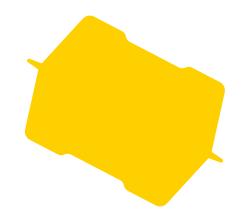


# COMPOSTABLE PLASTIC PACKAGING PACKAGING

# TAKING ACTION





This document will help businesses to make choices about where to use compostable plastic packaging.

It clarifies what compostable plastic packaging is, outlines current waste management practice, identifies key applications and opportunities within existing infrastructure, and considers communication with citizens on appropriate disposal.

The document is a snapshot and relates to the products and infrastructure that are available to packaging designers and specifiers in the UK today.

Whilst the document talks about the need for correct labelling, design, communications and treatment of compostable materials, it does not suggest uses that are currently unfeasible in the UK today, unless changes to labelling, design and recycling infrastructure are made.

<u>Decision trees</u> are included in this report to help users determine which packaging applications might be better suited to either composting or traditional recycling routes.

It should be noted that for some packaging neither of these options may be currently ideal owing to constraints in infrastructure.

The report has been developed through desk-based research coupled with consultation with key stakeholders from across the value chain.

BUSINESSES SHOULD CONSIDER
HOW PACKAGING CAN BE REDUCED,
DESIGNED TO BE RE-USED AND
THEN RECYCLED OR IN SOME CASES,
COMPOSTED.



## **CONTENTS**





This is an interactive document. The top toolbar and contents buttons allow you to navigate through the different sections of the guide.



## WHAT IS COMPOSTABLE PACKAGING?

#### **DEFINING COMPOSTABLE PACKAGING**

For an item to be deemed compostable in practice it must be:

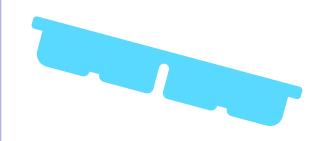
- 1. Certified to BS EN13432 (requirement for packaging recoverable through composting and biodegradation) or meet requirements of an appropriate home composting specification.
- 2. Widely collected and sent to appropriate organic waste treatment sites for processing (or be suitable for home composting).

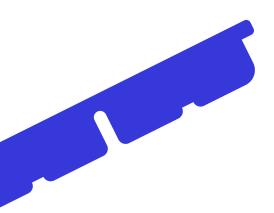
Home compostable refers to any product that has been certified as such (either through an independent scheme or via self assessment and compliance ISO 14021).

Whilst there are no UK or international standards for home composting (only independent, private schemes), in general home compostable plastics would meet **industrial compostable** standards (e.g. the most commonly used home composting scheme is 'OK Compost Home' which requires compliance with BS EN13432). However those materials which meet EN13432 do not necessarily compost under home composting conditions.

IMPORTANTLY, ALL COMPOSTABLE PLASTICS ARE BIODEGRADABLE, BUT NOT ALL BIODEGRADABLE PLASTICS ARE COMPOSTABLE.

Despite definitions being available in EU regulation (Dir2019/904), the term biodegradable is also often misused and applied to a broad range of different materials. Without a specified environment and time frame, the term is extremely vaque, because a biodegradable product may biodegrade in some environments and not (in any reasonable timeframe) in others. Importantly, all compostable plastics are biodegradable, but not all biodegradable plastics are compostable. Environments such as in soil, fresh or marine water are not controlled in any way, and therefore the time for a material to biodegrade will vary massively. The term biodegradable is therefore best avoided as a label for plastic materials as it infers a general behaviour of the material and could mislead users to think that something will automatically biodegrade in a reasonable timeframe.





#### WHAT IS COMPOSTABLE PACKAGING?

The terms bio-based and fossil-based relate to the raw material feedstocks that are used to produce plastics i.e. made from plants or biological feedstock or from fossil derived feedstocks. This is entirely separate from the way in which the material behaves in a composting (or any other) environment; not all bio-based plastics are compostable or indeed will biodegrade at all.

Equally, for a plastic material to be compostable it is not required to be made from bio-based materials.

Another important nuance is that **the term** 'plastic free' should not be applied to compostable plastics even if they incorporate 100% bio-based content; these are still most often defined as plastics.<sup>1</sup>

1 A polymer is a chemical compound that contains a large number of identical molecular repeating units. A plastic material is a polymer, typically modified with additives, which can be moulded or shaped by pressure and temperature.

biodegradability must be certified to harmonised international standards for defined environments such as composting for packaging EN13432/ASTMD6400 or soil for soil mulch EN17033.

NOT ALL BIO-BASED PLASTICS ARE COMPOSTABLE AND NOT ALL COMPOSTABLE PLASTICS ARE BIO-BASED.





**COMPLEXITY OF THE TERM BIOPLASTICS\* Bio-based feedstock** 1 2 behaviour **Bioplastics Bioplastics Biodegradable behaviour** e.g. PE, PET, e.g. PLA, PHA, PA. PTT PBS, Starch blends Non biodegradable 3 Conventional **Bioplastics** plastics e.g. PBAT, PCL e.g. PE, PP, PET Fossil-based feedstock \* biodegradability must be certified to harmonised international standards for defined environments

#### WHAT IS COMPOSTABLE PACKAGING?

#### STANDARDS AND CERTIFICATIONS

EN standard 13432:2000 – requirements for packaging recoverable through composting and biodegradation – was introduced in 2000. It was adopted by national standards bodies in many of the European Union Member States, for example published as BS EN 13432 by the British Standards Institution. Its scope is specifically compostability and anaerobic digestability of packaging.

Certification schemes are the process by which an independent assessor checks that a material meets the standard. The most commonly used certifications for industrial composting within the UK (in accordance with EN 13432) are:

- OK Compost from TUV Austria.
- The seedling logo which is licenced by European Bioplastics.
- The DIN Geprüft from Din Certco.

Other standards and schemes allow manufacturers to comply with their requirements using other means e.g. ISO14021 and the Green Claims Guidance.

Renewable Energy Assurance Ltd (REAL) provide a certification scheme in partnership with Din Certco to allow compostable packaging producers to display the seedling logo. The certifiers also play an important role in testing the conformity of the individual components of packaging or products (raw materials, inks, glues etc.) and the supply chain is also monitored to make sure that the final product is certified.

#### INDUSTRIAL COMPOSTING CERTIFICATIONS ASSOCIATED WITH EN 13432







Source: TUV Austria, European Bioplastics, Din Certco

## TODAY'S LANDSCAPE

It is estimated that compostable plastic accounts for around 0.5% of consumer plastic packaging in the UK. This equates to approximately 8,000 (±1,000) tonnes, with 80% expected to be flexible plastics and 20% rigid.<sup>2</sup>

The main applications (not all packaging) are food waste caddy liners, thin film packaging, food service ware, carrier bags that can be re-used as food caddy liners, fibres/non-wovens (e.g. wet wipes) and agricultural mulch films.

#### COMPOSTABLE PACKAGING AND TODAY'S UK WASTE MANAGEMENT

The collection and treatment of food waste plays an important role in achieving recycling targets and effective tools and products that help householders and businesses recycle food easily are needed. At the same time, safe and secure markets for the products that are generated by food waste treatment are needed. It also must be ensured that compost and digestate outputs are not polluting soils with plastic fragments.

Compostable materials have the advantage that they break down in composting systems, micro fragments of plastic will not appear in finished composts that are spread to land, and so should lead to the production of cleaner composts that are acceptable to the agricultural market in which they are used. However at the current time there are a number of issues that mean that compostable products and packaging are not always composted in practice.

The following section outlines the waste management issues and the impact that they have on the development of markets for compostable materials. Future use of compostable materials and the development of new markets will be dependent on improvements in design and labelling of compostable products as well as changes to waste management infrastructure and potentially to UK waste and resource policy.

FUTURE EXPLOITATION OF COMPOSTABLE MATERIALS AND THE DEVELOPMENT OF NEW MARKETS WILL BE DEPENDENT ON IMPROVEMENTS IN DESIGN AND LABELLING OF COMPOSTABLE PRODUCTS AS WELL AS CHANGES TO WASTE MANAGEMENT INFRASTRUCTURE.

2 **Source:** Ricardo (2019) *Plastics in the Bioeconomy*, Report for Biomass Biorefinery Network, May 2019 and WRAP (2018) PlasticFlow 2025 Plastic Packaging Flow Data Report.

#### **TODAY'S LANDSCAPE**

## ORGANIC TREATMENT INFRASTRUCTURE AND WASTE MANAGEMENT ISSUES THAT AFFECT THE USE OF COMPOSTABLE MATERIALS

The waste management situation for compostable plastics is complex, dependent on the route they follow. The figures shown on the following pages summarise each of the waste disposal routes that these materials might follow and the suitability of each route for compostable plastics at this point in time in the UK. Key issues to consider:

For industrial composting there is a clear standard in place to test products against (BS EN13432), which sets the criteria for the acceptance of the materials by processing sites. However, the reality is that much of the UK organics recycling infrastructure is not set up to fully treat the compostable plastics that they receive and will remove it as contamination along with other plastics. This is particularly true for anaerobic digestion (AD) facilities which very often do not have a composting stage to allow the compostable packaging material to fully break down.

Conventional plastics contamination in the compost and digestate is a very real risk to the ongoing application of these materials to agricultural land. This is particularly problematic in light of growing concerns around the negative impacts of microplastics. While compostable plastics offer a solution to this, there is a significant challenge in being able to distinguish between compostable plastics and conventional plastics to exclude the latter or remove during treatment. The presence of both will be measured for compliance with compost and digestate quality standards which have strict limits.

As a consequence AD operators will aim to remove all plastic from their incoming feedstock including compostable food caddy liners and compostable packaging with the aim of minimising the quantity of plastic fragments that end up in the digestate.

Composting facilities can deal with compostable materials but will also need to screen and remove non-compostable plastic that could contaminate the compost that is used on agricultural land.

Where the only waste disposal option is residual treatment (e.g. waste from public litter bins or residual household waste), waste is increasingly being sent to energy-from-waste facilities.
 Being compostable has little benefit here, but if the material is bio-based the net CO<sub>2</sub>e emissions are likely to be less than for conventional plastic.

In these circumstances, bio-based plastics may therefore be optimal.

Future changes in composting infrastructure, packaging design and labelling, and future waste and resource policy may help to overcome the current challenges outlined but the charts on the following pages are based on the current and existing landscape.

This diagram shows the treatment options available currently if compostable plastics enter the composting system, e.g. local authority collections of garden or food waste.

#### COMPOSTING



#### In-vessel composting (IVC)

This is currently used for the treatment of garden waste and food waste. Some local authorities collect these mixed together, others offer separate collection of food waste which is treated via AD. Technically IVC is currently the best composting option for compostable materials.



#### **Open Air Windrow (OAW)**

This process is used to treat garden waste. Whilst technically possible for the materials to compost effectively, general food waste and food contaminated packaging are not permitted feedstocks for OAW, with the exception of an AHVLA approved list of specific items including drinks cups.



#### **Anaerobic Digestion (AD)**

AD is used to treat food waste. It is not set up to process compostable plastics and most facilities attempt to remove **all types** of plastic at the front end. Because AD excludes oxygen, compostable plastic is unlikely to break down in this process. Unless the facility has a composting phase (not currently common in the UK), this route is problematic. However, if the material is bio-based and sent to energy from waste facilities then this is environmentally preferable compared to fossil-fuel based plastics.





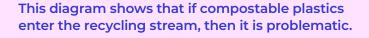
Most favourable waste management route



Some issues



Currently problematic



#### RECYCLING



#### **Plastics recycling**

Whilst it is technically possible to recycle certain rigid compostable plastics such as PLA, this does not happen in practice currently as it is viewed as a source of potential contamination.

The risk of compostable plastics entering the recycling stream is a concern for UK plastics recyclers.



#### **Paper recycling**

Paper recycling can tolerate some plastic contamination, but in the majority of cases, compostable or not it will be removed as contamination. Some specialist processors e.g. liquid cartons and coffee cups separate PE from card for recycling, and in this case the use of a compostable plastic is detrimental to the process at this point in time.

#### **RESIDUAL WASTE**

If compostable plastics enter the residual waste stream, it is optimal for any bio-based compostable plastics to go to energy from waste.

#### Key



Most favourable waste management route



Some issues



Currently problematic

#### **(Y**

#### **Energy from Waste**

Where the compostable material is biobased and is an alternative to conventional 'non-recyclable' plastics, this is the best residual waste option.



#### Landfill

When landfilling compostable plastics, the best case is it stays inert, but if it biodegrades then it will release greenhouse gases.

## KEY POTENTIAL APPLICATIONS

One of the most commonly cited situations where compostable plastics could be particularly useful is for **flexible** packaging/products that are likely to be contaminated with food and can facilitate the recycling of food waste. The compostable packaging/product and food can, in theory, be disposed of together in organic collections.

Tea bags can be made from or contain conventional plastic and will often be placed in an organic waste collection, therefore should always be made from compostable plastics.

There is a strong correlation between the provision of caddy liners for food waste collections and take-up of those services by householders. Compostable food caddy liners are widely used in many local authority schemes.

Where clear and appropriate labelling is used, loose fruit and vegetable bags, as well as other thin film packaging for fresh produce, are also a potential opportunity for compostable packaging. Although where possible, in particular when food waste is not likely to arise as an outcome, consumers should be encouraged not to use a bag at all. Reusing compostable fruit and veg bag alternatives as a food caddy liner could be beneficial. All of this needs to be considered against the backdrop of the current constraints in infrastructure discussed in the previous section.

Compostable plastics are currently being used in conjunction with paper/card (or other fibre material), for example, the windows in sandwich skillets and as a lining material in food trays. If the intention is for the fibrous element of the packaging to be recycled with paper/card, then the plastic material (compostable or not) will be removed as contamination during the paper recycling process regardless.

Rigid plastic compostable packaging is likely to be beneficial primarily in closed systems, for example at events, or within hospitality (e.g. coffee shops and fast food), where it has been prearranged that all packaging will be compostable and there is suitable waste infrastructure in place. In the household, clear PLA (a common compostable plastic), in particular, looks and feels similar to PET and therefore the potential for confusion is high. However, if ready meal trays are irrevocably food contaminated i.e. with baked on food, then this presents an opportunity for this material to be compostable and treated alongside food waste.

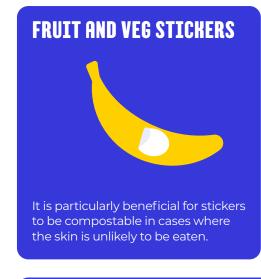
Similarly for, **coffee pods**, where there is a benefit of diverting coffee grounds to organic collection. However, **clear labelling** is necessary to avoid the risk of contamination (to either the organic or conventional plastic recycling stream).

#### **KEY POTENTIAL APPLICATIONS**

#### Firstly, consider if the packaging/item is needed at all.

Flexible packaging likely to be food contaminated could be particularly useful as well as the following applications, provided the appropriate design, labelling and treatment infrastructure are in place.













## COMMUNICATIONS

Key considerations for communication and labelling are:

- There is currently no established system
   of guidance in the UK for the communication
   of claims related to the compostability or
   biodegradability of plastics. Labelling exists
   only in the form of the certifications for
   compostability and these labels are unlikely
   to be understood by the majority of citizens.
   These provide no information about disposal,
   do not account for waste collection variations
   at a local level and there is no explanation as
   to where citizens can find further information.
- Without a consistent UK waste collection system, it is difficult to convey the correct message to the consumer around how to dispose of compostable plastics. In some cases householders have three or four options as well as home composting. The correct choice will vary between local authorities and well as differing options out of home such as at events and festivals, at work etc.
- If packaging producers are concerned over the littering of their products, simply choosing a compostable plastic material is not enough to negate the impact. Language should be careful to ensure citizens are clear that littering is never an acceptable method of disposal no matter what an item is made of.

Until such time as a consistent labelling is possible and is developed there are some key phrases and language considerations outlined on the next page.





#### **COMMUNICATIONS**



#### **RECOMMENDED STATEMENTS**

'This product is certified for industrial composting. Place in your food or garden waste bin if your local council accepts it'.

'Do not put this packaging in your recycling bin'

'Place in domestic waste if there is not a suitable food or garden waste collection'

'Do not litter - this package will still harm the environment'

'Not suitable for home composting'

'This product is suitable for home composting'



#### **X** STATEMENTS TO AVOID

'100% compostable' - avoid language that has no specific meaning. Claims of being compostable should be paired with disposal information.

'Plastic free' - compostable plastics are still plastics

'Compostable', 'Degradable' or 'Biodegradable' - vague, unqualified terminology should be avoided

Avoid using the terms compostable and recyclable together.

'Biodegradable' – this term does not mean anything on its own and it is recommended to avoid – it only has meaning when it is qualified with a particular environment (e.g. soil, open, marine) and specified conditions. However, any references to biodegradability in the natural environment are very difficult to verify.



These decision trees are designed to help businesses consider where they can use compostable plastic packaging appropriately, based on current infrastructure.

It should be noted that this is a fast-moving field and if any circumstances change this may affect the outcome – the guidance may also not cover every eventuality. In many cases there is no perfect answer and the risks and benefits of any decisions should be fully investigated.

## PACKAGING AND PRODUCT MANUFACTURERS AND SPECIFIERS

For the potential users of compostable plastic packaging or those who may be considering changing their current packaging material. This includes supermarket own brand dry goods.

### FRESH PRODUCE IN SUPERMARKETS

This section looks at supermarket packaging with a focus on fresh produce and baked goods with a short shelf life.

#### **FOOD VENDORS**

This section looks at food vendors- those that sell food that is meant for immediate consumption inside and outside of their premises or during events.

## PACKAGING AND PRODUCT MANUFACTURERS AND SPECIFIERS

For the potential users of compostable plastic packaging or those who may be considering changing their current packaging material.





NO

## FRESH PRODUCE IN SUPERMARKETS

This section looks at supermarket packaging – especially fresh produce and baked goods with a short shelf life. For own brand dry goods see the advice for product packaging.





## FOOD VENDORS

This section looks at food vendors – those that sell food that is meant for immediate consumption inside and outside of their premises or during events.





NO

## **GLOSSARY**

The following are some of the key terms that are used throughout this report.

Terminology in this subject can often be confusing and contradictory. Therefore, when viewing this report in the wider context, it is important to make sure that terms are aligned and clear when discussing certain aspects.

#### ANAEROBIC DIGESTION (AD)

A process in absence of oxygen that breaks down organic matter (primarily foods wastes) to produce digestate – which is applied to agricultural land – and biogas.

#### **BIO-BASED PLASTICS**

Bio-based plastics are those with building blocks that are derived partly or wholly from plant-based feedstocks. These are often also known as bioplastics.

#### **BIODEGRADATION**

The breakdown of an organic chemical compound by micro-organisms in the presence of oxygen to carbon dioxide, water and mineral salts of any other elements present (mineralization) and new biomass. Or in the absence of oxygen to carbon dioxide, methane, mineral salts and new biomass.

#### **COMPOSTABLE PLASTIC**

Plastic that biodegrades in industrial composting and is compliant with EN 13432. Only plastic that is labelled as complying with home composting schemes should be composted in home composting systems.

#### **CONVENTIONAL PLASTIC**

Plastic typically derived from fossil-based feedstocks that is not considered to be biodegradable or compostable in any reasonable timeframe.

#### **ENERGY FROM WASTE (EFW)**

Incineration of residual waste where energy is recovered as electricity and/or heat.

#### **GLOSSARY**

#### **HOME COMPOSTABLE PLASTIC**

Plastic Home compliant material biodegrades in home compost in under 12 months. Longer timescales are permitted under other specifications where the producer complies with the ISO 14021 requirements for self assessment and clear labelling.

#### **INDUSTRIAL COMPOSTING**

A blanket term which includes all forms of centralised aerobic organic waste treatment that is characterised by high levels of control and results in various forms of soil improver and/or biogas.

#### IN-VESSEL COMPOSTING (IVC)

Used to treat food and garden waste mixtures. These systems ensure that composting takes place in an enclosed environment, with accurate temperature control and monitoring.

#### **OPEN AIR WINDROW (OAW)**

Used for processing garden waste only in either an open-air environment or within large covered areas where the material can break down in the presence of oxygen.

#### PA

Polyamides (Nylon) comprise the largest family of engineering plastics with a very wide range of applications. Polyamides are one of the major engineering and high performance plastics because of their good balance of properties. Polyamides are very resistant to wear and abrasion, have good mechanical properties even at elevated temperatures, have low permeability to gases and have good chemical resistance, good dimensional stability, good toughness, high strength, high impact resistance, good flow.

#### **PBAT AND PBS**

Polybutylene adipate terephthalate and Polybutylene succinate – two biodegradable polyesters (Muthuraj et al 2014).

#### PE

Polyethylene – a type of resin and a polyolefin and one of the world's most widely produced synthetic plastic. High density PE is used for milk bottles, bleach, cleaners and most shampoo bottles. Low density PE is used for carrier bags, bin liners and packaging films (WRAP 2018).

#### PET

Polyethylene terephthalate is a type of resin and a form of polyester; it is commonly labelled with the code on or near the bottom of bottles and other containers. PET has some important characteristics such its strength, thermo-stability, gas barrier properties and transparency. It is also lightweight, shatter-resistant and recyclable (WRAP 2018).

#### **GLOSSARY**

#### PHA

Polyhydroxyalkanoate – A naturally occurring family of biodegradable polyesters (NNFCC 2018).

#### PLA

Polylactic acid – A biodegradable polyester produced from lactic acid, used in wide range of serviceware products and as filament for 3D printing (NNFCC 2018). Industry example: PG Tips is using PLA for their tea bags (NNFCC 2018).

#### **PLC**

Polycaprolactone is a biodegradable polymer that is suitable for applications requiring years of stability. In recent years it is becoming of increased interest to manufacturers of medical devices and drug delivery particles (polysciences.com 2018).

#### POLYMER/PLASTIC

A polymer is a chemical compound that contains a large number of identical molecular repeating units. A plastic material is a polymer, typically modified with additives, which can be moulded or shaped by pressure and temperature.

#### PP

Polypropylene – a recyclable polyolefin that is commonly used for margarine tubs, microwaveable meal trays, also produced as fibres and filaments for carpets, wall coverings and vehicle upholstery (WRAP 2018).

#### PTT

Polytrimethylene terephthalate is a type of polyester that differs from the common one polyethylene terephthalate (PET) as it contains one more methylene group in the aliphatic chain that links the terephthalic moiety (European Commission Joint Research Centre 2013).

#### **STARCH BLENDS**

The majority of bio-based plastics are currently manufactured using starch as a feedstock (c.a. 80% of current bio-based plastics). The current major sources of this starch are maize, potatoes and cassava. Other potential sources include arrowroot, barley, some varieties of liana, millet, oats, rice, sago, sorghum, sweet potato, taro and wheat (BPF 2018).

## PACKAGING AND PRODUCT MANUFACTURERS AND SPECIFIERS



For the potential users of compostable plastic packaging or those who may be considering changing their current packaging material. Follow the flow chart, but read all the accompanying information to provide perspective of the entire topic.

- There are various opportunities here to think of packaging as a service and design the system look at ways of accommodating reusable packaging, of incentivising the consumer to return the packaging or providing refill services.
- Opportunities for reuse as a food caddy liner
  Where services are provided, consider opportunities
  for bags to be reused as food caddy liners.
- Questions to ask your compostable material supplier
  - Is the product independently certified to the plastics composting standard BS EN13432?
  - Can the material provide equivalent performance characteristics (such as oxygen and moisture barrier) and hence shelf life?
  - Will the material change the production process?
- Do not use/supply oxo-(bio)degradable plastic items

  Despite their name these are not considered biodegradable (or compostable) and will shortly be banned in the EU. They are a contaminant in conventional plastic recycling systems and they are likely to simply fragment quicker than conventional plastic and thus become microplastics in the environment.

Is the packaging/product designed for a single use? Single use/trip YES Is it possible to redesign the packaging/product to be reusable? It's single trip packaging Does the packaging/product contain food or is it designed to come in contact with food during its life? In contact with food Is there a collection and recycling pathway for your current packaging? Cannot be recycled Is the packaging currently rigid? i.e. not a film It's a film NO Potential use of compostable plastic This is worth investigating alongside how recycling can be achieved with a packaging re-design and/or investment in new technologies. Note, that currently there is no ideal recycling or composting

route that is accessible to all UK consumers for these types of packaging.

Compostable plastics not recommended

Compostable plastic materials are generally less suitable for more durable items as recycling does not routinely take place at the end-of-life.

Compostable plastics not recommended

For rigid plastics PET, HDPE and PP are already widely recycled at the kerbside.

For film – aim to use mono-material PE and PP films. Industry is working towards widespread collection of these for recycling.

Compostable plastics not recommended

Low level food contamination is not generally an issue for recyclers and some packaging can also easily be rinsed by the consumer.

Move to the next box if the product will be highly contaminated with food.

Potential use of compostable plastic

Consumers easily confuse rigid compostable plastic packaging with conventional plastics as it often looks and feels the same and may place these in recycling streams.

Organic treatment facilities cannot separate compostable from conventional plastic and therefore will treat this as contamination and remove it where possible.

Items such as coffee pods or ready meal trays may be examples where food contamination makes them unrecyclable and a potential use of compostable plastic. **Effective communication is vital in this situation.** 

## FRESH PRODUCE IN SUPERMARKETS

This section looks at supermarket packaging – especially fresh produce and baked goods with a short shelf life. For own brand dry goods see the advice for product packaging. Follow the flow chart, but read all the accompanying information to provide perspective of the entire topic.

Prioritise removal of unnecessary packaging before considering alternatives while not compromising food waste prevention.

Do not view compostable packaging as a solution to consumer requests to reduce plastic packaging.

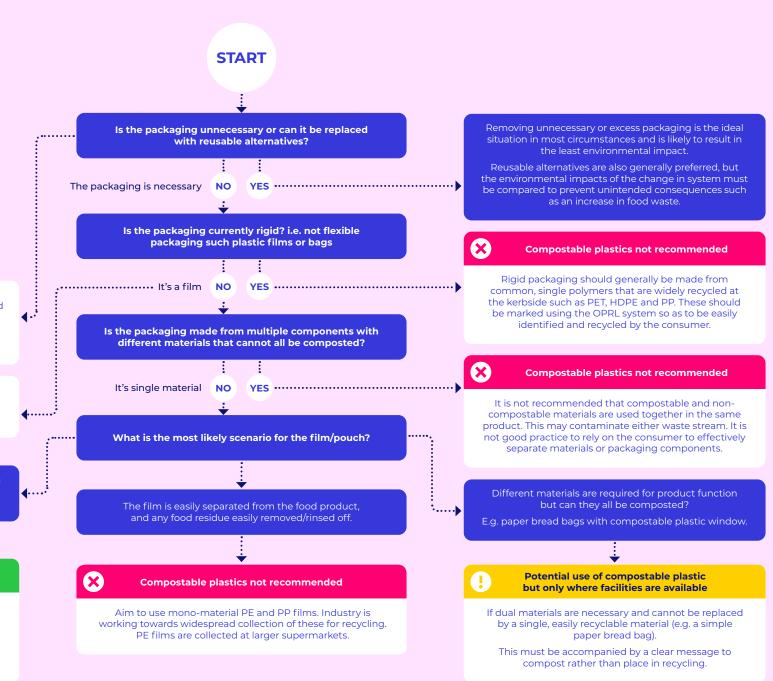
Opportunities for reuse as a food caddy liner

Where services are provided, consider opportunities for bags to be reused as food caddy liners.

The plastic film may be permanently contaminated with food residue, e.g. the food waste is difficult to separate/rinse from the packaging.

Potential use of compostable plastic

This situation creates a high risk of the plastic contaminating food waste which in turn can lead to plastics in compost spread on farmland. Using a compostable film may reduce this risk but is only recommended where removing the packaging altogether leads to unacceptable food wastage



The UK Plastics Pact | A Guide to Compostable Plastic Packaging

## FOOD VENDORS

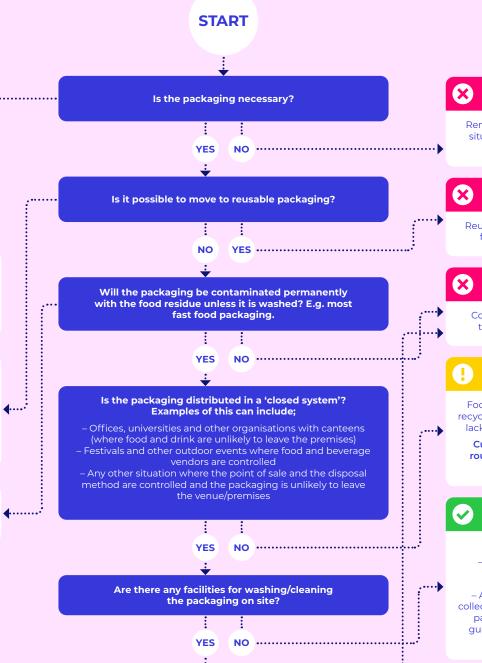
This section looks at food vendors – those that sell food that is meant for immediate consumption inside and outside of their premises or during events. Follow the flow chart, but read all the accompanying information to provide perspective of the entire topic.

Prioritise removal of unnecessary packaging be considering alternatives while not compromise

Prioritise removal of unnecessary packaging before considering alternatives while not compromising food waste prevention.

Do not view compostable plastic packaging as a solution to consumer requests to reduce plastic packaging.

- Look at ways of:
  - a. incentivising the consumer to return the packaging or
  - b. providing refill services. Moving to compostable packaging or serving methods should not be undertaken when reusable systems are already in place.
- Food contamination level can be subjective: speak with your recycling contractor to find out what is acceptable



•

Compostable plastics not recommended

Removing unnecessary or excess packaging is the ideal situation in just about all circumstances and is likely to result in the least environmental impact.

Compostable plastics not recommended

Reuse of durable items should always be the preference for 'eating in' from an environmental perspective.

Compostable plastics not recommended

Consider installing recycling bins on site or nearby for the types of packaging that are not contaminated.

Potential use of compostable plastic

Food packaging for 'on the go' is particularly difficult to recycle and/or compost due to contamination issues, and a lack of certainty over where the waste will be managed.

Currently there is no ideal recycling or composting route for these types of packaging that is accessible to all UK consumers.

Compostable packaging is an option worth investigating

The following must also be considered:

- Appropriate information around correct disposal.
- The provision of bins with the correct signage.

 A contract with a waste operator that has agreed to collect and compost large amounts of compostable plastic packaging with food contamination – and which will guarantee to get this material composted at a suitable industrial composting site.

# THANK YOU

WRAP's vision is a world in which resources are used sustainably.

Our mission is to accelerate the move to a sustainable resource-efficient economy through re-inventing how we design, produce and sell products; re-thinking how we use and consume products; and re-defining what is possible through reuse and recycling.

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wrap.org.uk @WRAP\_UK The UK Plastics Pact is led by WRAP with the support of the Ellen MacArthur Foundation. The UK Plastics Pact was co-created by the Ellen MacArthur Foundation and WRAP to accelerate the transition to a circular economy for plastics in the UK and is one of the Ellen MacArthur Foundation's national and regional implementation initiatives around the world. The opinions expressed, and materials made available, by WRAP or EMF or The UK Plastics Pact signatories do not necessarily reflect the views of the other parties who are not responsible for the same.

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