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# FOOD WASTE DISPOSAL - WHICH BAG IS BEST?

THE NATIONAL

# FOOD WASTE PROBLEM

WRAP states an estimated 10.7 million tonnes of food is wasted from all sectors in the UK each year. When this waste was analysed, they found that 70% of the discarded food was intended to be consumed by people (30% being the 'inedible parts' e.g. peelings, egg shells). This had a value of over £22 billion a year and would be associated with 18 million tonnes of greenhouse gas (GHG) emissions.

The 6.4 million tonnes food that could have been eaten would make the equivalent of over 15 billion meals – enough to feed the entire UK population 3 meals a day for 11 weeks.

**10.7 Million**

tonnes of food waste is estimated to be produced by the UK each year, 70% of this thrown away by households and businesses was intended to be consumed by people.

**18 Million**

tonnes of greenhouse gas (GHG) emissions is estimated to be contributed from household waste each year.

**£22 Billion**

estimated value of household waste in the UK.

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# GOVERNMENT LEGISLATION

By 31st March 2025, English businesses and organisations with 10 or more full-time equivalent employees will need to separate recyclable materials from general waste. By 31st March 2026, the new legislation rolls out to households. Local Authorities will have to provide services that allow householders to separate recyclables. By 31st March 2027, lastly, it extends to businesses with less than 10 full-time employees. At this point everyone will also need to separate plastic film, packaging, and bags.

What material will be separated?

- Paper
- Cardboard
- Plastic bottles, pots, tubs, and trays
- Glass
- Metal tins, cans, aerosols, lids, food trays, and foil
- Food waste
- Plastic film packaging and plastic bags made of mono-polyethylene (mono-PE), mono-polypropylene (mono-PP) and mixed polyolefins PE and PP, including those metallised through vacuum or vapour deposition (to be included from 31st March 2027)

*Collectors may however use the TEEP assessment to determine if separate food waste collection is currently practicable in their specific circumstances.*

# FOOD WASTE TREATMENT

Food waste is an inevitable factor and should be reduced where possible, however, good waste management and recycling methods are helping to support a cleaner, greener planet and more circular economy – preventing unnecessary items being sent to landfill where they struggle to decay. Almost all food waste is recyclable.

When food waste is recycled, it has the ability to breakdown and over time produce compost. Household composting recycles food waste in an environment where lots of oxygen is available. Fungi and bacteria break down the proteins, fats and carbohydrates in the waste into compost and CO2.

Industrial Composting is a controlled, high-temperature process where organic waste (like food and garden waste) is broken down by microbes in the presence of oxygen. It produces nutrient-rich compost and typically operates in large-scale facilities that maintain optimal conditions for rapid decomposition.

Anaerobic Digestion (AD) is a process where organic materials are broken down by microorganisms in the absence of oxygen. This occurs in sealed tanks and produces biogas (a renewable energy source) and digestate, a nutrient-rich substance that can be used as a fertiliser.

# WHY SHOULD FOOD WASTE BE COLLECTED IN COMPOSTABLE OR POLYTHENE LINERS?

Here we explore the constraints and challenges associated with alternative methods for collecting food waste in the absence of liners. As communities and individuals increasingly prioritise waste reduction and environmental sustainability, understanding the limitations of these alternatives becomes paramount.

## NO BAGS

Not using a liner to capture and contain food waste can produce strong and unpleasant odours which requires frequent and thorough cleaning of the food caddy after every use. This consumes more of the resident's time and water, reducing participation rates.

## OXO-DEGRADABLE BAGS

Oxo-degradable (sometimes referred to as oxo-biodegradable) is often mis-sold as biodegradable. Oxo-degradable bags are made using traditional plastic films which carry a degradable additive. These additives are designed to break down in the presence of oxygen and cause the plastic surrounding them to fragment into imperceptibly small pieces, giving the illusion that they have biodegraded. They are however contributing to the micro-plastics problem and can undermine plastics recycling efforts if they end up contaminating legitimate waste streams. The controversial nature of oxo-degradable products has resulted in bans in several countries.

## PAPER BAGS

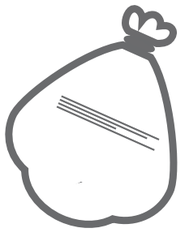
In practice, not a workable choice. The absorbant nature of paper means that any food waste collected will end up on the floor when the bag is lifted from the bin. In addition, paper will be prohibitively more expensive AND have a large carbon footprint to alternatives!

## COMPOSTABLE BAGS

Research conducted by Sancroft International Limited concluded that provides the greatest return on investment that delivers the biggest benefits for the nation is the use of compostable bags as a liner. They believe compostable liners have the most effective balance of reasonable costs, minimisation of plastic contaminants in the food waste stream and maximisation of total food waste collected and processed.

WRAP undertook a study with 11 local authorities between 2013 and 2015 to implement cost-effective solutions aimed at increasing food waste for recycling.

In the research WRAP concluded the supply of liners should be free, continuous and in sufficient supply for households. This will help to manage residents' expectations of the service, maximise its cleanliness and avoid the cost barrier for many households.



## POLYTHENE BAGS

Polythene liners made from recycled material provide a resource efficient and cost effective option.

When compared with compostable liners, polythene liners were associated with higher contamination levels, as some users occasionally added non-compostable waste. This behaviour is thought to stem from the long-standing association of polythene liners with general waste and dry recycling streams, leading users to mistakenly include similar plastic materials in their food waste bins.

If food waste goes to an anaerobic digestion (AD) plant that de-bag all liners before processing, polythene caddy liners can be  the next best choice.

## Check Your Standards!

There are certain logos which need to be displayed on anything made from compostable material, and alongside these logos, their placement of them is also very important to the authenticity of the product.

The Seedling Logo is a registered trademark owned by European Bioplastics. It proves that a product is certified industrially compostable according to the European standard EN 13432, the Seedling Logo and the accompanying EN13432 number will verify that it has been certifed to standard.

Alongside the Seedling Logo, genuine compostable liners or packaging will also have a 7P Number. Certified products or product families, e.g. a style of bags within a specified size/thickness range, are then issued a unique 7P certification number and are permitted to carry the European Bioplastics.

All our compostable sacks and liners fully decompose within the normal 6-10 week composting cycle in industrial composting facilities and are accredited to meet the stringent composting standard EN13432.

We supply a range of compostable caddy liners in all standard sizes that can support food waste management strategies. Manufactured from Ecopond® biodegradable plastic, these products are fully compliant with the European composting standard, which requires more than 90% of the plastic mass to convert into biomass, CO2 and water, with no harmful residue.

These logos are indicators of a certified compostable product! In doubt? Send us a sample, and we can authenticate!

### The Value of the Compostable Re-order Ribbon

We have improved our Compostable product range with the introduction of a re-order ribbon within the bag rolls.

With mandatory food waste collections, this new yellow ribbon is designed to make the re-order of liners for household collections an efficient process for local authorities.

Benefits:
- Brightly coloured re-order ribbon to improve visibility & order remembrance likelihood.
- Extended shelf-life with individual roll wrap.
- All liners are more likely to be used, due to the access of the ribbon which will minimise wastage.
- These combined should maximize the waste collected and participation rate.

The cost of the compostable outer and ribboned strip against the standard liner is ~2% more. However, the above, additional benefits to the inclusion of the ribbon, coupled with the ease of the re-order process offsets the additional costs and the wrap more than pays for itself.

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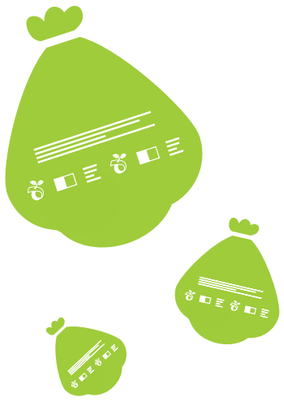
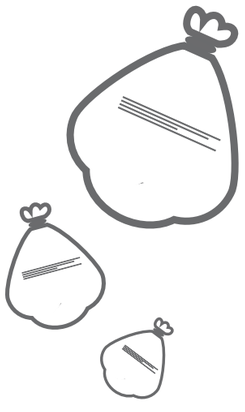
# LINER COLOURS

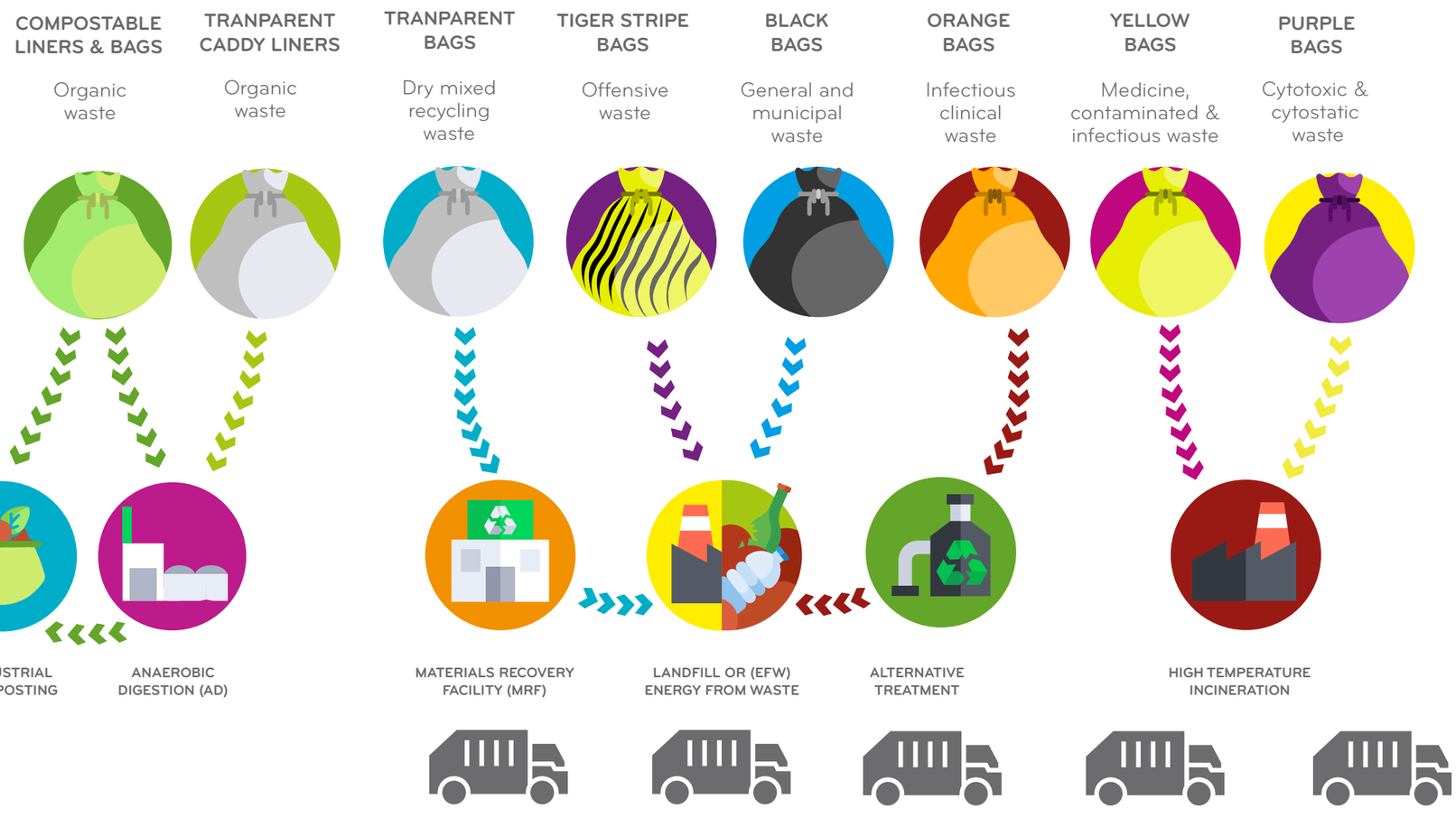
Choosing the right colour for food waste liners enforces clarity, compliance, and contamination prevention. Polythene liners coloured incorrectly could be mistaken for compostable or clinical waste streams, potentially leading to mis-sorting and costly disposal errors. Correct liner colours help waste go to the right place, improving recycling outcomes and supporting a cleaner, greener circular economy.

**Pale Green for Compostable Bags**
Pale green is the most appropriate and widely recognised colour for compostable material. It visually signals compostability and aligns with industry standards, helping to distinguish these bags from conventional plastics. This colour choice supports accurate sorting, encourages participation in food waste recycling, and reduces contamination at industrial composting facilities.

**Natural for Polythene Caddy Liners**
When compostable liners aren't used, natural (transparent) polythene is the best alternative. Its clarity allows users and collection teams to inspect contents visually, enabling quick identification and removal of contaminants. Unlike green, orange, yellow, or purple liners, which are linked to specific waste streams (such as compostable or clinical waste), the natural colour avoids confusion and cross-contamination risks.



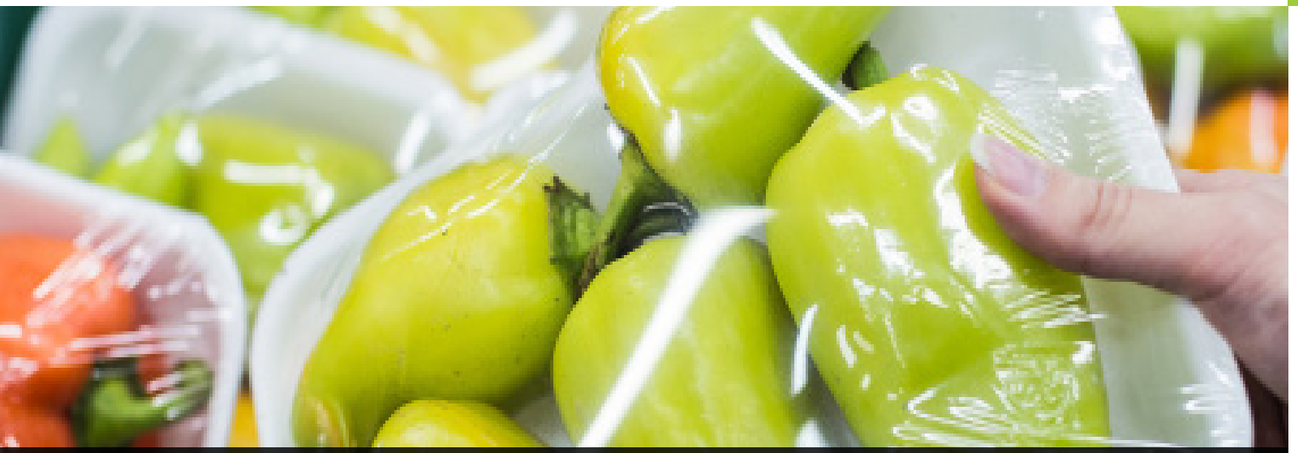


IMPORTANCE

# OF FOOD PACKAGING

Plastic offers a vast number of benefits, in particular hygiene and health advantages, but the use of plastic in food packaging makes a profound impact on reducing food waste by extending shelf lives:

| | | | |
|---|---|---|---|
| Watermelon | +10 Days | Steak | +10 Days |
| Broccoli | +5 Days | Grapes | +7 Days |
| Pepper | +10 Days | Cucumbers | +14 Days |
| Oranges | +10 Days | Carrots | +14 Days |



Food packaging is not only an advantageous addition but also a necessary requirement for some items. Despite what some may assume, plastic packaging does have a very significant purpose, and it plays a very important role in many different ways.

## Eco & Economical Impacts

Small amounts of packaging make big economical impacts. By extending the longevity of an item with packaging, in turn, it will reduce the food waste levels and the methane levels that such waste produces in landfills. Of course, a reduction in food waste will also help keep resources used to produce the food at a more economical level. Transport costs and emissions will also be lowered due to the greater convenience in distribution that packaging provides us with. Along with many other environmental benefits, packaging has been proven to be a very beneficial addition when it comes to food.

## Reduces Food Waste Levels & Preserves

A very small amount of plastic can make a huge difference in terms of a food's life span. Food's life span can be increased by 28 days, helping keep food fresher for longer.

## Informative

Unlike the non-packaged alternatives, food that has packaging allows for important information to be shown and shared. This includes allergy information, ingredients, cooking directions, calorie and nutritional information – which needs to be legally provided.

## Hygiene

COVID-19 highlighted the importance of hygiene in society. Loose food that is unpackaged has a far higher risk of contamination or risk of the spread of unhygienic particles.

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