

Packaging Resource Listing

December 2013

This document summarises all the resources (guidance, tools and research) produced by WRAP to support taking action to reduce packaging waste.

For a quick overview of WRAP's work in Packaging please [look here](#).

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1.0 Guidance

1.1 Material to help you optimise packaging

Rigid plastics recyclability UK recyclability guidance on how to design and place onto the UK market rigid plastic packaging that is as recyclable as possible.	July 2013
Lightweighting wine bottles: less is more Information sheet exploring the opportunities for using lighter weight glass bottles for wine and reducing the tonnage of glass entering the waste stream.	Aug-10
Sparkling wine: the lightweight opportunities Information sheet on making the most of the opportunities for using lighter weight sparkling wine bottles.	Aug-10
Glass wine bottles and UV light This factsheet aims to provide information on the effects of light on wine and the influence the glass bottle can have in avoiding or minimising any detrimental effects on wine quality.	Aug-08
Champagne and sparkling wine Prepared as part of WRAP's GlassRite Wine project, this information sheet assesses the opportunities to use lighter weight bottles thereby reducing the tonnage of glass entering the waste stream and improving resource efficiencies.	Aug-08
Lightweight spirits bottles: a business case for change Case study of lightweighted spirits bottles.	May-07

Cut the cost of coffee in an instant If you produce instant coffee you could cut packaging costs by more than 20% by moving to Best in Class packaging weights.	Mar-07
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1.2 Packaging waste prevention

Local authorities and packaging waste prevention A series of factsheets and information leaflets to inform local authorities and partners about the work being done to optimise packaging.	Various
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1.3 Packaging and distribution

Making the case for change Information sheet providing practical advice to businesses on how to implement changes to wine packaging and distribution.	Aug-10
Bulk importation A handy guide to the many advantages of bulk wine importation.	Aug-10
Bottling wine in a changing climate CO ₂ emissions for wine imported to the UK can vary significantly, largely based on two key elements - transport and weight of packaging used.	Jun-08
The benefits of importing wine in bulk Read about the opportunities available to the wine industry to reduce costs, improve filling line productivity and respond to retailer environmental requirements through bulk importation, lightweighting and glass colour choice.	May-08

2.0 Tools

Carbon Ready Reckoner A tool for assessing the carbon impacts of design changes to a packaged product.	October 2013
GlassRite Tool Lightweight glass bottle directory which includes a range of bottles for spirits, wines, beer, cider and perry.	September 2013
Recycled content protocol for plastic packaging Guidance which provides a standardised way to calculate the recycled content of plastic packaging for those looking to improve the amount of recycled content used in their packaging.	Live & accessible through the WRAP website
Resource Efficient Innovations Database The REID database illustrates recent technologies in products and packaging from around the world, such as machinery, tooling, materials and design, that help reduce food waste.	Live & accessible through the WRAP website
An introduction to Packaging and Recyclability Read about the latest thinking in designing packaging for recyclability.	Live & accessible through the WRAP website

UK Packaging Benchmark A database that gives you an indication of the lightest, middle and heaviest weight packaging used for food and drinks products.	Live & accessible through the WRAP website
International Packaging Study A database showing innovative packaging, product dispensing and distribution systems, merchandising approaches and designs.	Live and accessible through the WRAP website
Wine Ready Reckoner WRAP is working with the wine industry to encourage bulk importing of wine and bottling in lightweight bottles in the UK.	Live & accessible through the WRAP website
Recycled content glass toolkit A toolkit to help you understand recycled content in glass containers, how recycled content of glass containers is calculated in the UK.	Live & accessible through the WRAP website
PET Bottle Categorisation Tool An online tool that helps you to identify how recyclable your plastic bottles are and where improvements can be made.	Live & accessible through the WRAP website
HDPE Categorisation Tool An online tool that helps you to identify how recyclable your milk bottles are and where improvements can be made.	Live & accessible through the WRAP website

3.0 Research

3.1 Understanding packaging optimisation

Reducing Easter egg packaging In 2009, Easter egg packaging was cut by 25% and, in some cases, by as much as 50% by leading confectionery brands, manufacturers and retailers under the Seasonal Confectionery Working Group. This model of working is a great example of how industry can work collectively on a small sale to make significant change.	Jan-11
GlassRite Wine Phase II report The project has worked with the wine supply chain and glass manufacturing sector to deliver glass waste and carbon emission savings through a series of glass lightweighting and bulk importation initiatives.	Sep-10
Packaging optimisation for whole, fresh chicken A research report about reducing the weight of whole, fresh chicken packaging whilst maintaining, and ideally enhancing, shelf life.	Jul-10
Efficient use of resources in hot drinks packaging design A review of hot drinks packaging, identifying current good practice and new concepts which optimise the use of resources in the supply chain.	Feb-10
Life cycle assessment of example packaging systems for milk Two life cycle assessment reports and a foreword covering the potential environmental impact of different example milk containers for pasteurised	Jan-10

milk available on the UK market.	
Glass lightweighting potential in the sparkling wine sector A report looking at opportunities for glass lightweighting in the international sparkling wine sector, including a case study on Champagne.	Jan-10
Soft drinks packaging in a changing climate Optimising soft drinks packaging can deliver environmental and commercial benefits.	Dec-09
Efficient use of resources in pet food packaging design A review of pet food packaging, identifying current good practice and new concepts which optimise the use of resources in the supply chain.	Nov-09
Efficient use of resources in breakfast cereal packaging design A review of breakfast cereal packaging, identifying current good practice and new concepts which optimise the use of resources in the supply chain.	Oct-09
Premiumisation of drinks packaging A report investigating the trend towards premium products in the UK drinks sector and its potential impact on packaging.	Sep-09
Glass lightweighting in the food, ready-to-drink and soft drinks sector A series of research reports that give valuable insight into ways in which potential barriers to glass lightweighting can be overcome by industry.	Aug-09
Packaging reductions in Birds Eye's frozen foods Savings in household waste through the reduction of the folding box weight in Birds Eye's frozen foods.	Apr-09
Seal Integrity and the Impact on Food Waste An investigation into the contribution that inadequate heat sealing of food packaging might make to the generation of food waste, in the supply chain and the household, and the development of new sealing technology.	Mar-09
Lightweighting beer and cider packaging Lightweighting beer and cider bottles can deliver environmental and supply chain benefits.	Oct-08
Delivering rightweighted bottles Working with beer, cider and spirits brand owners and their supply chain, the project delivered significant benefits by rightweighting of glass bottles.	Oct-08
Glass beer bottles and ultra violet light Bottle colour, lightweighting and the effect of ultra violet light on beer quality.	Oct-08
Protection from Lightstrike in Lightweight Glass Beer Bottles Carried out under the WRAP GlassRite Beer, Cider and Spirits project this study examines if the use of lightweighted bottles will have a significant impact on their ability to prevent lightstruck flavours occurring in beers.	Oct-08

<p>The Future of Glass Forming Technology for the Manufacture of Lightweight Containers</p> <p>Through the implementation of developing technologies in forming and related areas, significant advancement in weight reduction may be realised.</p>	Oct-08
<p>Lightweighting the can pack</p> <p>This report demonstrates that through collaborative research, led by Coca-Cola Enterprises, the current aluminium beverages can pack has the potential to be lightweighted further than the industry initially thought possible.</p>	Sep-08
<p>Cardboard packaging optimisation: best practice techniques</p> <p>Effective re-engineering of carton and corrugated cardboard packaging can cut costs and waste while retaining brand benefits and consumer appeal.</p>	Jun-08
<p>Making more out of in-store merchandising to optimise packaging</p> <p>A report that explores the role that merchandising displays can have on packaging optimisation. Eight different concepts were developed focusing on ready meals, pizza, fresh pasta, meat, cereal and frozen.</p>	Jun-08
<p>GlassRite Wine Phase I - lightweighting and bulk importation</p> <p>In 2007 the UK consumed 1,360 million 75cl bottles of wine. This contributed around half a million tonnes of packaging to the household waste stream.</p>	May-08
<p>Optimising corrugated transit cases</p> <p>Trials of lightweight corrugated transit cartons for home delivered products by Kite Packaging.</p>	Oct-07
<p>Optimising packaging for organic products</p> <p>The Soil Association has developed revised packaging standards. As well as setting high standards for the organic food industry, the Soil Association wants customers to know that its symbol on a product means the packaging has been specified with sustainability in mind.</p>	Aug-07
<p>Minimising packaging: Coca-Cola's lightest ever PET 500ml bottle in GB</p> <p>See how WRAP and Coca-Cola Enterprises worked together to test the feasibility of further lightweighting their range of 500ml PET bottles without compromising quality or brand image.</p>	Jun-07
<p>Minimising PET bottle packaging, Coca-Cola</p> <p>Over 200,000 tonnes of PET is used in the UK every year for soft drinks packaging, and the supply chain is facing mounting pressure to reduce the amount of virgin material that is used.</p>	Jun-07
<p>The lifecycle emissions of wine imported to the UK</p> <p>This report looks at the impact of transport and packaging on the life cycle emissions of CO₂ of imported wine, and demonstrates the significant carbon benefits from such activities as shipping wine in bulk and the lightweighting of glass wine bottles.</p>	May-07
<p>Ultra lightweight packaging solutions for frozen pizza</p> <p>This report investigates potential packaging reductions in the frozen pizza category. It assesses the need for carton box packaging whilst delivering</p>	Apr-07

extra benefits for the consumer through improved freezer space.	
Reduction of Retail polypropylene tray weights A trial reducing polypropylene trays for chicken portion products could see huge household waste savings and reductions in CO ₂ emissions if rolled out across the meat and poultry sector.	Mar-07
Lightweighting carbonated soft drinks bottles Raising the bar in PET bottle lightweighting.	Jan-07
Heinz - Lightweighting Can Ends WRAP worked with Heinz to reduce the amount of material used in its can ends and can bodies, and ultimately the amount of household waste produced.	Nov-06

3.2 Understanding reusable packaging

Reusable Longspac packaging for delivery of kitchen components at B&Q The trial carried out by B&Q and Ceva Logistics looked to demonstrate the technical, environmental and commercial viability of using "Longspac" – a multi-trip packaging system – designed for efficient transportation of kitchen components to customers.	Oct-10
Single Trip or Reusable Packaging - Considering the Right Choice for the Environment The report describes the factors which need to be considered when reviewing the environmental performance of single-trip and reusable packaging systems.	Oct-10
apetito: waste prevention boosts business efficiency WRAP undertook a waste prevention review at apetito (one of Europe's leading suppliers of frozen foods) as part of a series of on-site visits to selected members of the Food and Drink Federation. The review identified several efficiency savings that could be made.	Jun-10
Refillable glass beverage container systems in the UK This study identifies and quantifies the barriers and opportunities for the wider adoption of refillable glass beverage containers in the UK.	Jun-08
Reusable Transit Packaging WRAP supported three projects to investigate the feasibility of replacing current single use packaging with bespoke reusable packaging. These projects involved trials with Argos and B&Q on upholstered furniture and kitchen worktops respectively, and a feasibility study with John Lewis and Electrolux for large kitchen appliances.	Apr-07

3.3 Understanding recycled content/packaging recyclability

Recycling post-consumer film Trials were carried out using fully comingled post-consumer film packaging to manufacture products that could be used by the retail sector such as refuse	September 2013
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sacks, in store display panels and external hoardings. Barriers were also addressed to sort plastic films collected co-mingled at kerbside.	
Collecting and recycling plastic film Guidance to inform local authorities and other collectors of the challenges associated with collecting, sorting and recycling household plastic film	September 2013
rPET Quality Research to improve the quality of recycled PET for use in food packaging, thus enabling the material to be more widely used.	July 2013
Food grade recycled polypropylene (rPP) in packaging Research to develop a viable process to recycle post-consumer PP packaging waste into rPP suitable for use in the manufacture of new food packaging.	July 2013
Black plastics Research to improve the recyclability of black plastics and prevent these materials from going to landfill.	July 2013
Removable colour systems This report identifies opportunities to use removable colour decoration techniques to improve the recyclability of rigid plastic packaging without compromising the use of colour in the pack design.	Sep-10
On-Pack Recycling Label UK standard consumer recycling label, which is simple, consistent, evidence led and provides sufficient information to make it easy for consumers to recycle more packaging, more often. Over 160 organisations already signed up to the scheme with the label being used in over 75,000 product lines.	Mar-09
Biopolymer packaging in UK grocery market The UK is seeing significant growth in the development and use of biopolymer and compostable packaging in retail. The introduction of these new materials create risks for established recycling operations for both oil based plastics and compostable materials, and must be managed carefully.	Aug-08
Using recycled content in plastic packaging: the benefits A WRAP project that demonstrates that recycled PET (rPET) can be successfully used in the production of new retail packaging.	Feb-07
Raising the bar in PET bottle lightweighting Is it possible to raise the bar even further and set a new Best in Class standard for major beverage fillers supplying UK supermarkets?	Jan-07
Front of Store Recycling WRAP, working together with Tesco and Sainsbury's, undertook trials of enhanced Front of Store Recycling facilities.	Jun-06
rPET Retail Packaging Demonstration of viability of recycled PET (rPET) in retail packaging.	Mar-06

3.4 Reconsidering the product and the delivery system

In-store Dispensing Systems (ISDS) - Retail Trial A report about an award winning trial during 2010 that tested the economic,	Jan-11
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environmental and operational feasibility of a self-dispensing system of selling laundry liquids in a number of Asda supermarket stores across the UK.	
Product Re-formulation Re-thinking how products are used and designed for a sustainable future.	Sep-10
Quantifying Opportunities for the Bulk Importation of Wine Investigating the potential for increasing bulk importation of wine for UK filling.	Nov-09
Beverages: Self-Dispensing A project that investigates and scopes the wider use and potential for implementing the self-dispensing of beverages (alcoholic and soft drinks) in-store in UK retail outlets.	Jun-09
Carbon impact of bottling Australian wine in the UK in PET and glass bottles A report showing the results of the first UK study into the carbon impact of bottling wine in the UK in glass and PET bottles.	Mar-08
Self-dispensing systems - commercial feasibility study Self-dispensing systems are well established in a number of countries and have proved popular with customers and grocery retailers. This study will help UK retailers consider whether implementation of such systems in the UK is commercially viable.	Mar-07

3.5 Understanding consumer attitudes to packaging

Home Compostable Packaging: Management Summary Consumer research was undertaken by WRAP in 2009 to gain greater understanding of the consumer's attitudes towards compostable packaging.	Jan-10
Consumer testing new packaging in seasonal, gift and luxury products Understanding consumer responses to new packaging for seasonal, gift and luxury products.	Oct-09
Glass lightweighting in the food, ready-to-drink and soft drinks sector Find out what consumers think about glass lightweighting and how potential barriers can be overcome by industry collaboration.	Aug-09
Consumer attitudes to biopolymers Consumer research into the consumer perceptions and impacts of biopolymers (degradable and compostable packaging).	Sep-07
Lightweighting glass containers: Understanding consumer perceptions Lightweight glass containers offer commercial benefits for manufacturers, retailers and brand owners – and can be developed without compromising consumer appeal or product durability.	Apr-07

3.6 Case studies

Household food, drink and packaging: Courtauld Commitment Phase 1 and Phase 2	Various
Rigid plastics recyclability Good practice of design for recyclability of rigid plastic packaging and non-drinks bottles on the UK market.	July 2013
DIY: Home Improvement Sector Commitment	Various
Carrier Bags	Various
Water: Federation House Commitment	Various
Hospitality and Food Service Agreement	Various

4.0 Related activities

Plastics Industry Recycling Action Plan (PIRAP) Initiative to help the UK industry to increase the recycling of UK plastic packaging waste and meet recycling targets.	Ongoing
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5.0 Contact us

If you would like further information on our Packaging Resources please contact amanda.gadd@wrap.org.uk