SWA Sustainable Packaging Guidance Document

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Chapter 1: Introduction

1.1. Intentions of the Packaging Guidance Document

This guidance document has been developed to provide comprehensive support to our members who choose to identify and implement actions to reduce the impact of their consumer facing packaging. The guidance is designed to address key areas of packaging impact, specifically glass, secondary packaging (e.g. gift boxes and tubes) and closures used in UK bottling and packaging activities.

This is the first time SWA has provided industry guidance on packaging. There are different challenges in different product categories and markets which will mean each company will need to assess independently how the guidance may aide them. This guidance will be reviewed and updated as technology, markets, supply chains and regulation continue to evolve. By embracing the principles outlined in this guidance document the SWA and participating members can work collaboratively towards our shared aspirations, ultimately contributing to our goals of being an environmentally conscious and responsible industry.

The provision of practical non-binding recommendations is designed to aid decision making for members when integrating changes in their product design processes. Different companies have different challenges with different elements of their packaging and it will be for each to determine alone how this guidance may support them. Members retain autonomy on how or if they apply the guidance. To enable the SWA understanding of the sector's progress in reducing packaging impact, members will be invited (though not required) to submit data which will be aggregated and anonymised to provide an overall status report. This will also help understanding of any areas of challenge and inform future guidance revision.

To ensure clarity and understanding, a glossary of terms is included at the end of this document, providing members with a common reference to key terminology related to sustainable packaging.

1.2. Our Journey

The SWA have had an environmental strategy in place since 2009 which sets the pathway for our commitments on climate change, water use, circular economy and land management. Recognising the sustainable use of resources has a pivotal role in reducing our overall environmental impact and achieving our sustainability ambitions.

A review of our packaging commitments commenced with an assessment of our baseline impacts in 2023 (based on 2021 data). This detailed exercise, assessed the impact of our packaging across four matrices: CO_2 emissions, virgin raw material use, water use and land use, providing a life cycle analysis (LCA) of the packaging procured, filled and distributed from UK operations.

This analysis identified that, in 2021:

- The industry placed approximately 500,000 tonnes of packaging on the market, accounting for carbon emissions of nearly 1 million tonnes, virgin material use of around 400,000 tonnes, water use of 3.5 million m^3, and land use of almost 200km^2;

Glass, wood, paper/cardboard were the most common materials used in Scotch Whisky packaging, with bottles the most common component (72%), followed by boxes (26%). While closures were only a minor contributor overall, the associated metal component had a comparatively large impact relative to the total mass used;

- The largest contributor to environmental impact is in the extraction and production phases of our packaging materials, accounting for around 70% of impact, following by transport across the supply chain (20%);

- The impacts from end-of-life processes are small in comparison to other stages in the life cycle, highlighting the importance of elimination/reduction of material use provides greatest opportunity for reduction in impact.

No single adjustment will be sufficient to achieve a significant reduction in packaging impact; meaningful change will only be achieved through a combination of net packaging reduction, increased recycled content and decarbonisation of glass packaging production.

1.3. Our Approach

Design	We will apply our guiding principles in packaging design to optimise resource use and minimise impact.
Collaborate	We will collaborate with suppliers, trade partners, retailers and policy makers around a common goal, working together to face into the barriers to success
Support	We will engage industry, supply chain and regulators with one voice around our ambitions. Sharing learnings, and best practice to create a repository of intelligence to support collective change required
Educate	We will reframe what the future of value is whilst maintaining our brand/industry uniqueness.
Report	We will report on our progress, demonstrating our journey as an industry and showcasing best practice & leadership

1.4. Our Focus

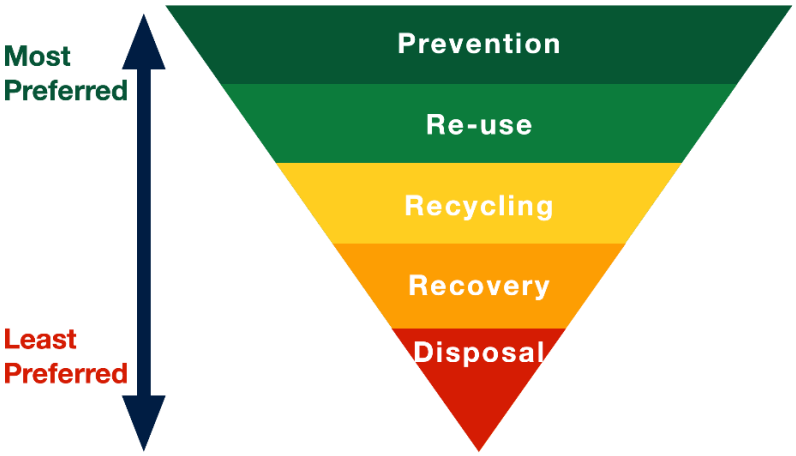
Focus	Actions	Influencing Factors
Glass	Reduce bottle weight by price point	Market and customer acceptance Regulation and Policy (e.g. PPWR, EPR)
	Specify increased recycled content	Market and customer acceptance, Material availability, Regulation & Policy
	Specify low-carbon glass	Supply chain decarbonisation (Private / Public Investment)
Closures	Consider material choice and design to aid any end of life recovery	Market and customer acceptance Product integrity

Secondary packaging	Consider removal at price point	Market and customer acceptance, Product protection (shipment)
	Consider removal by channel, end market	Market and customer acceptance, Product protection
	Specify increased recycled content	Market and customer acceptance, Material availability, Regulation & Policy
Design for Sustainability	Design out complexity Optimise efficiency	Market and customer acceptance, Regulation & Policy
	Design for end of life recovery Eliminate composite materials/minimise non-recyclable components	Market and customer acceptance, End-Market Infrastructure, Regulation & Policy
	Consider alternative formats or materials Consider reuse and refill opportunities	Market and customer acceptance, Material availability, Product integrity, Regulation and Policy
Customer Engagement	Collaborate to share consumer and business customer perception studies (non-commercial data)	Competition Law restrictions
	Achieve retailer (majors) engagement and buy-in (secondary packaging, bottle weight)	Market and customer acceptance

Chapter 2: Packaging Guidance

2.1 Introduction to Sustainable Design

Circularity is a principle that sits at the heart of designing sustainable packaging, following the whole supply chain from its production to consumption and disposal. The intention of circularity is to keep materials in use at the highest possible value, for as long as possible, minimising virgin resource use, eliminating waste and pollution, reducing energy consumption and supporting nature regeneration. When designing packaging, members should use a holistic approach that follows the well-established Waste Hierarchy, which provides a descending order of priority with respect to managing resources, thus helping to prioritise action when designing or redesigning packaging and considering its entire lifecycle.



Ref: https://ismwaste.co.uk/help/what-is-the-waste-hierarchy

Transitioning to sustainable packaging will involve applying design principles that minimise material use, increase the incorporation of recycled content or renewable materials from sustainable sources, and promote efficient end-of-life recovery.

2.1.1 Design Considerations

Sustainable packaging aims to minimise material usage by avoiding over-packaging, which involves using more packaging than necessary to adequately protect a product, leading to wasted materials and energy. Design strategies like right-sizing and lightweighting optimise material efficiency, improving distribution while also reducing carbon emissions.
However, when considering elimination, it is crucial to assess the market and distribution channels specific to the product, as well as ensuring product integrity is maintained in transit and throughout the products intended use functions.

When considering design, there are a variety of options which could reduce the overall impact of your packaging format within its lifecycle, including:

- Glass lightweighting/right-weighting
- Carton/secondary packaging removal or light weighting of board grade
- Moving to lighter and less complex closures

- Removal of single use plastic components and wrapping
- Increased use of post-consumer recycled content
- Use of alternative/next generation materials
- Consideration of alternative packaging formats which minimise material use and/or facilitate reuse.

Where possible, changes to packaging design including material choices should be supported by an appropriate LCA assessment to ensure that overall impact is reduced, considering local market waste management capabilities. Free online resources to support packaging design choices can be found under Further Support & Guidance.

2.1.2 Materials & Sourcing

Packaging is generally not sustainable if its production depends on depleting finite resources like fossil fuels or metals. Instead, incorporating recycled materials reduces the energy needed for production and lessens dependence on resource extraction. It also supports the development of end markets for recyclable packaging, driving circularity.

When sourcing materials responsibly, members should assess the environmental and social impact of the sourcing landscape of all the materials used, addressing potential issues like air pollution or hazardous waste. Third-party certifications and auditing programs can help companies safeguard against such risks while supporting the well-being of workers and communities.

2.1.3 Design Considerations - End of Life Recovery

A well-designed product should not be destined for landfill or incineration: rather, it is designed for recovery through reuse, recycling, or composting in a circular economy. Packaging which is not recyclable will be disposed of in general waste streams, arresting the potential for the raw materials to be recovered for higher value uses. In some cases, mixed general waste including packaging will be converted in refuse derived fuel (RDF) for utilisation in energy from waste plants but otherwise may simply be landfilled or incinerated with no energy recovery, resulting in a loss of valuable resources. It is broadly recognised in the UK and EU markets, that widely recyclable packaging is that which is recovered at scale via common household recycling routes. Note that care should be taken when considering compostable packaging, as there are few, if any, household recycling routes for these materials.

In business-to-consumer applications, any packaging should be clearly labelled to inform consumers of its intended end-of-life disposal method. Providing clear end-of-life instructions ensures transparency about the package's fate and helps avoid misleading or inaccurate marketing claims. This builds consumer trust in a brand's environmental efforts and prevents frustration.

2.1.4 Legislative and Market Drivers

Regardless of the imperative to reduce impact from an environmental perspective, domestic, EU, and individual market regulation and sustainable procurement policy are already challenging the traditional packaging formats used by the industry and are likely to continue to do so.
Retailers and buyers both within the UK and in European and International markets have sought to reduce the impact of their supply chain, including introducing red/amber/green systems defining preferred packaging materials, setting targets on bottle weight, and levying penalties for retention of

secondary packaging. Packaging regulations, both at UK and EU level could also drive changes in design to mitigate against rising compliance costs.

2.2 Guidance for Glass Containers

Glass is the most commonly utilised container material in the industry today. Along with the conveyance of quality, and its inert nature which ensures product integrity, glass can be infinitely recycled without loss of quality, providing the opportunity for incorporation into new bottle manufacture.

2.2.1 Glass Specific Design Principles

There are 2 main design levers on bottle design to reduce carbon emissions which encompass Reduce and Recycle, as outlined in the following sections.

2.2.2 Reduce - Optimise Bottle Weight & Shape

Lightweighting the bottle achieves a directly linear decrease in emissions. Bottle shape optimisation is generally required to lightweight bottles while limiting risk of breakage. Factors for consideration in reduction of bottle weights include:

- Reduce base thickness
- Soften bottle profile
- Reduce critical dimensions
- Increase angle of the bottle neck
- Redesign interface with other components – e.g. closures, label size

2.2.3 Glass Container Weights & Maximum Threshold

Glass weight guidance will be updated every 2 years following document review and packaging baseline submissions with consideration to any significant industry technology and regulatory requirements/market drivers.

Guidance for bottle weights is tailored to single use containers with the expectation they will be recycled.

Packaging elimination through reduction and control of bottle weight applies through application of the following bottle maximum weight threshold by price point criteria, with guidelines provided in the following tables.

The following table provides a starting point for general container weight guidance per IWSR price band and container size. These targets will be reviewed following the first optional data reporting exercise carried out by the SWA and built around a larger set of member data to drive CO_2 reduction via glass weight once a snapshot of member weights is gathered as a reference data set.

Price Range	£13.50-£22.49	£22.50-£28.99	£29-£34.99	£35-£75	>£75
35	375	420	480	600	No Threshold
37,5	363	406	464	580	
50	450	504	576	720	
70	500	560	640	800	
75	538	602	688	860	
100	694	777	888	1110	
114	769	861	984	1230	
150	1063	1190	1360	1700	
175	1218	1364	1559	1948	
No threshold for bottles > 175cl					

Table 1 – Weight by IWSR Price Bands

The below table illustrates based on industry containers what best in class can look like based on shape, volume, design and brand. These weights are a snapshot in time which are commercially in market in December 2024. This data set will again be updated following the optional data gathering exercise completed by the SWA members.

350ml	375ml	450ml	500ml	700ml	750ml	1000ml	1140ml	1500ml	1750ml
300g	290g	360g	360g	400g	430g	515g	615g	805g	974g

Table 2

2.2.4 Recycled Content

The use of recycled glass in the production of glass containers has a positive environmental benefits on two fronts:

- Climate Change- recycled glass reduces the energy required to smelt glass batch ingredients and as a result reduces the production of carbon dioxide
- Virgin Resource Use – the use of recycled glass reduces the need for virgin resources.

Target recycled content (%) by colour is provided in the table overleaf. The extent of recycled content in flint containers is inhibited by the quality of feeder recycled material and the desired clarity or pure colour of flint glass desired.

Colour	Ideal Recycled Content
Green	>75%
Amber	>60%
Flint	50%
Super Flint	Prestige Products

Table 3

Flint colour specification is a critical factor when considering levels of acceptable recycled content. For high value spirit brands, clarity and colour are paramount and may deter use of much, if any recycled content. However for those brands retailing at <£75, there may be an opportunity to increase this percentage, where there may be more tolerance of clarity and colour variations.

2.2.5 Summary Guidance for Glass

IWSR Categories <£75	Packaging Design	Packaging Sourcing and production	Packaging use and reuse
Ambition Long term target or optimum material choice	• Bottle containers designed with optimum weights in mind (ref table 2)	• Embed sustainable procurement in purchasing decisions • Select suppliers with certified environmental credentials • Source from local geography suppliers, where a net reduction in CO_2 emissions is achievable • **Recycled Content Target** See Table 3	
Review & Transition Review materials, designs and practices for opportunities to reduce impact, replace or phase-out where appropriate	**Decoration** • Organic ink • UV-ink • Enamel ink • Gold • Coating (non-opaque) **Sleeves** • Removable plastic sleeve (PET / PP / PE) • PP preferred material for recycling • Add 2 perforated lines zipper allows for active separation of sleeve. • Give instructions to consumers to remove the sleeve prior to recycling **Bottle Accessories**	• Consideration taken to responsibly procure from supplier with CO_2 reduction plans or green fuel furnaces **Material** • Sodalime glass • Coloured glass (non-opaque*) **Bulk Pack Format** • Container vs pallet block size should be optimised for pallet footprint utilisation and to minimise pallet	

	• Bottle accessories are not recommended under £75	quantities & number of movements	
Stop Use of materials or design methods not recommended and use of them should not continue	**<u>Decoration</u>** • Acid etching • Heavy Metals (Pb & Cd) in enamels • Full coverage opaque coating (except if recyclability proven) **<u>Sleeves</u>** • Non-removable sleeve • PVC **<u>Bottle Accessories</u>** • Wax • Non certified wood or paper* • Plastic netting, cords and ribbons; **<u>Electronics</u>** • RFID tags and NFCs glued on the bottles • Light pads glued directly on the bottle • Solar batteries directly glued on the bottle	**<u>Material</u>** • Extra/ Super Flint • Opaque sodalime glass • Borosilicate glass • Lead and Lead free Crystal • Porcelain • Sandstone • Ceramic • Opal glass	

*Opaque, black & dark tinted glass (except if recyclability proven through a test with glass recycler)

IWSR Categories >£75	Packaging Design	Packaging Sourcing and production	Packaging use and reuse
Ambition Long term target or optimum material choice	• Bottle containers designed with optimum weights in mind	• Embed sustainable procurement in purchasing decisions • Select suppliers with certified environmental credentials (e.g. ISO, SBTi signatory etc) • Sourcing from local geography suppliers benefits the CO_2 contribution of glass • **Recycled Content Target** See Table 3	• Does not apply
Review & Transition Review materials, designs and practices for opportunities to reduce impact, replace or phase-out where appropriate	**Decoration** • Organic ink • UV-ink • Enamel ink • Gold • Coating • Jet Metalisation • Metalisation **Bottle Accessories** • Plastic medallion • Metal and alloy: zinc, copper and silver plated, aluminium • Certified wood/ cardboard (FSC / PEFC) **Electronics** • Separable electronics • Electronics on caps/labels (NFC, RFID	• Consideration taken to responsibly procure from supplier with CO_2 reduction plans or green fuel furnaces **Material** • Sodalime glass • Coloured glass (non opaque*) • Lead Free Crystal **Bulk Pack Format** • Container Vs pallet block size should be optimised for pallet footprint utilisation and to minimise pallet quantities & number of movements	• Does not apply
Stop Use of materials or design methods not recommended and use of them should not continue	**Decoration** • Acid etching • Heavy Metals (Pb & Cd) in enamels • Full coverage opaque coating (except if recyclability proven) **Bottle Accessories**	**Material** • Borosilicate glass • Lead Crystal • Porcelain • Sandstone • Ceramic	• Does not apply

	• Wax **Electronics** • RFID tags and NFCs glued on the bottles • Light pads glued directly on the bottle • Solar batteries directly glued on the bottle	• Opal glass	

*Opaque, black & dark tinted glass (except if recyclability proven through a test with glass recycler)

2.3 Guidance for Secondary Packaging

To achieve a significant step forward in the sustainability of packaging, we should consider opportunities to reduce impact via the following principles for consumer facing secondary packaging;

2.3.1. Reduce – Removal of Secondary Packaging

Secondary packaging has a long-standing role in the presentation and sale of Scotch whisky. The opportunity to re-consider how whisky is sold to the consumer goes hand in hand with the future ideal to design out this packaging across all brand portfolios at <£75, with a further aspiration to identify markets and channels where this principle could be applied at higher price categories.

Overpackaging is receiving increasing focus across food and drink categories in different markets, driven by both regulators and buyers and underpinned by evolutions in regulation, sustainability strategies, corporate reporting and green investment standards, with different categories beginning to respond to this direction of change.
Where secondary packaging is retained, design briefs should specify minimal material use to remove excess 'air space' & by presenting brand agencies and designers the opportunity to innovate and present conscious luxury solutions.

Where possible, conscious design decisions should be made at an early stage of product development to allow sourcing strategies to align with sustainability goals and to supply secondary packaging to limited product market areas.

2.3.2 Recycle – Simple Material Choices

It is important to assess the environmental impact of the chosen material post-consumer use. This area is largely driven by the ability to recycle packaging.

The future ideal would be for all secondary packaging used to be "mono-material" i.e. *manufactured from a single type of material*. Mono-material products streamline the recycling process and require less energy, therefore contributing to a reduction in carbon emissions in recycling processes. Future design briefs for any secondary packaging should specify these elements with consideration of market streams and local ability to recycle the specific materials. For best-in-class items, consumers should be able to easily recycle any secondary packaging via standard domestic or kerbside recycling facilities.

Guides and tools such as the Confederation of Paper Industries (CPI) Design for Recyclability Guidelines, WRAPs Guidance on Recyclability and Best in Class Polymer Choices for Packaging and the free RecyClass online tool can be referred to when developing design briefs and sourcing packaging.

2.3.3 Secondary Packaging Design & Material Choices

Careful consideration should be given to the environmental impact of materials chosen for secondary packaging, not only from a carbon emissions perspective, but in terms of their ease of end of life recovery.

Switching materials can support with reducing the overall amount of packaging used. However, it is important to consider the environmental impacts of the alternative materials and ensure the alternative does not increase the overall carbon impact. The IGD material switching tool provides a useful look up table which lists the equivalent mass of alternative materials that would achieve the same or lower environmental impact. Finally, the use of post-consumer or recycled materials in the production of secondary packaging has a positive environmental benefit in the reduction of virgin material use, as well as other parameters such as reduced CO_2 emissions and water use.

2.3.4 Secondary Packaging Design & Sourcing Principles

The sourcing of secondary packaging should consider the following sustainability principles:

- Product design should aim for minimal packaging while retaining brand identity and product integrity during its storage and transit to the end customer
- Design briefs should avoid complexity in terms of construction and use of non-recyclable components/ materials
- When sourcing materials, efforts should be made to minimize the CO_2 impact of operations by implementing supply chain and transportation strategies which use the most efficient production sites, technology and distribution methods.
- Sourcing strategies should include a requirement for suppliers to have certified environmental credentials (e.g. carbon reduction plan), and a responsible sourcing strategy.

For paper and board products specifically, all wood fibre-based items should bear either FSC (Forest Stewardship Council) or PEFC (Programme for the Endorsement of Forest Certification) certification. For any wood products, suppliers should be able to demonstrate compliance with relevant regulations relating to deforestation.

2.3.5 Summary Guidance for Secondary Packaging

IWSR Categories <£75	Packaging Design	Packaging Sourcing and production	Packaging use and reuse
Ambition Long term target or optimum material choice	• No Secondary Packaging	• Embed sustainable procurement in purchasing decisions • Select suppliers with certified environmental credentials • Consider sourcing from local geography suppliers, where a net reduction in CO_2 emissions is achievable	• N/A
Review & Transition Review materials, designs and practices for opportunities to reduce impact, replace or phase-out where appropriate	• Phase out secondary packaging to <20% by Brand Quality Where still specified, design out: • Weight • Excessive air void • Multi-material use • Composite materials/formats • Embellishments, i.e. non-separable ribbons or chords. • Higher carbon materials (see Table 4) • Where still required, replace plastic supports in secondary packaging with lower impact materials, i.e. PCR Plastic, or moulded fibre/pulp components.	• Ensure that raw materials, e.g. wood are certified as being from a sustainable source • Source standard board type (cases and tubes) • Source packaging to maximise recycled content • Source mono-material packaging solutions • Source solutions which minimise requirement for adhesives • Source suppliers offering solvent-free printing, water-based inks and varnishes	• Clearly indicate directions for recycling of secondary packaging. • Offer the option to buy product without packaging • Removal of secondary packaging for additional channels beyond on-trade – e.g. DTC • Engage and educate consumers, and stakeholders on need to remove secondary packaging from the value proposition

Stop Use of materials or design methods not recommended and use of them should not continue	**Design out:** • Laminated board • PVC components • Plastic bottle supports, trays, sleeves or bags • Plastic window films in display apertures • Polystyrene and related expanded foams • Wood constructions • Fabrics	• Use of non-fibrous sealants/varnishes on printed surfaces • Use of plasticised inks on printed surfaces • Hot melt adhesives	• Stop supplying non-recyclable packaging into market • Stop supplying secondary packaging for bottles into on-trade environments

IWSR Categories >£75	Packaging Design	Packaging Sourcing and production	Packaging use and reuse
Ambition Long term target or optimum material choice	• 1 layer of packaging • Replace multi component packs with alternative mono material solutions. • Where required, replace plastic supports in secondary packaging with lower impact materials, i.e. PCR Plastic, or moulded fibre/pulp components. • Seek to deliver luxury through alternative touchpoints e.g. experiences	• Embed sustainable procurement in purchasing decisions • Select suppliers with certified environmental credentials • Consider sourcing from local geography suppliers, where a net reduction in CO_2 emissions is achievable	• Reduced secondary packaging into market
Review & Transition Review materials, designs and practices for opportunities to reduce impact, replace or phase-out where appropriate	For any redesign or new product development **Design out:** • Magnets from case doors • Wooden constructions • Fabrics	• Ensure that raw materials, e.g. wood are certified as being from a sustainable source	• Clearly indicate directions for recycling of secondary packaging. • Offer the option to buy product without packaging • Engage and educate consumers, and stakeholders on need to remove secondary packaging from the value proposition
Stop Use of materials or design methods not recommended and use of them should not continue	For any redesign or new product development **Design out:** • Laminated board • PVC components • Plastic supports for bottles	• Use of non-fibrous sealants/varnishes on printed surfaces • Use of plasticised inks on printed surfaces • Hot melt adhesives	• Stop supplying non-recyclable packaging into market • No recycling information • Stop supplying bottles into on-

			trade environments packed in cartons, bags or boxes within the case

2.4 Guidance for Closures

To achieve significant carbon reduction with closures, members should consider opportunities to reduce impact via the following principles.

Note: The complex nature of closures can result in them being less recyclable, with limited collection/capture, and consideration should be given to selection of the closure type used on high volume products to minimise impact on virgin materials, water, land use & carbon impact.

2.4.1 Reduce – Closure Weight & Material

A reduction in weight and virgin materials is a consideration for closures. Virgin materials such as plastics, metal and cork can be substituted with post-consumer recycled (PCR) materials where food safety compliance can be achieved.

2.4.2 Recycle – Impact of Multiple Materials & Complexity

It is broadly accepted that closures under 40mm in diameter will not be recycled and have an end of life destination of general waste.

It is important to assess the environmental impact of the chosen material post-consumer use. This area is largely driven by the ability to recycle packaging. Eliminating complex materials, such as multi material foils and embellishments will enhance the efficiency of any local recycling programs as well as increasing the likelihood of recyclability. Multi-material closures are generally not recyclable so use of mono-material or separatable componentry is favourable.

The future ideal would be for all closures used to be “mono-material” i.e. manufactured from a single type of material. Mono-material products streamline the recycling process and require less energy, therefore contributing to a reduction in carbon emissions in recycling processes. For best-in-class items, consumers should be able to easily recycle any primary packaging via standard domestic or kerbside recycling facilities.

2.4.2 Bottle Closure Types

Bottle closures are components used to seal the contents of a bottle and prevent spillage or contamination. There are several types of closures, each with its own unique features and uses. The below closure types give insight into closure types and their sustainability features. This brief overview of some common types of bottle closures presented in order of highest to lowest emission closure type;

Cork/ Bar top:

This type of closure is used on bottles with a cork seal. The cork can be made of natural cork or synthetic materials, while the bar top can be made of various materials such as plastic with PCR, wood, cork, or metal.

Influencing Sustainability: Natural cork is a renewable and biodegradable material, making it a sustainable choice for bottle closures. When choosing a bar top, consider using materials such as wood or plastics made from PCR, which have a lower environmental impact than plastic or metal. Agglomerate or natural cork when combined with a differing material bartop are generally treated as general waste items in domestic waste handling.

Non Refillable/ Fitments:
This is a complex multi-material fitment that snaps onto a specifically engineered bottle neck design. It has plastic, metal, or glass elements and is designed not to be separable.

Influencing Sustainability: These closures are complex and made of multiple materials, including plastic, metal, and glass. When choosing these types of closures, consider using materials that can be easily separated and recycled. Non Refillable fitments can also be specified as 'in-bore' in which they are installed as an interference fit to the bottle bore. Generally, this type of inbore comprise of a single plastic type and a glass ball, both of which can be recycled with a glass bottle.

Capsule & Heat Shrinks:
Capsules are fitted onto the bottle neck on the production line and spun on with rotating rollers, while heat shrink bands are applied using heat to shrink the band onto the bottle neck. Capsules are typically made of multi-material laminates or aluminium, while heat shrink bands (HSB) are single-layer materials made of plastic.
Both are used for tamper evidence on cork mouth bottles.

Influencing Sustainability: Capsule/Shrinks: Capsules and shrinks are typically made of plastic or multi-material laminates.

ROPP (Roll-on Pilfer proof):
This type of closure is made from aluminium where a metal screw-threaded closure is formed on the bottling line capper. It has a sealing wad made of either expanded plastic or a paper/plastic laminate. The wads are attached by means of either glue or interference fit with a retention bead to the top of the aluminium shell.

Influencing Sustainability: ROPP closures are made of drawn aluminium, which is a recyclable material. However, the sealing wad is typically made of expanded plastic or a paper/plastic laminate, which may not be as sustainable. Consider using a sealing wad made of a more sustainable food safe material.

Plastic EST (External Screw Top) – Plastic threaded closure:
This type of screw cap closure is made from injection moulded plastic with either a plastic or paper liner.

Influencing Sustainability: Depending on which plastic material is used the cap can be recyclable depending on the material and assembly method selection of components used. E.g. plastic vs paper wad/liner, bio based polymer for the injection moulded cap and inclusion of PCR plastic. Consider using a sealing wad made of a more sustainable food safe material.

2.4.3 Summary Guidance for Closures

IWSR Categories <£75	Packaging Design	Packaging Sourcing and production	Packaging use and reuse
Ambition Long term target or optimum material choice	**Material** • Polypropylene (pp) or high-density polyethylene (HDPE) bar tops with >30% recycled content • PE polyethylene (should not be black unless IR detectable) • Wooden bar tops from fast growing trees • Pet heat-shrink capsules with >30% recycled content • Mixed Materials that are easily separated without tools and recycled	• Embed sustainable procurement in purchasing decisions • Select suppliers with certified environmental credentials • Source from local geography suppliers, where a net reduction in CO_2 emissions is achievable	
Review & Transition Review materials, designs and practices for opportunities to reduce impact, replace or phase-out where appropriate	**Material** • Move to the Minimum Amount of Plastic use for Bar Tops • Move to minimum gauge Aluminium for ROPP • Identify minimal weights via price/material category • Aluminium and polyethylene (al/PE) laminated capsules • using capsules if not needed for tamper evidence • Natural & agglomerate cork • Move away from Foiling & Embellishments	• Consideration taken to responsibly procure from supplier with CO_2 reduction plans • Ensure that raw materials are certified as being from a sustainable source	• Maximise the use of Post-Consumer content in our Bar Tops (which comply with food grade legislation)
Stop Use of materials or design methods not recommended and use of them should not continue	**Material** • Multi-Material Bar Tops • Polymer Corks • Non-Sustainable Materials as identified by Key Partners and Regulatory Organisations • Multi-material bar tops e.g. metal coated plastic. • Glass or lead-free crystal bar tops • ceramic, porcelain, lead crystal & polystyrene bar tops • PVC capsules		

	• Complex multi-material closures where tamper evidence is not required		

IWSR Categories >£75	Packaging Design	Packaging Sourcing and production	Packaging use and reuse
Ambition Long term target or optimum material choice	**Material** • Wooden bar tops from fast growing trees • PET heat-shrink capsules with >30% recycled content • Mixed Materials that are easily separated without tools and recycled • If possible use mono-materials	• Embed sustainable procurement in purchasing decisions • Select suppliers with certified environmental credentials • Source from local geography suppliers, where a net reduction in CO_2 emissions is achievable	• Explore the reuse aspect of prestige packaging at the design stage – communicate to the consumer that components can be reused
Review & Transition Review materials, designs and practices for opportunities to reduce impact, replace or phase-out where appropriate	**Material** • Move to the Minimum Amount of Plastic use for Bar Tops • Aluminium and polyethylene (al/PE) laminated capsules • Using capsules if not needed for tamper evidence • Natural & agglomerate cork • Plated or solid metals can be used with clear instructions for recycling • Glass or lead-free crystal bar tops	• Ensure that raw materials, e.g. wood are certified as being from a sustainable source	• Maximise the use of Post-Consumer content in our Bar Tops (which comply with food grade legislation)
Stop Use of materials or design methods not recommended and use of them should not continue	**Material** • Multi-Material Bar Tops • Polymer Corks • Non-Sustainable Materials as identified by Key Partners and Regulatory Organisations • Multi-material bar tops e.g. metal coated plastic. • Ceramic, porcelain, lead crystal & polystyrene bar tops • PVC capsule • Complex multi-material closures where tamper evidence is not required	• End sourcing from problem or uncertified suppliers/regions	

Chapter 3. Data Collection and Reporting

This guidance is not binding. It has been developed to provide support to our members and help to identify evidence-based actions they may wish to independently consider to reduce their own packaging impact.

The SWA will further support understanding and industry progression through collaborative research and engagement with industry and our supply chains. We will maintain and review this guidance on a regular basis to reflect changes in technology, legislation, packaging trends & where relevant changing aspirations by members of the SWA.

Industry and our supply chain will be part of this ongoing work. Information such as market wide data and company data will be crucial in this work, as it is across our other sustainability strategy priorities.

The submission of data to the SWA has multiple purposes; supporting demonstration of sector, to support evidence used to engage on policy development with regulators and collaboration with the supply chain as we seek to deliver beneficial change e.g. PCR glass availability in the UK. In addition, and particularly relating to packaging, it will allow us to assess (at an aggregate level) the effectiveness of our guidance and to continually evolve and develop our commitments and KPIs to be both stretching while driving value. Data collection will not, however, be used to monitor the implementation of our guidance by individual members, who are free to decide independently whether to implement the guidance.

A detailed LCA exercise will be run every 2 years, starting in 2025, to capture best available data representing a minimum of 80% of the market by volume. Alongside this, lighter touch data collection exercise on our agreed KPIs will run annually, on a one year lag. This could be on aspects such as extent to which secondary packaging has been removed from portfolios, or progress against reduced bottle weight targets. All members will be invited to submit data (although doing so will be optional); all data will be handled under our strict confidentiality processes, with legal advice sought for projects and member companies supporting through working groups.

The higher the participation the better our future guidance will be. Document updates will be carried out following each round of data collection allowing for changes in technology, legislation, packaging trends & where relevant more ambitions philosophies for members of the SWA.

Any changes to the guidance document will be communicated to all members following review by Council.

Further Support and Guidance

There are a variety of free guides and tools available which members could refer to when developing design briefs and sourcing packaging, including

- World Packaging Organisation, 'Packaging Design for Recycling', https://worldpackaging.org/Uploads/2021-10/ResourcePDF37_1633089870.pdf
- Confederation of Paper Industries (CPI) Design for Recyclability Guidelines https://thecpi.org.uk/library/PDF/Public/Publications/Guidance%20Documents/Recyclability-Guidelines-2024.pdf
- WRAPs Guidance on Recyclability and Best in Class Polymer Choices for Packaging https://www.wrap.ngo/resources/guide/design-guidance-recyclability-household-rigid-plastic-packaging#download-file
- WRAPs Guidance: Understanding plastic packaging and the language we use to describe it https://www.wrap.ngo/sites/default/files/2020-09/WRAP-Understanding-plastic-packaging-FINAL.pdf
- IGDs Sustainable Packaging Guidance documents: https://www.igd.com/Social-Impact/Sustainability/Tool/Making-sustainable-packaging-choices-An-interactive-tool/20747
- RecyClass online tool: https://recyclass.eu/recyclability/design-for-recycling-guidelines
- Definition of Sustainable Packaging, Sustainable Packaging Coalition: https://sustainablepackaging.org/our-work/public-resources/
- Tesco Packaging Requirements: https://www.tescoplc.com/media/ss2otnvl/tesco-packaging-requirements-2024.pdf

Glossary of Terms and Definitions

Air void: Air spaces trapped inside a product are known as air void and can also include additional packaging layers. There are multiple regulations defining, measuring and controlling air void.

Brand Quality: Sub Brand or child product within a product range/product family

Carbon Footprint: A carbon footprint measures the total greenhouse gas emissions caused directly and indirectly by a person, organisation, event or product.

Circular Economy: The Circular Economy (CE) is to move away from a traditional 'take, make, dispose' linear process, which has seen the extraction of raw materials to be manufactured and then thrown away, often before they have failed or reached end of life. The CE looks to minimise the demand for resources and eliminate waste by keeping products and materials circulating in a high value state for as long as possible. This can be achieved when products and buildings are designed with their whole life in mind, allowing for reuse, repair and extending their useful life before being remanufactured. Where materials reach end of life and are not able to be remanufactured, they can still retain value; for example, products which are made from biological materials can be produced without any toxic chemicals so that they can be recycled or returned to the biosphere for composting or anaerobic digestion.

Climate Change: Refers to any change in climate over time, whether due to natural variability or, as now known, unequivocally as a result of human activity.

Composite: Material consisting of multiple material types e.g. agglomerate cork/ laminated paper

Compostable: compostable is used to describe a product that can disintegrate into non-toxic, natural elements in a compost environment. This means that it requires microorganisms, humidity and heat to yield a finish compost product and it does so at a rate consistent with similar organic products.

Cullet: "Cullet is a synonym for "broken glass". The source of cullet used in the glass manufacturing process is twofold: 1) it can originate from rejects from the glass process itself, and is called internal cullet, 2) it can originate from pre- (e.g. breakages on the filling or decoration lines or flat glass coming from processing activities) or post- consumer collection (PCR) collection schemes (e.g. glass collected in bottle banks or flat glass collected after the end-of-life of cars or buildings) and is then called external cullet."[1]

Downcycling: The opposite of upcycling and the transformation of products materials into lower quality and/or lower value products and materials.

GHG Emissions: Greenhouse gas emissions. Carbon is often used to encompass all 7 GHGs as defined by the Kyoto protocol, including carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride.

[1] https://feve.org/wp-content/uploads/2020/10/FEVE-paper-on-recycled-content-and-PCR-October-2020.pdf

Lamination: Process/technique of barrier application and occurs when a sheet of a non-cellulose fibre-based material (such as a plastic or foil film) is combined with a sheet of paper or board, usually with some form of adhesive or binder to adhere the two materials together.

Mono-material: Material made of only one single material type.

Multi-material: Material consisting of multiple material types eg laminated plastic and paper.

Net Zero: Net zero emissions are reached when anthropogenic (i.e., human-caused) emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period.

NGOs: Non-governmental organisations

Recyclable: Recyclable materials are those that would have otherwise been thrown away/ disregarded as waste and thus are processed, collected and turned into new products for reuse, in the process of recycling.

Assessing recyclability can be varied depending on how success criteria are set. There are three more common definitions of recyclable, "technically recyclable", "designed for recyclable" and "recyclable at scale".

The DEFRA Recyclability Assessment Methodology (RAM), which is yet to be released, will be the UK specific method of assessing recyclability with Packaging and Packaging Waste Regulations (PPWR) definition following more broadly in Europe which should bring harmonisation in this region.

The World Packaging Organisation has a useful free resource[2] more broadly aligned to "recyclable at scale";

- Green- recyclable
- Amber – limited recyclability
- Red- not recyclable

Recycling: The outermost loop of the circular economy, recycling which allows materials to be recycled back into the same material/product. The conversion of waste into new materials and products by remanufacturing in ways that reduce demands for extracting raw materials from the natural environment.

Re-use: The keeping of components and materials within the circular economy by redeployment and use again.

Sustainable Sourcing: Sustainable sourcing is the integration of social, ethical and environmental performance factors into the process of selecting suppliers.

Sustainable Procurement: Sustainable procurement integrates specifications, requirements and criteria that are compatible with the protection of the environment and society as a whole

[2] https://worldpackaging.org/Uploads/2021-10/ResourcePDF37_1633089870.pdf

Levels of Packaging

For the purposes of this guidance and in line with planned actions and reporting, definitions on levels of packaging are as follows:

Primary packaging: Packaging in direct contact with the product, with the main purpose of protecting/containing the product. This would include components permanently fixed to liquid container e.g. labels/ closure.

Secondary packaging: The second layer of packaging applied to the product, often comprising a carton or tube.

Tertiary packaging: Packaging used for handling, protection and transportation of multiple sales units.

It should be noted that definitions for primary and secondary packaging deviate from some packaging regulations, such as the UK EPR which defines primary packaging as a single 'sales-unit' sold to the consumer, which would include all packaging on shelf for that product[3].

Recycled content – Glass (PCR) & Cullet Plastic

Recycled content refers to the total percentage of recovered material in a product, including pre-consumer and post-consumer materials.

Glass[1]
The source of cullet used in the glass manufacturing process is twofold: 1) it can originate from rejects from the glass process itself, and is called internal cullet 2) or it can originate from pre-consumer collection (e.g. breakages on the filling or decoration lines or flat glass coming from processing activities) or from post-consumer collection schemes (e.g. glass collected in bottle banks or flat glass collected after the end-of-life of cars or buildings) and is then called external cullet. Any piece of glass generated during manufacturing and re-injected in the furnace is to be considered as internal cullet and cannot be included in the recycled content calculation. This also includes off-site quality control rejects and rejects generated during manufacturing steps (including onsite finishing and quality checks). Any cullet generated once the containers are packed and sent off for another process (e.g. filling), mostly from breakages, and which is returned to the furnace, can be included in the calculation of the recycled content.

Plastic[4]

Pre-consumer plastic is plastic that is recovered from waste generated during a manufacturing process. It is then processed by a reprocessing facility so that it can be used as a raw material. It does not include any material which would normally be re-used in a manufacturing process to avoid it becoming plastic waste. For example, reintroducing scrap or regrind into the manufacturing process after minimal reprocessing. Minimal reprocessing includes shredding and grinding.

3 Packaging data: what to collect for extended producer responsibility - GOV.UK
4 https://www.gov.uk/guidance/work-out-which-packaging-is-subject-to-plastic-packaging-tax#recycled-plastic

Post-consumer plastic is plastic that's generated by the end user of the product when it can no longer be used for its intended purpose.

Emissions Scope 1, 2 & 3

Scope 1 Emissions: The direct emissions from owned or controlled sources, including company facilities and company vehicles. These are predominantly from the combustion/use of fossil fuel derived energy sources.

Scope 2 Emissions: Covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company.

Scope 3 Emissions: Includes all other indirect emissions that occur in a company's upstream and downstream value chain, typically from sources that they do not control or own. This includes purchased goods and services, capital goods, fuel and energy related activities, transportation and distribution, waste generated in operations, business travel, employee commuting, leased assets, use of sold products, end of life treatment of sold products, franchises and investments.

Zero net deforestation: "Zero Net deforestation" can be distinguished from "zero deforestation", which means no deforestation anywhere. "Zero net deforestation" acknowledges that some forest loss could be offset by forest restoration.

Technical Appendix

Material	Material Type	Emissions Factor	Source
Paper	Greyboard FSC	0.70 tCO2e/tonne	DESNZ 2023
	Greyboard division	0.70 tCO2e/tonne	DESNZ 2023
	Corrugated board - B flute FSC	0.80 tCO2e/tonne	DESNZ 2023
	Cartonboard 600gsm FSC	0.87 tCO2e/tonne	DESNZ 2023
	Paper Pulp / Moulded Fibre Fitments	None Available	N/A
	Paper - labels 90gsm	0.91 tCO2e/tonne	DESNZ 2023
Other	Wood (Recycled)	0.04 tCO2e/tonne	DESNZ 2023
	Wood	0.31 tCO2e/tonne	DESNZ 2023
	Fabric	None Available	N/A
	Polyethylene Foam	2.54 tCO2e/tonne	ICE DB V3.0
	Polystyrene	None Available	N/A
	Styrofoam	None Available	N/A
	Plastic	3.31 tCO2e/tonne	ICE DB V3.0
	Metal - Other	4.00 tCO2e/tonne	ICE DB V3.0
	Aluminium	6.67 tCO2e/tonne	ICE DB V3.0

Table 1 – Emissions Factors/tonne by Material Type

IGD

		Alternative material									
	Single score (%)	Aluminium	Steel	Glass	HDPE	PE	PET	PP	LDPE	Paper and card	Wood
Current material	Aluminium		2.42	5.84	2.02	1.83	1.88	2.18	1.80	2.04	1.04
	Steel	0.41		2.42	0.84	0.76	0.78	0.90	0.75	0.85	0.43
	Glass	0.17	0.41		0.35	0.31	0.32	0.37	0.31	0.35	0.18
	HDPE	0.50	1.20	2.89		0.91	0.93	1.08	0.89	1.01	0.51
	PE	0.55	1.32	3.18	1.10		1.03	1.19	0.98	1.11	0.57
	PET	0.53	1.28	3.10	1.07	0.98		1.16	0.96	1.09	0.55
	PP	0.46	1.11	2.67	0.92	0.84	0.86		0.82	0.94	0.48
	LDPE	0.56	1.34	3.24	1.12	1.02	1.05	1.21		1.13	0.58
	Paper and card	0.49	1.18	2.86	0.99	0.90	0.92	1.07	0.88		0.51
	Wood	0.96	2.33	5.62	1.94	1.77	1.81	2.10	1.73	1.97	

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