

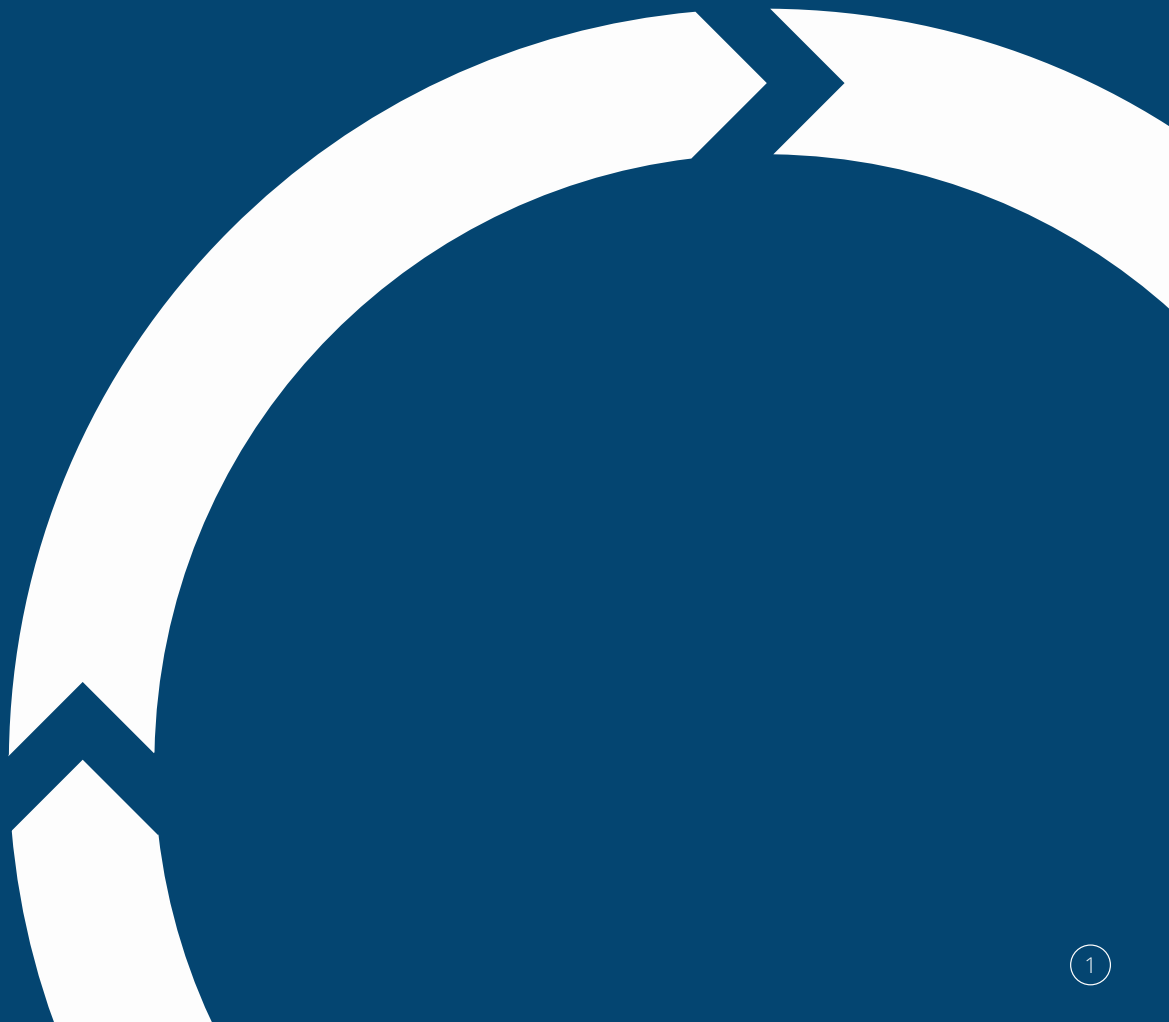
# Plastics: A Vision for a Circular Economy

*Improving the environment for the next generation*



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EXECUTIVE SUMMARY

We are at a juncture in our history where society's relationship with plastics is evolving. The plastics industry, government and wider society all want the same thing: to reduce plastic waste so we leave the environment in a better place for generations to come. As the experts on plastics, we have publicly welcomed the government's recent call for evidence surrounding single-use plastic items. This is an opportunity for the UK to develop more sustainable businesses, to enhance its infrastructure and establish and embed a culture that recycles used materials wherever possible.

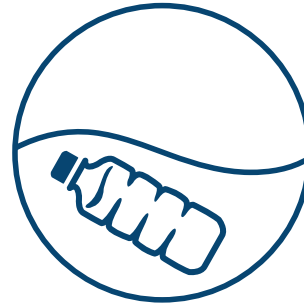
Adopting the principles of circularity laid out in the government's UK Industrial Strategy could lead to a low carbon manufacturing revolution, creating jobs and wealth as we establish a world-leading circular economy. To help the government deliver upon its commitments, the British Plastics Federation (BPF) has two ambitious goals leading up to 2030 and hopes to work with all relevant stakeholders to ensure they are met.



Zero plastic packaging to landfill

*The UK plastics industry would like to see all plastic packaging and single-use items re-used, recycled and/or recovered by 2030. Leading brands and retailers have already committed to using only reusable, recyclable or compostable packaging by 2025, and the BPF is a signatory to WRAP's UK Plastics Pact. We view this as the first milestone towards a*

*more ambitious target of entirely eliminating plastic from landfill by 2030.*



Minimising plastic entering the sea from the UK

*The plastics industry supply chain, including brands and retailers, leading experts in waste management and recycling, and academics have already pledged to work collaboratively towards developing a comprehensive plan to significantly reduce plastic leaking into the wider environment from the UK by establishing a Marine Litter Platform (MLP).*

To help achieve these aims, the plastics industry has already proposed **extending and revising the current Packaging Recovery Note (PRN) system**. A PRN is a document providing evidence that waste packaging material has been recycled. They form a key part of the Producer Responsibility Obligations (Packaging Waste) Regulations 2007, which covers the whole of the UK.

The current PRN system should be extended to include plastic items that are not packaging products but are products used in conjunction with food and drink consumed 'on the go', such as cutlery or straws. Revisions to the current system need to support the development of the UK's recycling infrastructure. Evidence suggests that collaborative work is also needed to deliver anti-littering, behaviour-change and educational campaigns to maximise recycling and stop plastic entering the marine environment from our shores.

The plastics industry would like to help deliver a streamlined recycling system, simplifying communication and eliminating confusion for the consumer. Evidence suggests that adopting **consistent collection schemes** throughout the UK (both kerbside and 'on the go'), which means every council collecting the same materials for recycling, would be a major step forwards.

Further innovations in waste sorting as well as recycling technologies, such as chemical recycling, are necessary for the UK to remain a world leader in waste management.

As we develop and help implement best practice for waste management within

If the UK's plastics recycling capacity is significantly extended and modernized by 2030, an estimated

**25,000**

new jobs could be created.<sup>1</sup>

**BPF Marine Litter Platform**

The BPF's Marine Litter Platform was established in 2017 as a forum to allow the government, brands, retailers, academics, NGOs, manufacturers and recyclers to collaborate and to find and deliver the best solutions to the global problem of marine litter.

The platform, which meets regularly, includes members of the British Retail Consortium (BRC) and Food and Drink Federation (FDF) as well as leading brands and retailers such as Co-Op, Danone Water, Marks and Spencer and Waitrose. All have agreed to take collaborative action and pledged to reduce waste and litter entering our oceans.

There are over

**300**

collection systems across the UK.<sup>2</sup> Simplifying them would increase recycling rates and could generate savings of £50m per year.<sup>3</sup>



1. "A European Strategy for Plastics in a Circular Economy" (European Commission) [bit.ly/2reDuYy](https://bit.ly/2reDuYy) Plastics Recyclers Europe – states 200,000 jobs created in the EU (the estimate is based on 25,650 jobs in the UK based on the UK being 12.82% of EU28 population)

2. Keep Britain Tidy [www.bbc.co.uk/news/uk-england-39079272](http://www.bbc.co.uk/news/uk-england-39079272)

3. Supporting evidence and analysis: The case for greater consistency in household recycling (WRAP) p7 [static.wrap.org.uk/consistency/Learn\\_more\\_about\\_the\\_evidence.pdf](http://static.wrap.org.uk/consistency/Learn_more_about_the_evidence.pdf)

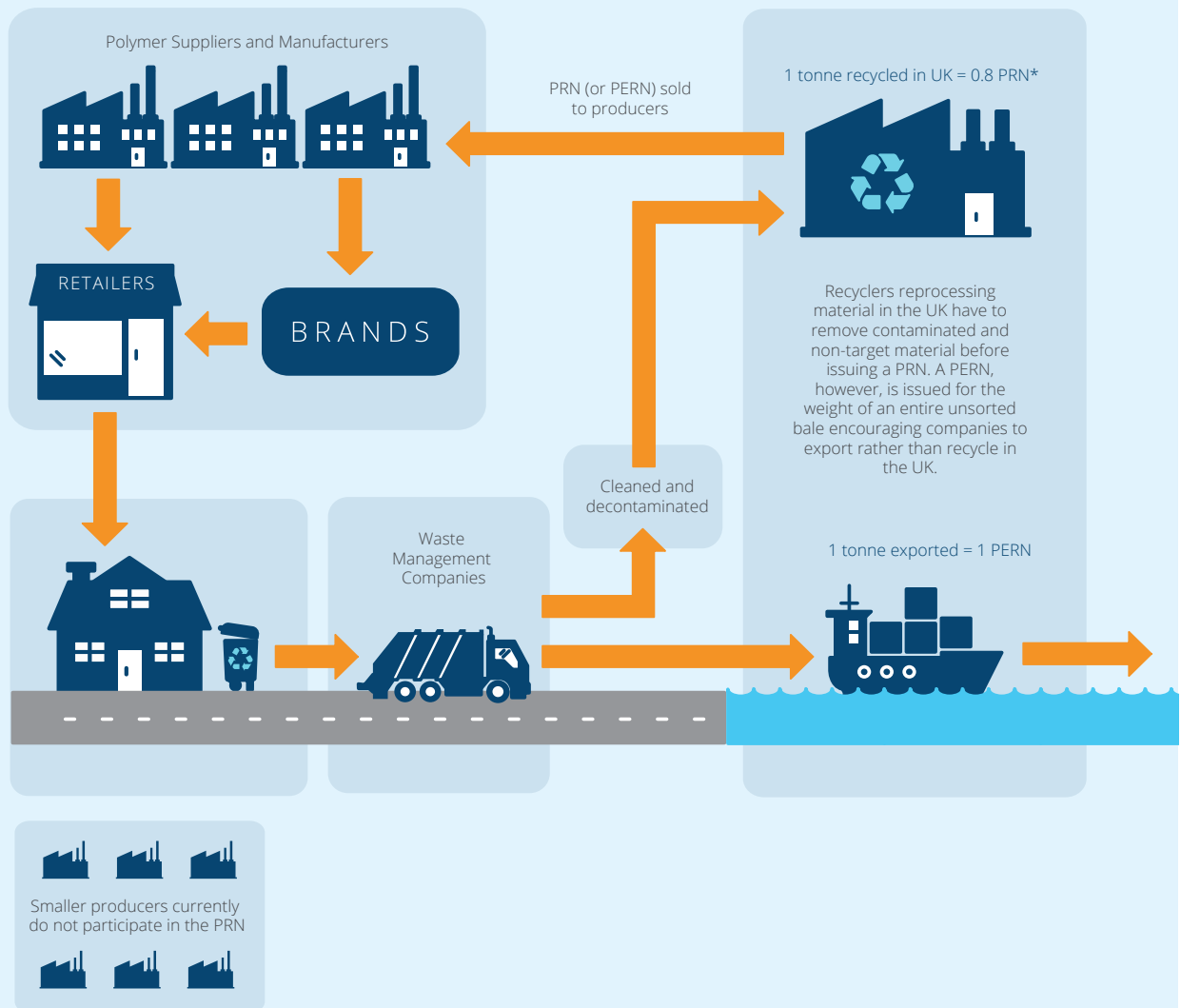
the UK, the plastics industry, brands and retailers have already agreed to openly share best practice to help improve waste management systems in the developing world, which is where a large portion of the plastic entering the sea originates. Through the BPF's Marine Litter Platform, the plastics industry has offered to use its comprehensive network across the globe to promote the establishment of similar

platforms elsewhere.

Finally, the plastics industry will work with others to promote **ecodesign** amongst specifiers and users of plastic packaging so that products are more easily recyclable, and will work with stakeholders to ensure that the **re-use** and **reduction** of items and materials are promoted where appropriate, sustainable and safe.

## WHAT IS THE PRN SYSTEM?

The Packaging Recovery Note (PRN) system was designed to help the UK achieve recycling targets set by the government. PRNs and Packaging Export Recovery Notes (PERNs) are issued by recyclers and bought directly from them or via compliance schemes. Obligated brands, retailers and manufacturers buy these as part of their responsibilities as a producer.



\*Based on estimates

## Ideas for PRN Reform



Companies producing difficult-to-recycle packaging pay the same as those producing easy-to-recycle packaging.

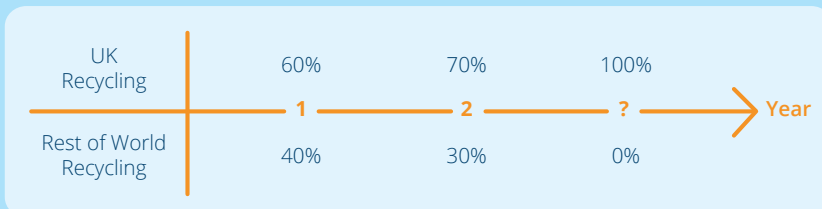


Money raised is not invested in a strategic fund to improve recycling infrastructure in the UK



The system encourages the export of material, whereas a split target between UK and the rest of the world could discourage this.

### SPLIT RECYCLING TARGETS IN OPERATION







# Introduction

*The Issue of Plastic Waste*



## INTRODUCTION

Plastic is an incredibly versatile material that brings many benefits to society. It has a range of unique properties that enable our modern lives.

In construction, plastic provides insulating materials for energy-efficient housing. In the automotive sector, it provides strong, lightweight materials, making vehicles lighter and thereby saving fuel and CO<sub>2</sub> emissions. In the medical field, plastic is used for artificial heart valves, medical implants and a host of other hygienic medical products, helping to save lives every day.

As a packaging material, plastic is safe, hygienic, functional, lightweight, durable and inexpensive. It helps keep costs down for consumers, reduces waste, increases the range of foods available to us throughout the year, uses far less resource than the products it protects and lowers the carbon footprint of the food and drinks industry.

However, plastic, if it finds its way into the environment, can do great harm. Recent discoveries, research and media coverage has left no doubt of the damage that irresponsibly discarded plastic can do. The UK plastics industry is committed to help drive positive change and ensure we don't deny the benefits of plastics for generations to come. Our relationship with plastic now needs to develop so that we understand it as a renewable resource rather than a throwaway product. It is about understanding on a country-by-country basis how and why plastic and other materials enter the environment and the best way to remedy this. The answer is not to stop using plastic completely but to use plastic intelligently where it adds the

most value and to educate consumers to correctly recycle and dispose of it at the end of its life.

Estimates vary as to how much plastic waste leaks into our seas, from 4 million to 12 million tonnes per year globally. Whichever figure you choose, this is unacceptable. Independent studies have calculated that 98% of the plastic waste in the world's oceans originates from nations outside the EU and the US, and a staggering 82% leaks from Asian countries.<sup>4</sup> The simple reason for this is that much of the developing world has yet to develop an adequate waste collection and management infrastructure. The UN estimates that "at least 2 billion people worldwide still lack access to solid waste collection".<sup>5</sup>

By  
**2025**  
it is estimated that  
European countries will  
account for just 0.7% of  
marine litter.<sup>6</sup>

In all our efforts, it is important to carefully analyse the root cause of issues such as marine litter and use data to understand the most effective solutions. For example, common items of marine litter include discarded fishing lines and nets, cigarette butts, food and snack litter, as well as

4. Plastic waste inputs from land into the ocean Jambeck et al [www.iswa.org/fileadmin/user\\_upload/Calendar\\_2011\\_03\\_AMERICANA/Science-2015-Jambeck-768-71\\_\\_2\\_.pdf](http://www.iswa.org/fileadmin/user_upload/Calendar_2011_03_AMERICANA/Science-2015-Jambeck-768-71__2_.pdf)

5. UNEP, Global Waste Management Outlook, 2015

6. See 4.

items wrongly flushed down the toilet such as wet wipes and cotton buds. By understanding which items and why, our efforts to prevent litter can be more targeted and have better outcomes for the environment. Proposals to address marine litter need to understand these issues fully.

### What is the UK Plastics Pact?

The UK Plastics Pact, of which the BPF is a signatory, brings together the entire plastics value chain and has set various targets for 2025:

- 100% of plastic packaging to be reusable, recyclable or compostable
- 70% of plastic packaging effectively recycled or composted
- Take action to eliminate problematic or unnecessary single-use packaging items through redesign, innovation or alternative (re-use) delivery models
- 30% average recycled content across all plastic packaging

# 98%

98% of the litter in our oceans comes from countries outside Europe and the United States.<sup>7</sup>

The UN's recent Ocean Conference 2017 recognised the importance of addressing marine pollution as a socioeconomic issue requiring the encouragement of re-use and recycling, development of energy-from-waste initiatives and behaviour-change interventions. It also noted the importance of increasing waste management capability within developing nations.

The UK government, in its quest to become a leader in protecting the environment and a driver of change, has set up a target to eliminate all avoidable plastic waste by the end of 2042 whilst significantly reducing and — where possible — preventing all kinds of marine plastic pollution.

The UK government's 25-year Environment Plan sets out intentions to make all plastic packaging reusable, recyclable or compostable. It also aims to increase recycled content in plastic packaging to drive demand and plans to enable citizens to play their part in reducing plastic packaging waste and litter.

As an industry, we would like to help deliver the government's ambition to leave the environment in a better state than it found it. It is in this spirit of commitment to future generations that we present a series of ambitious targets and initiatives up to 2030. These are focused on preventing plastic escaping into the environment whilst advocating the responsible use and consumption of plastic and increasing British recycling and re-use rates.

Adopting the principles of circularity laid out in the government's UK Industrial Strategy could lead to a low carbon manufacturing revolution, creating jobs

7. See 4.

and wealth using recycled materials. The UK has the potential to be a world leader in waste and recycling practices and technologies. These UK innovations could be another exportable commodity.

The environmental cost to replacing plastic with alternatives materials would be nearly

# four

times greater.<sup>8</sup>

8. Trucost, 2016 Plastics and Sustainability A valuation of Environmental Benefits, Costs and Opportunities for Continuous Improvements

## Education, Education, Education

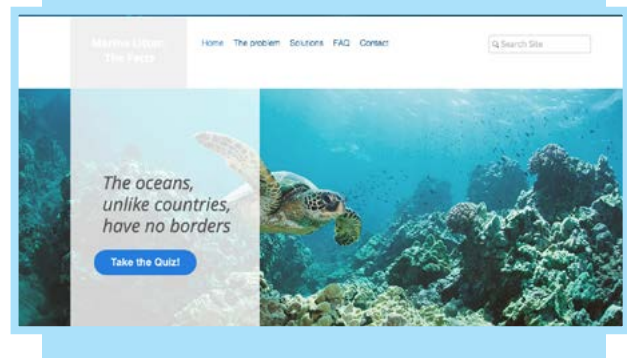
In the journey towards becoming a more sustainable society, education is going to play a key role. This ranges from individuals understanding what they can recycle, to society valuing plastics as a resource and not as a throwaway product. To achieve these goals, an integrated effort between multiple stakeholders is needed to ensure these messages are understood by the widest possible audience.

As part of this aim, the BPF has created a series of easily digestible educational materials aimed at the plastics industry, government, stakeholders and schools. This includes a series of posters, infographics, websites and responses to frequently asked questions on a range of topics, which are already being used across the UK within manufacturing facilities, recycling plants, offices, schools and other organisations.

The BPF also coordinates a Polymer Ambassador Scheme, enabling industry professionals to engage with their local schools to educate pupils on the benefits of polymers. The BPF encourages its members to open their doors to schools to build vital links within their local communities.

The BPF's [MarineLitterTheFacts.com](http://MarineLitterTheFacts.com) also explains to the public critical facts about the global issue of marine litter.

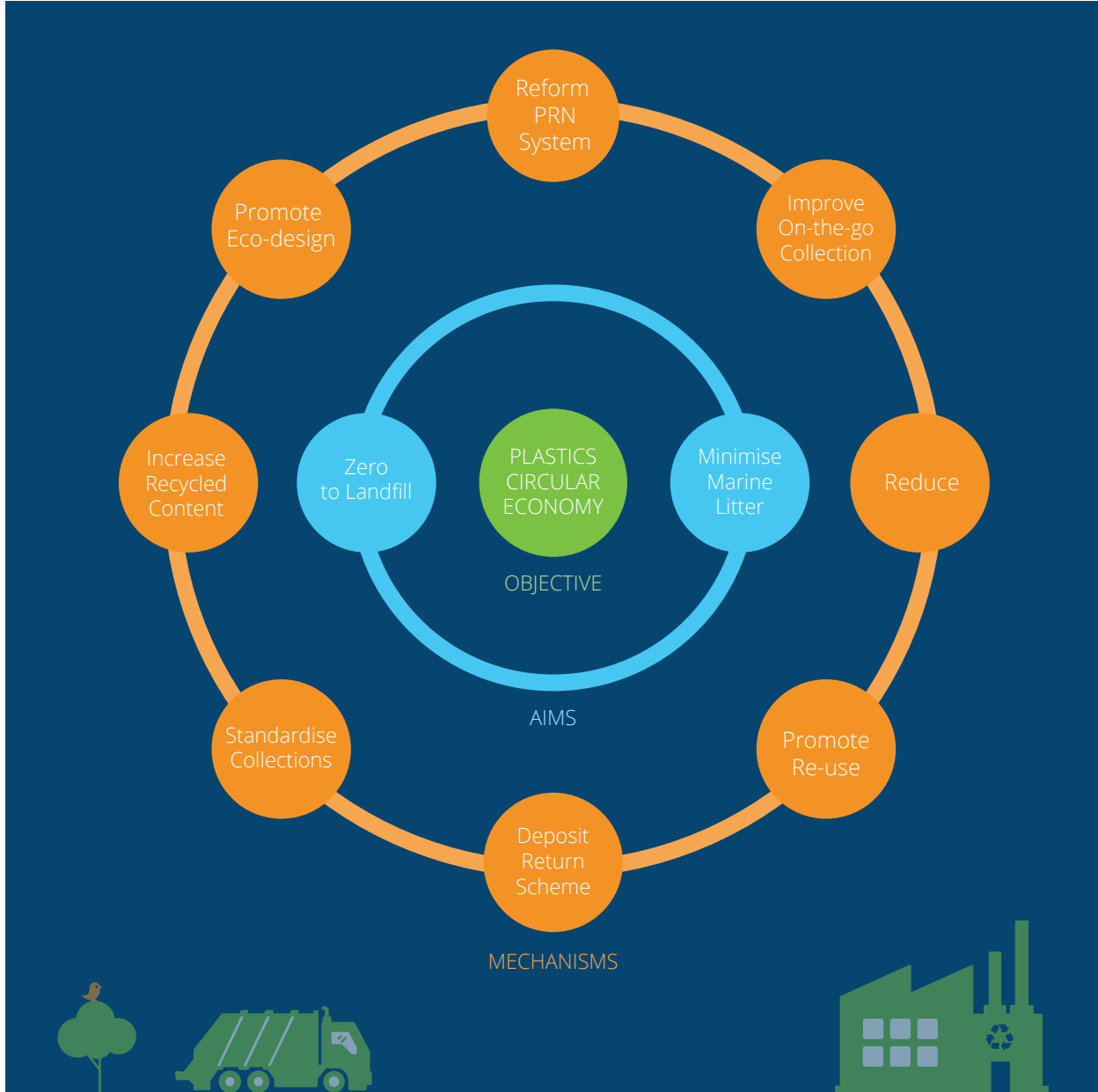
Many of the BPF materials are downloadable at [www.polymerzone.co.uk](http://www.polymerzone.co.uk).



# The BPF's Vision for a Plastics Circular Economy



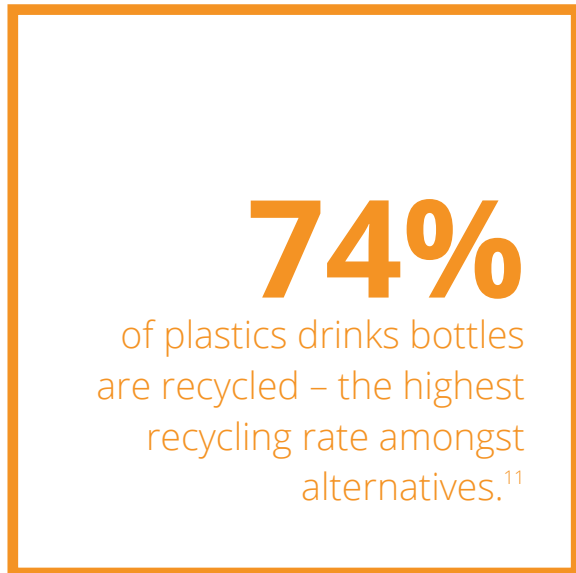
THE BPF'S VISION FOR A PLASTICS CIRCULAR ECONOMY



Urgent action is needed to reduce the amount of plastic waste in the environment. Solutions lie in the responsible use and disposal of plastic, together with improved waste management and design.

Citizens have ultimate responsibility for the way products are disposed of at the end of their life but businesses and government have a role to play in encouraging and enabling correct behaviour and providing the correct infrastructure.

The recovery rate of plastic packaging in the UK is currently at 78% (2016), with 44.8% being mechanically recycled and 33.2% being sent to energy recovery facilities.<sup>9</sup> The current amount of plastic going to landfill is 22%.<sup>10</sup>



## ZERO PLASTIC PACKAGING TO LANDFILL

Zero plastic packaging to landfill - all UK plastic packaging and single-use items are to be re-used, recycled, and/or recovered by 2030.

Most leading brands and retailers have already committed to using only reusable, recyclable or compostable packaging by 2025 and the BPF is a signatory of WRAP's UK Plastic Pact. This will be the first milestone to deliver our final target.

In addition, we commit to improve packaging recycling levels to achieve the very highest levels in Europe, consistent with best environmental practice.

Over half a million tonnes of rigid plastic was collected from UK households for recycling in 2016, including 58% of plastic bottles from UK households. This statistic includes bottles from the kitchen and bathroom, such as shampoo bottles. The recycling rate in 2016 for plastic beverage bottles is 74%, beating glass, aluminium, steel and carton alternatives.<sup>12</sup>

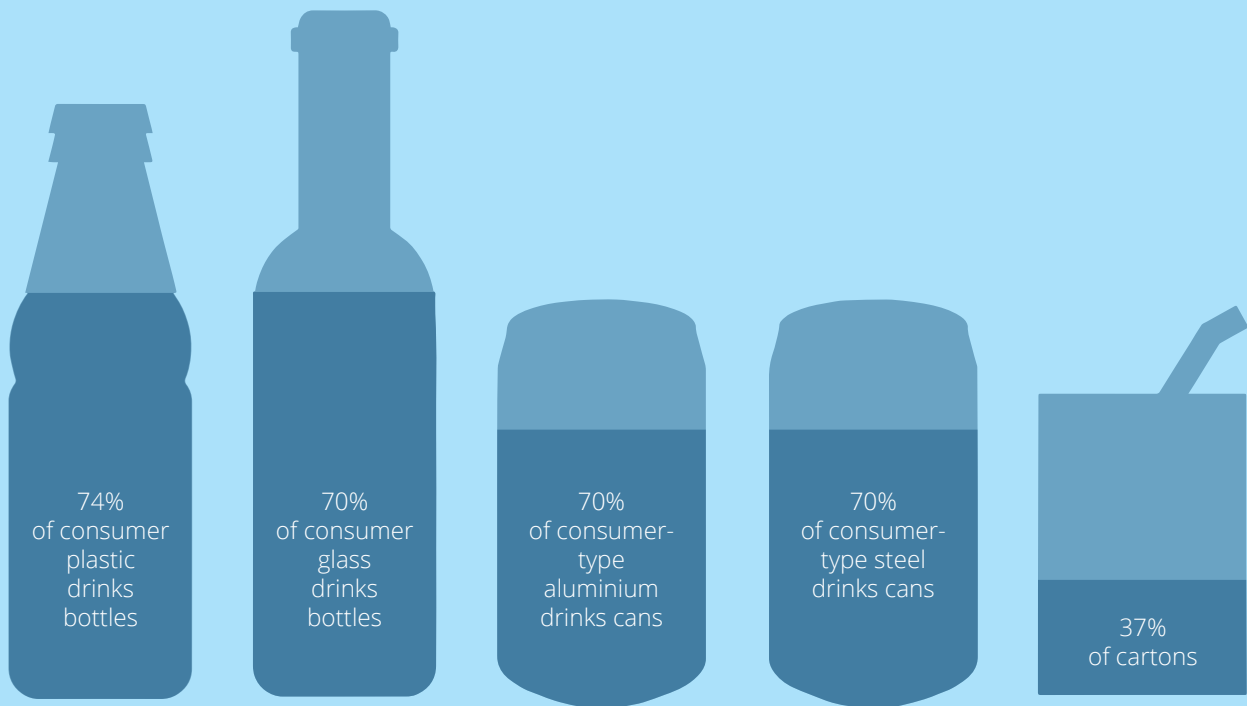
9. Conversion Report: Post-consumer Plastic Waste Management in European Countries (2016)

10. See 9.

11. [https://www.valpak.co.uk/docs/default-source/information-zone/databite-no-3---drinks-container-recycling-rates.pdf?sfvrsn=e2dc6d10\\_4](https://www.valpak.co.uk/docs/default-source/information-zone/databite-no-3---drinks-container-recycling-rates.pdf?sfvrsn=e2dc6d10_4)

12. Valpack Databite no.3: [www.valpak.co.uk/docs/default-source/information-zone/databite-no-3---drinks-container-recycling-rates.pdf](http://www.valpak.co.uk/docs/default-source/information-zone/databite-no-3---drinks-container-recycling-rates.pdf)

Recycling Rates of Various Drinks Containers (2016)



Valpak Databite No. 3 [www.valpak.co.uk/docs/default-source/information-zone/databite-no-3---drinks-container-recycling-rates.pdf](http://www.valpak.co.uk/docs/default-source/information-zone/databite-no-3---drinks-container-recycling-rates.pdf)

Food's shelf life is extended by plastic packaging. Bananas last three more days<sup>13</sup>, and a cucumber's shelf life extends by up to **two weeks**.<sup>14</sup>

*"I am gratified that many businesses and organisations wish to support the [Commonwealth Marine Litter] initiative including ... the British Plastics Federation, who represent over 500 members across the plastics industry"*

**-Sam Gyimah MP  
Minister of State for Universities,  
Science, Research and Innovation**

13. PlasticsEurope. Plastics Save Food. [http://www.plasticseurope.org/documents/document/20131017112406-05\\_plastics\\_save\\_food\\_sept\\_2103.pdf](http://www.plasticseurope.org/documents/document/20131017112406-05_plastics_save_food_sept_2103.pdf)

14. INCPEN: <http://www.incpen.org/displayarticle.asp?a=12&c=2> Original data from the Cucumber Growers' Association



## MINIMISING PLASTIC ENTERING THE SEA FROM THE UK

The industry will work with all stakeholders to develop a comprehensive plan to significantly reduce plastic and other items leaking from the UK into the wider environment.

The BPF has established the Marine Litter Platform, which brings together British and other world-renowned experts to increase understanding and develop best-practice solutions to the growing problem of marine litter.

The industry is hopeful that similar platforms could be established across the globe. This would enable the platform members' expertise and knowledge to be shared and help contribute to coordinated action, not just within the UK but wider afield.

## CASE STUDY

The Plastics Industry and Voluntary Commitments: VinylPlus®

VinylPlus® is the voluntary sustainable development programme of the European PVC industry, representing businesses involved at all stages of the lifecycle of PVC. VinylPlus® is committed to sustainability and is a key contributor to the circular economy by ensuring continuous growth in the recycling of PVC.

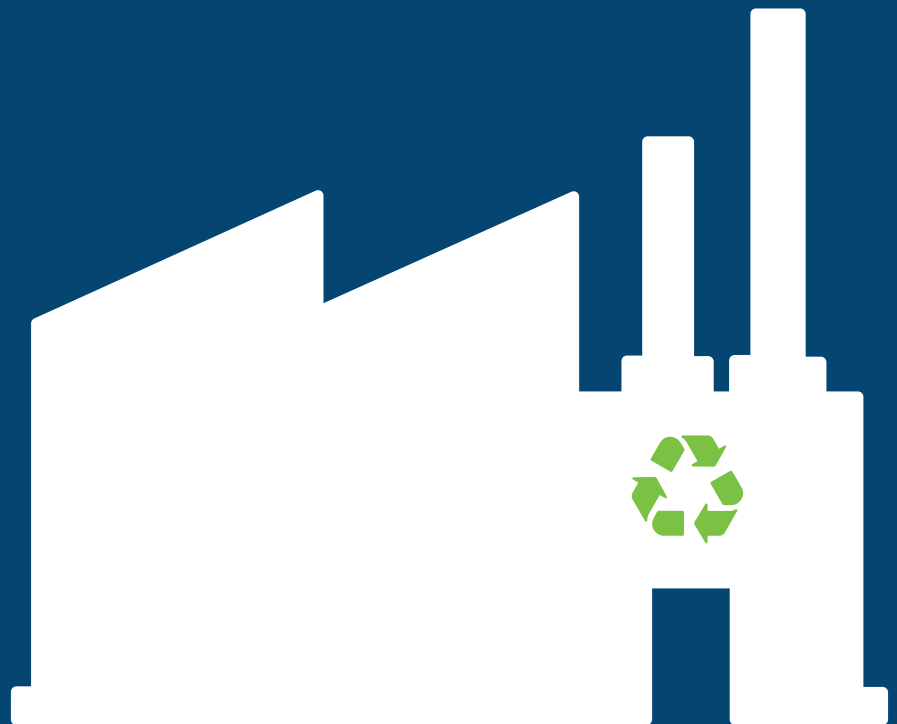
VinylPlus® has already spent over €100 million since its creation in the year 2000 and has become a concrete example of a voluntary commitment that works in practice and provides a benchmark for other industry initiatives. The current voluntary PVC recycling volume for 2020 was set in 2010 at an ambitious level of 800,000 tonnes of PVC recycling per year. In 2016, 570,000 tonnes of PVC was actually recycled in Europe, of which 120,000 tonnes were recycled in the UK alone.

[www.vinylplus.eu](http://www.vinylplus.eu)





# Mechanisms



## MECHANISMS

### PRN reform

The current Packaging Recovery Note (PRN) system has enabled the UK to consistently meet recycling targets and to position the UK as the seventh best recycler of plastic packaging out of 30 European countries.<sup>15</sup> However, the current system has created commercial incentives that have favoured exporting plastic over UK reprocessing and recycling. A by-product of this has been a lowering of the quality of sorted and separated material waste streams.

The consequence of this policy is that of the one million tonnes of packaging waste collected in the UK in 2016, 63% was exported and just 37% was recycled domestically.<sup>16</sup> Of our total plastic waste exports, 26% was sent to Europe and 74% to Asia, with the vast majority going to China.

China's recent ban on imports of lower quality recyclable plastic waste, coupled with ethical considerations, highlight how it is no longer acceptable for waste to be exported into low cost, less regulated destinations for recycling.

A reformed PRN system could reverse this trend whilst attracting investors into the UK market. To achieve this, the new system should:

1. Have no 'de minimis' exemptions.
2. Create extra funding that can be strategically directed to drive consistent collection for recycling for all plastic packaging in the UK and reward best environmental outcomes.

3. Provide extra funds to increase plastic recycling and minimise leakage.

4. Reward good design to maximise resource efficiency, recyclability and the use of recycled content.

5. Support, through a differentiated PRN/PERN, the development of a robust, competitive and innovative plastic recycling industry in the UK. This could be supported by split targets between export and domestic recycling, where the amount of material recycled in the UK gradually increases over a period of time.

6. Help the development of an effective on-the-go recycling system for all materials that prioritises the recycling of packaging and food consumed 'on the go', underpinned by consistent communication.

### Consistent collection and improved on-the-go facilities

There are currently over 300 different household collection schemes<sup>17</sup> in the UK and the harmonisation of these schemes, combined with improvements in on-the-go waste collection across the country, would dramatically improve the consistency of material for mechanical sorting whilst maximising recycling rates. Revising the PRN system could provide extra funding to enable this. In addition, it is estimated that consistent collections across the UK could generate £400m in revenue over eight years.<sup>18</sup>

Wales and Scotland have developed more consistent waste collection services, which has led to more efficient services and increased the quality and quantity of material collected for recycling.

15. PlasticsEurope, 2017 Plastics – the facts 2017 - [https://www.plasticseurope.org/application/files/5715/1717/4180/Plastics\\_the\\_facts\\_2017\\_FINAL\\_for\\_website\\_one\\_page.pdf](https://www.plasticseurope.org/application/files/5715/1717/4180/Plastics_the_facts_2017_FINAL_for_website_one_page.pdf)

16. Recoup, 2017 UK Household Plastics Collection Survey

17. [www.bbc.co.uk/news/uk-england-39079272](http://www.bbc.co.uk/news/uk-england-39079272)

18. WRAP: Supporting Evidence and Analysis, available [static.wrap.org.uk/consistency/Learn\\_more\\_about\\_the\\_evidence.pdf](http://static.wrap.org.uk/consistency/Learn_more_about_the_evidence.pdf)

We will commit to work with WRAP, local authorities and the waste management industry through the Plastics Pact to ensure that a consistent set of materials is collected by all local authorities and to significantly increase the proportion of plastic packaging that is collected and recycled.

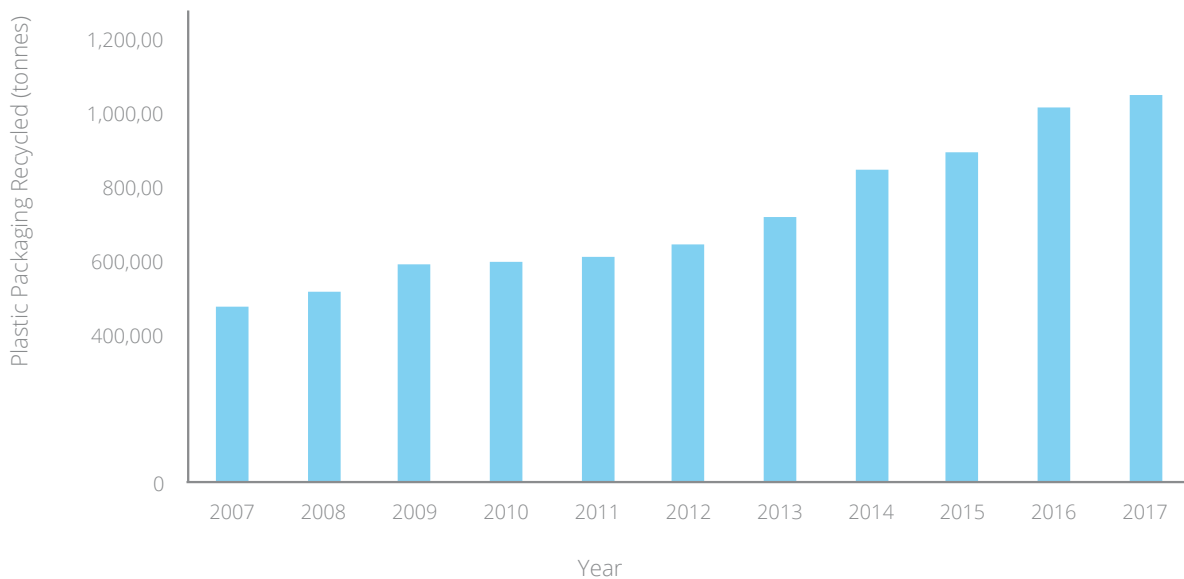
If Wales was an EU member state, it would be **third** for recycling. This has been achieved largely due to consistent collection.<sup>19</sup>

Improved waste sorting and quality

Improving waste sorting will help ensure we achieve maximum recovery for recycling with higher yields. Concerns over the quality of feedstock material is something that affects the whole recycling sector. There are already various pieces of work trying to address this issue such as the Materials Recovery Facility (MRF) code of practice and the Resource Association’s Recycling Quality Information Point (ReQIP). Plastic Recyclers Europe has also released ‘Bales characterisation guidelines’. Despite this and the work done by local authorities and waste management companies to reduce contamination at the kerbside, quality remains an issue.

The BPF would like quality standards for all plastic grades and would encourage both UK reproprocessors and exporters to only accept material meeting this standard. This would provide an advantage to businesses that are working to reduce contamination and also encourage change in those not meeting the standard. It is anticipated this

Plastic Packaging Recycled 2007-2017



19. Eunomia: Recycling – Who Really Leads the World? Available: [www.eunomia.co.uk/reports-tools/recycling-who-really-leads-the-world](http://www.eunomia.co.uk/reports-tools/recycling-who-really-leads-the-world)  
 Graph Source: Environment Agency, National Packaging Waste Database (NPWD), accessed 25 May

would be fed down to household level and further work would be done to reduce contamination at source.

### Chemical recycling and pyrolysis

The expansion of waste management methods to include chemical recycling and pyrolysis will significantly increase the recycling rates achievable in the UK. New innovations are under development, such as feedstock recycling, which is a particularly attractive option for difficult-to-recycle plastics that has the potential to allow plastics that cannot be recycled

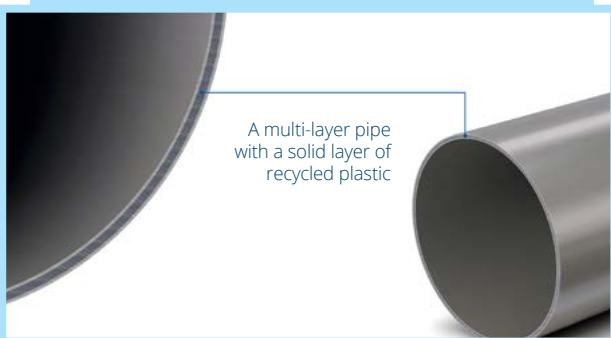
mechanically to be turned into valuable chemical building blocks for use in a variety of applications.

Thanks to a significant development effort, notably supported by the government and the plastics industry, some feedstock recycling applications have already reached technological maturity and have become economically viable as a reducing agent in industrial-scale installations within the metals industry.

### CASE STUDY

#### Pipes

PVC-U drain and soil pipes are available with a core that contains at least 50% recycled material. They were developed to help the construction industry achieve a lower carbon footprint. The pipes (available in the popular sizes of 110mm and 160mm diameter) have excellent performance characteristics — at least the same as the virgin products they replace. The increasing use of recycled material in products from BPF Pipes Group member products offers a practical solution to better protect the environment and ensure a more prudent use of natural resources.



The **first** production-scale chemical recycling plant is already operating in the UK in Swindon.

Alternative materials to plastic packaging could result in **2.7** times more greenhouse gas emissions across the life of the packaging.<sup>20</sup>

20. Denkstatt Report, The impact of plastic packaging on life cycle energy consumption and greenhouse gas emissions, 2011, available: in Europe [http://denkstatt-group.com/files/the\\_impact\\_of\\_plastic\\_packaging\\_on\\_life\\_cycle\\_energy\\_consumption\\_and\\_greenhouse\\_gas\\_emissions\\_in\\_europe.pdf](http://denkstatt-group.com/files/the_impact_of_plastic_packaging_on_life_cycle_energy_consumption_and_greenhouse_gas_emissions_in_europe.pdf)

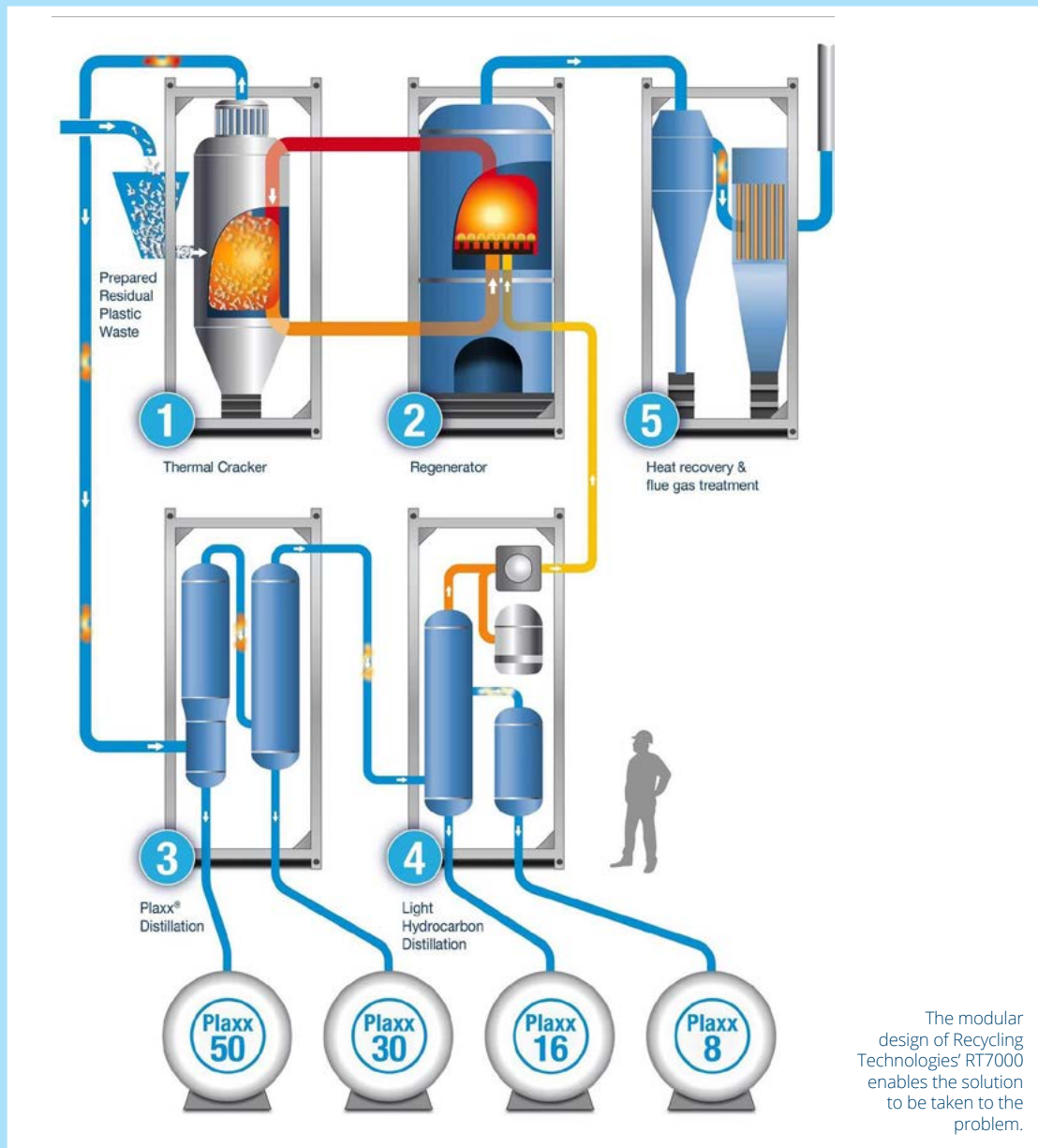
CASE STUDY

Chemical Recycling

Chemical recycling provides a recycling solution for residual plastic waste that cannot be mechanically recycled. Value is created from residual plastic waste by chemically turning it back into the oil it originally came from.

Recycling Technologies has developed a modular chemical recycling machine that recycles residual plastic waste into Plaxx®. Plaxx® can be used in a number of applications. It can be the feedstock for a steam cracker, it can also be a starting point for the production of plastic, as well as an industrial wax. In turning plastic back into a cracker feedstock, virgin quality polymers can be produced containing recycled material.

[recyclingtechnologies.co.uk](http://recyclingtechnologies.co.uk)



The modular design of Recycling Technologies' RT7000 enables the solution to be taken to the problem.

## Ecodesign

Whilst great steps have been made by specifiers and users of plastics packaging to ensure that the products are better designed for end of life, more can still be done. This will include:

- A best practice tool should be adopted, where possible, to help ensure sustainable packaging options are chosen.
- When considering new packaging or product formats, Life Cycle Assessments (LCA) should be adopted, where feasible, in order to analyse the potential environmental impacts associated with a product, process or service.
- Working with the supply chain to rationalise packaging formats and materials formats to make sure that more plastics can be easily recycled and the quality of collected recycled plastics is improved.

## Re-use

The industry will also work with stakeholders to ensure reuse is widely promoted in cases where it makes clear sense to do so. When safety, hygiene, and sustainability issues are all carefully considered, the general public should be encouraged to change their behaviour and reuse items rather than discarding them after a single use.

## Recycled Content

Recycled plastic needs greater adoption by society and to be understood as the high-quality material that it is. As part of this journey, it is important that brands and retailers adopt it where it makes sense to do so. The BPF will work with relevant stakeholders to increase, create and

protect the use of recycled material in end products by:

- Careful analysis and benchmarking of products using recycled content, understanding reasons why more products do not contain recycled content

## CASE STUDY

### Corretto™ Cup

The vast majority of ‘on the go’ cups used by coffee shops and fast food restaurants are not recycled. Consumers and businesses are becoming increasingly aware of the negative environmental impact beverage cups are causing and are now committed to finding sustainable alternatives.

Amaray's Corretto™ cup satisfies both consumer and environmental demands and is a 100% recyclable, reusable cup. The Corretto™ Cup features Bockatech's EcoCore™ foamcore walls to retain heat internally and prevent scalding externally. The cups are manufactured in a single polypropylene plastic through injection moulding. The result delivers a high-quality, cost-effective, reusable cup that meets modern sustainability demands.





(e.g. steady supply of quality material) and identifying opportunities to increase the use of recycled content.

- Encouraging the government to use green public procurement policy to incentivise the use of recycled materials in relevant products.
- Creating, through consultation with manufacturers and recyclers, guidelines for minimum recycled content in products.
- Addressing standards that result in recycled material being unfairly excluded from being specified for use in certain products.

## Reduce

The industry will continue to look at ways to optimise the use of virgin materials used in plastic applications. In the UK, we continue to use less virgin material to create packaging products, with per capita use of polymer decreasing over 7% between 2011 and 2015.<sup>21</sup>

Lightweighting, increased use of recycled material and innovative technologies

Plastic bottles weigh  
**half**  
 as much as ten  
 years ago.<sup>22</sup>

such as streamoulding (see case study), all contribute to increasing resource efficiency while at the same time reducing the amount of polymer used.

One important consideration is to look into the possibility of simplifying the range of polymer types used in plastic packaging when it is found to result in advantages from a resource efficiency and sustainability perspective.

## CASE STUDY

### Streamoulding

Streamoulding is a UK award-winning process and equipment solution that reduces the weight of plastics in injection moulded products by about 10%. It uses very small amounts of water as a blowing agent, injected into a modified nozzle during the moulding process.

The benefits are direct material cost savings for the manufacturers and the significant environmental benefits of reducing — at source — the amount of plastics used in a product without affecting reuse and recycling opportunities.

[www.rndfactory.co.uk](http://www.rndfactory.co.uk)



Streamoulding reduces the amount of plastic used at source

21. Source: PlasticsEurope Market Research Group (PEMRG)  
 22. Available at: [www.beveragemarketing.com/news-detail.asp](http://www.beveragemarketing.com/news-detail.asp)

## Deposit Return Schemes

Earlier this year, the British Plastics Federation welcomed the government's announcement of a deposit return scheme (DRS) embracing all materials, aiming to boost recycling rates for all drinks containers. Whilst the UK has a very strong record on recycling plastic drink bottles (which currently sits at 74%), now is the time for collaborative action to improve this figure across the whole country and a well thought out, properly implemented DRS could play a role in increasing this number. The front end of a deposit return scheme is fairly common across different systems; the challenge is how the scheme is operated and financed. We need a scheme that will be effective in tackling on-the-go consumption in particular. No other country faces that specific challenge.

## Monitoring and Guiding Progress

The industry plan will be a multi-year process of continuous improvement and learning. Members of the UK government departments Defra and BEIS, academia, NGOs and representatives of the UK plastics industry supply chain (including the British Plastics Federation) will be invited to join an independent committee to monitor and guide the progress made.

In 2000, 13,000 tonnes  
of plastic bottles were  
recycled in the UK. By  
2016, it was

**343,000**  
tonnes.<sup>23</sup>

23. Source: Parliamentary debate on Waste Collection Services (22 November 2017) Lord Bourne of Aberystwyth [hansard.parliament.uk/Lords/2017-11-22/debates/B30AE89D-32BB-4E53-8160-B755E4DD01AC/WasteCollectionServices](https://hansard.parliament.uk/Lords/2017-11-22/debates/B30AE89D-32BB-4E53-8160-B755E4DD01AC/WasteCollectionServices)



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