moving to **3 weekly or 4-four weekly residual collections**

Treatment of Residual Waste

- Reported destination of residual waste- **50%** to EfW, **29%** to landfill, **12%** to RDF and **9%** to recycling
- Significantly more material is going to EfW – this was **36%** in 2016
- **89%** of Local Authorities reported they were not investigating or implementing the recovery of plastics from the residual stream- there was a general frustration that investigation of different treatment options couldn't be taken further

Litter & Disposal 'On-the-Go'

- **49%** of the 391 Local Authorities in the UK provide **recycling 'On-the-Go'** collection units in public spaces
- **75%** of Local Authorities reported material collected for recycling 'On-the-Go' is sent to a MRF for processing- a significant quantity is expected to either be rejected or mixed in with kerbside material to 'hide' high levels of contamination
- Location of **litter bins** were reported as **22%** from main

shopping streets, **19%** secondary shopping streets, **20%** public open spaces, **19%** near schools, **15%** residential areas, and **5%** sea front locations

- **85%** of Local Authorities reported they consider the severity of litter to be **'manageable with current resources'** – this is due to a range of reasons
- Litter and fly-tipping are an equal challenge for **66%** of Local Authorities, with **19%** fly-tipping and **15%** litter reporting as their main challenge
- **Challenges** highlighted by Local Authorities include increasing population, consumer behaviour, need for more consumer communications, importance of well-designed bins, approach to litter enforcement, funding cuts, and the need to create efficiencies
- **Problem locations** include sea fronts, town and city centre night-life, roads alongside bring sites and business waste
- There is very limited data of **collection quantities** from recycling 'On-the-Go' units, litter and street sweepings
- **Significant benefits** were reported to having a

harmonised comprehensive 'On-the-Go' collection provision, for both litter and recycling

- **Operational resourcing and costs** can outweigh any potential benefits to 'On-the-Go' collections – staffing, budget for bins and maintenance, fit for purpose sorting facilities, and a means of segregating recycling from other materials in street cleansing vehicles
- Local Authorities cited contamination levels (**54%**), cost and resources (**38%**), and other reasons (**8%**) for not providing a recycling 'On-the-Go' collection bins
- If **funding** were to be made available to increase existing 'On-the-Go' collection provision **57%** would use the funds in the full range of options needed to deliver an effective scheme, **25%** solely in delivering communications and education to engage the public, **8%** to increase recycling and litter bin provision, **5%** for scheme servicing and maintenance costs, with **5%** citing other areas

Recycled Plastics Markets

- **Restrictions** on the import of plastics for recycling have changed market conditions creating a "perfect storm over waste exports" – many countries announcing **tough new inspection regimes and a temporary ban on plastic waste**
- Those who are still moving material found that **quality is key**
- Positively, demand for recycled plastics is increasing with companies wanting to use more recycled content
- Average mixed plastic bottle price in 2017 was **£110** per tonne
- In 2017 the average price per tonne of clear PET plastic bottles was **£158**, natural HDPE plastic bottles **£395**, mixed HDPE **£134**, and Polypropylene pots and trays **£150**
- The plastic bottles collected for recycling represented a potential total value in 2017 of around **£38 million**
- The unrecycled plastic bottles not collected for recycling would have a potential value in 2017 of nearly **£27m** and would cost over **£22m** to dispose of
- Costs for disposal of plastic pots, tubs and trays not collected for recycling is somewhere between **£32m** and **£56m**

Behaviour Change & Consumer Communications

- **49%** Local Authorities reported in 2017 they were planning a communication to householders about plastics recycling – this was **37%** in 2016



- **74%** of Local Authorities reported they are focussing communications on **increasing collection rates** and **reducing contamination**, with **17%** are focussing solely on reducing contamination
- Local Authorities cited reduced funding, misleading national media stories, language barriers, difficulty in providing evidence on the success of campaigns, and restrictions of using only social media communications as **barriers to effective recycling** by residents
- The **basic messages are still not getting through**- successful communications to residents should be planned as a long-term programme of campaigns
- RECOUP's national plastics recycling initiative Pledge 4 Plastics has been given a new look! Now known as **Pledge 2 Recycle Plastics**, it will continue to provide resources and be a catalyst in supporting consumer communications in plastics recycling across the UK.
- **91** Local Authorities reported they would be interested in a **match funded partnership** to deliver a **Pledge 2 Recycle** campaign to its residents – **16** more than in 2016
- Several successful campaigns have already been carried out under this new branding centred around **'cutting the confusion'** of plastics recycling and **educating the consumer about the recycling journey**. The campaigns have so far included community roadshows, leaflet campaigns and a student design challenge and fashion show.
- **17** Local Authorities are planning to involve **retailers** in communications to householders

European Plastics Recycling Ambitions & Current Status

UK

- The Government launched its **25-year Environment Plan** in January 2018- waste was one of the key focus points and a range of actions and policies were outlined to minimise waste, reuse materials and manage materials at the end of their life to minimise the impact on the environment
- The **UK producer responsibility system** in the UK for packaging was implemented from 1997- improvements to the current system is seen as a key opportunity to increase plastic recycling and reduce litter
- HM Treasury issued a **call for evidence on Single Use Plastics** which attracted **162,000** responses and identified that there is high public support for using the tax system to reduce waste from single-use plastics

EUROPE

- There is a generic EU requirement for **50%** of household waste to be recycled (or composted) by 2020 which UK

Local Authorities are working towards – the UK recycling rate at the end of 2016 was **45.2%**

- The **European Circular Economy Package** is moving closer and will bring with it a range of ambitious waste and resource measures- it is still to be formalised whether the UK will adopt these European measures, or develop a separate UK resource and recycling regime
- It includes a range of measures including a common EU target for recycling **65% of municipal waste** and **75% of packaging waste by 2030**
- European Commission adopted a new set of measures, including a Europe-wide **EU Strategy for Plastics in the Circular Economy** containing an annex to transform the way plastics and plastics products are designed, produced, used and recycled
- In 2016 the total EU recycling rate for plastic packaging waste was **40.8%**, well above the requested **22.5%** of the EU Packaging Waste Directive

PLASTICS: THE FACTS

- **Plastics: the Facts 2017** reported in 2016 **27.1 million tonnes** of post-consumer 'plastic waste' were collected in the EU28+Norway/Switzerland- within this **16.7 million tonnes** of 'plastics packaging waste' was collected
- From 2006 to 2016 the volume of plastic packaging waste in the EU collected for recycling increased by **74%**, energy recovery increased by **71%** and landfill decreased by **53%**
- Plastics packaging recycling and energy recovery reached **79.7% (40.9% recycling, 38.8% energy recovery and 20.3% landfill)**
- Whilst **40%** of all plastic products placed on the market are packaging, it contributed **62%** to all plastic waste generated and around **80%** of all plastics recycled- just over **7.5 mt** of plastic waste was recycled, of which **6.3 mt** was packaging
- **9** countries with a landfill ban obtained a total recovery rate (recycling plus energy recovery) **above 90%**

DEPOSIT RETURN SCHEMES

- There has been a growing interest in the use of a **Deposit Return Scheme** to increase the collection quantity and quality of beverage plastic bottles, and it will be consulted on by the UK Government
- Coca Cola have issued a set of **11 Key Principles** to outline what a well-designed Deposit Return Scheme might look like
- **79** Local Authorities reported they would be open to discussing the potential installation of a Deposit Return Scheme in agreed locations

FOREWORD

The RECOUP UK Household Plastics Collection Survey is a specialist research-based report for those working in, or making decisions about the plastics value chain and developing sustainable plastics recycling.

The primary focus is on the collection of waste and recyclables by all Local Authorities in the UK. A set of questions about many key areas are distributed online to those involved in waste and recycling collections in the UK, whether it be Borough, District, City or County Councils and Waste Partnerships.

Utilising these distinct, but inter-connected areas, the Survey report provides a comprehensive review of the collection of household plastics for recycling in the UK, and the challenges and opportunities Local Authorities face on a daily basis.

This year the *RECOUP Survey* has been sponsored by PlasticsEurope, which has enabled a range of case studies from Local Authorities to showcase practical examples and insight from those delivering 'on the ground' collection services. This could help and support approaches in future strategy and guidance to develop collections and responsible consumer behaviour for used plastics packaging.

The Survey is also supported by the Local Authority Recycling Advisory Committee (LARAC), which is invaluable when collecting data and opinions and reporting the results.

2018 – The Year of Change?

The direction which the UK now takes post-Brexit and what future resource strategy and aims are going to look like will start being shaped from now as the UK positions itself for the future. This year could see decisions that will structure and shape waste and recycling for many years to come.

It is hoped that the new Waste & Resources Strategy will transform the legislative drivers and funding for how plastics packaging is designed, collected and managed. It is more important now than ever to provide a balanced and informed view of the use and recycling of plastics. This includes the role of Extended Producer Responsibility in collection systems, consumer communications and use of recycled content.

The 'Blue Planet' Effect

The report always includes regular data and information such as collection service provision, plastics packaging collection levels and rates, but also other areas that directly affect collections and waste management.

With the 'Blue Planet' affect rippling through industry, media and consumer minds alike there is an ongoing focus on littering in our natural environment, particularly in our waterways and oceans. The Survey spotlights this in a *Litter and Disposal 'On-the-Go'* section for the first time.

Other areas covered in the report include treatment and recovery of recyclables from residual waste collections, end markets for the collected material, and how residents are engaged and instructed through consumer communications.



PlasticsEurope
Association of Plastic Manufacturers

LARAC

RECOUP

Message to Local Authorities - Thank You!

With a significant focus on plastics your responses this year are particularly important.

We would like to thank the many Local Authority waste management and recycling scheme managers, officers and their service contractors who took the time to respond to the Survey and continue to make the research comprehensive and worthwhile.

As the Survey report data is made available for **FREE** download on the RECOUP website, RECOUP is able to track the readership reflecting wider interest in the environmental debate.

The findings of the last Survey report received coverage in Sky News Ocean Rescue, the BBC, national and industry media, and in other corporate and Non-Governmental Organisations (NGOs) communications.

Through the *RECOUP Survey* your views and data will feed directly into waste management and resource strategy development through consultations, advisory groups and discussion, and be viewed by industry, decision makers, and national and industry media on a global level.

The *RECOUP Survey* is supported by the Local Authority Recycling Advisory Committee (LARAC), and RECOUP would like to acknowledge this support and influence it has in engaging with Local Authorities to produce such comprehensive data and information.



MOVING TOWARDS A CIRCULAR ECONOMY



PlasticsEurope are a valued and ongoing supporter of RECOUPs work, and are sponsoring the *2018 RECOUP Survey*. They are a leading trade association and represent plastics manufacturers active in the European plastics industry. Kim Christiansen, Regional Director at PlasticsEurope, describes how they are leading their members to provide a more sustainable and resource efficient future.

The circular economy represents an alternative, more sustainable model to the traditional linear economy. A linear model follows the path of make, use, then dispose. In contrast, in a circular economy, we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of their service life.

The unique characteristics of plastics enable them to play a major role on the road to a more sustainable and resource efficient future. However, to explore the full potential of plastics, it is essential to make sure that more and more plastic waste is recovered and doesn't end up in landfill or in the environment. Whilst industry has a key part to play in managing such end of life resources we all need to work collaboratively to ensure that materials are well managed throughout their lifetime.

Clearly the consumer has a key role to play and littering behaviour has to stop to prevent degradation of our living environments. However, citizens need to be encouraged to behave responsibly by the provision of adequate 'On-the-Go' waste and recycling collection facilities that are well-maintained, easy to use and emptied regularly. This needs to be reinforced by strong messaging and to this end we need consistency in how end-of-life 'On-the-Go' materials are collected to remove

confusion and enable effective national messaging campaigns to be used to reinforce how such materials are captured.

The plastics industry through PlasticsEurope has itself made voluntary commitments on behalf of its members to increase the level of recycling and reuse beyond what has been prescribed by the EU Circular Economy Package under its own Plastics 2030 Commitment. Furthermore it has for many years been running two flagship programmes relevant to this work under its Zero Plastics to Landfill flagship project where it has been calling on the diversion of plastics from landfill for recovery since 2011. The flagship project on preventing marine litter, and is working with stakeholders throughout the value chain to effect solutions.

STUART'S VIEW – RECOUP CEO

The Pressure Rises – the Plastics Packaging Value Chain in the Spotlight



Fuelled by the 'Blue Planet effect', the whole of the plastics recycling value chain is in the spotlight to do more, either voluntarily or through legislative interventions. It cannot be right to allow plastics to leak into the environment, neither is it acceptable to lose the opportunity to utilise plastic as a technically and cost-effective material for so many applications.

Collections of recycling and maximising the value and use of the collected material is the essential foundation to maximise circular use of the materials we use and dispose of.

Targets will provide the legislative driver. Although the current plastic packaging targets will increase gradually until 2020, more ambitious recycling targets are expected to be implemented in the upcoming European Circular Economy Package, which the UK should adopt. If we set this against information which suggests that the additional recycling target tonnage over the past 5 years has been based on export reprocessing, also that any growth has been in commercial and industrial plastic packaging as household collections, then we get some indication of the huge task that lies ahead.

Volatile Export Markets & UK Infrastructure

The UK has core capacity for plastic reprocessing, but this infrastructure would need to be drastically increased if we are to reprocess the additional tonnage from increasing target requirements and remove the reliance on volatile export markets. It will also be needed to service the ever-increasing commitments on use of recycled content and ambitious commitments by brand leaders to circular manufacturing.

The export market (particularly China) has played a key role in the development of UK plastic recycling over the past 15 years; but these export markets have often outbid UK reprocessors for material. However, as these markets in turn place restriction on importing material, no sooner does one door open than it

closes, with even more restrictions likely to be considered.

Creating the right balance of legislative drivers and positive long-term business conditions should allow for a viable and resilient system to meet future increased plastic recycling targets and maximise best use of plastic resources. Extended Producer Responsibility is seen by many as one of the key drivers to achieving these aims.

Green Procurement

Markets need to be supported and stimulated. Green procurement initiatives need to ensure much wider use of recycled plastics in the manufacturing of new products. This will also involve a mandate for recycling systems to provide the ongoing quantity and quality of plastics needed to meet manufacturing sector requirements, within sensible and justifiable business arrangements.

Pledge2Recycle Plastics Campaign

The messages given to householders around plastics recycling need to be aligned and based on facts. Despite the recognised role of consumer engagement in a successful recycling scheme, there has been very little financial support available for these activities. RECOUP is addressing this challenge through the Pledge2Recycle Plastics campaigns which are often run in partnership with Local Authorities to help cut the confusion around plastic recycling messages. We are seeing an increased consumer recognition and use of the On-Pack Recycling Label. Yet this is not enough recognition of the role of consumer

responsibility and potential consumer apathy that still exists. Despite the media attention has behaviour really changed? When will it really become socially unacceptable to litter?

More Than Just Packaging

There is more to plastics than packaging, and work on recycling more plastics from other sectors including bulky household products including toys, waste electrical and electronic equipment and end of life vehicles is also important and represents great potential.

World Leaders?

Ultimately to really make a difference and prevent plastic from leaking into the environment, this requires international intervention, something recognised within Defra's 25-year plan. Developing new recycling markets and uses for specific elements of plastics packaging is an ongoing area of innovation and research.

With plans to increase producer funding for recycling through extended responsibility measures, and given ongoing issues with recycling export markets, there is a fantastic opportunity to really grow the UK plastic recycling infrastructure. Through stimulating innovation to create new and better market; specify or mandate use of recycled plastics in manufactured product; the UK can become world leaders in plastic resource management.



RECOUP – OUR ROLE

RECOUP is a charity and leading authority providing expertise and guidance across the plastics recycling value chain. Built on a network of valued members, collaboration is central to our activities, and we are committed to securing sustainable, circular and practical solutions for plastic resources both in the UK and world-wide.

Our vision is to lead and inform the continued development of plastics recycling that is sustainable and protects resources

RECOUPs Work More Important than Ever

With the necessity for this generation to take greater environmental responsibility, the work of RECOUP is more important than ever before. There is a fundamental shift toward better long-term use of resources and the development of circular economy models. It is important that the practical business case for maintaining and increasing plastic recycling is robust, and more companies recognise and support the valuable work of RECOUP in achieving these aims.

As value chain co-ordinators there are many practical benefits for Local Authorities to become RECOUP members:

- **Understanding the supply chain** – for example, to maximise recycled material value or use recycled plastic
- **Pack Recyclability Testing** – assessing the recyclability credentials of plastic packaging
- **Cross-sector collaborative initiatives** – to work across the supply chain to collect and recycle post-consumer plastics
- **Bespoke research and innovation projects** – focussing on specific areas of the supply chain
- **Communicating the message** – using our Pledge2Recycle brand to inspire positive behaviour change to the public or training for your employees

Through the work of RECOUP, its members, the Board, and through RECOUP's communication channels we can influence policy and strategic development, and change. RECOUP would also like to acknowledge the support from all its valued members which has allowed us to cover the costs of completing the *2018 RECOUP Survey*.

Our Trustees



RECOUP is underpinned by the strength of its team and its trustees. The RECOUP board meets on a regular basis to represent their sector and develop RECOUP's strategy and direction. Trustees are all Senior Managers and Directors, and the expertise and knowledge of their sector ensures that the financial and operational activities of RECOUP serve the best interests of the plastics value chain.

RECOUP continue to have a strong Local Authority and waste management presence in its membership, with LARAC, NAWDO and some of the largest waste management companies in the UK represented on the RECOUP Board.

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RPC
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Eco. Furniture

AXION
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The **co-operative**
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PlasticsEurope
Association of Plastic Manufacturers

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Campden BRI
food and drink innovation





DATA, CALCULATIONS & REPORTING

The approach to the collection data and how it is calculated is important in understanding what can be reported and how it arrives at those figures.

Plastic Packaging Placed on the Market

The quantity of plastics packaging that is Placed on the Market (POM)- i.e. purchased and used by consumers- is essential in reporting collection rates. RECOUP always use the most robust data available, which is from a Defra and Valpak Limited project in 2014 to estimate plastics packaging material flow to support and guide Defra's packaging policy development.

Calculating Estimated Collection Quantities

Calculating collection quantities is not adding up sequentially reported tonnages, as there are many variables that can affect the reported quantities from Local Authorities. Accurate and audited estimated collection data is reliant on the necessary resources and processes in place, and these vary by Authority.

The reported collection data and also collection service provision data provided by Local Authorities is always checked, and where necessary followed up, or varied methods used to ensure that the final dataset is as accurate as possible.

Dry Mixed Recycling (DMR)

Plastics packaging fractions are increasingly being reported as part of commingled totals for all Dry Mixed Recycling (DMR). When totals for all DMR are reported the plastic packaging fraction is calculated by using percentage averages of the plastics formats (bottle, PTT and film) collected in that individual scheme.

Plastics Packaging Only

Any plastic packaging only data is reported as actual data by (a) Local Authorities operating source separated collection schemes; (b) a percentage estimate based on compositional analysis by the Local Authority or waste management provider; or (c) the

specific percentage composition recommended to be used by WasteDataFlow. It is often not often possible for Local Authorities to provide plastics collection quantities broken down by plastic format, and percentage averages are used to estimate these.

Multiple Collection Schemes

Many Local Authorities report collection quantities from all collection services they provide- kerbside, bring, recycle 'On-the-Go', commercial and HWRC schemes. Many bring and recycle 'On-the-Go' units are serviced as part of the kerbside collection route. This is accounted for when calculating collection quantities.

Composition of PTTs or 'Mixed Plastics'

Plastics packaging is often reported as 'mixed plastics', and clarification is often needed on the different interpretations and composition of the fraction. This composition can vary considerably between Local Authorities depending on the target outputs and the speed and efficiency of the Material Recovery Facility (MRF). Some facilities only segregate certain plastic bottles like clear PET and natural HDPE bottles, and leave others in the PTT or 'mixed plastics' mix, whereas other facilities can leave all plastics packaging together to try to ensure a positive value for all outputs. It is also more likely that where the material quantities are bigger than average and / or for the faster sorting facilities more bottles end up in a PTT or 'mixed plastics' fraction.

Limited or No Collection Data Reported

If there is no collection data or partial data reported, the estimated dataset is completed based on the service provision and then applying reasonable collection quantities based on those services. This is completed in one of two ways – either using one of the previous two years' responses to the Survey, or average performance data using the number of households in that Local Authority area against the average that can be expected to be collected for these households (kg per household per year).

Collection Service Provision

The criteria for offering a service is if the Local Authority communicates to their residents they collect a certain plastic format. This is based on two research routes. The actual responses from the Survey questions by Local Authorities and checking every Local Authority website to see what collection service provision is provided. Conflicting information is a regular occurrence, and if there was conflicting information the Local Authority was contacted for clarity.

Confidence Interval

Although a high proportion of the data and analysis in the Survey is based on actual responses only, analysing and measuring performance indicators is not a straightforward process.

There is a well-established number of performance indicators provided for plastic collections, but there are many factors that can influence a scheme's collection performance, operational efficiency and cost, including types and quantity of other materials collected, types of locations (urban / rural), housing types, socio-demographics (population make up), and how the scheme is communicated to residents.

All data has been analysed to provide a high probability confidence interval i.e. data that is considered to be incorrectly reported has been omitted or re-estimated using appropriate available data and appropriate averages.

Response Rate

Responses from up to 70% of collection authorities in the UK were received, with some Local Authorities responding to more questions than others. The collection quantities are based on data and information in the 2017 calendar or 2017/18 financial year.



UK PLASTICS COLLECTION SERVICES

The *RECOUP Survey* provides a comprehensive review of the service provision by Local Authorities for collecting post-consumer plastics across the UK. This service provision is the essential foundation to recycle this material and ensure it is not littered and ends up in our natural environment.

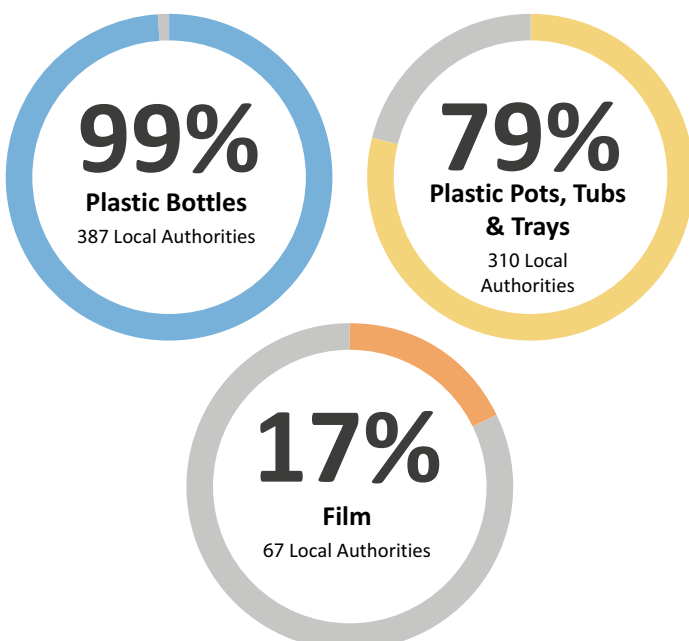
Local Authorities in the UK

There are 391 Local Authorities in the UK with:

- **326** in England.
- **32** in Scotland.
- **22** in Wales.
- **11** in Northern Ireland.

Kerbside Collection Schemes

The majority of the plastic quantities collected for recycling are from kerbside collections. It can be confirmed that the kerbside collection service provision for each plastic format is:



With kerbside collection services so prevalent across the UK there is a relatively low number of new services being reported each year.

Consistency of material being collected is a major strategic theme to improve recycling levels and improve material quality, and there is greater consistency in the collection of rigid plastics packaging than is often perceived by the public and media alike.

Plastic Bottles

99% (387) of Local Authorities collect plastic bottles as part of their kerbside collection service. Compared to the *2017 RECOUP Survey* report, **1** more Local Authority, Shetland Islands Council, has added plastic bottles to their kerbside collections. This is a new service which started being rolled out in March 2018 using a three-tier system to collect paper, card and cardboard (blue lidded bin), cans, cartons and plastic bottles (grey lidded bin), and glass bottles and jars (re-useable purple bag).

The *2018 RECOUP Survey* reports services until the end of March 2018. This left **4** Local Authorities not providing a kerbside collection service that includes plastic bottles. Contractual and geographical reasons are the main reasons why a service is not yet in place, however, kerbside collections that include plastics packaging should be in place by 2019:

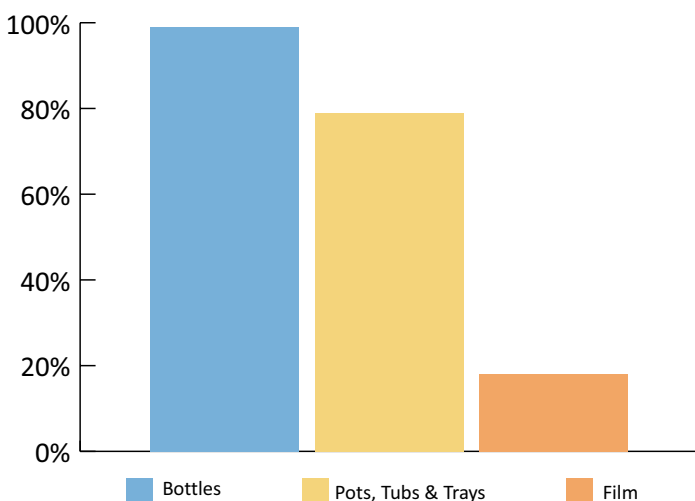
- **Copeland Borough Council** – in April 2018 Copeland started to collect “plastics” as part of major changes to their kerbside recycling scheme.
- **Council of Isles of Scilly** – plastics and other dry recyclables will be collected as part of a pilot to introduce kerbside recycling collections alongside the normal general waste collections, and will be rolled out sometime in 2018.
- **Rotherham Metropolitan Borough Council** – as part of many changes to the kerbside collection service it was announced in April 2018 plastics packaging would be

collected from early 2019.

- **Tonbridge and Malling Borough Council** – subject to agreement it was confirmed “mixed plastic containers” would be collected as part of major changes to their kerbside collection scheme and the new services would begin in 2019.

Plastic Pots, Tubs & Trays (PTT)

An addition **12** Local Authorities reported they added PTT to their kerbside collections in 2017. This means **310** Local Authorities provide a collection service, and **81** do not. The adding of new services for PTT is a gradual process, although changes across a Waste Partnership can make inroads into this figure. It was reported in the Survey that the 5 Local Authorities that make up Somerset Waste Partnership would be adding PTT to their kerbside collection service in 2020.



Plastic Film

There is a reduction in the number of Local Authorities who collect plastic film as part of their kerbside recycling collections. The number of Local Authorities collecting plastic film in 2017 is **67 (17%)**, which is now lower than the **70** that collected film in 2011.

Of the 67 Local Authorities that collect film, **26** of these specifically state they only accept empty carrier bags for this service – just **7%** of the total number of Local Authorities in the UK. The other **41** accept all types of film, which can include bread bags, breakfast cereal lining, cellophane, cling film, bubble wrap, magazine wrappings and shrink wrap (to package multi-pack bottles).

Some have removed plastic film from their kerbside collection service to be in line with the recommended consistent collections of materials. RECOUP has found information is not always clear when Local Authorities report film collections.

When dry recyclables are collected in bags, the Local Authority can report they accept plastic film, but this is not for wider collections of plastic film such as carrier bags, bread bags, shrink

wrap, etc. This can result in Local Authorities reporting to the *RECOUP Survey* they collect plastic film, but it is communicated as not being accepted to their residents (on websites, etc).

The message to residents can state plastic film is not accepted, but film is reported as actually accepted as an input material at the MRF and the Local Authority does not want additional plastic film in the recycling material stream.

In the *2018 RECOUP Survey* film data, the only Local Authorities that have been included are those who provide a message to their residents stating to include plastic film in the kerbside collection service.

RECOUP believe much of the collected household film is baled and exported for reprocessing or used in Energy from Waste facilities. If a Local Authority is considering the collection of film through their kerbside collections, it requires thorough communications throughout the recycling chain for anyone handling, selling or disposing of the material.

There are a number of practical barriers which prevent film being compatible with many existing UK collection and MRF systems. It can contaminate established plastic bottle bales and paper lines, and clog sorting equipment. RECOUP supports any activities and research in this area, as long as it does not interrupt existing collection and reprocessing activities, and it remains an opportunity to increase plastics packaging collections in the UK.

With a complex decision-making process needed by the public whether to place the various types of plastic film for recycling, operational sorting issues in MRFs and lack of end market value it is unlikely more collections will be added without significant financial investment or incentives.

Non-Packaging Plastics

Non-packaging plastics could include small Waste Electronic and Electronic Equipment (WEEE), such as unwanted or broken toasters, kettles, irons, hairdryers, drills, radios, telephones, power tools, straighteners, shavers, clocks and alarms. Other small plastic items such toys can also be collected.

These are often asked to be placed in a clear bag next to the recycling containers to separate them from other items.

A total of **7** Local Authorities confirmed they collect non-packaging plastics as part of their kerbside collection service. There were initially many more schemes being reported in the *2018 RECOUP Survey*, but after review it became clear that a comprehensive review is needed to establish a robust final total.



Kerbside Service Developments Since 2010

Since 2010 there have still been marked increases in the kerbside collection infrastructure. This is despite the reduction in the overall number of Local Authorities in the UK in this time – reducing from 406 to 391.

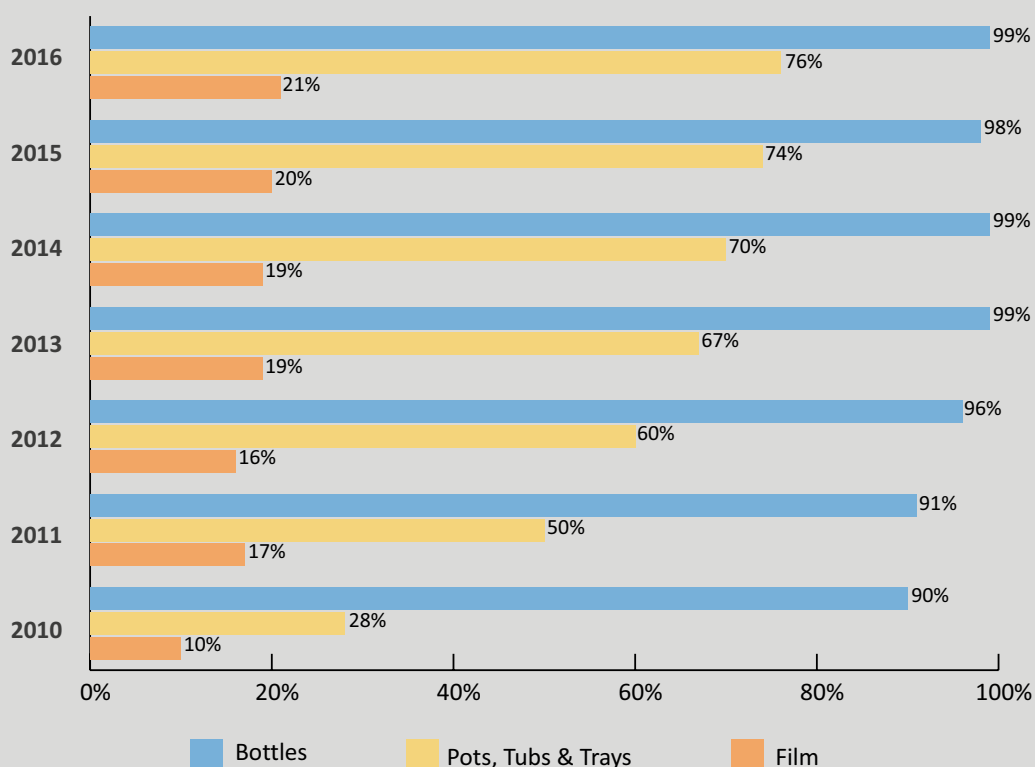
With increased consistency of materials being collected during this time there is inevitably a slowing down of new collection services being introduced in recent years.

The 90% of Local Authorities collecting plastic bottles in 2010 should reach **100%** in 2019 – this has increased from 365 Local

Authorities in 2010 to 387 in 2017. Collections of PTT have also seen a sharp increase, from just **28% (114)** of Local Authorities in 2010 to nearly **80% (310)** in 2017.

There have been minor changes in kerbside collections of plastic film, with **10% (40)** of Local Authorities collecting film in 2010 and **17% (67)** collecting film in 2017.

Collections of non-packaging plastics have been reported by Local Authorities from 2015.





Service Changes

Introducing a Service?

New collection services are being planned. 73 Local Authorities confirmed they were planning on introducing or trialling a new collection service. A small number confirmed this was introducing plastics collections as part of their kerbside service, but other new services could include bring, 'On-the-Go' and HWRC services.

Removing A Service?

The 2018 Survey asked Local Authorities whether, given the current financial climate if they were considering withdrawing a collection service that includes plastics. The majority of the **163** Local Authorities reported they were not considering withdrawing a service.

In many cases to reduce overall householder service costs it should be more cost effective to provide recycling services to avoid landfill and Energy from Waste disposal costs, but often wider contamination of dry recyclables or external factors such as contractual renewals can play a part.

On this evidence, as those responsible for dry recyclables collections continue to experience a challenging financial climate, unless there is significant financial investment it is expected that overall bring and recycling 'On-the-Go' services will continue to be slowly reduced in favour of investing in the bigger quantities collected from kerbside schemes.

Kerbside Service Summary by UK Nation

A summary of the kerbside infrastructure in the UK for England, Scotland, Wales and Northern Ireland to collect plastic is shown in the following tables. This includes the total number of Local Authorities in each nation, and the number and percentage of Local Authorities that provide a collection scheme.

The maximum number of households that receive a kerbside collection in each UK nation is also provided. A more precise number is not provided due to the wide number of variables that come into play when providing a kerbside service.

Kerbside Schemes- Plastic Bottles				
Nation	Total Number of Local Authorities in the UK	Number of Local Authorities Collecting Plastic Bottles	% Local Authorities collecting Plastic Bottles	Maximum Number of Households Covered
England	326	322	99%	22,416,139
Scotland	32	32	100%	2,416,000
Wales	22	22	100%	1,327,100
Northern Ireland	11	11	100%	790,100
Total	391	387	99%	26,949,339

Kerbside Schemes- Plastic Pots, Tubs and Trays				
Nation	Total Number of Local Authorities in the UK	Number of Local Authorities Collecting Plastic Pots, Tubs & Trays	% Local Authorities collecting Plastic Pots, Tubs & Trays	Maximum Number of Households Covered
England	326	251	77%	17,473,450
Scotland	32	27	84%	2,038,500
Wales	22	21	95%	1,266,777
Northern Ireland	11	11	100%	790,100
Total	391	310	79%	21,568,827

Kerbside Schemes- Plastic Film				
Nation	Total Number of Local Authorities in the UK	Number of Local Authorities Collecting Plastic Film	% Local Authorities collecting Plastic Film	Maximum Number of Households Covered
England	326	59	18%	4,107,305
Scotland	32	2	6%	151,000
Wales	22	6	27%	361,936
Northern Ireland	11	0	0%	0
Total	391	67	17%	4,620,241

If a Local Authority offers a kerbside collection service it does not mean that every household will benefit from a collection service. This might be due to:

- The type of property it is- for example, flats or apartments;
- The location of the property- it might not be viable practically or financially to provide a service for households that are in remote locations;
- The property might be empty for long-periods such as holiday lets or second homes- a household might not have one usual resident and therefore might not receive a regular kerbside collection; or
- A collection scheme that is in a trial period and is gradually being rolled out to the households in that area.

It should be noted it is assumed the plastic bottle schemes are fully established and it is more likely the maximum estimated number of households stated is accurate; for non-bottle plastics a number of the collection schemes are not fully mature or are being introduced on a trial or restricted basis, and therefore it is more likely the actual number of households covered will be less than the estimated maximum number.

The source for the number of households is the *Office for National Statistics - Total number of households by region and country of the UK, 1996 to 2017* (published 25 January 2018).

Other Collection Services

Collection provision other than kerbside is used to collect plastics 'away from home'. This can be used effectively at specific sites where people make dedicated trips to bring their waste and recycling material to (bring and HWRC services), or at convenient points when consumers are out and about (recycling 'On-the-Go').

It should be noted there is sometimes overlap with Local Authorities reporting of these services.

Bring Schemes

Bring schemes are containers located in public locations (such as supermarket sites and car parks) where the public can place their recyclables.

With the majority of plastics now collected from kerbside schemes, bring schemes are generally used by Local Authorities alongside kerbside schemes to supplement their recyclables collection provision. With the drive to increase recycling collections and reduce landfill costs, where funding allows, a bring service can be a useful service provision to provide. This is particularly true where a plastic format is not collected as part of the kerbside collection service, or where the kerbside service

is not available to all residents, such as in rural communities or high-rise property areas.

If Local Authorities are thinking about the decision to introduce, retain or withdraw bring schemes that includes plastics, there are many considerations to factor in alongside any cost-benefit analysis of the overall plastics collection schemes operated.

The reasons cited by Local Authorities for retaining a bring scheme included support kerbside collections, meeting residents needs, public demand for the service, and also an overflow for households who have limited kerbside collection container capacity and cannot fit all their plastic items in.

In the *2018 RECOUP Survey* a question was asked about whether a bring service is used to collect plastics, and from over 100 responses from Local Authorities **36%** reported they used bring schemes, and **64%** did not. This backs up the general trend that bring services are being scaled back. This is mainly due to maintenance costs and contamination levels, with Local Authorities focussing resources on kerbside and HWRC collection services.

Recycling ‘On-the-Go’

Recycling ‘On-the-Go’ is covered in greater detail in the *Litter & Disposal ‘On the Go’* section of the *2018 RECOUP Survey* report. It is confirmed in the *2018 RECOUP Survey* that **49%** of Local Authorities in the UK provide a recycling ‘On-the-Go’ service.

RECOUP have had extensive experience of installing and maintaining recycling ‘On-the-Go’ bins, and with the necessary investment believe the continued challenges of ‘away from home’ schemes can be overcome and that they provide great opportunities for the future.

An effective recycling ‘On-the-Go’ scheme can generate good quality material and also reduce litter. There are clear benefits for encouraging and reinforcing positive recycling behaviours, both ‘On-the-Go’ and consumers taking those positive behaviours home.

Too often though the bins are heavily contaminated, but this can be resolved in many cases with clear and strong bin signage, regular collections and communicating with residents and visitors alike through all available channels such as street signage, digital channels or communications direct to households.

The messages and approaches may differ, but engaging the public to have pride in their local community and using emotive anti-litter messages can help to provide an effective service.

Household Waste Recycling Centres (HWRCs)

Household Waste Recycling Centres (HWRCs) are available to the public for the disposal, recycling or reuse of a wide range of household materials and items. These public sites are often under the responsibility of the Waste Disposal Authority, which tends to be managed by the County Council and not the individual collection Local Authorities.

They offer supplementary collection points for plastics which are collected at kerbside, and are the primary point for those plastic items not compatible with kerbside services such as non-packaging plastics including small and large WEEE items and bulky goods such as plastic furniture.

RECOUP continue to ask Local Authorities about HWRC services, and the service provision for the UK is developing. There are information gathering issues when trying to build up UK wide service provision data as a service can be managed by the Waste Disposal or the Waste Collection Authority.

In the *2018 RECOUP Survey* from over 100 responses from Local Authorities **56%** stated they provided a service to collect plastics from their HWRC scheme. Many of the HWRC sites provide collections for non-packaging plastic formats, but also for plastics packaging.

Plastic Paint & Plant Pots

Previous *RECOUP Survey* reports have investigated HWRC collection provision for plant pots and paint pots and found around 70 schemes in place for both plastic formats. It should be noted that many paint pot schemes collect the paint and not the plastic pot itself.

Plant Pots

Plant pots, also commonly referred to as flower pots in consumer communications to residents, are mainly manufactured from Polypropylene, and if this fits in with the feedstock requirements of the MRF and reprocessor, they can be added to existing plastic pot, tub and tray collections. This is covered in more detail in the *Case Studies* supplement of the *2018 RECOUP Survey* report.

Paint Pots

Plastic paint pots are inherently valuable both in terms of any paint that can be recovered through the Community Repair Initiative, and the pot itself. Like plant pots, many paint pots are made from Polypropylene and are ideal for recycling when empty.

Recycled content can also be included in new paint pots, with RPC using 25% recycled content in the Dulux range.

HOUSEHOLD PLASTICS COLLECTION DATA

The *RECOUP Survey* has reported the plastics packaging quantities collected from UK households since 1994, and the quantities and measurement indicators provide a performance status for the collection of plastics from UK households.

Plastics Packaging Collected for Recycling from UK Households

The total plastics packaging collected from households in the UK in 2017 was **527,010 tonnes**:

2017	Plastic Bottles	Pots, Tubs & Trays	TOTAL (Tonnes)
	351,907	175,103	527,010

The coverage and interest around plastics recycling hasn't translated itself into householders recycling significantly more of their plastics packaging – but the upward trend is still continuing.

The overall **2.8%** increase in plastics packaging collection quantities in 2017 provide a similar change to the **2.6%** increase in collection levels reported in 2016. The composition shows a **2.5%** increase for plastic bottles and a **3.5%** leap for plastic pots, tubs and trays.

	2016 (Tonnes)	CHANGE		2017 (Tonnes)
		Tonnage	% Change	
Plastic Bottles	343,330	↑ 8,577	↑ 2.5%	351,907
Pots, Tubs and Trays	169,145	↑ 5,958	↑ 3.5%	175,103
TOTAL	512,475	↑ 14,535	↑ 2.8%	527,010

Plastic bottle collections saw **3%** increases each year in 2013 and 2014, but this followed with **sub-1%** increases in 2015 and 2016. 2017 is the first time in 3 years there is a marked increase in collections.

There were **11%** and **12%** increases in collection quantities of plastic pots, tubs and trays in 2013 and 2014. The **3%** and **6%** increases in 2015 and 2016 has been followed by a **3.5%** increase in 2017, is a sign that these services are maturing and collection levels stabilising.

Composition of Plastics Collected for Recycling

Collections of plastics from Local Authorities in the UK can be categorised into four formats – plastic bottles; plastic pots, tubs and trays; plastic film and non-packaging plastics. The tonnage composition of plastics collected for recycling includes plastic bottles and pots, tubs and trays only, as it has not been possible to collate a dataset that can be considered robust enough for a representative sample for plastic film and non-packaging plastics. The estimated ratio of plastic bottles to plastic pots, tubs and trays in 2017 consists of **67%** plastic bottles and **33%** plastic pots, tubs and trays.

Looking at the headline data it appears there is a continuing trend of relatively small annual increases in the collection of plastic bottles, and steady increase in the collection of plastic pots, tubs and trays as more services are introduced by Local Authorities.

'Mixed Plastics'

The splits of the different plastic formats are never precise and there is not a uniform composition of the different plastic formats – all total quantities of plastic bottles and plastic pots, tubs and trays contain other plastic formats.

Estimating plastics packaging collected for recycling by householders relies on a number of measurement indicators as outlined in the '*Data, Calculations & Reporting*' section. Every Local Authority, Waste Management provider and MRF or PRF can have a different approach to this depending on operational

decisions and the end markets status at that time.

Plastics packaging is often reported as ‘mixed plastics’, and clarification from Local Authorities is often needed on the different interpretations and composition of this fraction, which can vary considerably depending on a number of factors:

- The target outputs and the speed and efficiency of the Material Recovery Facility (MRF).
- Some facilities only segregate certain plastic bottles like clear PET and natural HDPE bottles, and leave the others in the plastic pot, tub and tray or ‘mixed plastics’ mix.
- Some facilities can leave all plastics packaging together to try to ensure a positive value for all outputs.
- It is more likely that where the material quantities are bigger than average and / or for the faster sorting facilities more bottles end up in a plastic pot, tubs and tray or ‘mixed plastics’ fraction.

Plastic Bottles in the Plastic Pot, Tub & Tray Stream

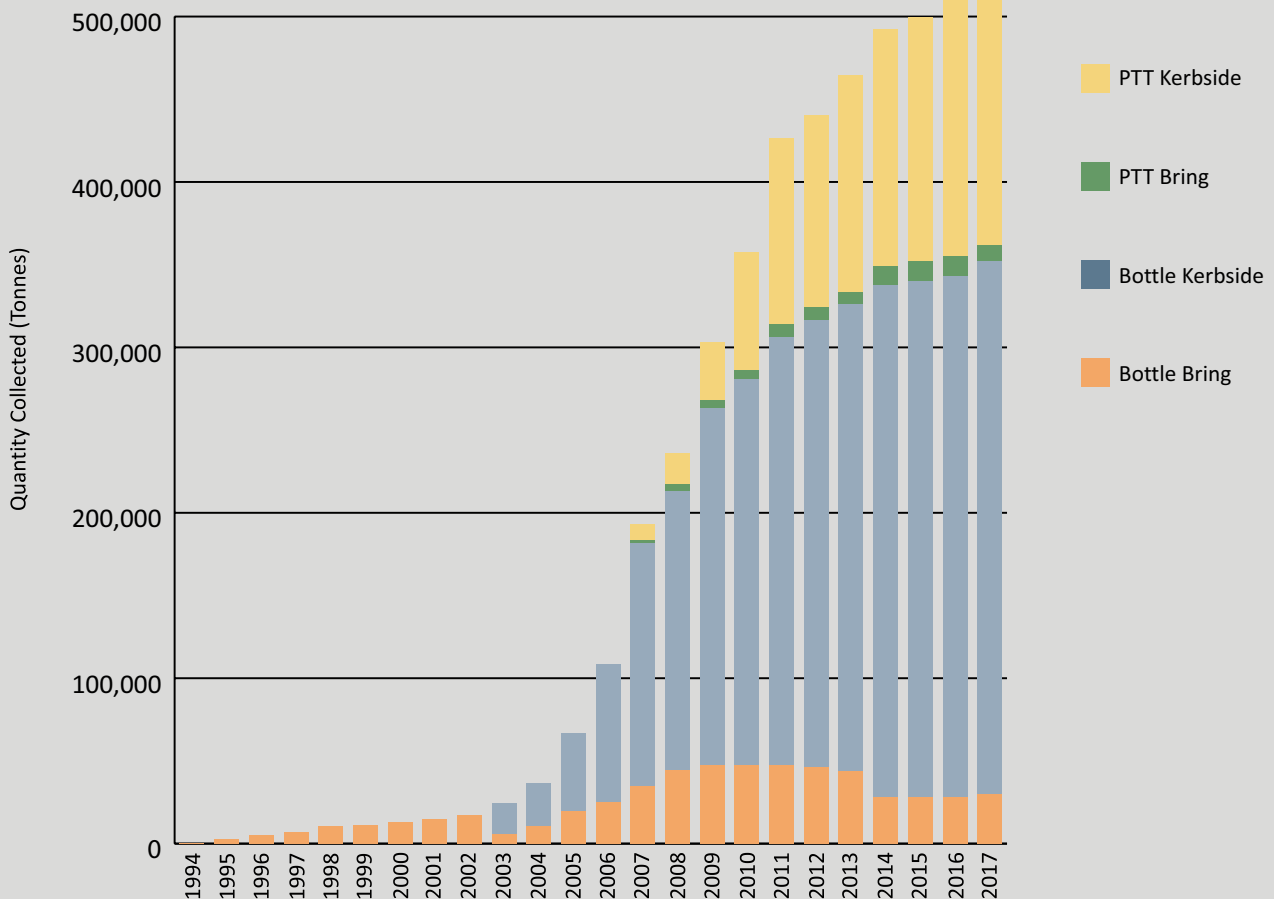
The quantities categorised as plastic pots, tubs and trays can typically include plastic bottles, but in the 2018 RECOUP Survey there is new evidence that more plastic bottles are estimated to be in the plastic pot, tubs and tray stream. This is both in the reported collection data and confidential material composition analysis of kerbside schemes shared with RECOUP. ‘Mixed plastics’ is also likely to include any plastic film collected, and therefore also to be included as part of the plastic pot, tubs and tray collection quantities.

Therefore, the total quantity of plastic pots, tubs and trays collected could be lower, with the quantity of plastic bottles in this stream needing to be added to the plastic bottle total.

RECOUP would like to undertake further work in this area, as the proportion of bottles in the plastic pot, tub and tray fraction will affect the accuracy of the collection rates for both plastic formats, an important factor with the Defra consultation on a DRS scheme for drinks containers likely to happen later in 2018.

Household Plastics Packaging Recycling – The Story

Since 1994 each RECOUP Survey has reported growth in plastics collected for recycling. It is a successful story, and the Survey graph is heavily used to represent both the past successes and challenges for the future:



Plastic Bottles

Only **425 tonnes** of plastics were collected when data was reported in the first *RECOUP Survey* – the equivalent of **9.3 million plastic bottles** – which was mostly collected from bring schemes. By 2003 it was reported that **24,000 tonnes** of plastic bottles were collected for recycling- **just over 500 million bottles**. This included **18,000 tonnes** from kerbside schemes, which were now collecting over three times more than bring schemes. At this time the collection of commingled dry recyclables from households was becoming more common.

The infrastructure for collecting plastic bottles from kerbside collection schemes started to see significant increases in the mid-2000's, which was mainly attributed to many new services being launched and existing schemes being expanded and becoming more efficient.

In total there has been nearly **80 billion plastic bottles** collected since 1994- that's over **3.5 million tonnes**.

80 BILLION PLASTIC BOTTLES HAVE BEEN COLLECTED FOR RECYCLING IN THE UK - THAT'S 3.5 MILLION TONNES

Pots, Tubs & Trays

Since kerbside collection data for plastic pots, tubs and trays started to be reported in 2007 there has been steady and significant increases in collection quantities of this plastic format. There were just over **9,000 tonnes** being collected in 2007, and this has now estimated to be over **175,000 tonnes** in 2017. As reported earlier in this section, there is increased evidence that more plastic bottles are going into the plastic pot, tubs and tray stream and the total quantity of plastic pots, tubs and trays collected for recycling could be lower. In total it is estimated maximum of plastic pots, tubs and trays collected for recycling since 2007 is over **1.2 million tonnes**.

1.2 MILLION TONNES OF PLASTIC POTS, TUBS & TRAYS COLLECTED FOR RECYCLING

Plastic Bottles	
Consumption Quantity	594,000
Collection Quantity	351,907
Collection Rate	59%

Pots, Tubs & Trays	
Consumption Quantity	525,000
Collection Quantity	175,103
Collection Rate	33%

Household Plastics Packaging	
Consumption Quantity	1,119,000
Collection Quantity	527,010
Collection Rate	47%

The increases continue to be predominately from kerbside collections, although there is service provision from bring and HWRC facilities schemes across the UK that were either introduced because the kerbside collection service did not include plastic pots, tubs and trays, or to complement the kerbside scheme.

With around **81** Local Authorities still not collecting plastic pots, tubs and trays, this is where the biggest opportunity lies to increase collection levels. With end market destinations only proven for the Polypropylene fraction of plastic pots, tubs and trays, despite landfill and incineration costs, the business case is still to be proven for Local Authorities to implement the collection of this plastic format.

Household Plastics Packaging Collection Rates

Collection rates are based on the percentage of plastics packaging 'Placed on the Market' that is collected for recycling. These rates are an effective way of providing an indication of how well the UK is performing in collecting plastics packaging.

To calculate these percentage collection rates and ensure that the rates are as accurate as possible RECOUP always use the best available estimate of plastics packaging placed on the market and packaging trends (% growth per year) to compare against the reported collection quantities.

With relatively small increases in collection quantities for plastic bottles and variations in the Placed on the Market data the collection rates have stayed **just under 60%** since 2013- and for 2017 the rate has increased by **1%**- from 58% in 2016 to **59%**.

Despite variations in the placed on the market data, increases in the collection rates for plastic pots, tubs and trays has kept increasing- from approximately **20% in 2013**, to **30% in 2014 and 2015**. Although the collection quantity has increased, the collection rate for plastic pots, tubs and trays in 2017 has remained the same as 2016 at **33%**. As mentioned previously in this section, due to the quantity of plastic bottles in the plastic pot, tubs and tray stream this figure is again subject to change.

These combined figures mean the overall figure for household plastics packaging collected for recycling has increased from **46%** in 2016 to **47%** in 2017.

Plastic Bottle Use & Recycling

Based on 594,000 tonnes of plastic bottles placed on the market, an estimated average of 22,000 plastic bottles per tonne, over 27 million households in the UK, the collection quantities for 2017 (tonnes) and the collection rates (%), the number of plastic bottles collected and not collected can be calculated.

Plastic Bottles Used

- Over **13 BILLION** plastic bottles are used each year in the UK- that's nearly **36 MILLION** plastic bottles every day – nearly **1.5 bottles per household**

Plastic Bottles Recycled

- Over **7.7 BILLION** plastic bottles were collected for recycling in 2017- that's **21.2 MILLION** bottles every day

Plastic Bottles Not Recycled

- Over **5.3 BILLION** household plastic bottles were not collected to be recycled from UK households- that's **14.5 MILLION** plastic bottles every day

Average UK Household

- Average UK household uses nearly **480** plastic bottles a year, but only recycles just over **280** of them – around **200** bottles are not collected for recycling

THIS MEANS...

- Based on current annual collection increases the number of plastic bottles not recycled could still be up to **3 MILLION** tonnes by 2030 – that's over **60 BILLION** plastic bottles
- Based on the same assumptions there would be even more

plastic pots, tubs and trays not recycled – over **4 MILLION** tonnes

- If the bottles not recycled in 2017 were placed in a line they would cover nearly over 650,000 miles – that would go around the Earth **27 TIMES**

Reported Quantities from Non-Kerbside Collection Services

There is an increasing trend to collect commingled materials from the kerbside and bring schemes, with bring sites, recycle 'On-the-Go' bins and even Household Waste and Recycling Centres (HWRCs) bins serviced as part of the kerbside collection route. This means individual material weights for these services are not recorded separately and increasingly plastics collected for recycling are being reported as a plastic total or the total for all dry recyclables (see *Data, Calculations & Reporting section*).

Up until the *2014 RECOUP Survey* plastics collected via kerbside and bring schemes were reported separately, with an allocation from recycling 'On-the-Go' collections as part of the total collected from bring schemes. The quantities collected from bring schemes have also stabilised over time with small decreases reported year on year from 2010-2014.

To reflect the reporting trends from Local Authorities and the relatively stable collection quantities from bring schemes an estimated of 40,000 tonnes has been allocated to collections from bring, HWRC and recycling 'On-the-Go' schemes, with 35,000 tonnes allocated to bring and HWRC schemes and 5,000 tonnes allocated to recycling 'On-the-Go' schemes.

The 40,000 tonnes have been separated by plastic format based on the estimated bring schemes for each plastic format in place:

- 75%** (30,000 tonnes) plastic bottles
- 25%** (10,000 tonnes) plastic pots tubs and trays

Carbon & Energy Use

There are a number of ways to translate the quantity of plastics packaging collected for recycling into the wider carbon and energy benefits, to put some context around the quantity recycled and to engage the consumer to recycle more.

Carbon

One example is recycling 1 tonne of plastic bottles saves $\frac{1}{4}$ of a tonne of Carbon, which is the equivalent of travelling nearly 2,500 miles in car/taxi/motorcycle (*www.recyclenow.com*). If the 351,907 tonnes of plastic bottles collected for recycling in 2017 is applied to this fact then this is the equivalent of **travelling around the world over 40,000 times**.

Energy

An example that involves energy use is recycling one plastic bottle saves enough energy to power a light bulb for 6 hours (www.BPF.co.uk). If the 351,907 tonnes of plastic bottles collected for recycling in 2017 is applied to this fact then the plastic bottles would save enough energy to **power all the light bulbs in all the households in the UK for nearly 1 month.**

Plastic Packaging Collections by Nation

Collections of rigid plastics packaging can be reported by UK nation.

Plastic Bottles

Collection levels of plastic bottles continue to grow steadily. There has only been just under an **8% increase in collection quantities in the last 5 years**, rising from **325,945 tonnes** in 2013 to **351,907 tonnes** in 2017.

Overall, the collection quantity of plastic bottles in 2017 consisted of **321,907 tonnes** from kerbside collections and an estimated **30,000 tonnes** from bring, HWRC and recycling 'On-the-Go' schemes.

The collection data by scheme and nation is shown below:

Nation	Quantity of Plastic Bottles Collected 2017 (Tonnes)
UK	351,907
Total Kerbside	321,907
England	267,115
Scotland	25,215
Wales	20,437
Northern Ireland	9,140
Bring, HWRC & RotG	30,000

Kerbside Schemes

The total of plastic bottles collected for recycling from kerbside schemes in 2017 was an estimated **321,907 tonnes**. This represented a **6,577 tonne** or **2.1%** increase – rising from **315,330 tonnes** in 2016.

The data indicates that England accounts for **83%** of kerbside plastic bottle collections in the UK, with Scotland, Wales and Northern Ireland representing **8%**, **6%** and **3%**.

Plastic Pots, Tubs & Trays

There has been an overall increase of **26%** in collection quantities of plastic pots, tubs and trays in the last 5 years, rising from **138,488 tonnes** in 2013 to **175,103 tonnes** in 2017.

With existing schemes maturing and new schemes slowly being introduced RECOUP expects collection levels of plastic pots, tubs and trays to continue to increase.

The total of plastic pots, tubs and trays comprised of an estimated **165,103 tonnes** from kerbside schemes, and an additional estimated **10,000 tonnes** from bring, HWRC and recycling 'On-the-Go' schemes.

Nation	Quantity of Plastic Bottles Collected 2017 (Tonnes)
UK	175,103
Total Kerbside	165,103
England	139,801
Scotland	11,020
Wales	10,588
Northern Ireland	3,694
Bring, HWRC & RotG	10,000

Kerbside Schemes

There was an increase of **7,958 tonnes** of plastic pots, tubs and trays from kerbside schemes in 2017, increasing from **157,145 tonnes** in 2016 – a **5.1%** increase.

England accounts for **nearly 85%** of total UK pots, tubs and trays kerbside collections, with Scotland, Wales and Northern Ireland, representing **7%**, **6%** and **2%**.

Plastic Film

With **67** Local Authorities reporting they collect plastic film as part of their kerbside recycling collection service, RECOUP continue to try to establish household collections levels in the UK.

As has been referenced in the *Data, Calculations & Reporting* section, many Local Authorities report collection quantities for all recycled materials or all household plastics packaging, and there is no substantial evidence to suggest there is large enough quantities of plastic film in these totals to extract accurate data to represent a UK wide dataset. It is likely to be included in the collection data and can be added by Local Authorities in the plastic pot, tub and tray stream.

What Film is Target Material?

It has been established that the majority of these schemes only accept carrier bags or Polyethylene (PE) bags plastic film, such as:

- Bread bags
- Bags around newspapers and magazines
- Toilet paper and kitchen roll packaging
- Fruit and vegetable bags
- Multi-pack packaging

For many collection schemes what is considered to be dirty plastic film packaging (e.g. heavily contaminated film lids used in ready meals), cling film and biodegradable bags is not target material.

Plant Pots

Plant pots have not traditionally fitted in the main categories of rigid items of plastic collected from kerbside schemes, although with many plant pots being made from Polypropylene they could be accepted by MRFs that handle plastic pots, tubs and trays from kerbside collections. Of all the polymers in the pot, tub and tray fraction, Polypropylene is the most recyclable and has the strongest values, although the colour needs to be considered.

There is evidence that plant pots are being collected as part of some Local Authority plastic pot, tub and tray collections, although this is very limited and there are no indications of the quantities collected. The collection of plant pots remains an opportunity to collect a plastic fraction which is often sent to incineration or landfill.

There is confusion about whether plant pots are classified as non-packaging or not depending on what the pot's function is. The current ruling from the Environment Agency is that plant pots are classified as packaging except when they are sold containing a plant intended to stay in the pot, for example, a house or patio plant. Pots sold separately with no plants included are always classified as a product and not packaging. So, using current classifications, they could be either packaging or non-packaging when collected as part of from households plastics packaging collection schemes.

Non-Packaging Plastics

Non-packaging plastics could include small Waste Electronic and Electronic Equipment (WEEE), such as unwanted or broken toasters, kettles, irons, and also other small plastic items such toys.

Through monitoring of kerbside collection services by RECOUP it is evident that what can be termed as non-packaging plastics service provision is being offered by a number of Local Authorities. A total of **7** Local Authorities confirmed they collect non-packaging plastics as part of their kerbside collection service, and RECOUP will be completing a comprehensive review to establish a robust final total.

Although more suited to HWRC collection services, there are opportunities to collect this material from kerbside schemes with the right financial incentive and investment. Due to the variable composition of these items it is not possible to report on the plastic quantities that is or could be recovered from this material stream and is something that could be researched if funding were made available.

Plastic Packaging Performance by Nation

The performance of rigid plastic packaging recycling has been tracked by collection rates for many years in the *RECOUP Survey*, and the 2018 report has estimated the relative performance based on two measurements:

- Number of households
- Collection rates

Both the bring and recycle on the go quantities are included, and have been split by the proportion (%) of number of households in each nation.

Number of Households

The relative performance of each nation compared to the number of households has been estimated below. The figure shows the number of households in each nation and the proportion (%) for each against the total in the UK, which is compared against the proportion (%) of the quantities of plastic bottles and plastic pots, tubs and trays collected in each nation.

The proportions by UK nations from kerbside collections are broadly in line the UK population split, with the data out-performing the averages highlighted. It shows that Wales is estimated to be collecting significantly above the UK average per household, whilst England are collecting a high proportion of plastic pots, tubs and trays.

Relative Performance – Collection Rates

The relative performance of each nation by their collection rates has been estimated below. This is based on the plastics packaging placed on the market data, which is then split between each nation based by the proportion (%) of number of households. This is then compared against the estimated collection quantities for each nation. Again, the estimated collection rates in Wales is higher than the other nations.

RELATIVE COLLECTION PERFORMANCE COMPARED BY PLASTICS PACKAGING PLACED ON THE MARKET - BY NATION

England	
Plastic Bottles	59%
Plastic Pots, Tubs & Trays	34%
Overall Collection Rate	47%
Scotland	
Plastic Bottles	53%
Plastic Pots, Tubs & Trays	26%
Overall Collection Rate	40%

RELATIVE COLLECTION PERFORMANCE COMPARED BY NUMBER OF HOUSEHOLDS – BY NATION

Nation	Households		Plastic Bottles		Plastic Pots, Tubs & Trays	
	Number of Households	% of UK Population	% of UK Collections- Bottles	Difference Compared to Number of Households- Bottles	% of UK Collections - Plastic Pots, Tubs & Trays	Difference Compared to Number of Households- Plastic Pots, Tubs & Trays
England	22,694,600	83.3%	82.9%	-0.3%	84.6%	1.2%
Scotland	2,416,000	8.9%	7.9%	-1.0%	6.8%	-2.1%
Wales	1,327,100	4.9%	6.2%	1.3%	6.3%	1.5%
Northern Ireland	790,100	2.9%	2.8%	-0.1%	2.3%	-0.6%

Wales	
Plastic Bottles	76%
Plastic Pots, Tubs & Trays	43%
Overall Collection Rate	60%
Northern Ireland	
Plastic Bottles	58%
Plastic Pots, Tubs & Trays	26%
Overall Collection Rate	43%

If all the plastic pots, tubs and trays consumed in UK households were collected the collection rate would be **19.28 kg** per household.

Total Plastics Packaging Collected per Household

The 11.92 kg for plastic bottles and 7.69 kg makes a total average of **19.61 kg** of plastics packaging collected per household from kerbside schemes for recycling.

Average Collection Rates

As covered in the *Plastics Collection Services* section the number of households that receive a kerbside collection for dry recyclables can be estimated. When combining this with the estimated collection quantities, it is possible to calculate the average kerbside collection rates per household per year (kg).

Plastic Bottles

Using this calculation, it can be confirmed that where a service is provided the kerbside collection rate of plastic bottles per household in 2017 is **11.92 kg**. This decreased from the **12.06 kg** in 2016 due to the increased number of households reported in the *Office for National Statistics - Total number of households by region and country of the UK, 1996 to 2017*, published in January 2018.

To provide some context about potential collections per household, if all the plastic bottles placed on the market were collected the kerbside plastic bottle collection rate per household would be **21.82 kg**. This was **22.42 kg** in 2016.

Plastic Pots, Tubs & Trays

The average kerbside collection rate for pots, tubs and trays in 2017 is **7.69 kg**. This was **7.78 kg** in 2016.

KERBSIDE COLLECTIONS – CONTAINERS & FREQUENCY

Each Local Authority can have a different approach to how it collects materials from kerbside collections, with different housing types, an urban or rural geographical area and demographics all playing a part.

Consistency of collections is a major theme. The ongoing projects, blueprints and charters in place across the UK nations examine ways to bring greater consistency to household waste and recycling collections. There is a great deal of focus on the opportunities to standardise collection containers and the frequency of collections.

Putting the materials collected to one side, the *2018 Recoup Survey* looks at two key areas when tackling consistency – the collection containers used and the frequency of collections. Data was collected for these questions from up to 170 Local Authorities.

Kerbside Collection Containers

There are three main types of kerbside collection container for dry recyclables – wheel bin, box and bags (disposable and reusable). Questions asked in previous *RECOUP Surveys* state the most popular kerbside recyclables collection container is a wheel bin. Their increased popularity reflects the increase in commingled collections, the wider adoption of 2, 3 or 4-weekly collections, and the need for larger capacity recycling units.

Combinations of containers are being used to allow for separate collections of specific materials, and this could be particularly important for glass. This could be, for example, to meet input and contractual requirements from MRFs and reprocessors, or to satisfy kerbside conditions where wheel bins cannot be utilised.

Frequency of Recycling & Residual Waste Collections

Recycling Collections

The frequency of the recyclables collections is an important factor in the effectiveness of a kerbside recycling scheme.

Overall, fortnightly recyclables collections are most popular, covering **74%** of Local Authority areas with a kerbside plastic bottle collection, with **23%** using weekly collections, and **3%** reported they collect recycling either three weekly or monthly. Moving to fortnightly recycling collections has had many reported benefits, reaping rewards financially through logistical efficiencies and route optimisation. However, there are ongoing discussions relating to material quality.

Recycling vs Residual Waste Collections

The frequency between recycling and residual waste collections has been reported by Local Authorities. This can typically range from weekly and alternate weekly recycling collections with the residual collection 2, 3 or 4-weekly. There has been a marked increase in alternate weekly services with the residual collection with **64%** now reporting this combination. The results are shown opposite:



Frequency of Recyclables & Residual Waste Collections	
Weekly- Same Week for Residual Waste	12%
Weekly- Alternate Weekly for Residual Waste	6%
Weekly- Three weekly for Residual Waste	5%
Fortnightly- Same Week for Residual Waste	8%
Fortnightly- Alternate Weekly for Residual Waste	64%
Fortnightly- Three weekly for Residual Waste	2%
Fortnightly- Four weekly for Residual Waste	0%
Three weekly	1%
Monthly	2%

3 & 4-Weekly Residual Waste Collections

Although a range of frequency changes have been made it appears the switch to 3 and 4-weekly residual collections will continue to increase in the same way 2-weekly collections have done. **15%** of Local Authorities reported they were investigating or planning to move to 3 or 4-weekly residual collections. This represents a **2%** increase when compared with the results from the *2017 RECOUP Survey*.

The objective to reduce residual waste collections is clear- to reduce costs even further, and by restricting the residual waste capacity to drive up recycling performance. A lot depends on the appetite for change within the Local Authority structure and the general acceptance by residents to make the change. Despite the obvious benefits this doesn't stop the negative press and feedback from residents and managing this through planned and effective communications is a key part of making a successful transition.

Service Frequency Changes

The *2018 Recoup Survey* asked whether there has been a change in collection frequency in the past 3 years, which could include recycling and/or residual collections. Changes in collection frequency are relatively stable, with **15%** of Local Authorities stating there had been a change.

It was reported the changes generally delivered positive results:

- 64% increased collection quantities
- 92% reduced costs

It was also reported that the quality of the material had reduced for some Local Authorities, although this may be due the change in collection frequency, or wider service changes such as containers types used and the range of materials collected.





TREATMENT OF RESIDUAL WASTE

There have been many treatment techniques and technological advances in the waste and recycling sectors in recent years, which are increasingly providing opportunities to recover and use residual waste that would otherwise go to landfill.

There is much debate about how much plastics are in residual waste, but there is no debate that large quantities do not get collected for recycling and end up in the residual waste stream.

With increasing landfill and gate fee costs and valuable recyclable materials in the residual waste stream, Local Authorities are increasingly looking at a variety of treatment options to replace or complement existing process routes.

The 2018 RECOUP Survey asked Local Authorities of their understanding of the treatment of residual waste, destinations of where the material goes and any future trends. Up to 170 Local Authorities responded to the questions.

Understanding of the Treatment of Residual Waste

There appears to be an uncertainty in the knowledge of the treatment of residual waste collected by Local Authorities, with **28%** not aware of how this material was treated. This emphasises the growing materials streams and technology in the waste and recycling infrastructure.

Do you know the treatment method for residual waste collected in your Local Authority?	
Yes	72%
No	28%

Ends Destinations for Residual Waste

A selection of the main treatment options were provided – landfill, recycling, Energy from Waste (EfW), and Refuse Derived Fuel (RDF) – and Local Authorities were asked to choose as many options that were applicable for them.

These results can provide a positive message to the industry and consumers alike about what happens to material that is seen by many to end up in landfill.

Significantly more material is going to EfW in 2017. The overall results are shown below:

What is the destination of your residual waste collected in your Local Authority?	
Landfill	29%
Recycling	9%
Energy from Waste (EfW)	50%
Refuse Derived Fuel (RDF)	12%

Landfill

It is unsurprising that landfill and EfW were the highest end destinations for residual waste. With residual treatment options in their infancy, landfill (**29%**) is the only viable option for some Authorities.

EfW

EfW generates energy (heat and/or electricity) from the treatment process and can provide sustainable and cost-effective energy supplies. With the landfill tax increase and exporting restrictions growing, it is unsurprising that the percentage of residual waste being sent to EfW in the UK is increasing – **36%** in 2016 has risen to **50%** in 2017.

RDF

Refuse Derived Fuel (RDF) is produced by some Mechanical Biological Treatment (MBT) processes and can be used as a fuel. MBT is where waste is stabilised through biological treatment using mechanical separation of the recyclable and/or readily combustible material from the remaining organic or lower grade

material. An RDF destination was reduced from **23%** in 2016 to **12%** in 2017.

Recycling

A recycling end destination has reduced in 2017. Only **9%** of Local Authorities reporting a recycling end destination for their residual waste, compared with **13%** in 2016.

Reported as Recycling?

The reporting of material quantities recovered for recycling from the residual stream raises questions. Are they being reported in the household recycling fraction and contributing to recycling quantities and rates? Or, are they classified as a landfill fraction but in real terms still finding their way into the recycling stream and included in Packaging Recovery Notes (PRNs), and part of the overall quantity of plastics packaging that is classed as recycled each year? Some Local Authorities report the material quantities are included in the collection data, but there is not enough information available to be able to assume how the data is categorised.

Future Trends

For those who are currently not treating material from the residual waste stream, this could become a more common waste management approach. The financial drivers to reduce costs and extract value from the materials in the residual waste stream are clear.

However, only **11%** of Local Authorities reported they are actively investigating or implementing treatment of their residual waste that might otherwise go to landfill or to EfW. RECOUP expects a steady but progressive move towards Local Authorities utilizing a range of treatment options to manage their residual waste stream.



Barriers to Treating Residual Waste

89% of Local Authorities reported they were not investigating or implementing the recovery of plastics from the residual stream. There was a general frustration that investigation of different treatment options couldn't be taken further, and the main reasons citing:

"We have an MBT facility for our residual waste and had hoped to extract further plastic material for recycling, however following the import ban by China the material now remains within the fuel pellet and is sent for RDF."

"Quality of material, lack of facilities, and cost"

"We do not have the funds or resources to sort residual waste post-collection."

"The Waste Disposal Authority (WDA) are currently developing an MBT Facility, which will have facility to recover recyclable materials prior to residual waste treatment"

"A new site is opening soon where the plastics will be recovered from residual waste."

LITTER & DISPOSAL

'ON-THE-GO'

Society today is on the move more than ever before. Today's behaviour of consuming and disposing of food and drink 'On-the-Go' is continuously increasing to fit in with lifestyles at home, work and leisure.

The conventional norm of fixed meal times has given way to a more flexible approach to dining. Today people eat a wider range of snacks and fully prepared convenience meals either at home, or away from home, and when travelling.

Research estimates (*Ellen MacArthur Foundation, The New Plastics Economy: Rethinking the future of plastics*) that only 2% of the plastic entering the ocean from the land comes from the US and Europe. Although many Local Authorities report that they think the litter problem is not getting worse, following the BBCs 'Blue Planet' series, there is a heightened awareness from the public surrounding the issue of littering, and the damage that it causes to the natural environment. As one Local Authority commented:

"Litter is very visual and exposure to the public maintains that awareness."

Disposal of used packaging away from home is a key strategic issue to tackle littering and promote positive disposal behaviour, and recycling has a big role to play in this.

RECOUP's research with over 100 Local Authorities (*RECOUP Local Authority Disposal 'On-the-Go' Survey, December 2017*) demonstrated there is inadequate collection infrastructure for both collection of recycling and residual waste material. Even where the infrastructure exists, it is both time-consuming and resource-intensive to collect. Looking specifically at recycling, the report identified the key barriers to 'On-the-Go' recycling as:

- High levels of contamination
- Inadequate budget for consumer communications and education
- Procurement, maintenance and collection costs

There are game changing new opportunities to meet the 'On-the-Go' challenges. The new Waste & Resources Strategy, currently being developed by Defra, is anticipated to lead to an overhaul of the packaging producer responsibility system in the UK which will yield additional funding to develop the 'On-the-Go' infrastructure.

With a consultation on a Deposit Return Scheme in Scotland and one being planned for England in 2018, such a scheme will possibly be part of the solution. However, more locations for 'On-the-Go' collection, supported by resources to maintain them, along with signage and communications to catalyse behaviour change are desperately needed and cannot be delivered without considerable investment.

This has been further evidenced by the results of a consumer survey from the British Plastics Federation and YouGov (*2,048 GB adults*) where 58% of consumers said they would recycle more 'On-the-Go' if there were more recycling bins in public places, and 31% said they would recycle more using some form of reward – either through a redeemable deposit or discount vouchers.

BPF YOUNGOV SURVEY

Thinking about when you are NOT at home (e.g. at the park, in town etc.)... Which ONE, if any, of the following would encourage you to recycle on-the-go packaging MOST, when you are outside of your home?



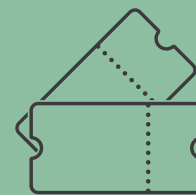
58%

If there were more recycling bins in public places



16%

If I had to pay more when I buy an item in a recyclable container, with the option to have the extra money refunded when I return the empty container to a drop off point



15%

If I received discount vouchers as a reward for taking items home to recycle



11%

None of these

Don't know

A strong and ambitious strategy around recycling can deliver higher than average recycling performance, as has been demonstrated by Wales in recent years. The devolved nations are also moving towards consistent kerbside collections – the materials collected, the frequency of collection, how they are collected, and consistent messaging about how residents should place them for recycling.

It is clear that such advantages for ‘On-the-Go’ collections can be realised in the same way – an ambitious strategy supplemented by the same materials being collected in the same way using the same signage and communications to the public. However, today, unpicking the current position of ‘On-the-Go’ recycling is likely to be unrealistic and an ongoing large-scale national project for the foreseeable future.

The *2018 RECOUP Survey* explores the ‘On-the-Go’ challenge and opportunity in more detail.

Inadequate Collection Infrastructure

Local Authorities are the main providers of ‘On-the-Go’ litter bins in public spaces. They are located across a wide range of locations, depending on the geographical make up and foot fall of areas accessible to the public.

The *2018 RECOUP Survey* reports that **49%** of the 391 Local Authorities in the UK provide **RECYCLING** ‘On-the-Go’ collection units in public spaces.

49% of the 391 Local Authorities in the UK provide Recycling ‘On-the-Go’ collection units in public spaces

The Local Authorities that responded to the *2018 RECOUP Survey* stated the location of their public litter bins.

LOCATION OF PUBLIC LITTER BINS	
Main Shopping Streets/Locations	22%
Secondary Shopping Streets (Mixed Retail/ Residential Areas)	19%
Public Open Spaces e.g. Parks	20%
Near Schools	19%
Residential Areas	15%
Sea Front Locations	5%

Wider infrastructure is needed to prevent littering and increase ‘On-the-Go’ collection and recycling. Each area is unique with its urban and / or rural make up, areas of footfall, school locations, number of open spaces and parks, shopping locations and trends, town and city centre design, socio demographics of residents and visitors, number of visitors, and road systems – all

of which needs to be considered when designing ‘On-the-Go’ litter and recycling collection.

Through central Government, several Local Authorities have clearly stated that Waste Collection Authorities are best placed to answer how the localised management of litter sits within their priorities and budgets. The challenge, therefore, is to prevent a proliferation of bespoke systems, but implement a generic system that can accommodate local needs.

The *2018 RECOUP Survey* highlights that a number Local Authorities felt the public perception can be that no recycling (or litter) provision is a result of service cuts, but the truth is more complicated than that. If resources are limited, the priority must be to reduce littering and provide litter bins. Recycling ‘On-the-Go’ is more complicated due to the collection of different materials across different collection schemes – kerbside, workplace, transport hubs, public service areas such as hospitals, and ‘On-the-Go’ in town and city centres – and solutions need a holistic approach.

Severity of Litter

Surprisingly **85%** of Local Authorities that responded to the *2018 RECOUP Survey* state they consider the severity of litter to be **manageable** with current resources at their disposal, with **14%** stating it is **too high** to manage. This contradicts initial expectations that Local Authorities would report that they were struggling to manage the severity of litter.

SEVERITY OF LITTER	
Too High to Manage with Current Resources	14%
Manageable with Current Resources	85%
Easily Managed with Current Resources	1%

There are reasons for this:

- Keeping areas of high footfall (town and city centres, areas near schools, etc) with reasonable infrastructure of litter bins and litter picks is a priority service.
- Local Authority staff may be reluctant to say litter severity is ‘Too high to manage’ as this could be viewed as an admission of failure when staff are working hard to maintain services and improve their local environment whilst under the pressures of budget cuts.
- There is a perceived increase in the level of volunteer community and individual’s participation with litter picking.
- Standards might also be different. One Local Authority commented “The standards of cleanliness may not be quite as high as 5-10 years ago, due to the increase in takeaway litter, particularly on the main roads. We regularly review how we work and how we can improve our collections.”.
- Enforcement of the legal requirements to keep highways ‘clean’ and other relevant land ‘clear of litter and refuse’ and the associated response times are set out in Defra’s

Code of Practice on Litter and Refuse. If there was greater enforcement of this more Authorities may report litter severity is 'Too high to manage'.

- It was reported that if the question on managing the severity of litter related to fly-tipping rather than litter only many more Authorities might report the severity of litter would be 'Too high to manage'.

The Priority – Litter or Fly-tipping?

Local Authorities that responded to the 2018 RECOUP Survey state the environmental challenge is not just about disposal 'On-the-Go' – both litter and fly-tipping are equal challenges.

THE ENVIROMENTAL CHALLENGE	
Litter	15%
Fly-Tipping	19%
Both	66%

The national trend of fly-tipping is increasing, which undoubtedly puts more pressure on resources and takes considerable time and funding away from managing the clean-up of litter. Fly-tipping is also a concern for residents, and it can affect both urban and rural areas.

Both require significant budget to manage. In England alone keeping the country's streets clean cost Local Authorities almost £700 million last year (Defra, 2018) and the cost of fly-tipping to Local Authorities is nearly £60 million per year (House of Commons Library - Fly-Tipping - the Illegal Dumping of Waste).

Large-scale fly-tipping is seen as relatively rare, but smaller fly-tips are much more frequent and amount to several hundred tonnes each month for some Local Authorities, generating significant costs to collect and dispose of the material from multiple locations.

Business Waste

An issue highlighted by Local Authorities was that of unregulated waste from business, or 'business fly-tipping'. This can be waste illegally disposed of by businesses and offices in street and parking areas placing their waste in black sacks without a waste contract. Or it can be small operators such as a builder illegally disposing of a loft conversion waste. One large Local Authority reported this waste amounted to 400 tonnes per month.

Bring Sites

Bring schemes are containers located in public areas (such as supermarket sites and car parks) where the public can place their recyclables. A common sight across the UK is the fly-tipping of materials next to these sites. This material might include good quality recycling and textiles but is often contaminated with general waste.

This can be tackled, in part, through regular monitoring, increasing the frequency of collections, and engaging signage, although generally it is not the genuine users of the units that are the problem. Many Local Authorities are also now reporting they have removed, or are looking to remove, the bring sites or using cameras at problem sites for monitoring and identifying those fly-tipping.



‘On-the-Go’ Collection – Learnings from Local Authorities

Local Authorities have communicated key areas to consider when delivering ‘On-the-Go’ collection services.

Increasing Population

Increasing population levels puts a strain on services, and this is particularly true when managing litter and disposal ‘On-the-Go’. Although this additional population can create revenue for Local Authorities (such as through Council tax), it is not necessarily proportionally channelled into front line services such as waste collection and management.

Paul Dobbs, Waste & Environment Manager (Public Realm), Hackney Council - **“Litter puts considerable strain on our current resources, but it is managed well and our streets attain good scores in our regular street cleanliness surveys. However, with our population increasing by several thousand every year, the current resources will no longer be sufficient to continue to provide this level of service.”**

Consumer Behaviour, Communications & Bin Design

Consumer engagement and communications to increase positive disposal behaviour should be a central part of any scheme. Effective and noticeable bin signage, visuals in public places, such as using advertising space and bus stops, use of social media platforms should all be used alongside conventional media channels such as TV and Radio. The latter is realistic if systems can be harmonised at a national level.

Many communication campaigns focus on reducing litter, which include:

- Encouraging people to use the litter or recycling bins
- Not dropping litter
- Taking material home

These communications are not commonplace.

Littering has yet to become anti-social – consumers act differently in different environments, for example, at large scale events they may litter in a contrary way to their normal behaviour patterns.

Glynis Wood, Performance & Education Team Leader – Waste & Fleet, Ipswich Borough Council - **“Unfortunately, there seems to be a general national behaviour of leaving litter behind in public places devolving responsibility to ‘someone else’.”**

There are obvious restrictions about how to present materials for recycling when away from home. Advice for recycling in the home is often about emptying and giving packaging a quick rinse, and this is not normally possible ‘On-the-Go’. As such, materials can be expected to have a higher level of food contamination.

Kate Murrell, Waste Reduction and Recycling Manager, Norfolk County Council - **“Even a conscientious recycler has trouble out and about - they don’t have the ability to ‘clean’ their recycling.”**

Personal psychology and social pressures also come into play. Public bins are simply not just one household looking after their own bin and giving individuals a sense of ownership and responsibility. Scheme operators can try to engender positive personal disposal behaviour through a sense of consumers’ responsibility to the local community or visitors treating that community as that of their own.

Bin design is also a key area, with dual bins having a particularly high risk of contamination. Also, the use of different types and colour of bins for collecting material in individual collection schemes e.g. a work place or a road services station. Consistent and effective bin design and signage all help consumers’ understanding of what materials should be placed in what bin. For example, the use of instructions such as ‘mixed recyclables’ is not appropriate for on-the-go schemes.

To reduce contamination in the recycling stream one such example of good practice is the use of clear sacks, which provides a solution to identifying bags with any obvious high levels of non-target materials.

Litter Enforcement?

Local Authorities have very different enforcement appetites. It was reported from a large Waste Partnership that some of their Local Authorities employ a contractor to hand out Fixed Penalty Notices to anyone who litters, whilst others are against fines and prosecutions. However, enforcement is challenging, with one Local Authority commenting *“Enforcement services are too stretched to make any significant contribution to reducing the number of littering incidents and lightening the burden on our street cleansing services”*.

There are alternative solutions that can be considered. One Local Authority reported they have just implemented a new dedicated Waste Crime Team who deal with waste crimes including littering and fly-tipping, and are positive about how effective it will be- *“With this new resource we are confident that the litter issue is now manageable”*. Alternatively, anti-littering enforcement can be out-sourced with the resulting income from fines used to fund the service with profit sharing with the Local Authority. This, however, needs to be implemented so it does not alienate the public through potentially over-zealous application.

A CALL TO ACTION

Three litter challenges are commonly mentioned when looking to tackle the 'On-the-Go' litter and recycling challenge, and they require very specific action.

Beach Life

With a focus on ocean plastics and litter, sea front locations including beaches should be a major target area to reduce litter and increase recycling. With high numbers of visitors, many eating 'On-the-Go' food and drink, Local Authorities put significant efforts into keeping beaches of high footfall clean. With many miles of sea front locations to cover, generally, collection infrastructure is poor and lacking in engaging communications to provide the 'nudge factor' to dispose of litter responsibly.



Night Life

A vibrant town or city centre life can cause significant amounts of litter for the Council to deal with, especially during the summer months. This is particularly true at night, when contamination of recycling bins often increases significantly with negative littering behaviour more common among late night revellers.

Our Roads

Road side litter is reported as being a significant issue, both for major and rural roads. Drivers throwing litter from vehicles and littering at lay-bys and road junctions is common place. Cleaning roadsides of litter is also disproportionately costly due to the time, health and safety risks associated with it. Paul Jones, Service Director for Local Services at Northumberland County Council commenting *"Roadside litter is costly to collect as it has to be undertaken manually along significant lengths of road, and also incurs additional costs due to the need for traffic management to ensure the health and safety of staff and road users"*.



Funding Cuts & Creating Efficiencies

Costs and resources to provide street cleaning and 'On-the-Go' litter and recycling collection services are significant. Local Authorities only have finite resources to manage consumers' waste, and this needs investment to help turn the tide on levels of litter and fly-tipping.

Although many are managing the severity of litter within very tight budgets, further funding cuts could have a very real negative impact. James Atthews, Management Support Analyst at Scarborough Borough Council commenting "Currently litter is manageable within current resources, but with savings still to be found for the authority, any cuts would have a detrimental impact on the waste and street cleaning services provided". Even one overfull bin with materials littered around when shared on social media platforms is a very visual indicator that the system is not working effectively.

Whether operations are delivered inhouse or contracted out, the service levels have need to be in line with the resources available. A reduction in operational budget can result in a poorer service delivery – "you get what you pay for" – and reduced service quality in turn leads to increased management time to deliver the service.

Maintaining or improving performance with less resources is challenging. Keeping front line services operational has been considered essential and budget cuts have been based on creating efficiencies, reducing or changing working hours, better management and flatter operational structures.

Now a holistic approach to deployment of resources should be considered, with a far more flexible approach to delivering front line services.

Local Authority comment: "Historically any funding cut reviews have focused on maintaining front line services. Going forward our plans are about greater synergies across front line services - for example refuse, streets and grounds teams."



Collection Quantities

Only a small number of Local Authorities were able to provide estimated collection quantities from recycling 'On-the-Go' units. There is also limited data available for litter and / or street sweepings.

The reasons cited for this by Local Authorities are:

70% OF MATERIAL IS MIXED WITH KERBSIDE COMMINGLED COLLECTIONS

18% THE MATERIAL IS TOO CONTAMINATED AND IT ENDS UP IN THE RESIDUAL WASTE STREAM

12% RESOURCE AND TECHNOLOGICAL REASONS

Enabling effective reporting of material disposed 'On-the-Go' either through collection bins or street sweepings should be a priority for any additional future investment.

End Destination of Recycling 'On-the-Go' Materials

75% of Local Authorities that responded to the 2018 RECOUP Survey state their material collected for recycling is sent to a MRF for processing, although it is often mixed with kerbside material. This could be due to logistics in collections or weighing devices on vehicles.

However, with high levels of contamination, an unknown but significant quantity of the material collected is expected to either be rejected at the MRF or mixed in with kerbside material to 'hide' the contamination with cleaner kerbside material.



The end destination for the remaining **25%** of material can include recovering recyclable materials from the residual waste stream through a Mechanical Biological Treatment (MBT) facility, going to Energy from Waste (EfW), Refuse Derived Fuel (RDF) or Anaerobic Digestion (AD) facilities, or landfill.

Caution? Introducing a Recycling 'On-the-Go' Scheme

The Benefits

If funding is available and there is a political will and the necessary operational resources, there are significant benefits to having a harmonised comprehensive 'On-the-Go' collection provision, for both litter and recycling.

- It reduces litter, and in many cases, substantially.
- Placement of bins in areas of high footfall or areas with a littering issue has been shown to be successful with the right investment.
- It provides a positive recycling message to compliment kerbside recycling collection schemes and a reminder not to litter- using the 'nudge' factor and keeping consistent messages both 'On-the-Go' and at home. This is particularly true if there are effective communications and signage for the scheme

The Barriers

When reviewing the overall waste and recycling collection provision and management for Local Authorities against that of 'On-the-Go' collection, the cost vs benefit does not add up.

Local Authorities who do not provide recycling 'On-the-Go' collection bins in public spaces were asked why they do not deliver this service- **54%** cited contamination levels, **38%** the cost and resources to deliver the service, and **8%** stated other reasons. With Local Government cut backs continuing, many Local Authorities think budget is better spent on increasing quantities and reducing contamination in kerbside dry recycling and organic waste collections. This makes sense in terms of the targeting recovery of materials from the biggest collection

stream and increasing overall recycling rates.

Operational resourcing and costs can outweigh any potential benefits to 'On-the-Go' collections. To make recycling 'On-the-Go' a viable proposition the following should be considered:

- Staff to empty collection units, drive collection vehicles, placement of bags to line the units, and resource waste transfer station facilities.
- Budget to procure and install durable bins.
- Bins need to be maintained for practical and visual appeal - vandalism, stubbing out of cigarettes and wear and tear are cited as key issues. City and town centre bins used in night-life locations are particularly challenging.
- Fit for purpose sorting facilities to recover recyclable materials from contaminated 'On-the-Go' loads are needed
- A means of segregating recycling from other materials in street cleansing vehicles which are often used to take materials to general waste end destinations such as the incineration facilities.

Regular emptying of bins has been highlighted as a key activity. Bins that are not emptied when they are full can attract more materials to be littered around them and the bins can actually end up being removed as a result. A full bin is almost as detrimental as having no bin in place, with one Local Authority commenting "*It is clear that if there is no bin or a full bin, then litter will multiply*".

Many Local Authorities reported they are looking into introducing more recycling provision in busy town centre locations, but ongoing contamination issues of the recycling bins remain a key barrier with **hot and cold drink cups (coffee cups, etc), fast food waste, bagged dog waste, sweet wrappers and crisp wrappers** being cited as particular problem materials.

This has led to a different but effective approach for some Local Authorities to recovering food and drink packaging disposed of 'On-the-Go'. Where litter and recycling bins are in place, the material is collected as general waste and recyclable materials are recovered through a Mechanical Biological Treatment facility before the material goes to incineration or landfill.

Funding Opportunities

There are funding success stories by some Local Authorities focussing their teams on targeted geographical locations and being proactive by looking at a wide range of funding opportunities to improve their local environment.

Paul Whiting, Business Support Officer for Performance Environmental Management, Rochdale Borough Council:
“Our Gateway Teams focus on main arterial routes within the borough. We’ve been able to invest in our resources as we’ve received additional budget and resources for improving the Public Realm, and as a result we have put in Clean and Green teams who are tasked with improving the areas. We also have been concentrating on our Britain in Bloom bid as representative of the North West so additional resources have been used to improve the appearance and quality of our horticultural assets, which includes additional cleaning.”

Where Funding Would Be Spent

Local Authorities were asked if funding were to be made available to increase existing ‘On-the-Go’ collection provision (for both litter and recycling bins) how would it be used. Many stated they would use funding across a range of areas needed to deliver the service, but communications was high on the agenda (see opposite).

In terms of adding a new recycling ‘On-the-Go’ scheme it was reported by a number of Authorities that unless full external funding for both bins and ongoing servicing costs are met at no cost to the Authority, they wouldn’t consider introducing a scheme.

57%

STATED THEY WOULD TAKE A HOLISTIC VIEW OF THEIR SERVICE PROVISION AND USE THE FUNDS IN THE FULL RANGE OF OPTIONS NEEDED TO DELIVER AN EFFECTIVE SCHEME

21%

WOULD USE FUNDING SOLELY IN DELIVERING COMMUNICATIONS AND EDUCATION TO ENGAGE THE PUBLIC

8%

WOULD INCREASE THEIR RECYCLING AND LITTER BIN PROVISION

5%

WOULD USE THE SERVICE FOR SCHEME SERVICE AND MAINTINENCE COSTS

5%

CITING OTHER AREAS

RECYCLED PLASTICS MARKETS

Plastics packaging collected to be recycled continues to provide income generation, employment and business opportunities for Local Authorities and Waste Management providers.

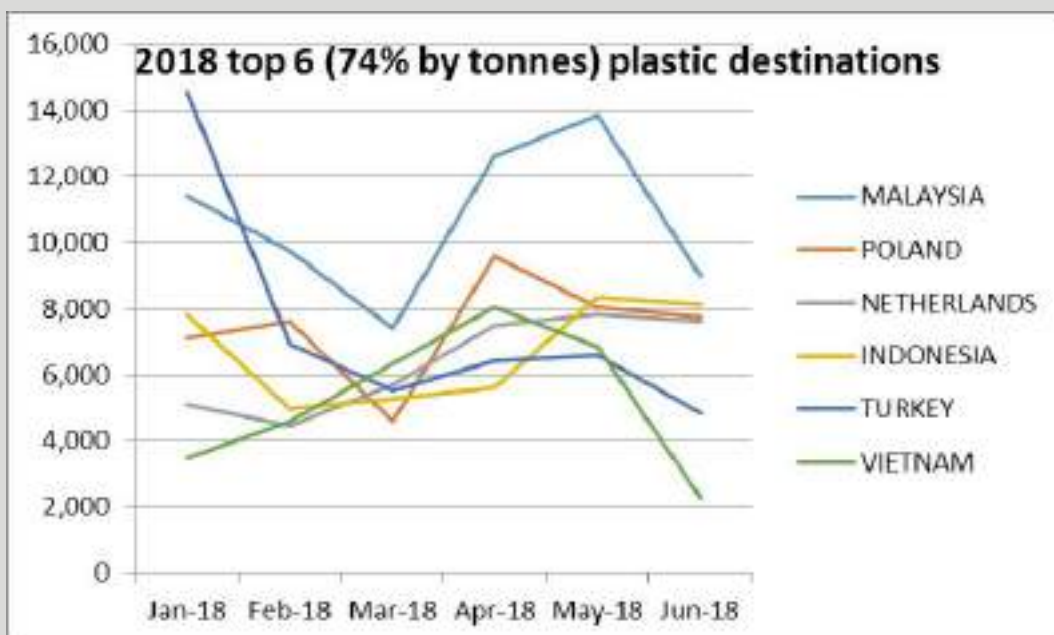
As with all material commodities, the value of plastic collected for recycling changes due to market conditions. Regardless of values of collected plastics, with landfill and Energy from Waste costs, the business case to recycle is proven if an end market is financially viable.

'The Perfect Storm'

The current market conditions are precarious, with the BPF describing a *"perfect storm over waste exports"*. With over 60% of the plastics packaging collected in UK for recycling exported the current plight faced by those operating in waste and recycling is very real.

The BPF article includes a graph illustrating the restrictions on the import of solid waste into China and the emergence of new markets in Asia.

More recently further restrictions on the import of plastic waste for recycling have been put in place in these countries, with reports of household and other low-quality plastic waste from the developed world being returned or stuck at ports.





PAUL SANDERSON, REB MARKET INTELLIGENCE

Towards the end of 2017, the Chinese Government announced that it would ban the import of all plastics, apart from those from post-manufacturing sources, from 1 January 2018.

Since then, the market for plastic packaging has fundamentally changed.

Once China shut its doors to imports, the market sought other destinations for material, and for a time with great success. Countries such as Malaysia, Thailand, Vietnam and Poland saw a sudden rush of material exported there, with the UK in particular a prime exporter.

But these countries couldn't cope with all of the extra material.

Infrastructure at Asian ports often wasn't good enough to deal with this sudden influx, particularly when containers were abandoned. Often, the existing recycling infrastructure wasn't able to cope either.

This flood of material spooked national governments who did not want to be seen as a dumping ground for low grade plastics, or even containers of mixed waste.

As has been reported on REB Market Intelligence, there has been regular developments in policy. Thailand has completely banned the import of plastics. Malaysia has announced a three-month ban, which at the time of writing, was still in force – many in the market expect this ban to be extended permanently. Vietnam has announced tough new inspection regimes and a temporary ban on plastics. Taiwan too banned imports of plastics.

While a spate of fires at plastics storage facilities in Poland has also led to it seeking tougher import restrictions and bans on imports. Poland had become the premier destination for UK exports in Europe.

Those who are still able to move material have found that quality is key, with the market price for high quality packaging grades remaining stable and at medium to high levels compared to historic data.

With a PRN price at the time of writing above £70 per tonne for plastics, and above £60 per tonne for much of the year, this has helped to give UK material a competitive edge and helped to keep it moving.

But this price advantage is of no use if end destinations are closing their doors.

Increasingly, it looks like we will have a situation where recycled materials are processed into pellet in the UK before being exported. This will require more investment in UK infrastructure.

To finish with a positive though, demand for recycled plastics is increasing. Companies are wanting to use more recycled content and are prepared to pay a premium above virgin polymer prices for it. This demand for recycled content of packaging grades looks set to get even stronger over the coming years, but it will require a high-quality input of recycled materials to ensure it is a sustainable market.

www.rebnews.com/intelligence/

Value of Plastic Bottles Collected for Recycling

The highest values for collected plastics are when plastic bottles are sorted into their main fractions – clear and light blue PET, natural HDPE and mixed HDPE – with coloured PET and mixed bottles prior to the current market conditions retaining relatively stable but lower prices.

Plastic bottles mainly consist of PET drinks bottles and HDPE milk bottles, but there is an increasing amount of other bottle types such as DIY, bathroom and cosmetic products, which can be made from PP, coloured HDPE and PET, and also PVC.

Mixed Plastic Bottles

Using the REB News material price index (www.rebnews.com) 1 tonne of mixed plastic bottles typically attracted an average price of **£110 per tonne** in 2017. This uses a combination of 'A Grade Mixed Plastic Bottles' (includes more clear PET and natural HDPE) and 'Grade B Mixed Plastic Bottles' (includes more Jazz PET and HDPE).

MIXED PLASTIC BOTTLES

- 351,907 tonnes of plastic bottles collected for recycling respresented a potential value in 2017 of around **£38 million**
- Real prices in 2017 ranged from **£15-£215 per tonne**

Coloured (jazz) PET and HDPE command far lower prices.

Sorted Plastic Bottles

These prices are for mixed plastic bottles, which can vary depending on the levels of clear and light blue PET and natural HDPE bottles. To give a comparison of the prices for a tonne of clear PET and natural HDPE bottles, according to *Lets Recycle*, average prices ranged from:

CLEAR PET

- Clear and light blue PET- £140-£190 per tonne, with an average of **£158**

NATURAL HDPE

- Natural HDPE- £370-£420, per tonne with an average of **£395**

This demonstrates the potential additional value of sorted plastic bottles, although this needs to be balanced against the additional sorting costs incurred to achieve these higher values.

Value of Plastic Bottles Not Collected for Recycling

The estimated 242,093 tonnes of plastic bottles not collected for recycling from UK households provides an indication of the potential value and disposal costs for these bottles:

- Using the average **£110** per tonne mixed bottle value, the unrecycled bottles would have a potential value in 2017 of over nearly **£27m**
- Based on a number of assumptions about Energy from Waste (EfW) versus landfill end destinations, **£86 per tonne** median EfW gate fee and **£107 per tonne** median landfill tax and gate fee for non-hazardous waste (landfill tax £86.10 and median MRF gate fee of £20 per tonne (*source: WRAP Gate Fees 2017/18*)) these bottles would cost over **£22m** to dispose of

Although the following calculation would be providing an unlikely view of the financial implications, if there was a 100% bottle collection rate there would be an additional **£49m** benefit to disposal Authorities in the UK versus the current situation today. This is based on combining the potential value of plastic bottles not collected for recycling, the landfill and incineration costs and removing the average median MRF gate fee of **£22**, the average percentage Local Authorities that do not pay a MRF gate fee (*source: WRAP Gate Fees 2017/18*), and the extra material is integrated into existing collection services at no additional cost.

Value of Plastic Pots, Tubs & Trays Collected for Recycling

Although collections for plastic pots, tubs and trays have increased significantly in recent years, their inherent recyclability and end market options mean they are not attracting positive values.

The value of pots, tubs and trays depends primarily on the level of contamination and Polyolefin content (PP and PE plastics). As a mix, the plastic pot, tub and tray fraction does not attract positive values but may still be favourable compared to EfW or landfill. Any positive prices reported are likely to refer to material that also includes plastic bottle content, which inflates the value, or are subjected to several appropriate sorting processes to extract the valued Polyolefin plastics. PP is the only positive value element of the pot and tray fraction in 2018.

It is not realistic to put a potential figure on the benefit of collecting the 525,000 tonnes entering the household waste and recycling systems. With the values not yet realised for the 175,103 tonnes of plastic pots, tubs and trays that were collected for recycling in 2017, an idea of the scale of costs to dispose of plastic pots, tubs and trays are:

- If all the estimated **525,000 tonnes** of pots, tubs and trays consumed were disposed of in 2017, based on a number of assumptions about Energy from Waste (EfW) versus

landfill end destinations, **£86 per tonne** median EfW gate fee and **£107 per tonne** median landfill tax and gate fee for non-hazardous waste, the disposal costs would be over **£48 million per annum**

- Based on the same assumptions **349,897 tonnes** of plastic pots, tubs and trays not collected for recycling in 2017 would incur disposal costs of almost **£32 million per annum**
- Therefore, the actual cost of disposal is somewhere between **£32m** and **£56m**.

End Markets - UK or Export

Both domestic and export markets have been important to provide outlets for the collected plastics. End markets are referring to where plastics are reprocessed into granules, pellets or flakes in preparation for use as a raw material in second life applications.

In terms of plastics-packaging recycling levels in the UK according to the National Packaging Waste Database (NPWD), **1,044,363 tonnes** of plastic packaging were declared as recycled from all sectors in 2017, with **66% (685,896 tonnes)** exported and **34% (358,467 tonnes)** recycled domestically. With **2,260,000 tonnes** placed on the market this is a recycling rate of **46.2%**. The remaining **1,215,637 tonnes** is not collected for recycling and therefore goes in to landfill or energy recovery end destinations. The **527,010 tonnes** of rigid plastic packaging collected for recycling from UK households makes up just over 50% of the total plastics packaging recycled.

It is not possible to audit market flows and precise end destinations; especially where intermediate traders are used. Transparency about end destinations of exported materials should be high on the agenda as the UK shapes its strategy for the future.

Struggling to Find End Markets?

The *2018 RECOUP Survey* continues to receive comments about the volatility of the markets.

Local Authorities were asked if they were struggling to find a market for plastics collected for recycling and there the responses covered all plastic formats, although there was particular concern around plastic pots, tubs and trays fraction, which reflects the current market conditions.



BEHAVIOUR CHANGE & CONSUMER COMMUNICATIONS

Effective communications from Local Authorities to residents are central to a well performing recycling collection scheme to both increase collection quantities and reduce contamination.

The 2018 RECOUP Survey explores a number of key areas about how Local Authorities approach their communications, and the ongoing challenges that surround engaging their residents. With far greater restrictions in exporting material and a higher demand for the use of recycled plastics, there is a growing importance in reducing contamination and producing high quality material.

The challenge to communicate effectively with residents about what they should recycle and how to present their packaging for recycling is increasingly challenging.

As a result, the national plastics recycling initiative, *Pledge 4 Plastics*, has been rebranded as *Pledge 2 Recycle Plastics*, and has already shown exciting potential in the Local Authority campaigns.

There is ongoing national media coverage to consumers that can undermine recycling and use of packaging, with messages such as emphasising high contamination levels, the export of material, and littering of packaging in our natural environment. Certainly 'recycling' and 'packaging' is often an easy target and poorly informed articles can have a negative effect and disengage the consumer to make the effort to recycle effectively.

There were up to 200 responses from Local Authorities depending on the questions.

What Local Authorities Say About Communications to their Residents

Q: Are Local Authorities planning a communication to householders about plastics recycling, either as an individual Authority or part of a wider County or Partnership campaign?

The reason to run a communication about plastic recycling could include increasing capture of target plastic material, reducing contamination or introducing / changing a service.

Is your Local Authority planning a communication to householders about plastics recycling?	
Yes	49%
No	51%

Plastic is in the public's mind more than ever before, and this is reflected in the interest shown in Local Authorities running a communications campaign. Nearly half of Local Authorities are now planning a communication to householders about plastics recycling – the 2017 RECOUP Survey reported only **37%** were planning a campaign.

Q. If no plastics recycling communication is planned to the householders what are the reasons?

Many Local Authorities provided their reasons if no plastics recycling communication was planned to householders.

If no communication is planned to the householders what are the reasons?	Yes
Cost and Resources	28%
Focus on Communications for all Dry Recyclables	52%
Other	20%

The main reason reported was focussing on communications for all dry recyclables, rather than one target material (**52%**), with cost and resources also impacting communications (**28%**).

20% stated other reasons which included language barriers, the difficulty in providing objective monitoring and evidence

to report whether the scheme has been a success, and existing newsletters used meet their communications needs.

Language Barriers – *“Language is always going to a barrier so creative communications are required. Many residents will not understand the use of the word 'contamination'”*

Success Rates – *“Hard to monitor success of initiatives”*

Ongoing / Previous Communications – *“Two council newsletters are published and delivered to residents each year which contain an article on recycling”*

Q. Are Local Authorities planning to involve retailers in communications to householders?

One of the opportunities for Local Authorities is to partner with retailers or businesses to deliver sponsored or shared consumer communications.

- More Local Authorities reported they are planning to involve retailers in their communications to householders – **17** reporting retailers are involved compared to the **6** in the *2017 RECOUP Survey*. This is something that RECOUP sees as offering good opportunities, particularly with the more proactive retailers, and are willing to support and co-ordinate future proposals and activities.

Q. Is the focus on communications around increasing collection rates, reducing contamination, or both are equal priorities?

With the increased restrictions of exporting material and increased demand for recycled plastic, there has been a shift in focus on communication towards reducing contamination. One Local Authority commented that their collection rates are already adequate, so there is no desire to spend budgets on communications that *“will have no real effect”*, whilst another noted that householders in their district *“do not clean out recyclables leaving food and drink residues, as well as hiding residual waste bags below the surface in recycling bins”*.

Increasing material quality is a key area of interest for RECOUP and is the central strategic message in the rebranded *Pledge 2 Recycle Plastics* initiative. The responses from the *2018 RECOUP Survey* provide further evidence to back this approach.

Is the focus on communications around increasing collection rates, reducing contamination, or both are equal priorities?	Yes
Increasing Collection Rates	9%
Reducing Contamination	17%
Both are Equal Priorities	74%

- **74%** of Local Authorities reported that increasing collection and reducing contamination are equal priorities.

- **91%** of Local Authorities are including reducing contamination in their communications.
- Although most Local Authorities reported that increasing collection rates and reducing contamination are equally important, the Local Authorities focussing on reducing contamination has increased from the *2017 RECOUP Survey* from **10%** to **17%**.

To validate these responses a separate question confirmed **85%** of Local Authorities were asked whether they have communicated in 2017/18 or are you currently communicating with householders about the importance of reducing contamination and / or how to present their plastics for recycling.

Q. Has Your Local Authority Received Budget Cuts to Deliver Communications to Householders about Waste & Recycling?

Consumer communications to householders can save Local Authorities money by reducing the landfill and gate fee charges from target recycling ending up in the residual collections, or reducing contamination levels in the material that is placed for recycling. There is evidence that budget spent on communications provides value for money and reduces overall spend, rather than increasing it.

- In 2017, **47%** of Local Authorities in the UK received budget cuts for providing waste and recycling collections or to deliver communications to householders surrounding waste and recycling.
- Although this figure had increased significantly in 2016 (from **13%** in 2015 to **51%** in 2016), it has seen a slight decrease in 2017.
- It is not clear whether these budget cuts applied to collections, communications or both, although one Local Authority commented *“we have seen a reduction in budgets overall for collection and communications, and further cuts are anticipated in the foreseeable future”*. RECOUP have been made aware that communications are still continuing to be **scaled back and even stopped altogether**.
- Without financial investment, recycling rates and material quality will continue to decrease.

How do Local Authorities Refer to Non-Bottle Rigid Plastics Packaging?

Non-Bottle rigid plastic packaging is referred to in the *RECOUP Survey* as plastic pots, tubs and trays, but there are many different approaches when communicating this plastic format to consumers.



- The most common way description was plastic format (plastic pots, tubs & trays) at **40%**.
- Plastic use (e.g. margarine tubs, yoghurt pots, etc) is **23%**, and a combination of both plastic format and use is **31%**.
- **4%** use polymer codes in their communications, although this is always used in combination with plastic format and / or use.
- **No Local Authorities reported using polymer type only** to describe non-bottle plastic packaging. Using Polymer codes is not recommended as it can cause confusion when one polymer type is used across a variety of products e.g. PET trays and PET bottles.
- **2%** of Local Authorities use other communications, such as just photos and 'rigid and semi rigid plastics'.

In any communications RECOUP recommends using a plastic pots, tubs and trays to describe the plastic packaging type, and examples of the product use (e.g. margarine tubs, etc) and clear photos of the products that are either specific target material or not wanted in the recycling stream.

40% FORMAT (E.G. PLASTIC POTS, TUBS, TRAYS) ONLY

31% COMBINATION - FORMAT & USE

23% USE (E.G MARGARINE TUBS, YOGHURT POTS ETC) ONLY

4% USE OF POLYMER CODES

2% OTHER

BARRIERS TO EFFECTIVE PLASTIC RECYCLING

Although the focus of this report is plastics recycling, one material cannot be looked at in isolation and there are common challenges in managing across all material types. Successful communications to residents need to be planned as a long-term programme to continually emphasise recycling messages through different communication channels.

A few of the main issues reported in the *2018 RECOUP Survey* by Local Authorities across the UK are shown below. They mention national media issues, the difficulty in providing evidence-based campaigns, language barriers, social media use, and the basic how the basics still need to be communicated (kids toys):

Lack of Resources & Evidence

"Communications are very limited due to no budget for a council newsletter and a dedicated Recycling Officer."

"It's hard to monitor the success of initiatives, so sponsors are less likely to support campaigns without evidence that the scheme is working."

"We have delivered limited communications in 2017/18 due to lack of funding."

Conflicting Media Messages – Black Plastics

"There are a lot of confusing articles about problems with recycling black plastic, which are confusing residents. We accept black plastic food trays at our MRF- but *The Guardian* and *Which?* are telling people they can't be recycled which is not helpful."

Plastic Type Confusion

The basic messages need to get through to residents- ***"Plastics represents the single biggest source of confusion amongst residents regarding contamination ... despite focussing on very specific plastic materials (e.g. bottles, margarine tubs, yoghurt pots) some residents cannot make the distinction with non-recyclable plastics (e.g. kid's toys)."***

Language Barriers

"Language is always going to a barrier, so creative communications are required. Many residents will not understand the use of the word 'contamination'."

Social Media Restrictions

Many Local Authorities reported budgets would only allow to use social media platforms and their websites to communicate with residents. This could be missing a large portion of the population who do not use these sites.

RECOUP led a cross sector Black Packaging National Recycling Forum. The main issue is the use of carbon black pigment, which is not detectable, and is used in black packaging and often in other colours.

Solutions are now being delivered through:

- Retailers and producers changing from black trays to clear, or removing carbon black from their packaging and using alternative pigments
- Innovative sorting solutions to recover and recycle the black packaging into new food grade packaging



Pledge 4 Plastics Becomes Pledge 2 Recycle Plastics!

RECOUP's national plastics recycling initiative Pledge 4 Plastics has been given a new look! Now known as *Pledge 2 Recycle Plastics*, it will continue to provide resources and be a catalyst in supporting consumer communications in plastics recycling across the UK.

Several successful campaigns have already been carried out under this new branding centred around **'cutting the confusion'** of plastics recycling and **educating the consumer about the recycling journey**. The campaigns have included:

- Community roadshows in high streets and events in Peterborough, Corby and across Norfolk.
- Leaflet campaigns.
- A student design challenge and fashion show in Norwich!

The campaigns have also used, roller banners and tear drop flags, and a plastic bottle sculpture.

A whole new suite of resources have been developed, including leaflets and roller banners which can be easily adapted for each Local Authority.

Would Local Authorities be Interested in a Match Funded Arrangement with Pledge 2 Recycle to Deliver Communications to Householders?

There is significant interest from Local Authorities in delivering a Pledge 2 Recycle campaign. **91** Local Authorities said they would be interested in a match funded partnership to deliver communications to residents, **16** more than was reported in the *2017 RECOUP Survey*.

Subject to funding, RECOUP can provide match funded opportunities to run a campaign. Through its member network and various industry and Government meetings and consultations, RECOUP is continuing to look at funding streams to partner with Local Authorities to deliver communication campaigns.

RECOUP wants to build on the success of the campaigns already delivered. RECOUP make every penny of funding really count, and Local Authorities can work with members of the RECOUP team who are experienced in delivering communications campaigns. More news on *Pledge 2 Recycle Plastics* will be communicated throughout 2018 and 2019.



OPRL LABELLING REACHING NEW AUDIENCES

One of the main communication tools to inform the public about whether to recycle packaging is the On-Pack Recycling Label (OPRL). Recognised by the UN Environment Programme as international best practice, the award-winning On-Pack Recycling Label scheme delivers a simple, consistent and UK-wide recycling message on consumer packaging to help more consumers to recycle more packaging correctly, more often. Jane Bevis, Chair of OPRL, provides an update about how OPRL are reaching new audiences.

The 2017 OPRL labelling review led to simplified labelling with new calls to action, and promoted non-black pots, tubs and trays to Widely Recycled status. At the time we trailed revising the evidence base for our labelling from local authority collections to also include the final fate of those materials in our 2019 revision. That work is now ongoing with RECOUP, WRAP and industry experts under the UK Plastics Pact, so watch this space. Our new labelling rules next year will align with Plastics Pact assessments.

As we approach our 10th birthday next March, OPRL has some big changes in hand to help members ensure their packaging is recyclable and to engage consumers more effectively in recycling them. As membership now includes packaging designers and manufacturers, compliance schemes and consultancies we can bring the whole supply chain to bear on ensuring plastic packaging is understood to be a recyclable option and a positive contributor to sustainability.

In October 2018 we will be launching the first pilot of our recycling app as part of the #LeedsByExample initiative put together by Hubbub and involving major retailers and brands. The app will give on-the-go recycling advice for Leeds city centre on participant brands' drinks packaging and coffee cups. With a young population – 57 percent of Leeds city centre residents are aged 16-24 years old – including many students away from home for the first time, addressing recycling on-the-go with this notoriously difficult to engage demographic is vital. It will be interesting to see whether newly acquired 'On-the-Go' recycling behaviours transfer to the home too.

The app will also trial in other locations on different packaging types during the winter, ahead of roll out in 2019. All this has been possible thanks to generous financial support from members and partner organisations in developing the software. It will revolutionise recycling communication and engagement, taking OPRL labels to new people and new places.



EUROPEAN PLASTICS RECYCLING AMBITIONS & CURRENT STATUS

The European Circular Economy Package is moving ever closer and will bring with it a range of ambitious waste and resource measures, including increased recycling targets. With the UK due to leave the EU in March 2019, it is still to be formalised whether the UK will adopt these European measures, or develop a separate UK resource and recycling regime.

With more EU plastic waste recycled than landfilled for the first time in 2016, and with 19 countries reporting over 35% plastic packaging recycling, these new measures are now required to help continue the journey towards a plastic Circular Economy. The Waste Framework Directive has a current target for all member states to reuse or recycle 50% of their household waste by 2020.

Development of The Circular Economy Package

The EU directive for waste management is the Waste Framework Directive. It provided the overarching legislative structure for the management of waste in EU countries, including the current plastics packaging recycling rate for the EU member states. This target is set at **22.5%** but has been superseded by a number of EU countries during the past decade. In 2014, the European Commission put forward an initial Circular Economy Package, which was replaced at the end of 2015 by a more ambitious and wider ranging package which included an action plan for the Circular Economy, as well as legislative proposals amending a number of directives including the Waste Framework Directive and the Packaging Waste Directive.

Measures and Components of The EU Circular Economy Package

The *European Circular Economy Package* includes a range of measures that will help stimulate Europe's transition towards a Circular Economy, boost global competitiveness, foster sustainable economic growth and generate new jobs. Within this, the revised legislative proposals on waste set targets

for reduction of waste and establish a roadmap for waste management and recycling. Key elements of the revised waste proposal include:

- A common EU target for recycling **65% of municipal waste by 2030**.
- A common EU target for recycling **75% of packaging waste by 2030**.
- A binding landfill target to reduce landfill to maximum of **10% of municipal waste by 2030**.
- A **ban on landfilling** of separately collected waste.
- Promotion of economic instruments to **discourage landfilling**.
- Simplified and improved definitions and **harmonised calculation methods** for recycling rates throughout the EU.
- Measures to promote, re-use and stimulate **industrial symbiosis**- turning one industry's by-product into another industry's raw material.
- **Economic incentives** for producers to put greener products on the market and support recovery and recycling schemes.

Since the last *2017 RECOUP Survey*, the European Commission adopted a new set of measures, including a Europe-wide *EU Strategy for Plastics in the Circular Economy* containing an annex to transform the way plastics and plastics products are designed, produced, used and recycled. The Strategy highlights the need for specific measures, possibly a legislative instrument, to reduce the impact of single-use plastics, particularly in our seas and oceans. It also references that all plastics packaging should be recyclable by 2030, and identifies a monitoring framework to assess progress towards Circular Economy goals with ten key indicators set around production, consumption, waste management and secondary raw

materials – as well as economic aspects such as investments, jobs and innovation.

A full overview of the EU Circular Economy package and related activities can be found on: http://ec.europa.eu/environment/circular-economy/index_en.htm

EU Strategy for Plastics in a Circular Economy Overview

- Reduce the leakage of plastic in the environment by transforming the way products are designed, manufactured, used and recycled
- Make better use of taxation and other economic instruments to reward the uptake of secondary plastics
- Put in place well-designed EPR schemes, including introducing deposit return incentives, in particular for beverage containers
- Raise the cost of landfilling and incineration and promote plastic recycling and prevention of use
- Develop a global response to the increase in marine litter

Current EU Plastic Recycling Performance

The most reliable source for the analysis of European plastics production, demand and resource data is *Plastics: the Facts* published by the sponsors of the 2018 RECOUP Survey, PlasticsEurope.

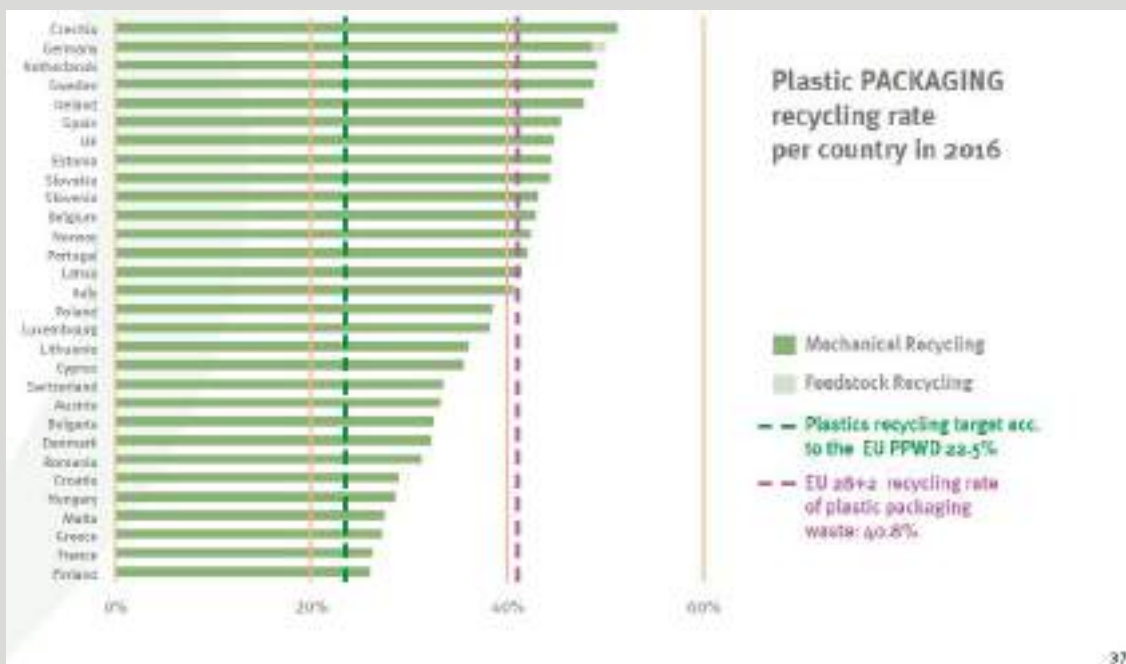
Plastics: the Facts 2017 reported in 2016 27.1 million tonnes of ‘plastic waste’ were collected in the EU28+Norway/Switzerland in order to be treated. This represents a key benchmark with more plastic waste recycled than landfilled for the first time. Within **this 16.7 million tonnes of ‘plastics packaging waste’** were collected. From 2006 to 2016, the volume of plastic packaging waste **collected for recycling increased by 74%, energy recovery increased by 71% and landfill decreased by 53%.**

In 2016, the total EU recycling rate for plastic packaging waste was **40.8%**, well above the requested 22.5% of the EU Packaging Waste Directive. This includes 19 countries with a plastic packaging recycling rate above 35%.

The figures below shows the recycling, energy recovery and landfill rates across the EU for plastics packaging, and also the country specific data. The UK is **7th** on the recycling rate list, and no country currently achieves the recycling rates outlined in the Circular Economy Package proposals. The German data also incorporates a small amount of feedstock recycling alongside traditional mechanical recycling data. The definitions of recycling and standardisation of reporting against new targets across the EU is a key topic of debate.

There are significant differences in levels of plastic going to energy recovery within Europe. **10 countries** with a landfill ban obtained a total recovery rate (recycling + energy recovery) above **90%**. Although there is extensive use of energy recovery technologies in these countries, they do also generally achieve higher recycling rates. It is less clear how the energy recovery option may impede potential recycling developments. It also may not fit with longer term Circular Economy aspirations.

There may be some inconsistency of data reporting across the EU, but this information does provide a useful overall indicator of the approaches to managing post-consumer plastics packaging in the EU.





UK Legislation and Policy

There are no specific plastic or plastic packaging recycling targets placed on Local Authorities. There is a generic EU requirement for **50% of household waste to be recycled (or composted) by 2020** which UK Local Authorities are working towards. The reported UK recycling rate at the end of 2016 was **45.2%**. The performance is not uniform across the UK with Wales reporting higher recycling rates than the UK average. There are concerns that the 2020 targets will not be met, but these targets use a weight based metric so plastic may not be prioritised to help achieve these requirements.

Individual nations have strategies and targets which are reflected in different policy objectives and support for increasing recycling. The Scottish Government and the Convention of Scottish Local Authorities (CoSLA) have a *Household Recycling Charter*. Wales has an overarching waste strategy document, *Towards Zero Waste*, and also has its established *Collections Blueprint*, England has a consistency programme and Northern Ireland has a Waste Management Strategy, *Delivering Resource Efficiency*. The UK government and devolved administrations may choose to continue with their own regulations and policies to achieve their own ambitions.

Through UK packaging waste legislation, by 2020, a **57%** business target has been set which translates to an estimated **1.1 million tonnes** of UK plastics packaging to be recycled. The UK producer responsibility system for packaging was implemented from 1997, but this is also under review with a range of options and discussions ongoing covering both recycling and wider resource and litter considerations. It is expected that these discussions will advance before the end of 2018.

The 25-Year Environment Plan

The Government launched its 25-year environment plan in January 2018. Waste was one of the key focus points and a range of actions and policies were outlined to minimise waste, reuse materials and manage materials at the end of their life to minimise the impact on the environment. This includes:

- Working towards our ambition of **zero avoidable waste by 2050**.
- Working to a target of **eliminating avoidable plastic waste by end of 2042**.
- **Meeting all existing waste targets** – including those on landfill, reuse and recycling – and developing ambitious new future targets and milestones.
- Seeking to **eliminate waste crime** and illegal waste sites over the lifetime of this Plan, prioritising those of highest risk.
- Delivering a **substantial reduction in litter** and littering behaviour.
- Significantly reducing and where possible **preventing all kinds of marine plastic pollution** – in particular material that came originally from land.

Further actions and aims will be outlined in a Resources and Waste Strategy which is expected to be released for consultation before the end of 2018. While there have been many workshops, papers and recommendations from various groups, the resource strategy consultation content is yet to be confirmed. Further details on the 25-year plan can be found on the UK government website www.gov.uk/government/publications/25-year-environment-plan.

Extended Producer Responsibility

Improvements to the current producer responsibility system in the UK is seen as a key opportunity to increase plastic recycling and reduce litter. The Secretary of State for the Environment, Michael Gove, asked WRAP, INCPEN and DEFRA's Advisory Committee on Packaging to facilitate discussions to improve the way we use and dispose of plastics. This resulted in a range of headline actions being recommended. It was recognised that businesses are willing to pay more into a packaging producer responsibility system to ensure that it is adequately funded and works effectively. This was subject to ensuring the funds raised were used appropriately to resolve the priority issues identified.

This also identified key deliverables which RECOUP have promoted for many years including design of packaging and products for recycling; more standardised approaches to collection; continued and effective consumer engagement to achieve behaviour change; development of auditable and sustainable markets for those plastic formats and fractions placed onto the market; and encouragement of the use of recycled plastic in manufacturing of new plastic products.

There is a growing recognition that the existing EPR system for plastic packaging must be changed and improved, but the scale of this change, the structure of a new system and the measures prioritised within it are yet to be confirmed. More announcements are anticipated within the next Government budget before the end of 2018. Further details can be found at www.wrap.org.uk/blog/2018/05/reform-regulations-relating-packaging.

Deposit Return Systems

Led by Scotland, there has been a growing interest in the use of a deposit return system to increase the collection quantity and quality of beverage plastic bottles, and reduce littering of these items. This opportunity is also referenced within the EU plastics strategy, and will be consulted on by UK government, most likely in conjunction with the Resources and Waste Strategy consultation. A Scottish DRS consultation closes in September 2018.

There are a number of platforms and groups exploring the considerations and model options of a DRS system in the UK. This includes the materials and sectors in scope, whether the focus includes household material or just targets 'On-the-Go' items, the level of deposit to be paid, the infrastructure requirements, and the viability of a UK vs specific country approach.

A range of companies from different sectors have identified that the DRS opportunity needs to be explored. A summit brought together the four UK nations to co-ordinate work at a UK level and set principles for the design of potential schemes across the UK. Coca Cola (European Partners and Great Britain) have issued a set of '11 Key Principles' to outline what a well-designed Deposit Return Scheme might look like, which provides a sound base to build the system from.

**Coca-Cola European Partners (CCEP) and
Coca-Cola Great Britain (CCGB):
'11 Key Principles' for a well-designed
Deposit Return Scheme**

THIS IS
FORWARD

1. Easy for public to recycle and no penalty for doing the right thing (i.e. good provision of return points and deposit not subject to VAT)
2. Good financial management and fraud control
3. A common approach covering the whole of GB
4. Run by one not-for-profit management company
5. Retailers, machine suppliers and hauliers are paid for the services they provide
6. Scheme costs are covered by the sale of collected materials, deposits which aren't redeemed by the public and a fee on producers and retailers
7. The management company designs and runs the scheme to achieve targets agreed with Government, including responsibility for determining the number and type of collection points, administration and fraud control.
8. The management company is run by the producers and retailers who have an obligation to fund the scheme
9. Scheme is flexible enough to work in different retail outlets, specific exemption criteria for small stores and those with sensitive hygiene or security requirements
10. Underpinned by legislation so all parties engage in the same scheme
11. Sits alongside other policy initiatives such as changes to the current producer responsibility schemes and other proposed taxes

For more information please contact:
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The Coca-Cola Company

A DRS system would undoubtedly provide a clean, high value stream of plastic drinks containers which is likely to include PET and metal cans. Other materials and plastic formats such as glass and HDPE bottles are also be in scope. It could complement existing collection schemes (kerbside, bring, HWRC and 'On-the-Go'), but there are many questions that need to be researched and developed.

Defra are currently working on various options on how the system operation and structure of the scheme and financial and fiscal measures used will work. Additional consideration needs to be given to equipment, space, leasing of Reverse Vending Machine

(RVM) units, use of 'manual' collection points, and transport.

There is evidence both for and against the potential benefits of DRS to Local Authorities in relation to both the practical and economic implications for litter management and revenues from recycling collections. In a DRS scheme consumers would place plastic drinks bottles for recycling outside of kerbside collections schemes, and therefore there is a potential for significant quantities of these highly recyclable bottles to be removed from kerbside schemes.

Some reports state the loss of revenue for Local Authorities and waste management providers from this stream would be offset against reduced litter and street cleaning costs. In addition, there would be savings in collection costs because of the reduced quantities being collected through kerbside services. Others state street cleaning and collection costs would not be affected and compensation should be given Local Authorities to reimburse them for this loss of revenue. There is also a potential opportunity for plastic drinks bottles collected through kerbside schemes to receive a deposit back, although the logistics and practicalities will need to be understood.

Learnings from other countries using a DRS scheme can be considered, but with different waste management and recycling structures and financial and Green Dot systems in place exact replication of other systems is unlikely to work in the UK, and the use of other systems in data modelling to estimate collection levels and costs need to be carefully considered.

Local Authorities are open to discussing the potential installation of the Deposit Return Scheme in agreed locations- **79** Local Authorities confirmed this in the **2018 RECOUP Survey (75%** of responses to this question), which shows a willingness and openness to embrace future change.

Local Authorities open to Dialogue about the Installation of Deposit Return Scheme (DRS)	
Yes	79
No	27

Single Use Plastic and Taxes

HM Treasury issued a call for evidence on single use plastics in Spring 2018. This incorporated views on the definition of single use plastics; the associated issues and priorities; potential exemptions; recyclability; tax and modulated fee options; and infrastructure needs. The call for evidence attracted **162,000 responses** and the Treasury have identified that there is high public support for using the tax system to reduce waste from single-use plastics.

The Treasury's response to the consultation said that it "wanted to promote the greater use of recycled plastic in manufacturing, discourage plastics that are difficult to recycle, and reduce demand for single-use items, including coffee cups and takeaway boxes". Further details are available via the HM Treasury website www.gov.uk/government/consultations/tackling-the-plastic-problem.

PLASTICS PLACED ON THE MARKET

The consumption of plastics in the UK is considerable, with an estimated 3.7 million tonnes (*Source: WRAP, Plastics Market Situation Report (Spring 2016)*) used each year. Packaging is the main source of plastic consumed, accounting for approximately 2.2 million tonnes (*Source: Valpak / WRAP – Plastic Packaging Market Study 2014*) with non-packaging plastic estimated to be 1.5 million tonnes.

Placed on the Market (POM)

The quantity of plastics packaging that is placed onto the market (i.e. produced and used by consumers) is essential in providing clarity on how collections are performing and the opportunities that exist to collect more material.

Collection rates – the percentage of available plastics packaging that is collected for recycling – are calculated when the collection tonnage is compared against the best available estimate of plastics packaging POM and packaging trends (% growth per year).

Consequently, depending on the POM data the percentage collection rates will change over and above the actual changes in reported collection quantities, and can go up or down even if the collection quantities have consistently increased.

Plastic Packaging Market Study (Plastic Flow) 2014

RECOUP always use the most up-to-date best available plastics packaging POM and thus calculate the UK recycling rates for plastic packaging.

In 2014 a project delivered by Valpak and Defra was published to provide support for plastic packaging material flow estimates in Defra's packaging policy work and also review the implications of various scenarios for future recycling rates to 2020. Titled *Plastic Packaging Market Study (Plastic Flow) 2014* and based on 2013 data, the quantities of consumer plastic packaging POM were calculated using retail sector sales data and packaging usage for plastic packaging used.

This report estimated the plastics packaging POM for the UK was **2,260,000 tonnes**, with this overall figure split between **1,534,000** by consumers (household) and **726,000** for non-consumer (non-household). This split is defined as:

- **68%** of the total quantity of plastics packaging is from household sources – food, drink, groceries, body care, clothing, DIY sold by supermarkets and retailers
- **32%** is from other sources (non-consumer) – food and drink from the hospitality sector, plastic packaging discarded by retailers back of store, and plastics packaging used by the construction, manufacturing and agricultural sectors

It should be noted the data in this report focusses on rigid plastic packaging used by households in the UK as there is not enough data to provide a UK wide picture of recycling of plastic film. The total bottles consumed through the household stream is **594,000** for plastic bottles and **525,000** for plastic pots, tubs and trays.

Stream	Quantity (Tonnes)
Consumer Total	1,534,000
Consumer- Bottles	594,000
Consumer- PTTs	525,000
Consumer- Film	414,000
Non-Consumer Total	726,000
Non-Consumer- Bottles	68,000
Non-Consumer- Other Rigid	310,000
Non-Consumer- Film	348,000
Total	2,260,000

Polymers in Plastics Packaging

The data from *Plastic Packaging Market Study (Plastic Flow) 2014* does not break down the plastic packaging formats by polymer. However, a polymer breakdown was completed in the *Plastics Packaging Composition 2011* report, which was published in January 2013, when Valpak and WRAP produced a suite of reports around plastics packaging POM and composition,

recycling and carbon footprint performance, and projections for meeting the UK plastics packaging recycling target.

Using the data from *Plastic Packaging Market Study (Plastic Flow) 2014* and using the percentage polymer composition breakdown outlined in *Plastics Packaging Composition 2011*, it is possible to estimate the flows of polymers through the household stream using the plastic packaging POM data:

	LDPE / LLDPE	HDPE	OPP	PP	PET	PS	PVC	Other	Grand Total	Grand Total (%)
Film Total	108	105	12	69	44	1	4	71	414	27%
Rigids Total	6	188	0	121	708	50	40	7	1120	73%
Bottles	1	188	0	5	397	0	2	0	594	39%
Consumer PTTs	5	0	0	116	311	50	38	7	526	34%
Grand Total	114	293	12	190	752	51	45	78	1534	100%

New Placed on the Market Data

Plastics packaging POM trends are estimates and are subject to changes. With the spotlight on how the UK manages its waste, recycling, and producer responsibility Defra and WRAP commissioned RECOUP and Valpak to estimate the quantity of plastic packaging POM and recycled from 2017 to 2025 and the probability of compliance with National and European recycling targets.

This work will contribute the development of Waste & Resources Strategy that is hoped to be launched later in 2018. It is likely the POM data will change, and as any changes will affect the collection rates the *RECOUP Survey* will be updated when the new quantities are communicated.

UK HOUSEHOLD PLASTICS COLLECTION SURVEY

2018

RECOUP

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