

Recycled Content Verification Systems

Verification Solutions to Support Delivery of Recycled Content in
Plastic Packaging



A RECOUP and BPF Research Document

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The British Plastics Federation (BPF) is the UK Plastics Industry's leading trade association representing over 500 members, about 80% of the industry by turnover. The BPF represents the entire plastics industry value chain, from raw material production through to converting and recycling.

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

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Background

The Plastic Packaging Tax came into effect on 1st April 2022. The tax charges £200 per tonne on plastic packaging on the UK market which does not contain 30% recycled content, with only a limited number of exemptions.

Businesses need to register for the Plastic Packaging Tax if they¹:

- Expect to manufacture or import 10 or more tonnes of finished plastic packaging components in the next 30 days (the 'forward look' test).
- Manufactured or imported 10 or more tonnes of finished plastic packaging components within the last 12 months (the 'backward look' test).

For registration, businesses need estimated weights of finished plastic packaging components. The weight of the component can be worked out using the individual component method, sample component method, material inputs method, verified specification method or bulk weighing method². The recycled content percentage can be worked out using the material input or verification specification method. Records must be kept.

HMRC has stated that the following records need to be kept for components that contain 30% recycled plastic and you want to claim an exemption from the tax³:

- Show how you've worked out the percentage of recycled plastic.
- Provide sufficient supporting evidence that recycled plastic was used.
- Show which dates the evidence relates to, such as the dates that the components were finished or imported.
- Show which plastic packaging component the percentage relates to, including product line or production runs.
- Are an accurate reflection of the proportion of recycled plastic contained in the output materials of that recycling process.
- Confirm the source of the recycled plastic.
- Due diligence checks should also take place.

The 'Recycled Content Verification System' (RCVS) is a method by which recycled content can be confirmed and audited within plastic packaging. It was first proposed in Summer 2020 during the consultation period for HMRC's Plastic Packaging Tax⁴ following discussions around the implementation of the tax and how it could be enforced fairly, and recycled content reliably verified. However, a RCVS is not a requirement of the tax.

Fair enforcement of the Plastic Packaging Tax is essential for ensuring that it is successfully implemented. Intentional, or unintentional false claims of packaging containing recycled content can be addressed through an RCVS.

¹ <https://www.gov.uk/guidance/check-if-you-need-to-register-for-plastic-packaging-tax> accessed 08.09.2022

² [Work out the weight of packaging for Plastic Packaging Tax - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/work-out-the-weight-of-packaging-for-plastic-packaging-tax) accessed 10.11.2022

³ <https://www.gov.uk/guidance/record-keeping-and-accounts-for-plastic-packaging-tax> accessed 14.09.2022

⁴ <https://www.gov.uk/government/publications/introduction-of-plastic-packaging-tax-from-april-2022/introduction-of-plastic-packaging-tax-2021> accessed 14.09.2022

Although HMRC has not specified a RCVS needs to be used as evidence of recycled content it could still provide benefits for those involved in the tax and businesses are starting to see requests for this type of evidence from customers. Independent verification is also likely to be most well received by environmental groups rather than claims made by the supply chain and will allow the UK Government to prove that the tax is delivering the intended environmental objectives. It may also be something which is revisited by HMRC at a future point.

The following provides the benefits of RCVS for those involved in implementing the tax:

- **UK Government and HMRC.** In order for the Plastic Packaging Tax to be successfully implemented, it is vital that the fundamental requirement of it, the need for 30% recycled content, can be confidently and independently verified. This both ensures confidence in the enforcement of the tax, and safeguards against any future claims of packaging that has been found to avoid payment through false claims. It will help the government to prove that the tax is delivering the intended environmental objectives.
- **Plastic Packaging Supply Chain.** Key factors that will benefit those in the plastic packaging industry are: 1) Prevent fraud through having a robust system which checks claims of recycled content are accurate; 2) Having a system in place to ensure that packaging material imported on 'trust' rather than verified claims of recycled content, can be tested independently; and 3) Help to create / ensure public trust in the plastics recycling chain by limiting the possibility of bad publicity generated by incorrect, or unverifiable claims of recycled content within plastic packaging.

Businesses in the packaging supply chain have communicated there is a strong possibility incorrect claims on recycled content may be made mistakenly or deliberately by manufacturers. This has often occurred in packaging which has been produced abroad and then imported into the UK. This is relevant for both imported empty and prefilled packaging and filled packaging, where there can be a lack of clarity around the source of materials, and indeed the quality standards of such recycled content, and as such an element of trust has to be relied upon. A robust RCVS would not only help to ensure that standards are sufficient, and claims are legitimate, but will also act as a deterrent to future fraudulent claims and incentivise importers to ensure more robust checks on their supply chains.

This report outlines the role that a RCVS could play in supporting the keeping of accounts as required by HMRC and the tax commissioner and providing confidence to customers that recycled content has been independently checked.

Current Status

As mentioned, there is currently no requirement through the packaging tax to need to use a RCVS. There is, however, requirements to ensure the correct records are kept to prove that an exemption due to 30% recycled content applies. As previously mentioned, RCVS would provide this proof and other benefits for businesses as well as the wider scheme. RECOUP and the BPF have set out below the different RCVS options which are available and could operate separately or together to ensure a more accurate and reliable assessment of the packaging placed on the market.

Verification Solutions

There are three verification solutions, which are all designed to give confidence to purchasers of plastic packaging that the level of recycled content as stated can be relied on. These are:

- Independent Third-Party Auditing
- Certification Schemes
- Scientific Laboratory-Based Testing Approach

These are explored in more detail as follows.

Independent Third-Party Auditing

Independent third-party auditing on behalf of brands, retailers or packaging manufacturers can be used to audit recycled content. This is where a Material Audit Approach is carried out by businesses' accountants, auditors or tax representative. This would need to follow the principles and standards embedded in best practice certification schemes.

An example is Faerch, which provided its customers with third-party audited statements and certificates on post-consumer recycled content in their PET food packaging products through PricewaterhouseCoopers (PwC). The press release⁵ stated this is an industry-first done in this way, with customers gaining transparency for their products on an individual recipe level.

An ISO definition forms the basis of this, and specifically identifies the use of post-consumer material and not post-industrial by-products or virgin regrind "that has never been in the hands of a consumer".

The service is available for Faerch's UK CPET range, with levels of post-consumer recycled content between 53% and 79%. Audited certificates for Faerch's remaining PET products will follow, covering all countries across the Faerch Group. Faerch will also be expanding the certification to include a specified percentage for pot, tub and tray post-consumer recycled content.

Certification Schemes

Existing certification schemes are available which analyse packaging specifications from manufacture to sale to the consumer. This would enable a view of the sources of material, and therefore provide a method to verify claims of recycled content. This could be more challenging and convoluted in longer supply chains, and those which rely on importing of either the content to create the packaging, or the final packaging itself. This will be particularly important for importers of packaged products which may well have lengthy supply chains. It is understood that (prior to impacts of Brexit and the COVID-19 pandemic) around 60% of the UK's packaging placed on the market is imported from overseas.

There are a number of schemes that have been set up across Europe in the last few years to do this.

⁵ www.faerch.com/fr/news/Audited-certificates-on-recycled-content-in-Faerch-products-sets-new-standard-for-transparency-in-sustainable-food-packaging accessed 14.09.2022

Some schemes are international, some are regional e.g. at European level, and some operate in a limited number of countries. However, all rely on annual audits and work to ISO standards (see Appendix 1) on traceability and on the definition of recycled content. These schemes are relatively new, but audits have taken place and it is likely the schemes and, in particular, in person audits would have developed quicker without the impact of covid. The costs of membership of the schemes varies, but by far the biggest cost is the cost of the audit. This is due to the small pool of auditors currently available worldwide, and although it can be as high as £10k per site, it is expected to reduce over time.

Scientific Laboratory-Based Testing Approach

A scientific laboratory-based testing approach would determine the recycled content in plastic packaging. RECOUP and the BPF are aware of partners and members who claim to have, or be developing, the technology to be able to identify recycled content within packaging.

Supported by financial and record auditing, development of these scientific laboratory-based testing technologies will be important to ensure businesses are taxed appropriately. They can provide due diligence to allow spot checks and verification of claims of recycled material and enable packaging manufacturers to test their packaging, and evidence its composition for HMRC.

Due to costs of these type of tests and how this would impact the supply chain, particularly if they are required on an individual Stock Keeping Unit (SKU) level, the likely option for any successful process is use of spot checks, which could be utilised for both domestically manufactured and imported plastic packaging. In particular, this may offer a solution to imported packaging which a Material Audit Approach might struggle to verify.

At this stage, the accuracy of these systems and likely costs are unknown. Whilst projects are on a laboratory scale, depending on the outcomes, with the right drivers and financial investment it could be possible to scale these up. However, it should be pointed out, this type of testing could only have a role for recycled content that is mechanically recycled. There may also be limits on the level of accuracy and the type of material the process can be applied to.

Impact of Schedule 1: Plastic Packaging Tax: Secondary Liability and Joint and Several Liability Notices

There are joint and several liability requirements which mean businesses will need to conduct due diligence on their supply chain or take action following notification of wrongdoing by a taxpayer they are connected with⁶. The detail is outlined in The Plastic Packaging Tax (General) Regulations 2022⁷.

Secondary Liability

This is potentially where a party further down the value chain may be approached by HMRC to pay all or some of the Plastic Packaging Tax due if a party higher up has failed to pay⁸. This is a retrospective payment for previous tax not paid.

⁶ <https://www.gov.uk/government/publications/introduction-of-plastic-packaging-tax-from-april-2022/introduction-of-plastic-packaging-tax-2021> accessed 14.09.2022

⁷ <https://www.legislation.gov.uk/uksi/2022/117/part/7/chapter/1/made> accessed 14.09.2022

⁸ <https://www.legislation.gov.uk/ukpga/2021/26/schedule/9/enacted?view=plain> accessed 14.09.2022

Secondary liability is described as:

- 1 A secondary liability and assessment notice given to a person (“R”) makes that person liable to pay an amount which is equal to or less than an amount of plastic packaging tax which another person (“P”) is liable to pay in relation to an accounting period of P (the “relevant time”) but which P has failed to pay on or before the date on which the amount became due and payable.

As an example, secondary liability will apply if Company (R) is involved in the related business or concerned in Company (P) failure to pay the tax or were involved in transporting, storing or dealing with plastic packaging in scope of the tax and knew (or should have known) that Company (P) has not paid the tax. HMRC can issue a secondary liability notice to assess Company (R) for Company (P) past unpaid tax.

RECOUP and the BPF recommend practical examples are provided in order to give greater clarity for business.

Joint and Several Liability

This means that a third party further down the value chain could potentially be approached by HMRC to pay the Plastic Packaging Tax if a party higher up has failed to pay, and it is then that third parties’ responsibility to pay the tax and recover the money from the original party who should have paid⁹. If a company are deemed to be joint and several liable, they will be responsible for the tax for two years after the notice is served.

Joint and several liability is described as:

- 9 A joint and several liability notice given to a person (“R”) makes that person jointly and severally liable to pay plastic packaging tax that another person (“P”) will be liable to pay in respect of so much of any accounting period of P as falls within the period of two years beginning with—
 - (a) the day on which the notice is given to R, or
 - (b) if a joint and several liability notice is given to R at a time when another joint and several liability notice already has effect in relation to R, the day after the day on which the previous notice ceases to have effect.

As an example, Company (R) could be served with a joint and several liability notice if they are concerned in Company (P) not paying Plastic Packaging Tax (or in taking steps with a views to Company B not paying it) or they were involved in transporting, storing or otherwise dealing with a plastic packaging that is in scope of the tax and therefore the PPT is or will be due but Company B has not or is not intending to pay this.

RECOUP and the BPF recommend practical examples are provided in order to give greater clarity for business.

⁹ <https://www.legislation.gov.uk/ukpga/2021/26/schedule/9/enacted?view=plain> accessed 14.09.2022

Responses to the Schedule

During the development of the tax, RECOUP and The BPF responded to HMRC's request for feedback specifically concentrating on joint and several liability. The responses highlighted the need for clarity around what circumstances joint and several liability would arise and transfer to another party. It also raised the concern that confidentiality and competition law can often reduce transparency in the plastic packaging supply chain and therefore reduce knowledge on responsibility to pay the tax, whether it has indeed been paid, as well as other factors such as reliability of recycled content claims. This could especially be a problem in relation to imports where incorrect claims on recycled content may be made mistakenly or deliberately by foreign manufacturers but are harder for HMRC to chase over British businesses.

The responses also highlighted what an important role a harmonious and internationally accepted RCVS would play when it comes to joint and several liability. By being able to certify recycled content and material traceability it would ensure a level playing field between UK and Overseas businesses by verifying any recycled content claims, providing businesses with more piece of mind over using these claims.

Existing Certification Schemes

Existing certification schemes are categorised into schemes that cover:

- Platform for certification schemes
- Mechanical recycling only
- Chemical recycling only
- Mechanical and chemical recycling

The majority of the existing schemes make reference to ISO definitions and use a chain of custody approach. Appendix 1 provides a list of definitions.

Certification Schemes for Recycled Content - Platform

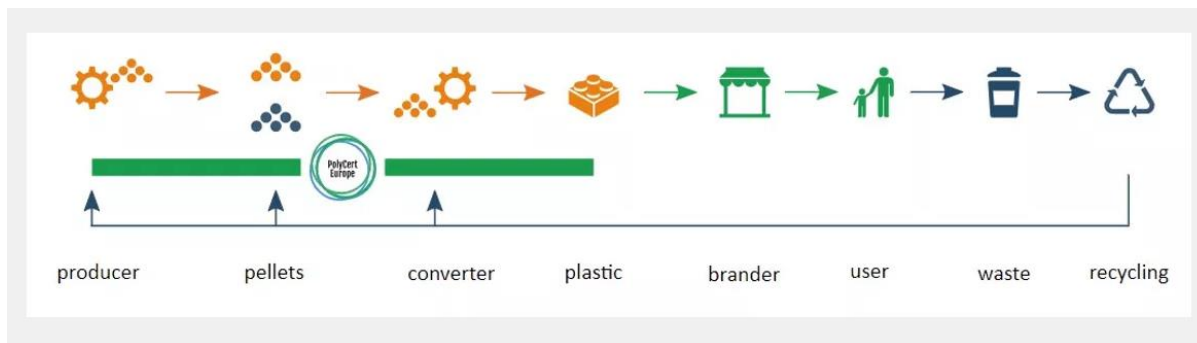


PolyCert Europe

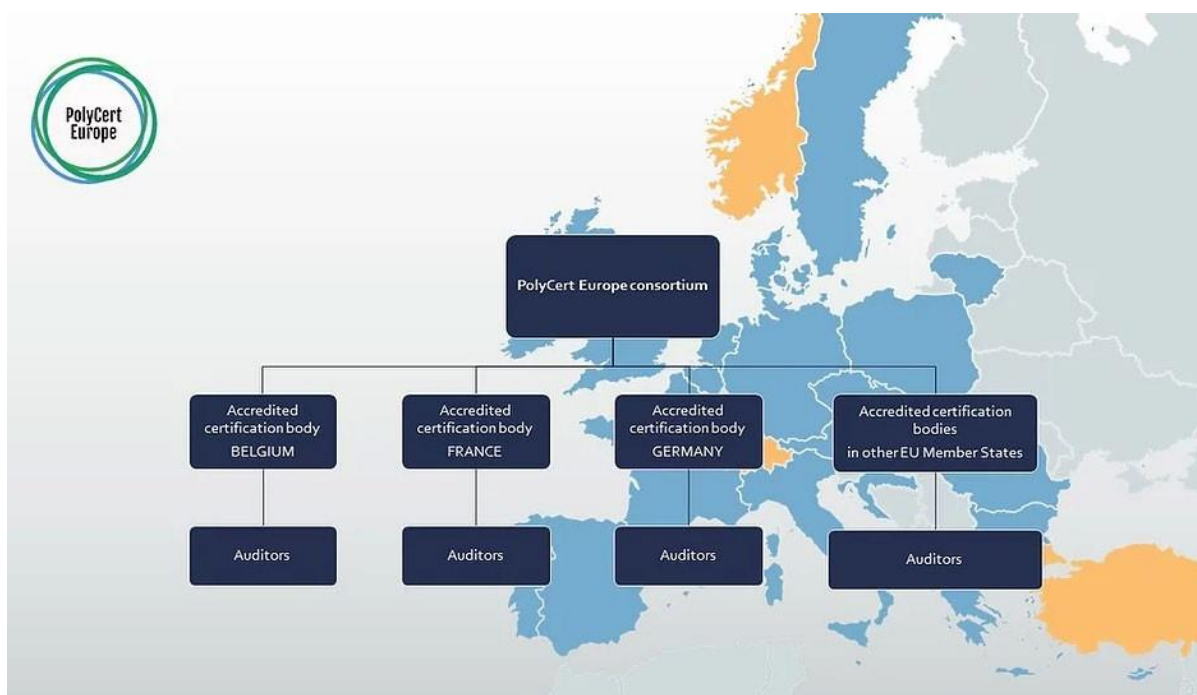
PolyCert Europe is an umbrella technical platform to harmonise certification schemes. It was set up to facilitate the verification and auditing of volumes reported on the MORE platform. It harmonises the methodology used by existing certification schemes in Europe to calculate recycled content, making sure of a unified approach and compliance with relevant standards¹⁰. This methodology

¹⁰ <https://www.recycling-magazine.com/2020/10/04/polycert-europe-established-to-harmonize-existing-certification->

calculated recycled content in converted products based on definitions of ISO EN 14021 and ISO EN 472, recognizing all waste stream and building on principles of ISO 9001 quality certification including chain of custody¹¹. PolyCert fits downstream after recycling and / or sourcing of raw material.



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Certification Schemes for Recycled Content – Mechanical Recycling Only

All the schemes outlined were set up to help underpin claims on recycled content due to growing requirements to ensure consistent claims are made about the presence of recycled content.

[schemes/](#) accessed 14.09.2022

¹¹ <https://www.polycerteurope.eu/> accessed 14.09.2022

¹² <https://www.polycerteurope.eu/about> accessed 14.09.2022

¹³ <https://www.polycerteurope.eu/about> accessed 14.09.2022

RecyClass

RecyClass Audit Scheme for Recycled Content Traceability

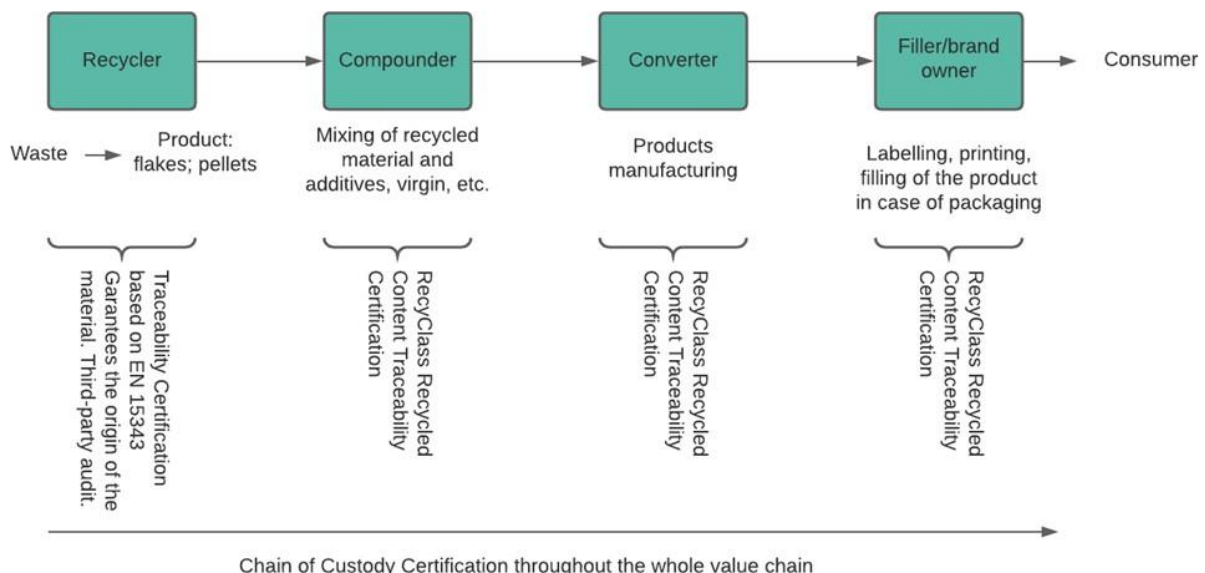
The RecyClass Audit scheme was published in July 2020¹⁴ and was set up by RecyClass members and experts to assess and calculate recycled content used in plastics. The scheme is based on two main principles:

- Traceability
- Chain of custody

Developed according to EN 15343:2007 and the principles of a controlled blending chain of custody model as described in ISO 22095.¹⁵ To use this certification scheme the recycler used must be certified with the RecyClass Recycling Process or equivalent. The certification scheme can be used for products containing 10% to 100% recycled content¹⁶.

Certification is issued by third party certification bodies. There is one who is based in the UK.

Certification uses an independent verification system and independent certification body in order to identify recycled content and verify its traceability and to calculate the share of pre-consumer and post-consumer material¹⁷. It can be sought and achieved through various stages of the plastic value chain and can be provided to finished or semi-finished products¹⁸: Certification can be individually granted to different businesses who play a part in the value chain or hold custody of the recycled plastic.



¹⁴ https://recyclclass.eu/wp-content/uploads/2021/10/RecyClass-Unwrapped_20210127.pdf accessed 14.09.2022

¹⁵ <https://recyclclass.eu/get-certified/recycled-plastic/#1> accessed 14.09.2022

¹⁶ <https://recyclclass.eu/news/recyclclass-tests-functional-barriers-in-pp-containers/> accessed 14.09.2022

¹⁷ https://recyclclass.eu/wp-content/uploads/2021/10/RecyClass-Unwrapped_20210127.pdf accessed 14.09.2022

¹⁸ https://recyclclass.eu/wp-content/uploads/2021/12/RecyClass_RecycledPlastics-Audit-Scheme-Version-2.1-FINAL.pdf accessed 14.09.2022

The recycled content is then communicated as a percentage of the total weight of the product or component assessed. In accordance with ISO 22095 it must also show the pre-consumer and post-consumer presence in the recycled content¹⁹.

The audit scheme allows businesses using recycled material to increase their transparency, backing up any claims made around sustainability by verifying pre- and post-consumer material points of origin, and increasing trust with consumers. Over thirty businesses have completed certification across Europe and two within the UK²⁰. Certification lasts for 1 year.

RecyClass is working towards being accredited under ISO 17065 (Conformity assessment – Requirements for bodies certifying products, processes and services).



COST: The cost is based on the recognised certification bodies depending on location, size of plant and number of products. It costs between €3,000-5,000. RecyClass adds a €150 management fee per certified business for the first 30 certificates, €100 after this.²¹

Certification Scheme for Recycled Content – Chemical Recycling Only



REDcert²

REDcert² certifies the use of recycled material of fossil origin to manufacture chemical products according to REDcert² recycling mass balance approach²². An independent, approved, certification body checks the sustainability criteria using REDcert's principles and checklists.

COST: 1st year €2000, 2nd year €2000 and third year is combination of the annual basic fee €1000-5000 (based on turnover) plus a scaled fee based on number of sites €500 per site to €250 per site (based on the number of sites) and quantity-based fee which is based on the mass of material used recognised as sustainable under REDcert² 0.10€ per tonne. In addition to this there is the cost of annual audit²³.

¹⁹ https://recyclclass.eu/wp-content/uploads/2021/10/RecyClass-Unwrapped_20210127.pdf accessed 14.09.2022

²⁰ <https://recyclclass.eu/get-certified/recycled-plastic/list-of-certificates/> accessed 14.09.2022

²¹ <https://recyclclass.eu/join-us/> accessed 14.09.2022

²² <https://www.redcert.org/en/redcert-systems/chemical-industry.html> accessed 13.09.2022

²³ https://www.redcert.org/images/Fee_schedule_RC%C2%B2_system_participants_chem_industry_V_1.1.pdf accessed 08.11.2022

Certification Scheme for Recycled Content – Mechanical and Chemical Recycling



ISCC (International Sustainability & Carbon Certification) PLUS system

All parts of the supply chain for sustainable material covered by the certification need to have traceability and a chain of custody. There are two chain of custody options. The first is physical segregation in the production process, and the second is the mass balance approach where material is mixed but separated within material specifications. Methodologies are provided with audit requirements.

Certification via an approved list of certification bodies (no UK bodies are currently listed but some are global)²⁴. An audit procedure is provided for the certification bodies to assess against.

Once certified businesses must ensure sustainable material brought have a valid certificate on the ISCC website. There needs to be a sustainability declaration issued for outgoing material and ensure all incoming and outgoing delivery documents have all the information needed.

ISCC can be used for both mechanical and chemical recycling.

COST: Registration fee and certificate fee (per certificate) €50-500 based on turnover in metric tons and turnover. Quantity dependent fee 0.08-0.10€ for outgoing product declared as sustainable per ton (depending on ISCC membership). In addition to this there is the cost of annual audit.



UL Recycled Content Validation

The scheme uses the Environmental Claim Validation Procedure (ECVP) for Recycled Content to evaluate and validate source material content claims in manufactured products. The scheme requires the use of Chain of Custody between sites²⁵. Both segregated material flows and mass balance may be used to define source of material. The scheme can cover post-consumer recycled content, pre-consumer (post-industrial) recycled content, Closed-loop recycled content and total recycled content²⁶.

²⁴ <https://www.iscc-system.org/process/certification-bodies-cbs/recognized-cbs/> accessed 13.09.2022

²⁵ https://www.shopulstandards.com/ProductDetail.aspx?productId=ULE2809_5_S_20200323 accessed 14.09.2022

²⁶ <https://www.ul.com/services/recycled-content-validation> accessed 14.09.2022



QA-CER Recycled Content

This is an international, independent, third-party system certification which is based on ISO 9001 principles including chain of custody²⁷. It goes beyond ISO 14021 as it identifies all possible waste streams that can be recycled and therefore provides a comprehensive system²⁸.

If a business has QA-CER recycled content, it means that it has a control system for their production facilities allowing them to determine the recycled content of their products²⁹. This system has been audited by an independent expert auditor.

Certification Schemes for Recyclers Only



EuCertPlast

EuCertPlast is a European scheme designed to focus on the traceability of plastic materials throughout the supply chain and recycling process, as well as the quality of the recycled content in the end-product³⁰. As such, it has limitations as it only operates in Europe, and it is not a whole supply chain audit as it focusses on recyclers only. It hopes to solve issues surrounding variations in standards and lack of transparency across the European plastics industry by combining different audit schemes into one common system³¹. Overall, it is encouraging an environmentally friendly plastic recycling process³². The scheme acknowledges the recyclers that are working to high standard and implementing best practices.^{33 34} It confirms the recycler will recycle the waste in a transparent, responsible, and environment-friendly manner³⁵. Founding members of the scheme include European Association of Plastics Recycling and Recovery Organisations (EPRO), Plastics Recyclers Europe (PRE), European Plastics Converters (EuPC) and Recoviniyl³⁶.

The EuCertPlast certified recycling capacity per country is as follows ³⁷:

²⁷ <https://www.qa-cer.be/recycled-content> accessed 08.11.2022

²⁸ <https://www.qa-cer.be/recycled-content> accessed 08.11.2022

²⁹ <https://www.qa-cer.be/recycled-content> accessed 08.11.2022

³⁰ <https://www.eucertplast.eu/about> accessed 14.09.202

³¹ <https://www.eucertplast.eu/about> accessed 14.09.202

³² <https://www.eucertplast.eu/> accessed 14.09.202

³³ <https://www.eucertplast.eu/about> accessed 14.09.202

³⁴ <https://www.aimplas.net/circular-economy-plastics/eucertplast-%C2%B7-certification-of-recycling-plants/> accessed 13.09.2022

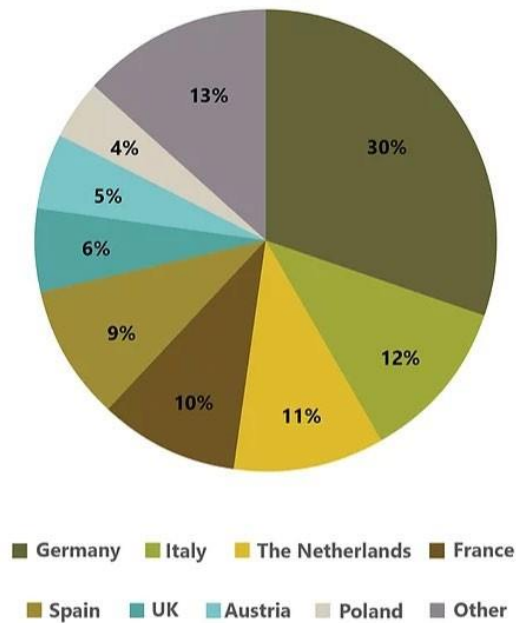
³⁵ <https://ecogrant.eu/en/eucerplast/> accessed 14.09.202

³⁶ <https://www.eucertplast.eu/about> accessed 14.09.2022

³⁷ <https://www.eucertplast.eu/statistics> accessed 13.09.2022



EuCertPlast certified recycling capacity per country (%)



In order to achieve EuCertPlast certification a recycler must follow 5 steps which involve:

- The selection of a EuCertPlast auditor
- On-site audit by chosen auditor
- Information exchange between recyclers and auditor
- Spot checks on reports via a third-party anonymous auditor
- Certification

The certification is valid for 1 year³⁸ and works according to European Standard EN 15343:2007³⁹.

As of 2020, EuCertPlast had 214 certified recycling facilities and 4.6 Mt certified plastics recycling capacity⁴⁰.

EuCertPlast works in conjunction with the new RecyClass Audit Scheme for Recycled Content Traceability, by providing the traceability certification at the initial recycler stage of the chain of custody. It provides the assurance of the quality and origin of the recycled material that is then audited by RecyClass who trace the recycled content through the value chain to the final produce placed on the market⁴¹.

COST: Not available but auditor is required to be hired and timescales given for the length of time an auditor would need to be on site.

³⁸ <https://www.eucertplast.eu/certification> accessed 13.09.2022

³⁹ <https://www.eucertplast.eu/about> accessed 14.09.2022

⁴⁰ <https://www.eucertplast.eu/statistics> accessed 14.09.2022

⁴¹ <https://recyclass.prezly.com/setting-transparency-for-the-use-of-recyclates-in-plastic-products> accessed 14.09.2022

RecyClass

RecyClass Recycling Process

This scheme is for plastic recyclers reprocessing pre-consumer and post-consumer waste who are operating under the requirements set out in the Recycling Process Conformity Assessment Scheme⁴². By being assessed by the audit scheme, recyclers can communicate their origins of waste⁴³

Audit schemes are aligned to EN 15343:2007 and ISO 22095:2020⁴⁴. There are currently no certification bodies in the UK.

Other Examples of Certification Schemes for Recycled Content

Although the focus of this report is on the schemes previously covered in the report, there are other examples of certification or verification schemes for recycled content, which might vary in their approach or process.

- **SCS Global Services Recycled Content Certification**⁴⁵. This evaluates products made from pre-consumer or post-consumer material and measures the percentage of recycled content used enabling claims to be made. It is endorsed by The Association of Plastic Recyclers (APR), a US-based international trade association representing the plastics recycling industry.
- **Intertek Recycled Content Verification**⁴⁶. This uses the mass balance approach to establish recycled content level using definitions consistent with ISO 14021:2016. An Intertek evaluator reviews data and may do an onsite inspection based on a risk-based approach. A technical review is then undertaken. Certification lasts for 3 years.
- **GreenCircle Certified**⁴⁷. Recycled content certification scheme, focusing on recyclable material, closed loop products and other areas.
- **DIN CERTCO**⁴⁸. Recycled content certification scheme. Includes pre- and post-consumer waste. Based on the requirements of DIN EN ISO 14021 and EN 15343. An onsite audit is done of the key production stages. Valid for 5 years but annual verification tests are done annually.
- **Plastica Seconda Vita**⁴⁹. Italian certification scheme which looks at the traceability of recycled material. Uses EN ISO 14021 and is mentioned in the Minimum Environmental Criteria (CAM) for Green Public Procurements as the way to verify recycled content. The scheme uses certification bodies to verify compliance.

⁴² <https://recyclclass.eu/get-certified/recycling-process/#2> accessed 14.09.2022

⁴³ <https://recyclclass.eu/get-certified/recycling-process/#2> accessed 14.09.2022

⁴⁴ <https://recyclclass.eu/get-certified/recycling-process/#2> accessed 14.09.2022

⁴⁵ <https://www.scsglobalservices.com/services/recycled-content-certification> accessed 14.09.2022

⁴⁶ <https://www.intertek.com/assuris/sustainability/recycled-content/#:~:text=To%20determine%20recycled%20content%2C%20Intertek,site%20inspection%20conducted%20by%20Intertek> accessed 14.09.2022

⁴⁷ <https://www.greencirclecertified.com/product-certifications> accessed 14.09.2022

⁴⁸ <https://www.dincertco.de/din-certco/en/main-navigation/products-and-services/certification-of-products/packaging/products-made-from-recycled-materials/> accessed 14.09.2022

⁴⁹ <https://www.ippr.it/psv> accessed 13.09.2022

Additional Certification Schemes

There are other schemes which should be referenced. These do not provide a mechanism of verifying recycled content. These are categorised in two areas:

- Monitoring uptake of recycled polymer
- Certification of products as recyclable

As a reference point only, these are provided in Appendices 2 and 3.

Scheme Summary

The schemes have been summarised in the table below, which cover:

- Methodology and standards used
- Whether the schemes certify auditors
- Whether the scheme includes mechanical and / or chemical recycling
- Geographical region they cover

Scheme	Methodology / Standards	Scheme Certifies Auditors	Recycled Content Verification		Geographical Region			
			Mechanical	Chemical	National (UK)	National (non-UK)	European	International
RecyClass Recycled Content Traceability	Traceability uses EN 15342:2007 and chain of custody ISO 22095	✓	✓				✓	
REDcert ²	Uses RED cert principles and checklists	✓		✓			✓	
ISCC	Change of custody - physical segregation and mass balance	✓	✓	✓				✓
UL	Uses the Environmental Claim Validation Procedure (ECVP)	✓	✓					✓
SCS			✓					✓
Intertek	Uses ISO 14021:2016		✓					✓
Greencircle			✓			✓		
DIN Certco	Uses ISO 14021:2016 and BS EN 15343:2007		✓			✓		✓
QA-CER	Goes beyond ISO 14021:2016. Certification based on ISO 9001	✓	✓					✓
Plastica Seconda Vita	Uses ISO 14021:2016	✓	✓			✓	✓	
Company scheme using independent auditor	Based on ISO definition		✓	✓				✓

✓ National (non-UK) scheme but can be used elsewhere

Table Key	
National (UK)	Scheme operating within the UK only
National (non-UK)	Scheme operating in a non- UK country only (unless hollow tick elsewhere)
European	Scheme operating in multiple European countries
International	Scheme operating in multiple countries in multiple regions
Scheme certifies auditors	Scheme specifically mentions using independent auditors

New Developments and Considerations

There are technology developments that will or potentially impact the systems around the verification of recycled content in plastic packaging. These include scientific laboratory-based testing technologies, blockchain technology and non-mechanical recycling.

RECOUP and the BPF will continue to monitor progress and how these technologies could be applied on a commercial scale.

Scientific Laboratory-Based Testing Technologies



Sustainably Sourced Plastics Certification and BSI Standard

Verification of recycled content has previously predominantly been based on trust and considering the global supply chain around the manufacture and supply of packaging, this trust has been open to fraudulent influences due, in part, to the inability to physically test for recycled content.

The Sustainable Certification Group (SCG) in partnership with the British Standards Institute (BSI), Impact Solutions and other partners won a government contract to develop Project RECORD⁵⁰. The aim of the project was to provide an accreditation scheme by developing a scientific method for testing and verifying recycled content percentages within plastic packaging and potentially be a key contributor to an effectively managed tax system in the UK.

This laboratory-based testing process combines with a Sustainably Sourced Plastics (SSP) certification to remove the reliance on the ‘trust of another’ to show that regulatory requirements have been met, providing clear evidence of compliance for both ethical procurement and legal fiscal entities.

Testing – Flex 6228 Standard

Sustainable Certifications Group (SCG) has been collaborating extensively with the BSI, HMRC, Universities and industry experts to create a new standard – BSI Flex 6228. This standard has

⁵⁰ <http://scottishplasticrecycling.org/recycling/ensure-recycled-plastic-used-plastic-packaging/> accessed 14.09.2022

established a dynamic scientific laboratory-based testing process that identifies the actual percentage recycled content in tested packaging. As part of the testing, UV-Visible Spectrometry (UV-VIS) is used to indicate the presence and levels of recycled content in packaging products. A further two tests are used to further validate the results found, ensuring the process is robust. These tests can be carried out by any UKAS-17025 accredited laboratory, providing they have the equipment, capacity and the intelligence to interpret the data.

Sustainably Sourced Plastics Certification

Sustainably Sourced Plastics (SSP) Certification has been developed in conjunction with BSI Flex 6228 to provide an overall validation of the plastics packaging supply chain. This ensures that the required recycled % content can be traced and assured, from Recyclers to Manufacturers and Retailers.

This Certification process, which is currently working towards ISO 17065 accreditation, creates an Evidence Portfolio for each customer. This validates that regular material testing and in-process quality standards are met, and that product reference samples are taken to ensure ongoing conformity and traceability within the supply chain. To ensure independent evaluation the Flex test results are sent to SCG where they are added to the customer's evidence portfolio.

The combined findings are then assessed and if (all requirements are met) the SCG Team award SSP Certification to the customer, clearly demonstrating compliance and customer conformance.

As more and more of the supply chain actors adopt the SSP Certification this will create a database of certificated customers, providing an accredited value chain reference point for procurement specialists and compliance schemes.

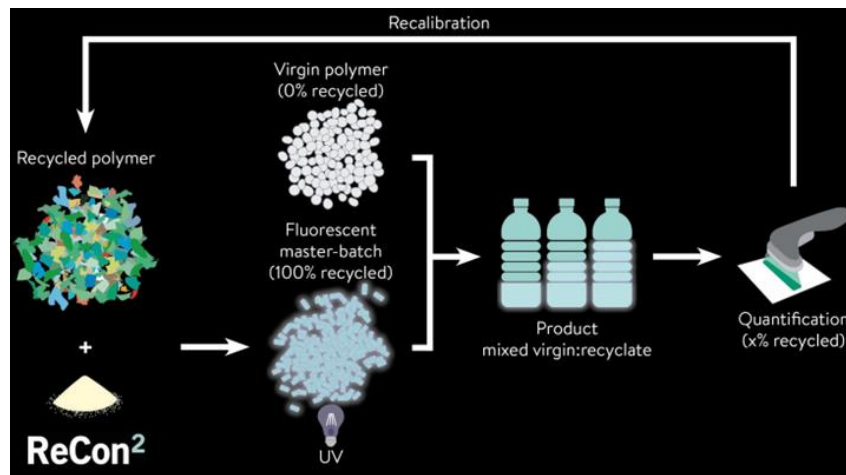
SCG are continually improving the Certification and testing processes through innovation. Investigating the integration of blockchain approaches to supplement the Flex testing.



ReCon² ⁵¹

ReCon² is a breakthrough fluorescent-based approach for the convenient quantification of a plastics' recycled content. In this technology, minute quantities of a Food and Drug Administration (FDA) and REACH approved fluorescent molecular marker are mixed with a recycled plastics stream at the compounding stage. This marker exhibits concentration-dependent changes in its fluorescence emission profile that are independent of processing conditions, additive inclusion, or sample dimension. As a result, the recycled content of any common plastic can be determined rapidly – usually within minutes – to a high degree of certainty. The marker is also invisible to the naked eye and has no measurable impact on the plastic's properties. Analysis can also be verified that rules out any possibility of result manipulation.

⁵¹ <https://www.plastikmedia.co.uk/recycled-content-reconnaissance-with-recon2-the-missing-link-in-plastics-circularity/> accessed 08.11.2022



Stardust⁵²

Stardust is an established authentication technology designed by Stardust Materials, an R&D firm based in Vancouver, Washington. Used globally and across industries for value chain traceability and authentication, this verification approach is based on adding minute amounts of inorganic luminescent taggants into recycled feedstock at the molding or compounding stage. Once the tagged recycled plastic is combined with virgin feedstock, low-power Infrared tester / verifier registers the optical response in the combination and quantifies the content ratio.

Testing devices ranging from hand-held to industrial, the verification process is instant, non-destructive, and highly accurate at any point in the supply chain. The taggants can come in multiple unique variations, are invisible, chemically inert, food safe, and REACH approved. Secure results can be automatically stored in the blockchain or personal local devices. An extension of anti-counterfeiting and anti-diversion technology developed for businesses and governments, the Stardust[®] system is virtually impossible to manipulate or reverse-engineer.



⁵² <https://stardustsecured.com/> accessed 08.11.2022

Blockchain Technology

As part of a material audit solution Blockchain Technology is in development that aims to allow for individual plastic items to be tracked for its entire lifespan – from its initial production through its use, collection, sorting and conversion back to a raw material form. This works through the use of ‘digital badges’ that identify ingredients within the product. It remains to be seen how this develops, and how it may be beneficial for the tracking of the circularity of packaging, and also how it could be used to identify recycled content.

Non-Mechanical Recycling

Further understanding and analysis of non-mechanical recycling (otherwise known as chemical recycling) is required to ensure that the process is categorised as recycled content. There is a solid platform to work from, with recycled content verification schemes already including non-mechanical recycling, and these need to be reviewed and communicated to assess how these can be adopted in the UK.

Non-mechanical recycling is currently a developing sector and at present the technology is not available on a commercial scale. There is, however, capacity under development and a number of businesses are looking to put significant future capacity within the UK. The contribution this technology will have on recycled content usage in the UK will develop over time, but it offers the potential to enable recycled content in products which are not currently possible. This potentially includes plastic films and flexibles and packaging that meets food safety standards.

The use of the mass balance approach is critical to help to develop the non-mechanical recycling sector (mass balance is described in appendix 1). Industry is currently working with HMRC to explore the benefits of using mass balance and how it can contribute to the packaging tax and further legislation.

Calculations on mass balance and allocation must be independently audited and certified in a similar way to ISO 22095 and / or ISO 14021:2016.

Developments in Other Countries

Legislation and schemes in different countries are being put in place to mandate or incentivise the use of recycled content, which will increase the global demand. This could be through a tax or reduced producer responsibility payments for including recycled content, or wider overarching targets to mandate and increase recycled content.

An example is *EU The Single Use Plastics Directive*⁵³, which was finalised and published in 2019, and part of the *EU Plastics Strategy and Circular Economy Action Plan*⁵⁴. Although primarily targeted at reducing marine litter it has a specific target to include 25% recycled content from 2025 for PET bottles and 30% from 2030 for all beverage bottles.

A recent example is in November 2022, when the European Commission published the new proposed *Packaging and Packaging Waste Regulation*⁵⁵ which will widen the scope and increase

⁵³ https://environment.ec.europa.eu/topics/plastics/single-use-plastics_en accessed 08.11.2022

⁵⁴ https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en accessed 08.11.2022

⁵⁵ https://environment.ec.europa.eu/publications/proposal-packaging-and-packaging-waste_en accessed 08.11.2022

levels of recycle content targets further. Whilst this proposed legislation is only binding to EU Member States, due to the significant trade link between the UK and EU, the UK is likely to be impacted. Part of this proposes minimum percentages of recycled content recovered from post-consumer plastic waste from 2030 and 2040, with the 2040 targets being: 50% for contact sensitive plastic packaging; 65% for single use plastic beverage bottles; and 65% for all other plastic packaging. A methodology for calculating and verifying the percentage of recycled content recovered from post-consumer plastic waste will also be established.

There are already plans to implement taxes on plastic packaging with exemptions for recycled content in Italy, Spain and Greece.

French Extended Producer Responsibility System to Incentivise Recycled Content

In August 2018, it was reported that the French Government were looking at launching a sales tax initiative in order to entice consumers into buying recycled plastic products. The initiative would see a lower Value-Added Tax (VAT) on bottles that have been made of recycled plastic, whilst on the other hand increasing VAT on bottles that have not been made of recycled plastic. This could see up to 10% of the products price added or taken from the VAT⁵⁶. Although this is not currently implemented, from 1 January 2022 the eco-contribution due by producers for Extended Producer Responsibility was adjusted by bonuses and penalties based on environmental performance including recycled content⁵⁷.

Minimum Recycled Content in the USA

California was the first state in the USA that imposed a requirement on a minimum post-consumer recycled resin in plastic bottles. The bill, which passed in summer 2020, states that AB 793 requires all plastic bottles that are covered by the state's container redemption program, contain on average at least 15% post-consumer recycled resin in 2022, raising to 25% in 2025 and 50% in 2030 (subject to change based on factors such as market conditions, recycling rates, and infrastructure capacity). A 20-cent penalty for each pound of post-consumer resin short of the target amount will be imposed if the minimum requirement is not met⁵⁸.

Other states are now seeming to be following California's lead.

Washington introduced SB 5219 to the senate on 14th January 2021 which states 15% minimum post-consumer recycled content for plastic packaging sold in the state by 1st July 2023, raising to 25% by 1st January 2027, and 50% by 1st January 2031. SB 5022 for plastic beverage bottles was also introduced to the senate on 17th December 2020 with the same minimum post-consumer recycled content requirements as for packaging⁵⁹.

New Jersey drafted SB 2515 which would establish minimum recycled content not just for plastic containers, but other packaging such as plastic film carryout bags, plastic trash bags, as well as paper carryout bags and glass containers. For rigid plastic containers, at least 35% would need to be recycled content beginning January 1st 2022. Plastic beverage containers would see a minimum

⁵⁶ <https://www.rfi.fr/en/france/20180812-france-announces-new-consumer-incentive-reduce-plastic-waste> accessed 14.09.2022

⁵⁷ <https://cms.law/en/int/expert-guides/plastics-and-packaging-laws/france> accessed 08.11.2022

⁵⁸ <https://www.packaginglaw.com/news/ca-require-minimum-recycled-content-plastic-bottles> accessed 14.09.2022

⁵⁹ <https://www.natlawreview.com/article/more-states-consider-minimum-recycled-content-requirements> accessed 14.09.2022

requirement of 10% recycled content by 2022, raising to 25% by 2026, and 50% by 2031⁶⁰. Oregon has a slightly different approach, with their bill HB 2065. It does not set out specific constraints for recycled content, but instead requires producers to join producer responsibility organisations who would be responsible for putting plans in place if yearly goals on plastic packaging recovery are not met⁶¹.

Recommendations for Action and Intervention

HMRC require businesses to prove that plastic packaging components that contains 30% or more recycled content are not taxable, albeit there is no requirement to provide evidence of recycled content through a certification or verification scheme.

There are a number of benefits for businesses, HMRC and consumers if robust and comprehensive evidence is provided to prove that recycled content is what it says it is, including ensuring confidence for all stakeholders about the environmental claims being made. Activities to ensure this can include:

- Independent Third-Party Auditing
- Certification Schemes
- Scientific Laboratory-Based Testing Approach

Time, funding and technology are all key factors that should be considered as the UK continues to use and develop the Plastic Packaging Tax legislation, systems and technologies to advance use and verification of recycled content in the UK.

Looking to the future, RECOUP and the BPF highlight three focus points for legislative and practical interventions that will enable the UK to transform the structure and funding around use of recycled content in plastic packaging:

- ✓ Implement a **Recycled Content Verification Framework** funded by revenues from the tax
- ✓ Readjust policy to prioritise **investment in the UK's plastic packaging reprocessing infrastructure**
- ✓ Ensure packaging material choices achieve the **best overall environmental outcomes**

Implement a Recycled Content Verification Framework Funded by Revenues from the Tax

HMRC estimates around £700 million will be generated by the Plastic Packaging Tax by 2025, with the revenues raised going to HM Treasury. Therefore, there is a direct financial benefit for the UK Government to ensure enforcement of the tax.

⁶⁰ <https://www.natlawreview.com/article/more-states-consider-minimum-recycled-content-requirements> accessed 14.09.2022

⁶¹ <https://www.natlawreview.com/article/more-states-consider-minimum-recycled-content-requirements> accessed 14.09.2022

For businesses that use plastic packaging there are administrative costs and inherent burdens relating to providing evidence that any component of their packaging has met the 30% recycled content requirement. There are even concerns that, in certain scenarios, businesses that 'behave perfectly' by providing evidence around recycled content will have a greater financial burden than paying the cost of the tax.

As a risk mitigation for HMRC and businesses operating within the requirements of the tax, as well as to reduce burdens on both UK Government and industry, RECOUP and the BPF propose that a small percentage of the revenue from the tax should be used to implement a well-designed Recycled Content Verification Framework for providing evidence of recycled content. This would provide an overall financial benefit for the range of stakeholders involved in using or regulating recycled content in plastic packaging and the associated benefits outlined in these recommendations.

It is acknowledged that an effective framework will require financial investment and resources in terms of planning, development and ongoing support. The £700 million estimated to be generated by the tax by 2025 would amount to around £230 million per year between 2022 and 2025. If £10 million of the revenue of the tax was put into this framework that is less than 5% of the total estimated revenue per year. This recommendation should be included in any formal review of the implementation of the tax in 2024/25.

If a Recycled Content Verification Framework was to be considered, to be both effective and attractive for businesses in scope of the tax, RECOUP and the BPF recommend a well-designed framework that should include five focal features. All of these should also be considerations for any verification activity delivered by businesses that use recycled content.

- ✓ **Consistent reporting mechanism.** A consistent and independent audit approach and reporting templates to work from.
- ✓ **Operate internationally / multinational and to operate to recognised international standards on recycled content and traceability.** A central requirement due to the international supply chain and use of globally recognised standards.
- ✓ **Provision to have an annual in-person audit at a site level with an auditor pool that can be deployed worldwide.** As an example, RECOUP and the BPF are aware of one business had tasked audits of their sites in Canada, China, Europe and the UK and needed an auditor that could deliver consistently in all countries.
- ✓ **Affordable, credible and add value.** To ensure the administration costs associated with implementing the tax are kept to a proportional and reasonably expected level, are robust and transparent, and noticeably add value to business operations.
- ✓ **Monitor scientific laboratory-based testing technology.** This technology should be monitored closely to ensure any opportunities to verify recycled content are considered to improve the current audit-based systems.

Readjust Policy to Prioritise Investment in the UK Plastic Packaging Reprocessing Infrastructure

As outlined in the House of Commons Environment, Food and Rural Affairs Committee *The Price of Plastic – Ending the Toll of Plastic Waste* report, the committee recommended that the UK

Government ban the export of plastic waste by the end of 2027. To achieve this, it called on the government to:

- ✓ Reinvest income raised from Extended Producer Responsibility fees and the Plastic Packaging Tax into recycling infrastructure and promising areas of future research
- ✓ Create 'investment ready conditions' to unlock between £500 million and £1 billion, and potentially up to £10 billion of private investment ready to be invested in plastic reprocessing infrastructure in the UK

There is a challenge around creating 'investment ready conditions', and these large numbers would transform the UK's plastic packaging recycling infrastructure.

Reassurance about the delivery and timescales of future policy to those ready to invest in the waste and recycling infrastructure is part of what's needed to create the 'investment ready conditions'. The Plastic Packaging Tax has been labelled an environmental tax with an estimated £700m going to HM Treasury by 2025. To achieve the optimal environmental benefits and provide further reassurance the government could demonstrate a significant sign of its commitment to achieve its aims relating to UK recycling if revenues raised from the tax were reinvested in the UK's plastic packaging reprocessing infrastructure.

This can also be achieved by recycled content being under the packaging Extended Producer Responsibility regulations, and within this, to be a central criterion to the eco-modulation framework that sets the fees packaging producers pay.

These would deliver two clear benefits:

- 1) Deliver the much-needed UK reprocessing infrastructure and ultimately increase the availability of recycled content
- 2) Ensures regulations work together to achieve the best environmental outcomes, so to avoid paying the tax businesses don't prioritise the use of other packaging materials or combinations of materials that are potentially not recyclable

However, it is likely, in the short-term at least, that the UK will continue to incentivise the use of recycled content for plastic packaging through the Plastic Packaging Tax.

Therefore, in terms of readjusting policy, in the coming years the tax and any associated recycled content verification activities both need to be agile enough to adapt to developing legislation and systems in the UK and internationally to ensure coherent and inclusive policy can be applied for businesses that use plastic packaging.

These policies might not just be focused on the use of recycled content in plastic packaging. Any changes in the UK or in other countries could be linked to all packaging or non-packaging products regardless of the material that's used. Examples of these could include:

- Reform of the scope or use of Extended Producer Responsibility systems
- The overall financial incentive for using recycled content, which as an example for packaging could be:
 - Reductions in Extended Producer Responsibility fees for including recycled content
 - Changes in the percentage of recycled content required to avoid paying packaging taxes
- The inclusion of more plastic formats, which for packaging could be through the expansion of the definition and scope of 'packaging' or 'packaging-like' plastics that are taxable
- Similar taxes being used to incentivise recycled content in non-plastic and / or non-packaging products (metals, paper, etc)

Due to the international supply chains, these requirements could cause significant operational and administrative burdens for businesses as well as their respective supply chains. As such, any changes to legislation and systems outside the UK could impact businesses that use or could use recycled content in their products, and thus should be an ongoing consideration for the UK Government in how it plans and applies its policy strategy.

Ensure Packaging Material Choices Achieve the Best Overall Environmental Outcomes

The Plastic Packaging Tax must be both consistent with and complementary to other policies to negate unforeseen impacts of this tax. However, this needs to be without relying on other policies to avoid unintended consequences. This is particularly relevant in relation to any commercial advantages of material substitution and eco-modulation into non-plastic packaging alternatives that don't pass the 'environmental test' by delivering the best overall environmental outcomes.

Changes to packaging should be done based on technically and environmentally sound decisions and not changed for less environmentally beneficial alternatives which have a greater overall carbon impact, or are less sustainable, economic, or effective in their use. Material substitution should not be done to simply avoid paying the Plastic Packaging Tax.

Metrics to measure the overall environmental outcomes include:

- Greenhouse gas reductions
- Ethical material sourcing
- Cost efficient manufacturing and logistics systems
- Meeting end-of-waste protocols

Other considerations include:

- The design of reusable and refillable packaging being based on first use to ensure the product is both resource efficient and recyclable at the end of its life
- The recyclability of the packaging should not be the only consideration for Extended Producer Responsibility eco-modulated fees, but both resource use and efficiency are considered alongside end-of-life considerations to account for relative carbon impacts

Appendix 1 – Definitions

The majority of the existing schemes make reference to ISO definitions and use a chain of custody approach. The standards used are:

- **ISO 14021:** Environmental labels and declaration – self-declared environmental claims.
- **ISO EN 472:** Plastics Vocabulary.
- **ISO 22095:2020:** Chain of custody – General terminology and models.
- **ISO 9001:** Quality Management System.
- **ISO 17065:** Product Certification Bodies Accreditation.
- **EN 15343: 2007:** Recycled Plastics – Plastics recycling traceability and assessment of conformity and recycled content.

What is Chain of Custody?

Chain of custody is the ‘process by which inputs and outputs and associated information are transferred, monitored and controlled as they move through each step in the relevant supply chain’⁶².

- A chain of custody system is designed to implement a chain of custody⁶³.
- A chain of custody model is a way to control inputs and outputs in a chain of custody system⁶⁴.

There is different chain of custody models:

- Identity preserved model. Recycled material is kept separate to virgin and from one source.
- Segregated model. Recycled material from multiple sources but kept separate to virgin.
- Controlled blending model. Virgin and recycled material is kept separate up until the point it is mixed so you know the percentage split between virgin and recycled material.
- Mass balance. Mixing of material at an unknown point so amount of recycled material in a particular output is unknown. There are different approaches to mass balance and how the recycled material is then allocated but it allows all the recycled material to be allocated to a certain output. Mass balance is particularly applicable to chemical recycling and the diagram below has more information.
- Book and claim model. Tradable certificates are brought to claim the recycled material, but this is separate to the supply chain of using the recycled material.

⁶² <https://www.iso.org/obp/ui/#iso:std:iso:22095:ed-1:v1:en> accessed 08.09.2022

⁶³ <https://www.iso.org/obp/ui/#iso:std:iso:22095:ed-1:v1:en> accessed 08.09.2022

⁶⁴ <https://www.iso.org/obp/ui/#iso:std:iso:22095:ed-1:v1:en> accessed 08.09.2022

What is the Mass Balance approach?

Mass Balance is a particular chain of custody model, by which inputs and outputs and associated information are transferred, monitored and controlled as they move through each step in the relevant supply chain.

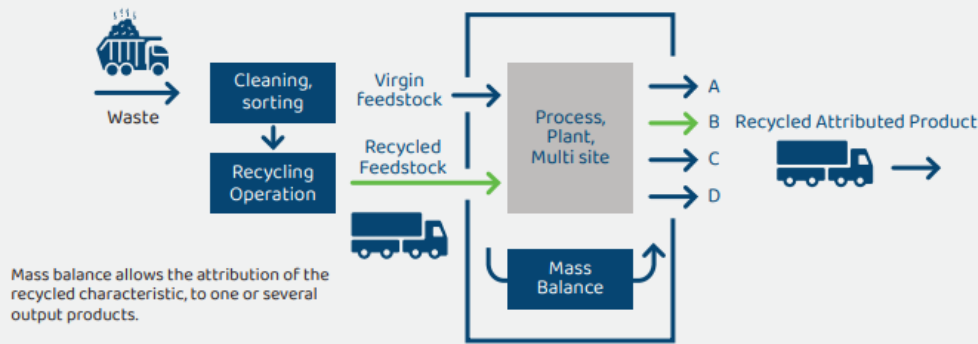
The choice of a chain-of-custody model and of the associated rules and principles is necessary to evaluate certain product characteristics and ensure the credibility and transparency of associated product claims :

- Renewable content or origin
- Recycled content

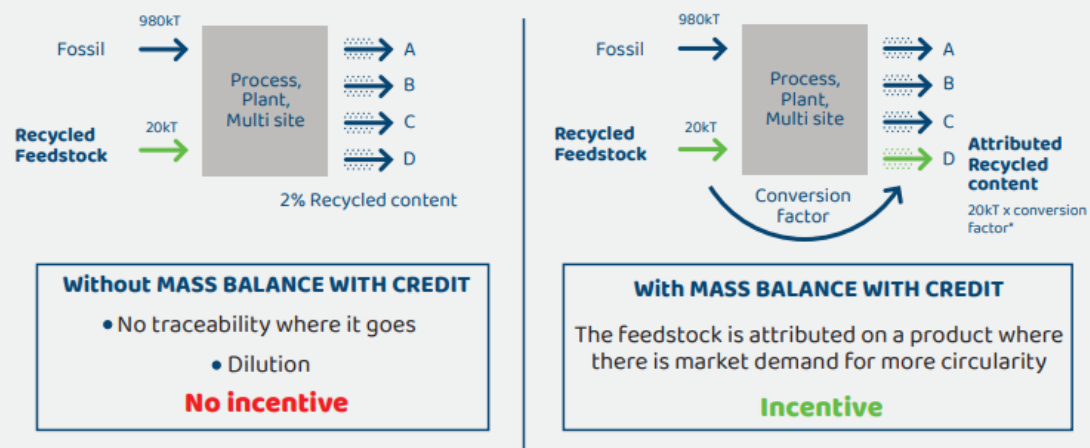
Mass balance is a model in which materials or products with a set of specified characteristics are mixed according to defined criteria with materials or products without that set of characteristics.

ISO 22095 standard describes the different chain of custody models

Application of mass balance to chemical recycling



Why is Mass Balance with credit method* required to accelerate the use of recycled feedstock in existing assets?



Accelerates the use of recycled feedstocks in existing efficient, complex and interlinked multi-step chemical production systems

* Terminology according to ISO 22095

Appendix 2 – Schemes Monitoring Uptake of Recycled Polymer

MORE Platform

The MORE Platform (which stands for MOnitoring Recyclates for Europe) was launched by EuPC (European Plastics Converters) in collaboration with its member organisations in April 2019. It is a unified, digital platform set up in order to monitor the amount of recycled polymer used by the European plastics converting industry⁶⁶. This in turn enables the ability to monitor progress towards the European Commission's target which is to use 10 million tonnes of recycled polymers per year by 2025 and 2030⁶⁷. The platform can currently be accessed by plastic converting businesses in 14 European countries, with usage data being collected annually and reported per country as well as at a European level⁶⁸.

The number of members and the volumes reported to the platform have grown consistently, and in September 2020 France was the first country to be able to announce data as a result of the platform, seeing 389,000 tonnes of recycled polymer used in France in 2018 (from participating businesses in the packaging, construction, automotive and consumer goods industries)⁶⁹.

EuPC is working with Circularise Plastics Group who have a 'Open Standard for Sustainability and Transparency' using blockchain technology and zero-knowledge proofs. More information is available later in the report on blockchain technology.

PolyCert Europe verifies recycled content monitored via MORE.

COST: No cost to use.

RecoTrace

Recovinyl has announced the launch of a new data system for circular PVC called RecoTrace, which will monitor, verify and report PVC recycling and uptake in Europe. VinylPlus (European PVC Industry's voluntary sustainable development programme) have pledged that by 2025 at least 900,000 tonnes of PVC will be recycled into new products every year⁷⁰. RecoTrace will be used to deliver this commitment, meeting increased data collection requirements as well as helping to strengthen recycled plastics traceability and transparency.

As of 1st February 2021, the tool will be available for recyclers and converters to register data, with the tool having been developed with usability and time efficiency in mind as well as safety and security of data. From this data, a picture of material flows will be generated, as well as traceability of the material⁷¹.

⁶⁶ <https://www.moreplatform.eu/> accessed 14.09.2022

⁶⁷ <https://www.moreplatform.eu/> accessed 14.09.2022

⁶⁸ <https://www.moreplatform.eu/post/monitoring-platform-more-announces-first-results-on-the-use-of-recycled-polymers-in-france> accessed 14.09.2022

⁶⁹ <https://www.moreplatform.eu/post/monitoring-platform-more-announces-first-results-on-the-use-of-recycled-polymers-in-france> accessed 14.09.2022

⁷⁰ <https://www.vinylplus.eu/news/recovinyl-launches-recotrace-an-advanced-data-system-for-circular-pvc/> accessed 14.09.2022

⁷¹ <https://www.vinylplus.eu/news/recovinyl-launches-recotrace-an-advanced-data-system-for-circular-pvc/> accessed 14.09.2022

COST: Currently unknown.

PolyREC

PolyREC will use RecoTrace as a common data collection system to record and monitor data on plastics recycling tonnages and recycled material use in Europe⁷². It is a collaboration between Petcore Europe, Plastics Europe, Plastic Recyclers Europe, Vinyl Plus, EUMEPS and PCEP.

COST: Currently unknown.

⁷² <https://www.polyrec.eu/about> accessed 14.09.2022

Appendix 3 – Platform to List Plastic Commercial & Industrial Packaging

Plareco

Plareco is an initiative of Valipac, the Belgian Extended Producer Responsibility for Commercial and Industrial (C&I) packaging and has been further developed with the support of the European Association of Plastics Recycling and Recovery Organisations (EPRO) and other European organisations.

The aim is to bring together suppliers of plastic C&I packaging containing recycled material on a single European platform.

Their mission is to:

- Facilitate the use of recycled content in C&I packaging.
- Establish one common European database for C&I packaging containing recycled content.
- Guarantee the recycled content of C&I packaging by recognized certification systems.

They ensure that all products listed on the platform have the necessary certification and make the database available to their partners throughout Europe.

The platform only offers a listing of plastic C&I packaging with recycled content and does not sell the items and does not provide any price information.

There are currently 177 listed products and 24 registered suppliers across 4 countries, some of which are currently in development.

Appendix 4 – Certification of Products as Recyclable

OPRL ‘Certified As Recyclable’ Scheme



In September 2020 OPRL (the On-Pack Recycling Label) announced it is launching a new certification scheme in the UK called ‘Certified as Recyclable’⁷³. Available only to OPRL members, the scheme is designed to aid confidence by assuring the type of packaging and materials used in a product are: 1) Collected for recycling in the UK; 2) able to be effectively sorted for recycling at MRFs and PRFs in the UK; and 3) if the material stream can be recycled; and that resulting recyclate has a valid and viable end market. Certification can be sought against the entire packaging design as well as an individual packaging component.

Initially, the scheme was introduced for rigid plastic packaging, with RECOUP carrying out the assessments. It has now been expanded to cover paper and card packaging, with this element being offered in partnership with the Confederation of Paper Industries.

Once the packaging has been Certified as Recyclable, the scheme marque can be added to the promotional material, as well as the certificate details being used for any internal audit trails on recyclability. It also provides confidence in any recyclable labeling added to packaging for consumer instruction. The certificate is valid for 3 years.

COST: £1,500 + VAT.

RecyClass – Recyclability Product Certification

This scheme certifies plastic packaging as recyclability using the Design for Recycling Guidelines developed by RecyClass. These use findings from laboratory testing of the behaviour of products and novel technologies in a recycling process are incorporated⁷⁴. They also have a free online tool for self-assessment of plastic packaging. A list of certified bodies to provide the certification are provided. RECOUP is the certification body in the UK.

RecyClass have a recyclability evaluation protocol which gives a harmonised methodology to test the recyclability of technology. Published for PE film, HDPE containers, PP Containers, PP Films and PS containers⁷⁵. There are also quick test procedures for labels, inks and attachments.

COST: €3000-10,000 for Recyclclass membership. Each category has a different number of product certifications included but laboratory testing and audit costs are in addition.

⁷³ <https://oprl.org.uk/what-we-do/certified-as-recyclable/> accessed 09.12.2022

⁷⁴ <https://recyclclass.eu/recyclability/> accessed 14.09.2022

⁷⁵ <https://recyclclass.eu/recyclability/test-methods/> accessed 14.09.2022

Recycled Content Verification Systems

A RECOUP and BPF Report
Verification Solutions to Support Delivery
of the Plastic Packaging Tax

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