

# Opportunity North East Sustainability Programme

## Packaging Policy



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## Summary

This report summarises the (known) Scottish and UK packaging legislation implemented and planned from 2022 to 2030, which will impact the food and drink sector. This should allow businesses to prepare for the legislative requirements and understand how they may be impacted directly or indirectly.

The table below summarises the legislation, along with clickable links to each section:

Legislation	Coverage	Effective From	Overview
<a href="#">Plastic Packaging Tax</a>	All of UK	01 April 2022	<ul style="list-style-type: none"> <li>£200 per tonne tax for plastic packaging with less than 30% recycled plastic content.</li> <li>Manufacturers and importers of &gt;10 tonnes of finished plastic packaging components per year are obligated.</li> </ul>
<a href="#">Single-Use Plastics</a>	Scotland	01 June 2022	<ul style="list-style-type: none"> <li>Ban on the manufacture, supply, export and import of single-use plastic (including compostable plastic): <ul style="list-style-type: none"> <li>Cutlery (forks, knives, spoons, chopsticks)</li> <li>Plates</li> <li>Beverage stirrers</li> <li>Straws (unless exempt)</li> <li>Balloon sticks (unless exempt)</li> <li>Expanded polystyrene cups, food containers and lids.</li> </ul> </li> </ul>
<a href="#">Deposit Return Scheme</a>	Scotland	16 August 2023	<ul style="list-style-type: none"> <li>20p deposit for single-use drinks containers between 50ml and 3L made wholly or mostly from: <ul style="list-style-type: none"> <li>PET plastic</li> <li>Glass</li> <li>Steel</li> <li>Aluminium</li> </ul> </li> </ul>
<a href="#">Extended Producer Responsibility</a>	All of UK	2024	<ul style="list-style-type: none"> <li>Full net-cost of collecting, treating and managing packaging waste is placed on packaging producer.</li> <li>Certain brand owners and importers are obligated.</li> <li>Data collection and registration requirements from 2023.</li> <li>Various reporting and payment requirements.</li> <li>Mandatory labelling from 31 March 2026.</li> </ul>
<a href="#">Biodegradable Landfill Ban</a>	Scotland	2025	<ul style="list-style-type: none"> <li>Ban on biodegradable waste going to landfill from 2025.</li> <li>Ban includes paper and cardboard packaging and food waste.</li> </ul>
<a href="#">Single-Use Beverage Container Charge</a>	Scotland	2025	<ul style="list-style-type: none"> <li>Minimum or fixed charge added to the cost of a drink in a single-use container.</li> <li>No further details on dates, materials or costs.</li> </ul>

Following the sections detailing recently implemented and future legislation, this report then provides best practice guidance for maximising packaging recyclability, highlights supply-chain and consumer engagement considerations and provides case studies of packaging innovations and good practice.

The table below summarises these sections, along with clickable links to each section:

Topic	Overview
<a href="#">Best Practice – Maximising Recyclability</a>	<ul style="list-style-type: none"> <li>Best practice guidance from the UK packaging and waste sector for maximising the recyclability of various packaging materials: <ul style="list-style-type: none"> <li>Paper and cardboard</li> <li>Metal – aluminium and steel</li> <li>Glass</li> <li>Rigid plastic (e.g. bottles and trays)</li> <li>Flexible plastic (e.g. film, wrappers and bags)</li> <li>Compostable and biodegradable packaging</li> </ul> </li> </ul>
<a href="#">Best Practice – Supply Chain</a>	<ul style="list-style-type: none"> <li>Considerations for procuring packaging and packaged goods, such as: <ul style="list-style-type: none"> <li>Supplier’s activities</li> <li>Transportation</li> <li>Materials used</li> <li>Green claims being made by suppliers</li> </ul> </li> </ul>
<a href="#">Best Practice – Consumer Communication</a>	<ul style="list-style-type: none"> <li>Considerations for communicating with consumers using packaging on environmental matters, such as: <ul style="list-style-type: none"> <li>Recycling/disposal advice labels for the packaging</li> <li>Carbon footprint labels about the product</li> <li>Green claims being made to the consumer</li> </ul> </li> </ul>
<a href="#">Case Studies</a>	<ul style="list-style-type: none"> <li>Case studies of packaging innovations and good practice, including: <ul style="list-style-type: none"> <li><b>Border Biscuits’</b> switch to card-based boxes</li> <li><b>Colman’s</b> switch to paper sachets</li> <li><b>Nestlé’s</b> switch to paper and card-based packaging</li> <li><b>Coca-Cola’s</b> switch to cardboard multipack packaging</li> <li><b>Carlsberg’s</b> radical change to reduce secondary packaging</li> <li><b>Dunnet Bay Distillery’s</b> refillable packaging solution</li> <li>Examples of alternative transport packaging solutions to replace expanded polystyrene cool boxes for fish and seafood</li> <li><b>Tesco’s</b> mixed methods approach to removing, reducing and increasing the recyclability and reusability of their own-brand packaging</li> </ul> </li> </ul>

## 1. Introduction

This report summarises and signposts readers to the UK's best practice guidance for maximising packaging recyclability, along with points to consider when procuring packaging and packaged goods.

The consultation on Scotland's [Circular Economy Bill](#) sets out proposed legislative requirements to develop Scotland's circular economy. In it, policy measures for Scotland are proposed from 2022 to 2025 and beyond. Some of the proposed measures in the Circular Economy Bill are explored in this report.

2022	2023	2024	2025	BEYOND 2025
<b>Circular Economy Bill</b> Consult on Circular Economy Bill proposals.  <b>Single Use Plastics Ban</b> Introduction of our ban on some of the most environmentally damaging single-use plastic items.  <b>FWRAP</b> Publish review and update of the Food Waste Reduction Action Plan.  <b>Recycling Improvement Fund</b> £70 million fund to improve local authority recycling collection infrastructure (ongoing to 2025).  <b>Textiles Challenge Fund</b> Establishment of a £2m textiles innovation fund to tackle textile pollution and throw-away culture.  <b>Incineration Review</b> Completion of independent review into the role of incineration within Scotland's waste hierarchy.  <b>UK Emissions Trading Scheme</b> Consultation on UK Emissions Trading Scheme to gather evidence on inclusion of incineration within the scheme.  <b>Digital Waste Tracking</b> Consultation on digital waste tracking.  <b>Research Programme</b> Launch a programme of research in 2022-23 on waste prevention, behaviour change, fiscal incentives and material-specific priorities.	<b>Deposit Return Scheme</b> Implementation of our Deposit Return Scheme (DRS) for single use drinks containers.  <b>Recycling Co-design</b> Co-design of high quality, high performing household recycling and reuse services with service operators and citizens.  <b>Separate Collections – Garden Waste</b> Separate collections of Bio-waste (e.g. garden waste), in line with EU requirements.  <b>Consult on Extending Bio Ban</b> Consultation to consider extending the ban on landfilling biodegradable municipal waste in 2025 to include biodegradable non-municipal waste.  <b>Digital Waste Tracking</b> Implementation of mandatory digital waste tracking service (timing dependent on consultation responses).	<b>Extended Producer Responsibility</b> Implementation of Extended Producer Responsibility (EPR) schemes for packaging, waste electrical and electronic equipment and batteries from 2024 onwards.  <b>Recycling Guidance</b> Develop guidance for household waste and recycling services.  <b>Review of Service Charging</b> Review of household waste and recycling service charging.  <b>Commercial Zoning Pilots</b> Research and launch commercial waste zoning pilots.  <b>Residual Waste Strategy</b> Implement a Residual Waste Plan.  <b>Sector-led Plan for Incineration</b> Develop a sector-led plan for incineration by 2024 to restrict the incineration of fossil materials.  <b>Food Waste Prevention Target</b> Investigate the feasibility of food waste prevention action plans for businesses and organisations.	<b>Single-Use Disposable Beverage Cups Charge</b> Introduction of a charge on single-use disposable beverage cups.  <b>National Re-Use Target</b> Investigate the feasibility of a national reuse target.  <b>Separate Collections – Textile Waste</b> Separate collections of textile waste, in line with EU requirements.  <b>Bio Ban</b> Introduction on ban of landfilling of biodegradable municipal waste.  <b>Landfill Gas Capture</b> Expand landfill gas capture programme to double the number of sites that undertake investigative or development work.	<b>Powers for Environmental Charging</b> Develop a prioritised approach to charges & bans on other environmentally damaging products. <sup>†</sup>  <b>Ban on Destruction of Durable Goods</b> Ban on the destruction of unsold durable goods. <sup>†</sup>  <b>National Consumption Reduction Target</b> Develop statutory targets to tackle consumption reduction. <sup>†</sup>  <b>Mandatory Reporting</b> Introduction of mandatory public reporting of food surplus/waste. <sup>†</sup>  <b>Statutory Performance Targets</b> Introduction of statutory recycling & reuse local performance targets for household waste services, targets to be met from 2030. <sup>†</sup>  <b>Statutory Recycling Guidance</b> Introduction of statutory guidance for household waste & recycling services. <sup>†</sup>
				<sup>†</sup> Circular Economy Bill Proposal

**Figure 1:** Existing and proposed policy measures taken from the Scottish Government's "[Delivering Scotland's Circular Economy: A Consultation on Proposals for a Circular Economy Bill](#)". Those measures highlighted in yellow are explored in more detail in this report. [Source: Scottish Government]

Readers are encouraged to keep up-to-date with current and future environmental legislation by referring to the [NetRegs website](#), which provides a database on legislation that impacts Scottish businesses.

## 2. Recently Implemented Legislation

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### 2.1. Plastic Packaging Tax

#### What Is It?

The UK's (including Scotland) [Plastic Packaging Tax \(General\) Regulations 2022](#) places a £200 per tonne tax on plastic packaging components containing less than 30% recycled plastic content. The Plastic Packaging Tax (PPT) began on 01 April 2022 and was designed to encourage increased use of recycled plastic. Plastic packaging components containing more than 30% recycled content are not charged the PPT. Many primary and secondary plastic packaging components are in-scope, as are certain tertiary plastic packaging components. Examples: plastic bottles, lids, labels, bags, wrappers, trays, windows.

#### Who Is Obligated?

Manufacturers and imports of 10 tonnes or more of “finished plastic packaging components” within a 12-month period are obligated to register and potentially pay the PPT. To decide who must account for the PPT, it is important to understand when the plastic packaging component is “finished”. If the plastic packaging components have been manufactured in the UK, the business that makes the last “[substantial modification](#)” to the plastic packaging components (to make these “[finished plastic packaging components](#)”) shall be obligated. If the finished plastic packaging components have been imported into the UK empty or filled, the importer shall be obligated. Further guidance can be found [here](#).

Where a business uses another business to import finished plastic packaging components into the UK on their behalf, both parties should check their incoterms (International Commercial Terms/terms of sale) to determine which business is obligated to register and potentially pay the PPT.

The UK Government has produced useful step-by-step guidance for businesses to check whether they are obligated to register and pay the PPT, found [here](#).

#### What Are The Requirements?

The PPT requires obligated manufacturers and importers to register and report each quarter on the types and volumes of finished plastic packaging components they placed on the UK market. Plastic packaging components containing less than 30% recycled plastic will be charged £200 per tonne.

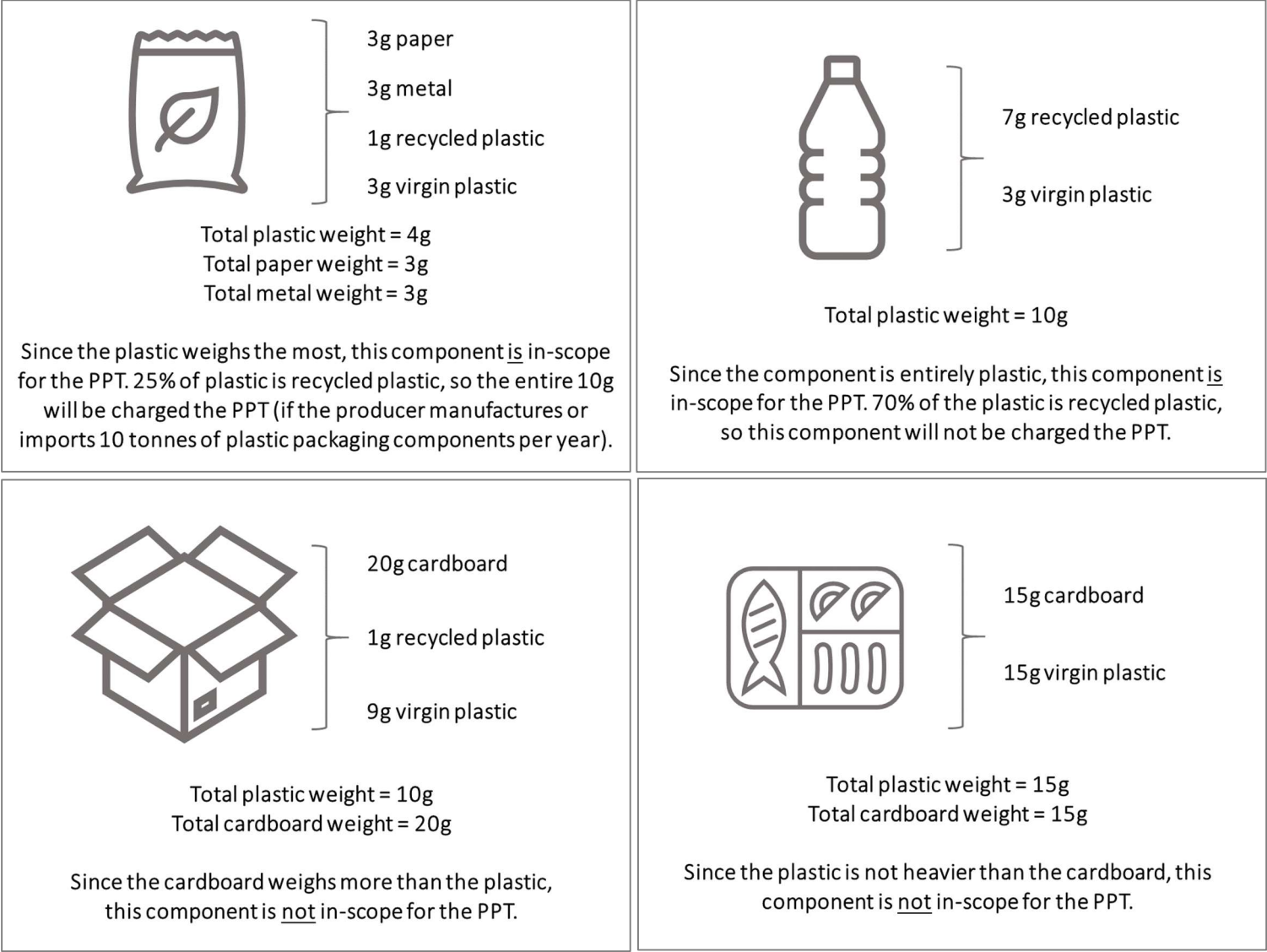
A plastic packaging component is defined as a product that is designed to be suitable for use, whether alone or in combinations with other products, in the containment, protection, handling, delivery or presentation of goods, at any stage of the supply chain of goods. This ranges from the producer of the goods to the consumer or user. A packaging component is defined as plastic if it consists of more plastic by weight than any other single material.

All plastic packaging components containing more than 30% recycled plastic **and** less than 30% recycled plastic content must be counted towards the 10-tonne registration requirement threshold. Bioplastics are subject to the PPT, which include biodegradable plastic, compostable plastic, and oxo-degradable plastic. Some primary, secondary and tertiary packaging components are exempt from the PPT, so it is important that businesses understand what is in-scope for the PPT. Examples of packaging and non-packaging components provided [here](#).



Where a mixed material packaging component is classed as being plastic, the entire weight of the packaging component will be charged the PPT if the plastic contains less than 30% recycled plastic.

Figure 2 provides workings used to determine whether packaging components are “in-scope” (i.e. the packaging component is classed as a “plastic packaging component”, so the amount of recycled plastic will need to be calculated) and “charged” (i.e. contains less than 30% recycled plastic) the PPT.



**Figure 2:** Examples of packaging components and their status under the PPT.

Top-left: mixed material bag classed as a plastic packaging component and is chargeable for the PPT;

Top-right: plastic bottle classed as a plastic packaging component but is not chargeable for the PPT;

Bottom-left: cardboard box not classed as a plastic packaging component;

Bottom-right: mixed material tray not classed as a plastic packaging component.

### How Do I Comply?

Businesses must register with HMRC on the [UK Government's website](#) as soon as they believe they meet the 10 tonne per annum threshold – either based on historic records or forecasting future volumes. Guidance how to assess annual tonnages can be found [here](#). For the avoidance of doubt, businesses must register even if their packaging components contain 30% or more recycled plastic.

Once registered, businesses must supply plastic packaging information, including weights and supporting evidence of exemptions and recycled content, on a quarterly basis. Crucially, if the recycled content of a plastic packaging component is not known, or cannot be provide with evidence from the supplier or producer, it will be charged the PPT. All records must be retained for at least six years from the end of the reporting period they relate to. Full details on record keeping can be found [here](#).

All businesses that handle finished plastic packaging components should carry out due diligence checks at least once per year to ensure the PPT is paid in the supply chain. Records of the due diligence checks should be kept and/or used as evidence for quarterly reporting. If a business cannot show it has taken reasonable steps to ensure PPT has been accounted for in their supply chain, they may be held secondarily or jointly liable for any unpaid PPT. Guidance on due diligence can be found [here](#).

Guidance on completing the quarterly PPT return can be found [here](#).

### What Should I Do Now?

Businesses will need to determine whether they meet or exceed the 10 tonne per annum threshold. Businesses that are obligated to register and potentially pay the PPT on their plastic packaging components will need to decide on the weighing method for the PPT, of which there are various methods that can be used, as listed [here](#).

Although some businesses will not be required to register and pay the PPT, due to their position in the supply chain and/or not exceeding the 10 tonne per annum threshold, due diligence checks are required by all businesses. Additionally, many businesses may find their packaging costs increase as the costs for paying the PPT or sourcing recycled plastic content will likely be passed down the supply chain.

Notably, there is concern in the packaging industry over the supply of recycled plastic material to meet increasing demand for recycled plastic content. This is particularly true for food-grade recycled plastic, and particularly food-grade recycled Polyethylene Terephthalate (rPET). As such, the price per tonne of recycled food-grade plastics has increased in recent months spurred by the PPT, but also from the EU-wide target of increasing recycled plastic content in packaging. Fortunately, with rising recycling rates, schemes such as the Deposit Return Scheme (mentioned at section 3.1) and technology to capture and create food-grade recycled plastic material, the supply and cost of recycled plastic should improve over time.

Full guidance on the PPT is available on the UK Government's website, found [here](#).



## 2.2. Single Use Plastics Ban

### What Is It?

Scotland's [\*The Environmental Protection \(Single-Use Plastic Products\) \(Scotland\) Regulations 2021\*](#) prohibits the manufacture, supply and import of certain single-use plastic items in Scotland from 01 June 2022. The ban includes both online and in-store sales and is applicable whether the single-use plastic items are sold or provided free-of-charge to consumers. The ban covers single-use plastic items which have alternative sustainable solutions – such as wooden cutlery and paper straws. Biodegradable and compostable single-use plastic items are also banned.

### Who Is Obligated?

From 01 June 2022, all businesses in Scotland are prohibited from manufacturing, importing, supplying or possessing for the intention of supplying certain single-use plastic items. The manufacture of certain single-use plastic items for exporting outside of Scotland is also prohibited. Online distributors and physical stores are obligated to adhere with the regulation.

### What Are The Requirements?

From 01 June 2022, the manufacture, possession and/or supply of the following single-use plastic items (including biodegradable and compostable plastic) are prohibited in Scotland:

- Cutlery (forks, knives, spoons, chopsticks and other similar utensils)
- Plates
- Beverage stirrers
- Food containers made of expanded polystyrene
- Beverage cups, containers and lids made of expanded polystyrene
- Straws (with the exception of use by those with certain medical conditions)
- Balloon sticks (with the exception of plastic balloon sticks used for industrial or professional purposes)

Businesses that have surplus stock of the above single-use plastic items must dispose/recycle them and replace them with sustainable alternatives, such as items made of paper, card, wood etc. Further guidance, including useful FAQs and exemptions can be found [here](#).

### How Do I Comply?

From 01 June 2022, all businesses operating in Scotland must not manufacture, supply or import single-use plastic items as listed above. Exceptions to the ban include plastic straws and plastic balloon sticks, which include medical grounds for plastic straws (such as use in catering facilities, pharmacies, care homes, schools and prisons) and for professional/industrial use for plastic balloon sticks (such as professional party planners and certain events).

Failure to comply with the ban may result in a fine of up to £5,000, enforceable by local authorities.

## What Should I Do Now?

Businesses in Scotland that are still manufacturing, supplying or importing single-use plastic items under this ban must stop now, and instead use alternative materials. Switching to alternative materials will require research into which have a lower environmental impact and be economically feasible. Zero Waste Scotland provides a [useful guide](#) for choosing alternative packaging solutions and materials.

Some businesses in the food and drink sector may also be impacted indirectly by the ban, as commercial customers may request alternative packaging solutions for them to comply with the ban.

## What About The Rest Of The UK?

Table 1 below provides an overview of Scotland, England, Wales and Northern Ireland's current (July 2022) policy measures or plans to ban certain single-use plastic items.

**Table 1:** Current (July 2022) status for the ban of single-use plastic items for Scotland, England, Wales and England.

Single-Use Plastic Item	Scotland	England	Wales	Northern Ireland
Beverage stirrers	Ban on manufacture, supply, export and import from June 2022.	Ban on supply from October 2020.	<a href="#">Proposed ban</a> on supply and manufacture. No date.	Required to transpose <a href="#">EU Single Use Plastics Directive</a> in 2022. No ban imposed yet.
Straws	As above	As above	As above	As above
Plates	As above	<a href="#">Proposed ban</a> on supply in April 2023.	As above	As above
Cutlery	As above	As above	As above	As above
Balloon sticks	As above	As above	As above	As above
Polystyrene cups, containers and lids	As above	As above	As above	<a href="#">Consultation</a> held on approach – ban, levy or voluntary schemes.

### 3. Future Scottish and UK Legislation Up To 2030

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*NOTE: The information in this section is correct at the time of writing (July 2022). Readers should refer to Circularity Scotland, UK Government [online resources](#) and [NetRegs](#) to ensure information is current.*

#### 3.1. Deposit Return Scheme

##### What Is It?

Deposit Return Schemes (DRS) are effective policy models used in [over 45 countries](#) around the world. A DRS works by applying a returnable deposit to certain packaged produce (mainly single-use drinks containers) bought by consumers. The deposit is returned to the consumer once the empty packaging/container is returned to a retailer, café, reverse vending machine or other return point. This incentivises consumers to return their empty packaging, which is subsequently recycled. Because of this, DRSs are generally successful in increasing recycling rates, with countries typically achieving [around 80-95% recycling rates](#) for certain packaging types.

Scotland's DRS will go live on **16 August 2023** and will be the first nation in the UK to implement a DRS. Scotland aims to achieve a 90% collection rate of certain drinks containers by 2025. Scotland's DRS will use a flat-rate deposit for various single-use drinks containers, along with a variety of return and collection options, to achieve this ambitious recycling target.

##### What Will It Involve?

[The Deposit Return Scheme for Scotland Regulations 2020](#) sets out the scope and requirements of Scotland's DRS. The DRS will set a 20p deposit on single-use drinks containers between 50ml and 3L made wholly or mainly of PET plastic, glass, steel or aluminium.

The 20p deposit must be applied per drink container, so for multi-packs of drinks containers, a 20p deposit will be applied to each container in the multi-pack (e.g. a six-pack of 330ml cans of cola will incur a £1.20 deposit. The 20p deposit cannot be increased or reduced, however the impact of VAT is being considered by HMRC and Scottish Government. The 20p deposit is not applied to drinks containers sold at duty-free shops or drinks containers distributed outside of Scotland.

Retailers, the hospitality sector and online stores (unless exempt) must provide consumers the option to return their empty drinks containers and return their 20p deposit(s). Additionally, reverse vending machines at various locations across Scotland will allow consumers to scan and return their drinks containers and receive their deposit. **Error! Reference source not found.**

Further details, including useful information for producers and FAQs, from Zero Waste Scotland can be found [here](#).

##### What Will This Mean For Me?

Producers (brand owners, importers and online sellers) of drinks in single-use containers composed of the in-scope materials will be legally responsible for their collection and management. This will add additional costs and administrative burden through the payment of fees, registration and reporting requirements to SEPA. Whilst the labelling, packaging design and barcodes of in-scope drinks containers

will not require change, producers may decide to indicate the deposit value on the packaging artwork, as is common in other international DRS'. Further information on labelling and signage can be found [here](#).

As a way of reducing administrative burden on producers, a scheme administrator, [Circularity Scotland](#), can fulfil producers' obligations for a fee. Using a scheme administrator may require labelling added to drinks containers to prevent fraud. The Scottish Government expects the majority of producers to use the scheme administrator to comply.

It is important to note that Scotland's DRS will complement the UK-wide packaging Extended Producer Responsibility system (see section 3.2 below). As such, [producers will not pay twice for the in-scope drinks containers for DRS](#), as these drinks containers will not be in-scope for the upcoming packaging EPR system. However, PET plastic bottles will still be subject to the Plastic Packaging Tax – see section 2.1.

### When Will It Be Implemented?

Scotland's DRS will go live on **16 August 2023**. Existing stock that does not have a 20p deposit applied can still be sold by producers and retailers after 16 August 2023 without a 20p deposit applied. But will need to make it clear to consumers that a 20p charge has not been applied to the container.

### How Will I Comply?

All producers of in-scope single-use drinks containers sold in Scotland must register with SEPA from **01 January 2023**. However, producers who use the scheme administrator to register with SEPA, and meet other obligations, will need to check with their scheme administrator on when they need to register by. Circularity Scotland is currently the only scheme administrator, who provides details on registration [here](#).

Producers must register with SEPA, pay a registration fee, apply the 20p per container deposit to their containers, arrange and pay for the collection of containers and meet collection targets. Producers can comply with these requirements themselves or through their scheme administrator.

Details and guidance on producer registration and requirements can be found on SEPA's website, [here](#).

### What About The Rest Of The UK?

Following this second consultation in 2021, the UK Government [proposed several details](#) (within their responses to packaging EPR consultation) on England, Wales and Northern-Ireland's DRS. However, the full response from the UK Government has not yet been released.

The UK Government will implement a DRS similar to Scotland, in that single-use drinks containers between 50ml and 3L will have a deposit assigned for England, Wales and Northern Ireland. However, whilst England, Wales and Northern Ireland will all include PET plastic, steel and aluminium containers in the DRS, England and Northern Ireland will not include glass. Wales will include glass, in-line with Scotland's approach.

Further details on the proposed DRS for England, Wales and Northern Ireland will be announced by the UK Government in due course.

### 3.2. *Extended Producer Responsibility*

#### What Is It?

The UK's (including Scotland) proposed "Extended Producer Responsibility" (EPR) scheme for packaging is a policy model used in many countries. Ultimately, packaging EPR schemes place the full net cost of managing packaging waste on packaging producers. The full net cost is based on the volume of packaging placed on the market, specific composition of the packaging materials used and whether the packaging is reusable or single-use. As such, packaging EPR systems encourage producers to reduce the amount of packaging used, use more sustainable materials, increase recyclability, reusable and refillable packaging.

#### What Will It Involve?

The UK Government [has proposed details](#) on the UK's (including Scotland) upcoming packaging EPR system. Although certain definitions, processes and calculations are yet to be decided and confirmed in formal EPR legislation, the key features of the upcoming EPR system will include:

- **One Obligated Producer:** A single producer in the supply chain will be responsible for full net cost of waste management for the packaging placed on the UK market. The obligated producers will be brand owners and importers of packaging and packaged goods. If packaging is imported unfilled, then the UK-based filler will be obligated under the proposed system.
- **Additional Thresholds:** The same 50 tonnes per annum **and** £2M annual turnover thresholds as used in the current Producer Responsibility Obligations system remain as part of determining obligated producers. As such, brand owners and importers that exceed these thresholds will be required to pay packaging compliance costs, meet recycling targets and report on their packaging. In addition, a lower threshold of 25-50 tonnes per annum **and** £1M-2M annual turnover will be introduced. Producers who meet this lower threshold will need to report on their packaging and pay an annual fee to the environmental regulator. These thresholds and requirements will be reviewed in 2026.
- **Modulated Costs:** A modulated cost approach will be used for consumer packaging placed on the market. The cost placed on the producer based on the specific types, recyclability and weights of packaging placed on the UK market.
- **Local Authority Costs:** The necessary costs associated with local authority household waste collections and litter bins for packaging waste will be calculated and charged to obligated producers based on the tonnage of packaging placed on the UK market.
- **Business Waste Costs:** As an interim solution for calculating management costs associated with packaging waste arising from businesses, obligated producers will need to purchase Packaging Waste Recovery Notes (PRNs) and/or Packaging Waste Export Recovery Notes (PERNs) to evidence that the packaging placed on the UK market and used by businesses and public sector organisations have been recycled. A more effective, long-term solution will be developed as the EPR system progresses.

- **Recycling Targets:** Recycling targets will be set from 2024 to 2030 for plastic, paper/card, steel, aluminium, glass and wood. These targets must be met by obligated producers through the purchase of PRN/PERN evidence. Additional material types and reusable/refillable packaging targets may be added in the future.
- **Detailed Reporting:** Obligated producers will be required to submit detailed reports on the volumes and types of packaging placed on the market, plus details on the material composition to determine the recyclability of the packaging components.
- **Mandatory Labelling:** The Recycle Now “Swoosh” icon (Figure 3) along with the term “Recycle” or “Do Not Recycle” will be mandatory for all consumer packaging components (except plastic film/bags) from 31 March 2026. Plastic film/bags must be labelled with “Recycle” or “Do Not Recycle” from 31 March 2027. This will be mandatory for all businesses selling consumer packaging in the UK. The decision on whether “Recycle” or “Do Not Recycle” term will be used will be based on overall UK household recycling collections and recycling infrastructure. Guidance will be provided to producers on determining which term to use. Compostable and biodegradable packaging will use the “Do Not Recycle” message until evidence suggests such packaging can be safely and correctly separated and composted across the UK.



**Figure 3:** Recycle Now’s “Swoosh” icon (for recyclable packaging). [Source: UK Government]

- **Cup Takeback:** Sellers (such as cafes) of filled fibre-based composite cups will be required to provide a dedicated bin on their premises for cup recycling by 2024. The threshold for obligation to this will initially be for sellers with 10 or more full-time equivalent employees, but it may be applied to sellers of all sizes following reviews. Obligated sellers must report on cup sales and recycling tonnages.

### What Will This Mean For Me?

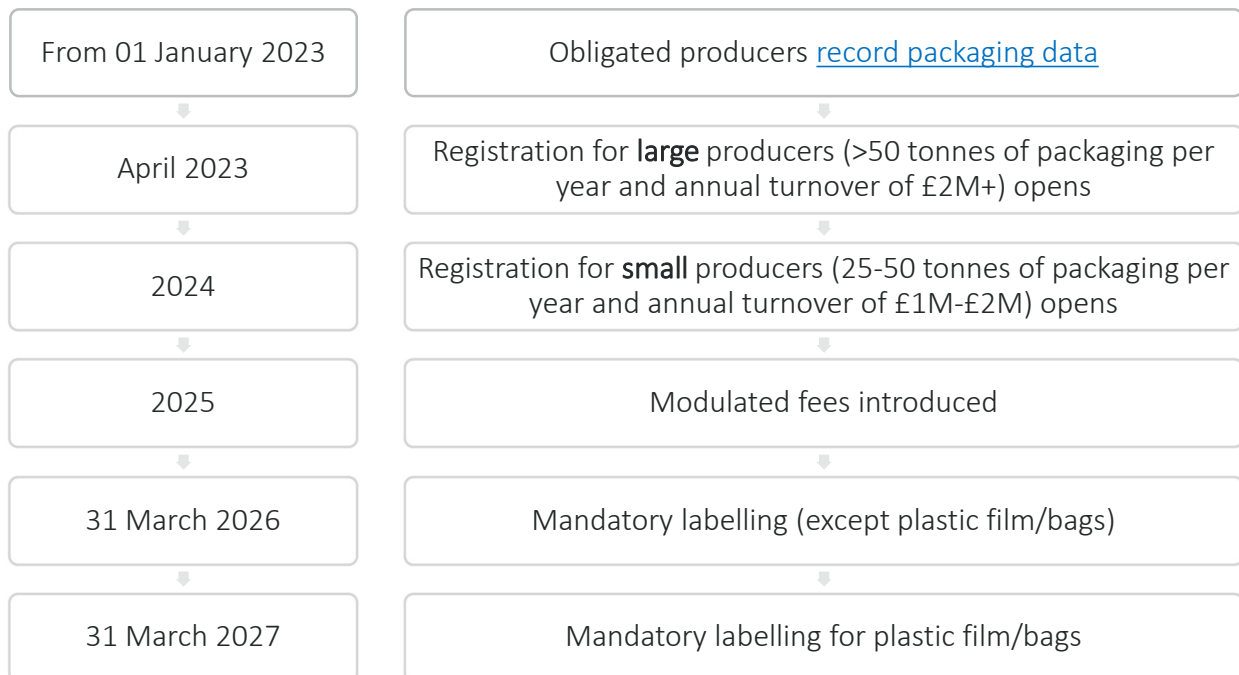
Costs for obligated producers under EPR will be substantially higher than those under the existing Producer Responsibility Obligations, as the full net cost of managing packaging waste will be charged to producers. Whilst this may mean that some businesses will not be directly obligated, costs will likely be passed along the supply chain.

As a result of EPR, many businesses (especially brand owners) will change the way their products are packaged so as to minimise their costs. Within the food and drink sector, this will encourage less packaging or alternative materials being used.



### When Will It Be Implemented?

The UK Government intends to implement this EPR scheme in **2024**, applying a phased approach:



### How Will I Comply?

Until the packaging EPR legislation is introduced, all businesses are **strongly encouraged to check [this website](#)** from the UK Government on steps to take to prepare for EPR. Guidance from the UK Government's online resources and advice from their packaging team should be used: [packaging@defra.gov.uk](mailto:packaging@defra.gov.uk)

## 3.3. Biodegradable Landfill Ban

### What Is It?

Scotland's ambitious plan to ban biodegradable waste to landfill by 01 January 2021 was [extended to 2025](#), allowing the waste management sector, local authorities and government time to prepare. The ban will [prohibit biodegradable municipal waste materials](#) (e.g. garden and food waste, paper, cardboard, textiles, wood and even composite packaging, among others) being sent to landfill in Scotland from 2025. The ban will reduce landfilled materials, encouraging it to be recycled, composted or incinerated.

### What Will It Involve?

The ban will prohibit landfill operators in Scotland from accepting biodegradable municipal waste from local authorities and private waste carriers. This will require the waste loads to be inspected, tested and, in some cases, treated, to ensure it no longer contains biodegradable materials. Local authorities and private waste management companies will either need to pre-treat the waste to filter out biodegradable

waste, and/or use alternative treatment options for the biodegradable waste – such as incineration, recycling, anaerobic digestion or composting.

#### What Will This Mean For Me?

In terms of packaging, this will not directly impact the food and drink sector with no action required to comply with this ban. There may be encouragement to increase recyclability of biodegradable packaging along the supply-chain – such as paper and cardboard packaging. This will ensure that biodegradable packaging can be recycled, which will also avoid costs associated with pre-sorting of landfilled waste.

It is also worth noting that the food and drink sector may find general waste costs increasing further in 2025 as waste contractors have to sort or find alternative disposal routes for their general waste. However, this is speculation.

#### When Will It Be Implemented?

The ban will be implemented in **2025**.

### *3.4. Single Use Beverage Container Charges*

#### What Is It?

The [Scottish Government plan](#) to introduce a mandatory minimum charge to consumers for using single-use beverage containers – such as coffee cups.

#### What Will It Involve?

Whilst the Scottish Government is currently devising plans with its steering group, early indications suggest a minimum fee of 20-25p per cup. This non-refundable fee placed on consumers will encourage greater use of reusable cups and reduce hard-to-recycle single-use cups – many of which are incinerated or landfilled depending on how consumers dispose of them.

#### What Will This Mean For Me?

Whilst the single-use beverage cup charge may not directly impact the food and drink sector, but rather the hospitality sector, it is important to understand the legislative landscape which will impact stakeholders and customers of the food and drink sector.

#### When Will It Be Implemented?

There is no confirmed date on when the charge will be implemented, but the Scottish Government's "[Delivering Scotland's Circular Economy: A Consultation on Proposals for a Circular Economy Bill](#)" suggests it may be introduced in **2025**.

## 4. Best Practice

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### 4.1. Maximising Recyclability

#### 4.1.1. Paper and Cardboard

Paper and cardboard packaging are widely recycled in domestic recycling, recycling points and recycling centres across the UK. The use of recycled content is encouraged where possible. The following summarised guidelines have been taken from the [Confederation of Paper Industries'](#) recyclability guidelines on paper and cardboard packaging in the UK:

- Plastic and metal coatings/lamination should be kept to a minimum. Packaging producers should aim for 5% or less of plastic and metal content on the pack weight where possible.
- Double-sided plastic and metal coatings/lamination should be avoided, if possible, as the fibre cannot easily be captured for recycling.
- Beverage cartons (e.g. Tetrapak and EloPak) and cups can be recycled, but they tend to be recycled differently to other paper and cardboard packaging.
- Peelable solutions such as plastic laminates and windows are encouraged (e.g. sandwich packs), which allows the consumer to remove them before recycling the paper or cardboard packaging.
- Water-soluble varnishes are preferred.
- Adhesive usage should be minimised, where possible, and water-soluble adhesives and adhesives which create large particles are preferred.
- Food residue such as leftover pasta and baked-on cheese should be avoided, although food staining on paper/cardboard packaging is generally acceptable. Packaging artwork should encourage consumers to empty and remove 3D food residue prior to recycling. Tear off and peelable surfaces can help to reduce contamination.
- Traditional waxed papers should be avoided. Moisture resistant papers can be dealt with by mill systems but are not preferred feedstock and may not be fully recycled.
- Packaging should use cellulose fibre derived from trees. Other fibres may be recycled, subject to having been prepared for use in papermaking.

Whilst this report only assesses packaging legislation and best practice in the UK, readers with European consumers may find the following European guidance for paper and cardboard packaging useful: [FEFCO](#) and [CEPI](#).

#### *4.1.2. Metal – Steel and Aluminium*

Steel and metal packaging are widely recycled at home, recycling points and recycling centres across the UK. Whilst there are no identified metal packaging best practice guidelines for the UK, [The Metal Packaging Manufacturers Association](#) shares information regarding metal packaging. Furthermore, the USA's [Aluminium Association](#) provides best practice packaging guidance for aluminium cans, which is applicable for UK metal recycling, whereby additional materials such as labels and sleeves should be avoided and removable where possible.

Unlike plastics and paper recycling, coatings are less likely to impact the recyclability of metal packaging materials because coatings are often burnt off the metal prior to melting, and do not contaminate the recyclate. However, large amounts of plastic contamination can cause problems for shredding and de-lacquering systems during reprocessing, so producers should limit the use of plastic materials such as non-removable plastic shrink sleeves and plastic resealable openings. The use of recycled content is encouraged where possible.

Consumers are encouraged by [On-Pack Recycling Label](#) and [Recycle Now](#) to place metal lids back on glass bottles and jars before recycling them. Placing lids on bottles increases the chances of them being captured in collections and recycled appropriately. Packaging producers should prompt consumers to keep the lid on glass jars and bottles by mentioning this on the packaging, so that the lids are captured and recycled.

#### *4.1.3. Glass*

Glass bottles and jars are widely recycled at home, at recycling points and recycling centres across the UK. The use of recycled content is encouraged. The following summarised points have been taken from [British Glass'](#) recyclability guidelines for glass packaging in the UK:

- Paper and plastic labels and sleeves can be used, as they are often removed in the recycling process. However, plastic labels attached with strong adhesive can be rejected, along with some attached glass.
- Caps and closures can be easily removed in the recycling process. However, swing stoppers can be difficult to remove and can cause issues with recycling of the glass.
- Glued on decoration such as plastic or metal badges should be avoided as the portion of the bottle attached to these materials will be rejected. Attaching decorative items should be applied to the minimum possible surface area to reduce the amount of rejected glass.
- Coloured prints directly onto the glass surface can cause glass bottles and jars to be incorrectly colour sorted for reprocessing. Coloured print usage should be minimised.

#### 4.1.4. Rigid Plastic

Rigid plastic polymer types that are widely recycled at home in the UK include clear and coloured polyethylene terephthalate (PET), polypropylene (PP) and polyethylene (PE) bottles, trays, pots and other rigid packaging. Many black plastic items are not detected by automatic sorters, so many black plastic items are not recycled. Polyvinyl chloride (PVC) and polystyrene (PS) plastic polymers are non-recyclable and should be avoided if possible. The use of recycled content is encouraged where possible and safe.

The following points are from [RECOUP's](#) recyclability guidelines for rigid plastic packaging in the UK:

- Only one type of material and polymer should be used. Where a mix is required, the same polymer type should be used – e.g. LDPE and HDPE.
- Minimise the use of colour, avoiding strong colours. Black plastic should be avoided in particular.
- Minimise the use and coverage of sleeves and labels. Where sleeves/labels are necessary, they should be easily removable – e.g. peelable or perforated. A prompt to consumers to remove the sleeves/labels should be mentioned on the packaging.
  - Where sleeves and labels are not easily removable, the sleeve/label should be the same polymer as the rigid plastic. This will allow it to be correctly sorted at the sorting facility.
  - Where sleeves and labels are not easily removable and not the same polymer as the rigid plastic, the sleeve/label should cover less than 60% of the rigid plastic component's surface area. This increases the chance of it being sorted correctly.
- Adhesives should be minimised and ideally be water-soluble.

#### 4.1.5. Flexible Plastic

Unlike many rigid plastics which are widely recycled at home in the UK, flexible plastic (bags, film and wrappers) is not widely recycled at home in the UK. Whilst this is being changed as part of EPR reform, some flexible plastics can be recycled at certain stores, recycling points and recycling centres. This includes PE and PP bags, films, wraps and pouches. Inclusion of other flexible plastic is being investigated.

The following summarised points have been taken from [CEFLEX's](#) recyclability guidelines for flexible plastic packaging in the EU and UK:

- Only one polymer should be used – either PE or PP.
- PE and PP must be greater than 90% of the total packaging weight, with no more than 10% of other accepted materials.
- Aluminium foil and paper labels are prohibited.
- Labels should be composed of the same material as the main packaging component (e.g. a PE label on a PE bag).
- Barrier layers are compatible up to a maximum of 5% by weight. These can be composed of AlOx, SiOx, EVOH, PVOH and Acrylic.

- Adhesives should be limited to a maximum of 5% of the total weight of the packaging structure (and with other materials, barrier layers, lacquers, etc. must not exceed 10%). This ensures a higher quality of recyclate.
- Flexible PE/PP packaging should be greater than 20mm x 20mm in size. Smaller items will generally not be captured and recycled.
- Pigments/inks should be clear, natural or lighter/paler colours. This prevents cross colour contamination during recycling and ensures a higher value recyclate.
- Use of additives and fillers such as thermal stabilisers, UV stabilisers, antistatic agents, etc. should be minimised.
- Additional features such as zippers, spouts, closures, etc. should be composed of the same polymer as the PP/PE flexible plastic.

#### *4.1.6. Compostable and Biodegradable Packaging*

There is growing demand for sustainable packaging, which has led to the creation of compostable and biodegradable packaging, as plastic alternatives. Depending on the manufacture and end-of-life destination for compostable and biodegradable plastic packaging, they can have a lower environmental impact than traditional fossil-based plastic packaging. However, there is misinformation on the overall impacts of these materials, with much of this material often ending up in landfill or being incinerated.

Compostable and biodegradable packaging materials (such as compostable cups and bags) are limited in terms of their recyclability/composting due to an overall lack of collection and reprocessing facilities. Furthermore, when these materials end up at composting and anaerobic digestion facilities, they can be rejected over fear that they are plastic contaminants. However, as more are composted, the increase in compostable packaging and awareness of these alternatives may allow these items to be correctly composted. For now, however, compostable and biodegradable plastic packaging should be declared as non-recyclable for UK consumers. In terms of reporting biodegradable and compostable plastics for EPR purposes, the category “Other” should be used.

In addition to their treatment, the terms “compostable” and “biodegradable” are often misused or misunderstood. All compostable packaging is biodegradable, but not all biodegradable packaging is compostable. For an item to be classed as “**compostable**” in the UK, it must be either certified to EN13432, ISO14021 or be certified through an independent scheme such as “OK Compost”. Under EN13432 standards, the packaging must disintegrate after 12 weeks and completely biodegrade after 12 months. Over 90% of the material will have then been converted to CO<sub>2</sub>. “**Biodegradable**” is applied to a broad range of materials and generally has vague definition. Specifically, biodegradable materials do disintegrate, but not over a specified time frame. This may take several years and depends on conditions of the treatment process.



There are several issues relating to compostable and biodegradable packaging:

- It often looks like plastic or mixed material packaging, so are often regarded as contamination at processing sites (such as anaerobic digestion facilities) and can end up in landfill or incineration.
- It may contaminate plastic recycling if it is mistaken for traditional plastics by consumers. This is a concern for plastic recyclers.
- If disposed of as general waste and sent to landfill, these materials can produce methane, which is a greenhouse gas that has 25 times more global warming potential than CO<sub>2</sub>.

WRAP and The Plastic Pact have produced [compostable packaging considerations guidance](#), which provides useful information on compostable packaging certification, limitations and suggested uses for compostable packaging currently.

## 4.2. Supply Chain

To reduce the environmental impacts of packaging, it is important that the supply chain operates efficiently and sustainably. Working with suppliers by exploring alternative materials and packaging designs, plus examining supply chain processes and operations can reveal areas for improvement. These points may be worth considering when assessing and carrying out due diligence on supply chains:

- Supplier's operations
  - How do they operate?
  - What plans and certification do they hold?
- Deliveries of packaging and packaged goods
  - Can orders be placed in bulk to reduce transport needs?
  - Is the transport and secondary packaging returnable or recyclable?
  - How is it being transported? (e.g. courier van, ship, airmail etc.)
  - Where is it being transported from?
  - How is it packaged?
- Packaging materials
  - Can we use reusable packaging instead of single-use?
  - Are the materials from recycled or raw materials?
  - How recyclable are the materials at end of life?
  - How have the materials been sourced? (e.g. Forest Steward Certified?)
  - Environmental impact of materials (e.g. life cycle assessments)

If claims are being made to customers about the environmental benefits from packaging (or any other goods and services), care should be taken so as to ensure the claims are true. This will require evidence

from the supply-chain to ensure that the claims on points such as recycled content, recyclability or carbon emissions are correct and not misleading. Further guidance on “Green Claims” and how to ensure the claims are not misleading can be found [here](#).

### *4.3. Consumer Communication*

Consumers can be confused by the variety of symbols and labels on packaging. Many of these have been explained by [RecycleNow](#). One of the most recognised environmental symbols used on packaging in the UK is On-Pack Recycling Label ([OPRL](#)). OPRL states “Recycle” if the material is widely collected by UK councils, there is infrastructure/technology in place to recycle it, and a viable end market for the processed materials. If these criteria are not met, then the packaging is labelled “Don’t Recycle”. The OPRL system also uses messages for certain packaging materials/format types that can be recycled at recycling points or supermarkets, such as plastic bags and film. Use of the OPRL artwork, along with guidance and support on label usage, requires membership.

Packaging can also be used to inform customers about the carbon impact of a product and/or packaging. The [Carbon Trust](#) works with companies to measure, manage and reduce the footprint of their products. The carbon footprint of food is a growing interest as consumers are concerned about climate change. As such, more businesses are choosing to indicate their carbon footprint, or suggest they are working towards lowering it, on their packaging.

As mentioned in section 4.2 above, if claims are being made about environmental benefits from packaging (or any other goods and services), care should be taken to ensure the claims are true. Further guidance on “Green Claims” and how to ensure the claims are not misleading can be found [here](#).

## 5. Case Studies

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These case studies provide real-world examples of packaging innovation and good practice. In doing so, many of the businesses have reduced their environmental impact and costs associated with packaging materials, transportation, fees and taxes related to producer responsibility and Plastic Packaging Tax.

### 5.1. Border Biscuits

[Border Biscuits Ltd](#) is a biscuit manufacturer based in Lanarkshire, Scotland. Prior to 2019, their core line of biscuits was sold to consumers in predominantly plastic packaging. Recognising the issues surrounding the carbon footprint, recyclability and transport inefficiency of the plastic packaging design, Border Biscuits developed a more environmentally friendly solution.

In 2019, the new cardboard-based packaging design was introduced. This [reduced plastic use by 90%](#), by [replacing the rigid plastic tray and lid](#) with a cardboard box and plastic outer-wrap. This increased the recyclability of the packaging, reduced the weight of the packaging by 50%, and reduced the packaging volume per box. The reduced packaging volume increased the transport efficiency by allowing double the number of biscuits to be loaded onto a pallet. In all, this new design reduced Border Biscuit's carbon footprint by 527 tonnes of CO<sub>2</sub>.

In 2022, Border Biscuits went on to [remove more plastic packaging](#) from their 2019 packaging. By removing the plastic window (which was used to protect the biscuits and allow the biscuits to be seen by consumers), the cardboard box was redesigned to include an image of the biscuits and showcase their new branding. This new design [reduced plastic packaging by two tonnes](#).

### 5.2. Colman's

[Colman's](#) is a condiment and sauce manufacturer owned by Unilever. Famous for English mustard and mint sauce, Colman's also produce sachets of powdered sauce-kits. Prior to 2021, the sachets were made of mixed material laminates, consisting of plastic and aluminium. These sachets were not recyclable through household recycling. By working with packaging developers, Mondi, Colman's removed the aluminium barrier layer and replaced a large amount of the plastic with paper.

In 2021, Colman's introduced their [new recyclable sachets made from 85% paper](#), allowing them to be accepted for household recycling. The 15% plastic barrier layer was required to maintain shelf-life of the powder. Since the new paper sachet contains 15% plastic lamination, it has been allowed to use the "Recycle" OPRL message, allowing UK consumers to recycle it in their household recycling bin (however, from 2023, the plastic lamination threshold for paper and cardboard using the "Recycle" label will lower to 10%). By replacing the non-recyclable sachets with recyclable paper-based sachets, Colman's estimate that this will [avoid 220 tonnes of landfilled packaging per year](#).

### 5.3. Nestlé

As part of Nestlé's commitment to make all of its packaging recyclable or reusable by 2025, the Smarties brand underwent substantial change to its packaging in 2020 and 2021 to increase its recyclability. [Nestlé decided to change from plastic and mixed material to paper and cardboard-based packaging](#), allowing the packaging to be recycled at home. 90% of the Smarties range had to change its packaging, with the remaining 10% already being paper-based and recyclable. Nestlé [carried out life cycle analyses](#) on a range of packaging materials and determined paper and cardboard to be the most environmentally friendly material. Compostable packaging was considered, but due to the lack of collections and issues with contaminating the recycling stream, Nestlé decided not to use compostable packaging.

Nestlé faced multiple challenges, such as the global reach of Smarties, along with the different packaging types that Smarties use – sharing bags, individual tubes, easter egg boxes and chocolate bars. In total, 250 million plastic and mixed-material packs per year needed to change to paper and card-based packaging. The other [challenge surrounded the choice of paper](#), since paper is fragile and does not have the same oxygen and moisture barriers that plastic has, an important attribute for food. By applying a coating/barrier to the paper-based packaging and testing its shelf-life and durability during transport, Nestlé produced a robust and recyclable paper and card-based packaging solution for Smarties. Notably, for the multi-packs of Smarties tubes, Nestlé removed the need for a multi-pack plastic bag, and instead introduced a perforated packaging solution. This allows individual tubes to be connected, with consumers tearing off each tube when required. This novel approach removes the need for a multi-pack bag.

Nestlé also sources [at least 90%](#) of their paper and cardboard material from FSC and PEFC certified suppliers. Additionally, the Smarties packaging encourages consumers to recycle their packaging by using recycling labels and information on their packaging.

### 5.4. Coca-Cola

[Coca-Cola](#) is a global soft drink manufacturer, producing various soft drinks in various packaging materials – such as aluminium cans and PET plastic bottles. In 2021, packaging was Coca-Cola's largest contributor to their carbon footprint for their European sales, [accounting for 43% of their greenhouse gas emissions](#). From 2019 to 2021, Coca-Cola managed to reduce their packaging carbon footprint by almost 11% through various packaging methods such as light-weighting their plastic bottles and aluminium cans and using recycled content.

In the UK, Coca-Cola has [replaced hard-to-recycle plastic multipack wrappers with recyclable cardboard](#) boxes from 2019. This move has been rolled out across their four, six and eight packs of cans, including the Coca-Cola, Fanta, Sprite, Dr Pepper and Lilt brands. The transition from plastic wrap to cardboard boxes removes the hard-to-recycle plastic wrappers for over 30 million packs per year. This move by Coca-Cola increases the recyclability of their secondary packaging, with the cardboard also being sustainably sourced from FSC (Forest Stewardship Council) or PEFC (Programme for the Endorsement of Forest Certification) certified suppliers.

In addition to replacing packaging materials to increase recyclability, [Coca-Cola has also reduced the amount of packaging used for many of its PET bottles](#). By reducing the amount of PET on the neck of each PET bottle by 1g across Europe in 2021 and 2022, the total plastic reduction will represent around 9,100 tonnes by 2024, equating to around 15,000 tonnes of CO<sub>2</sub>-equivalent. Additionally, as of 2021, Coca-Cola's use of recycled PET plastic in Europe was almost 53%, with some brands and markets achieving 100% recycled content.

### 5.5. Carlsberg

[Carlsberg](#) is a Danish multinational brewer with a specialisation in lager. In 2018, [Carlsberg introduced their new "Snap Pack" innovation](#), which holds multi-packs of cans together without the need for plastic multi-pack rings (or "hi-cones"). The "Snap Pack" solution consists of a specially-designed adhesive dot which is placed on each can and holds all cans together as a multi-pack. Carlsberg worked alongside [KHS](#) to ensure that the Nature MultiPack adhesive was strong enough to hold all cans together in transit, but could be easily pulled apart by consumers. Despite the decision to retain a plastic carrier handle, the replacement of the multi-pack rings with the adhesive dots has resulted in 76% less plastic being used.

Carlsberg won the "Best CSR/Sustainability Initiative" in the [World Beverage Innovation Awards 2018](#), and they estimate that by rolling this solution out across their four, six and eight-pack range, 1,200 tonnes of plastic will be avoided per year. Additionally, Nature MultiPack adhesive dots [do not impact the recycling process](#) for metal cans or plastic bottles.

### 5.6. Dunnet Bay Distillers

[Dunnet Bay Distillers](#) is a gin and spirits manufacturer based in Thurso, Scotland. As part of Dunnet Bay's ambition to expand sales internationally, reduce their environmental impact from packaging and reducing transport costs, they have developed a [refillable packaging solution](#) for their "Rock Rose Gin" product line.

By selling and mailing their gin in flat lightweight (65g) pouches, [Dunnet Bay managed to reduce their packaging](#), shipping and storage costs associated with their gin, which would otherwise be packaged in large heavy (700g) ceramic bottles. The pouches increase storage capacity by 400% compared with ceramic bottles, save Dunnet Bay on shipping costs by over £10 per delivery and reduces the cost for customers too. Customers can empty the gin from the pouches into their refillable bottle and then send their pouches in the post free-of-charge to Dunnet Bay. Dunnet Bay sends these mixed material pouches to a specialist recycler, Terracycle, for recycling. Notably, the pouches do not need to be packaged in an envelope, as the Royal Mail agreed that the postage details could be printed on the pouch to allow it to be returned to Dunnet Bay.

## 5.7. Sustainable Solutions for Fish and Seafood Transport Packaging

Expanded polystyrene (EPS) boxes are [the most common single-use packaging solutions](#) for transporting fish and seafood from sea to shore in the UK, equating to 22 million boxes used per year. Whilst EPS is an effective material for maintaining fish and seafood temperature and integrity, EPS poses multiple environmental impacts. It has a high presence as marine litter, a bulky nature resulting in low transport efficiencies, it is hard-to-recycle, has a high carbon footprint compared with other materials, and is generally single-use. Due to these environmental issues, many companies offer alternative packaging solutions for transporting fish and seafood, using single-use and reusable packaging. Examples of alternative packaging solutions include:

- Recyclable single-use corrugated polypropylene (PP) boxes – such as [Tri-Pak's CoolSeal](#) boxes
  - The boxes are flat-pack, allowing empty boxes to be stored and transported efficiently. When flat, CoolSeal boxes allow 80% more boxes to be stored compared with EPS boxes.
  - When assembled, the boxes use less space than EPS boxes, increasing transport efficiency by around 50%.
  - The boxes are waterproof, protecting the produce from contamination.
  - The boxes are made from recyclable PP plastic, allowing them to be recycled at the end of their useful life.
- Recyclable single-use corrugated cardboard boxes – such as [Stora Enso's EcoFishBox](#):
  - The boxes are flat-pack, allowing empty boxes to be stored and transported efficiently. When flat, EcoFishBoxes use 85% less space than EPS boxes.
  - The boxes produce 40-73% less carbon emissions than EPS boxes.
  - The cardboard is coated with PET plastic to allow the box to be waterproof, but still allowing the boxes to be flattened and recycled.
- Reusable insulated boxes – such as [Saeplast](#):
  - The reusable boxes are durable and can be used multiple times.
  - Some empty reusable boxes can be stored and transported more efficiently than EPS boxes, as they can be nested or folded.
  - In some cases, such as [iTub](#) in Scandinavia, reusable boxes can be rented, with the boxes being returned, cleaned and appropriately recycled at the end of their useful life.

The environmental engineering consultancy, TAUW, [produced a report](#) comparing and assessing EPS cool boxes against PP, cardboard and reusable cool boxes in the UK's fishing industry. TAUW highlighted that single-use PP and cardboard boxes are currently not as effective as EPS boxes in terms of temperature retention, and that flat-pack boxes require time and resources for assembly. However, there are cardboard boxes available with insulation, such as [WoolCool](#), which improves temperature retention.



As for reusable plastic boxes, TAUW found examples of Scottish salmon farms transporting salmon to large retailers in reusable boxes. TAUW modelled the environmental impact of transporting 300kg of fish 100km once and then 50 times, using EPS, PP, cardboard and reusable plastic boxes. For a one-time use, single-use PP boxes had the lowest impact; however over 50 uses, reusable plastic boxes had the lowest impact. However, other impacts such as cost, insulation properties and risk of damage to produce are noted as important factors when selecting alternative packaging solutions. See [TAUW's report](#) for detail.

## 5.8. Tesco

[Tesco](#) is a major retailer located around the UK, selling branded and own-brand food, drink and household items to consumers in-store and online. By designing, manufacturing and selling a wide variety own-brand food and drink produce, Tesco has control over the packaging solutions and materials that they use.

In 2019, Tesco launched its [4R strategy](#) – Remove, Reduce, Reuse and Recycle. The relevant “R” from the 4Rs is printed on packaged goods which have had their packaging removed, reduced, or made reusable or recyclable.

The following examples highlight the activities and impacts Tesco has carried out so far:

- **REMOVE:**

- Pre-packed whole chickens no longer contain plastic trays. This saves 14 million pieces of plastic per year. Notably, due to salmonella concerns from washing raw meat trays before recycling, many plastic trays used for raw meat are not recycled by consumers.
- Rigid plastic lids (which were originally on top of another film lid) on creams, yogurts and deserts were removed, saving over 100 million pieces of plastic.
- Plastic film for multipack tins (e.g. soup and beans) were removed, saving 75 million pieces of plastic. Customers get a multipack discount on a certain number of tins purchased.
- In total, Tesco’s “Remove” strategy has removed 1.6 billion pieces of plastic packaging.

- **REDUCE:**

- Fruit juice packaging was reduced by 410 tonnes per year.
- Pre-packed fruit and vegetables packaging was reduced by over 400 tonnes per year.
- Packaging for multipacks of crisps was reduced by 116 tonnes per year.
- Plastic wrapping for cheese was reduced by 95 tonnes per year.
- In total, over 3,000 tonnes of packaging per year has been reduced.

- **REUSE:**

- Tesco has introduced cleaning spray refill capsules to mix with water in reusable spray bottles. Whilst this is not a food and drink refill solution, it highlights an example of Tesco's reuse innovations.
- By partnering with [Loop](#), Tesco [trialled a reuse shopping experience](#) through home collections and in 10 stores in England from 2020 to 2022. Tesco's own-brand and partners such as Tetley, Heinz and Mackays were included in the trial. Consumers bought their groceries in pre-packed refillable containers. Consumers paid a refundable deposit for the containers, which was refunded when they returned their empty containers in-store. The empty containers were collected, washed and refilled by Loop, which Tesco would then sell to consumers.
- By analysing data including stakeholder feedback, Tesco will develop a strategy to scale up reusable packaging infrastructure for the future.

- **RECYCLE:**

- Non-recyclable flexible plastic packaging has been changed to recyclable plastic, which are accepted at supermarkets and recycling points.
- Tesco has introduced in-store collection points for recyclable flexible plastics, such as PE and PP bags and film, across the UK. 850 tonnes of flexible plastic has been collected.
- Where possible, rigid plastic packaging has been changed to recyclable polymers to ensure it can be accepted by the majority of UK household recycling collections.

Finally, as part of Tesco's supply-chain management, Tesco has produced its "[UK Packaging Preferred Materials & Formats Guidelines](#)" for sourcing its own-brand and branded packaging and packaged goods. The guidelines list various packaging materials and specifications which are categorised green for recyclable materials (e.g. glass and paper) through to red for non-recyclable (e.g. compostable plastic and paper laminated on both sides). This encourages Tesco's suppliers to use recyclable packaging materials. Tesco also [encourages its suppliers](#) to source paper and cardboard sustainably and to maximise recycled content in plastic packaging so as to comply with the Plastic Packaging Tax.

## Branding Statement

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The North East Economic Recovery and Skills Fund (NEERSF) is a £14.3 million investment by the Scottish Government to support economic recovery and enhance skill levels in Aberdeen City and Aberdeenshire through key sector growth, employment, training, and skills development opportunities. This Opportunity North East Sustainability / Net Zero Research Programme Services project is one of the 12 NEERSF projects being delivered by Opportunity North East.

The branding of Opportunity North East (the Client), NEERSF (funding body) and Ricardo Energy & Environment (the Contractor) acknowledge all parties involved in this Services project.

