

# Considerations for Compostable Plastic Packaging

# Taking Action

We all want to help clean up our environment and minimise waste. To do this we need to start using certifiable compostable packaging correctly.

It's important to understand the two distinct families of certified compostable and conventional plastics and their separate avenues for recovery. This practical document will help people decide when and where to use certified compostable plastic packaging and items like cutlery, and where they should go after use.

This document defines compostable packaging and provides information on standards and certifications, the market today, and potential applications suited to current infrastructure. It also clarifies communication and labelling requirements for certified compostable packaging.

**Decision trees** provide guidance on the suitability of packaging applications for either composting or traditional recycling routes, ideal for decision makers such as:

- Brand Owners
- Packaging technologists and designers
- Food service providers.

The information provided is based on packaging types and recycling systems used for plastics and food material in Australia today. It is designed to assist industry and government as we work together to achieve Australia's National Packaging Targets by 2025 and the National Waste Targets by 2030.

This guide has been adapted for the Australian market from WRAP UK's [Considerations for Compostable Plastic Packaging](#), and was developed in partnership with the Australian Organics Recycling Association (AORA), the Australasian Bioplastics Association (ABA), APCO Members and key stakeholders.

**Follow the waste hierarchy: First consider how to reduce packaging, then design for re-use, next for recycling and then, where appropriate, for composting.**

# Contents



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# 1. What is compostable plastic packaging?

Compostable plastic packaging is created to be suitable and certified for composting after use. Compostable plastics are not to be mixed with conventional plastics for mechanical recycling.

## Defining compostable plastic packaging

When designing, specifying, selling or purchasing compostable plastic packaging, it is important to use correct terms as these indicate where items should go after use - to landfill or to compost. Misleading terminology can result in unintentional litter or contamination of mechanical recycling or composting systems.

For an item to be called '**compostable**' it must be certified to the Australian Standard - [AS 4736: 2006 Biodegradable plastics suitable for composting and other microbial treatment](#) (**Australian Industrial Composting Standard**). This standard is relevant to industrial and commercial scale composting facilities in Australia that are used to treat our kerbside collected organics and organics from other collections. Compostable plastics should be able to be successfully collected for organics recycling, and proven to work in practice and at scale.

'**Home compostable**' refers to an item that has been certified to a similar Australian Standard - [AS 5810: 2010 Biodegradable plastics suitable for home composting](#) (**Australian Home Composting Standard**). Packaging designed for a home composting environment should be certified to the Australian Home Composting Standard.

Although this standard requires similar testing regimes to those in the Australian Industrial Composting Standard, the lack of visibility over the processing conditions of these materials in individual environments means there is therefore no guarantee that adequate biodegradation will occur. Materials which meet the Australian Industrial Composting Standard do not necessarily compost under home composting conditions.

For commercial scale organics recycling, certification and therefore verification of conformance to the Australian Industrial Composting Standard is critical for organics recyclers. Certification provides assurance that technically these materials will break down without interfering with normal operating processes, and will not leave any physical or chemical residues in the finished organic product after processing. It is important to note that organics recyclers in Australia have differing capabilities to process these materials based on individual operating processes.

## What is compostable plastic packaging?

### Clarifying complex terms

The terminology around compostable plastics can be confusing. Businesses should prioritise only referencing either **'certified compostable plastics'** or **'conventional plastics'** for maximum clarity across industry and consumers.

The term **'biodegradable'** is often misused and applied to a broad range of different materials. The term is vague, because a biodegradable product may biodegrade in some environments and not in others in an unknown timeframe. Importantly, **all certified compostable plastics will biodegrade, and when mixed in compost contribute to soils, but not all biodegradable plastics will turn into compost.**

Natural soil and water environments are not controlled, and therefore the time for a material to biodegrade will vary greatly. 'Biodegradable' is therefore best avoided as a term 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.

The terms **'bio-based'** and **'fossil-based'** relate to the two different raw material feedstocks that are used to produce plastics i.e. made from plants or fossil derived oil and gas by-products. This is entirely separate from the way in which the material behaves in compost or any other environment; **not all bio-based plastics are compostable or will biodegrade.**

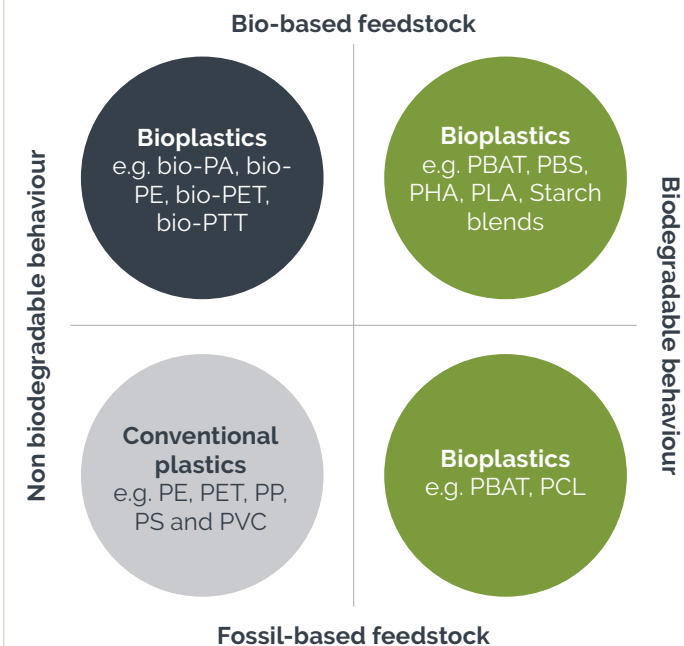
Equally, for a plastic material to be compostable it is not required to be made from bio-based materials. The origin of the feedstock for the production of a certified compostable product is irrelevant. Passing the relevant composting standard confirms only the ultimate properties of biodegradability and disintegration in the appropriate end-of-life environment, such as organics recycling.

Another important fact 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 a plastic.

Other varieties of plastics containing additives, such as those called oxo-degradable or oxo-biodegradable, are not certified compostable. These, along with common conventional plastics should not be used when disposing of food and organics for collection in

systems such as a kerbside Food and Garden Organics (FOGO) collection or home composting system. Oxo-degradable or photodegradable (fragmentable) plastics are internationally and locally recognised to be phased-out.

### COMPLEXITY OF THE TERM BIOPLASTICS



<sup>1</sup> AORA/ABA (2018) Joint Position Paper: Certified Compostable Bioplastics. Available at <https://www.aora.org.au/sites/default/files/uploaded-content/website-content/180503-certified-compostable-plastics-position-joint-policy-statement.pdf>

## What is compostable plastic packaging?

### Standards and certifications

Anyone wanting to use and provide certainty on compostable plastics must obtain certification to the Australian Standard - [AS4736:2006 - Biodegradable plastics: Biodegradable plastics suitable for composting and other microbial treatment](#) (Australian Industrial Composting Standard).

Verification that a compostable plastic meets the Australian Industrial Composting Standard is provided by the [Australasian Bioplastics Association \(ABA\)](#) and a certificate of conformance issued following testing to this Standard by an independent accredited laboratory. Its scope is specifically for compostable plastics.

If making and using fibre-based packaging (paper, bamboo, etc.) and seeking to make compostability claims, there is no specific standard to prove this. In theory, all natural fibre-based packaging should biodegrade, however many inks, polymer linings, additives and so on, can cause toxicity concerns, and so it is important to assess composition and additives. This can be achieved by having the product verified

to the requirements of the Australian Industrial Composting Standard through the ABA verification program.

Whilst there are other Standards that cover commercial and home compostability throughout the world, including EN 13432:2000 – requirements for packaging recoverable through composting and biodegradation, these Standards are not equivalent to the Australian Standard. The Australian Industrial Composting Standard contains an important ecotoxicity test for earthworm survival, which has been included to assure users of the recycled organics that there are no toxic residues in the organic output.<sup>2</sup>

Australia has other standards and guidelines that support legally compliant marketing claims about compostability. These include [ISO14021 – Environmental labels and declarations – self-declared environmental claims](#) and [Green marketing and the Australian Consumer Law](#).

The Australasian Bioplastics Association (ABA) administers the verification scheme, issues a certificate of conformance and licenses compostable packaging producers to use the two logos pictured to the right.

The verification program plays an important role in testing the conformity of the individual components of packaging or products, such as raw materials, inks and glues. The ABA publishes a list of all applicants that have verification of conformance to the Australian Industrial Composting Standard.

#### AUSTRALIAN STANDARD INDUSTRIAL COMPOSTING LABEL



#### AUSTRALIAN STANDARD HOME COMPOSTING LABEL



<sup>2</sup> AORA/ABA (2018) Joint Position Paper: Certified Compostable Bioplastics. Available at <https://www.aora.org.au/sites/default/files/uploaded-content/website-content/180503-certified-compostable-plastics-position-joint-policy-statement.pdf>

Source: Australasian Bioplastics Association (ABA)

# 2. Today's landscape

It is estimated that compostable plastics account for around 0.1% of plastic packaging in Australia. In 2017/18, this equated to approximately 1,000 tonnes, and 0.02% of all packaging placed on the market.<sup>3</sup>

The main applications currently seen are food waste bin liners, takeaway coffee cups and lids, food serviceware (plates, cutlery etc.) and postage and retail bags.

The [Australian Organics Recycling Association \(AORA\)](#) is the national association for the organics recycling industry. Organics that potentially can be recycled include food waste, green or garden waste and food-soiled compostable packaging.

## Compostable packaging and Australia's current resource recovery system

Compostable packaging (both plastics and natural fibre-based like paper and bamboo) has the potential to play a small but important role in achieving Australia's 2025 National Packaging Targets. Compostable packaging and items may facilitate the recovery of food waste and food-contaminated packaging by enabling it to go to compost facilities instead of landfill.

Safe and secure markets are needed for the products that are generated by organics recycling businesses. Recycled organic products, such as compost, are beneficial to support soil health and Australia's agriculture and horticulture industries. It is therefore vital that compostable plastic packaging and items have approved certification to the Australian Industrial Composting Standard to ensure they are not contaminating soils.

Currently there are a number of issues that mean that compostable packaging is not always ending up in organics recycling systems.

The following section outlines some of these resource recovery and reprocessing issues and the impact that they have on the destination of compostable materials. Future use of compostable materials and the development of markets for compost will depend on improvements across the supply chain including design, identification, collection and recycling infrastructure, as well as government policy and industry programs.

**Future use of compostable materials and the development of new markets will depend on improvements in design, identification, collection and organics recycling infrastructure, as well as government policy and industry programs.**

<sup>3</sup> Based on APCO. (2019). Australian Packaging Consumption & Resource Recovery Data. Available at: <https://www.packagingcovenant.org.au/industry-resources>

## Today's landscape

### Organics recycling infrastructure and resource recovery challenges that affect the use of compostable materials

The recyclability of compostable packaging is complex and depends on the reprocessing technology used.

For organics recycling, there are multiple technologies available including in-vessel composting, open air windrow and anaerobic digestion. The diagrams shown on the following pages summarise each of the disposal routes that compostable materials might follow and the relevant challenges at this time in Australia.

#### There are four key challenges:

- **Limited collection** from households to recover certified compostable packaging that otherwise would be directed to landfill. Only an estimated 18% of councils in Australia provide a FOGO collection service, and not all accept compostable packaging.

There are a small number of food businesses that separate food at their premises and a small but growing number of outdoor festivals and events that have food separation and training of staff and

public. The destination of these food collections is relevant to the choice and type of certified compostable plastic packaging or items.

- **Although Australia has an Industrial Composting Standard** (AS 4736:2006) much of Australia's organics recycling infrastructure is not set up to recognise or completely process compostable packaging. As a consequence and in combination with non-certified compostable plastic packaging on the market, some organics recycling operators will aim to remove all plastics from incoming feedstock. This can include certified compostable bin liners and compostable packaging with the aim of minimising the quantity of plastic fragments that could end up in their product.
- **Conventional plastics** contaminate compost and pose a very real risk to the ongoing application of compost to agricultural land and gardens. This is particularly problematic in light of growing concerns about the negative impacts of microplastics. Misleading or vague claims are exacerbating consumer confusion.

- **Distinguishing between plastics is difficult.** While compostable plastics offer a potential solution in reducing organic waste to landfill, there is a significant challenge in being able to distinguish between compostable plastics and conventional plastics once collected. This poses a challenge for organics recyclers seeking to exclude or remove conventional plastics during treatment to avoid contamination. Only those compost and mulch outputs of organics recycling that meet the relevant compost quality standards for each State and Territory will have viable end markets.

The diagrams on the following pages are based on the current and existing landscape and do not consider new potential opportunities that may overcome the challenges detailed above.



This diagram shows the options currently available in Australia if compostable packaging enters an organics collection and recycling system, e.g. through FOGO or other dedicated collections, such as at events.

## ORGANICS RECYCLING



### In-vessel composting (IVC)

This industrial scale composting system is like an enclosed pressure cooker that accelerates composting of food organics and garden organics (FOGO). Some local councils and businesses collect food and garden organics mixed together, while others offer separate collection of food waste which is generally treated via Anaerobic Digestion systems. Technically IVC is currently the best option for compostable materials. Frequently, organic material will be put through an IVC before being processed more slowly and for a longer period through open air windrows.



### Open Air Windrow (OAW)

This process is used to process garden waste and sometimes finish off IVC material. Whilst technically possible for the materials to compost effectively, generally food waste and food contaminated packaging are not permitted input feedstocks for OAW in some jurisdictions.



### Anaerobic Digestion (AD)

AD is used to treat food waste. It is not designed to process any plastics and most facilities work to remove all types of plastic, including certified compostable plastic, before the organic material is inserted into the equipment to prevent equipment seizure. As AD excludes oxygen, even some certified compostable plastics are unlikely to break down in this process. Unless the facility has a composting phase (not currently common in Australia), all plastics including certified compostable plastics are problematic for this route and system.

#### Key



Most favourable waste management route



Some issues



Currently problematic

This diagram shows that if compostable plastics enter our conventional mechanical recycling stream, they are problematic as they contaminate other recyclable materials.

## MECHANICAL RECYCLING



### Plastics recycling

Whilst it is technically possible to recycle certain rigid compostable plastics such as PLA, this does not currently happen in practice in Australia.

The risk of compostable plastics entering the mechanical recycling stream is a concern for Australian plastics recyclers as these materials are considered a contaminant. When removed as a contaminant from the plastics mechanical recycling stream, compostable plastics will be sent to landfill.



### Paper recycling

Paper recycling can tolerate some plastic contamination, but in the majority of cases, compostable or not, it will be removed and sent to landfill. For some specialist processors aiming to separate the fibre and plastics, the use of a compostable plastic can be detrimental to their production processes.



### Landfill

Compostable packaging that is not collected for organics recycling will enter the residual waste stream and thus be directed to landfill. In landfill, the best case is the compostable packaging stays inert, but if it biodegrades then it will release some greenhouse gases as will other organic matter.

#### Key



Most favourable waste management route



Some issues



Currently problematic

# 3. Key potential applications for compostable plastic packaging

First consider if the packaging/item is needed at all and if reusable options are more appropriate.

The following applications can be considered, providing the appropriate design, certification, separation protocols and systems, and organics recycling collection and infrastructure are in place.

All of these applications must be considered against the backdrop of the current constraints in infrastructure discussed above.

One of the most commonly cited situations where certified compostable plastics could be particularly useful is for packaging that is likely to be so contaminated with food that it cannot be mechanically recycled and where it can facilitate the collection of food waste. Certified compostable packaging and food can, in theory, be disposed of together in organics collections where it is approved by councils and collectors.

## Food caddy liners

There is a strong correlation between the provision of caddy liners for food waste collections and uptake of those services by householders. Compostable food caddy liners are widely used in many local council FOGO collection schemes. Check with your council first before proceeding to confirm their position on caddy liners and compostables.

## Fruit & vegetable stickers

It is particularly beneficial for stickers to be compostable in cases where the skin is unlikely to be eaten and they can be disposed of together (e.g. FOGO or home composting).

## Closed-loop food service systems

Rigid certified compostable plastic packaging is likely to be most beneficial in closed systems where it has been prearranged that all packaging will be compostable and the suitable collection infrastructure is in place. Examples include festivals, individual buildings, food courts and coffee shops. A key to success is the control of other materials to ensure that there is no contamination of the organics collection, which would condemn it to landfill.

Clear, uncoloured PLA (a commonly used compostable plastic) looks and feels similar to natural PET. The potential for confusion and contamination of the PET recycling system is therefore high when used outside of these closed systems.

# 4. Communication

When choosing to use certified compostable plastic packaging, there are a few key considerations for communication and labelling:

- **There is currently no widely recognised, consistent labelling or identification system** in Australia that communicates how to correctly dispose of compostable packaging. The only current recognised labelling system is the ABA licenced logos, available only from the ABA, that provides evidence of certifications for compostability.

Given this system has limitations in consumer reach and recognition, it is vital if using compostable plastics to provide information about disposal, account for waste collection variations at a local level and explain where consumers can find further information.

- **Without a consistent organics recycling system in Australia, it is difficult to convey the correct message to the consumer** about how to dispose of compostable packaging. The correct disposal pathway will vary between local councils and there will be differing options out of home such as at events, festivals, and at work. This must be clearly communicated to users and appropriate systems put in place.

- **If packaging producers are concerned about the littering of their products, simply choosing a certified compostable plastic material is not enough to negate the impact of that packaging on the environment.** Use language that ensures consumers understand that littering is never an acceptable method of disposal no matter what an item is made of. Certified compostable packaging is not to be littered.

The diagrams on the next page outline key phrases and language you can use and should avoid for compostable packaging, until consistent product identification is developed and adopted.

## Communication

 Recommended statements

If you are using certified compostable plastic packaging, along with displaying the certification logo, the following statements are recommended for application in reference to collection systems.

**'This packaging is certified for industrial composting. Place in your food or garden organics recycling bin if your local council accepts it.'**

**'Place in the organics recycling compost bin'**  
*(intended for away from home disposal pathways)*

**'Place in your waste bin if there is not a suitable food or garden organics recycling collection and if it is not allowed by your council or collector'**

**'This packaging is suitable for home composting'**

**'Do not put this packaging in your recycling bin'**

**'Do not litter – this package will still harm the environment'**

 Statements to avoid
**'100% compostable.'**

*Avoid vague language that lacks direction for consumers. Claims of being compostable should always be paired with specific disposal information for consumers.*

**'Plastic free.'**

*Compostable plastics are still plastics. Avoid misleading people.*

**'Degradable', 'Biodegradable' and similar claims such as 'oxo-degradable' and 'photo-degradable'.**

*Avoid such vague, unqualified terms that will confuse people. 'Biodegradable' does not mean anything on its own and should be avoided. It only has meaning when you qualify it for a particular environment (e.g. soil, open, marine), and specify conditions and time. Any references to biodegradability in the natural environment are very difficult to verify.*

**Avoid using the terms 'compostable' and 'recyclable' together.**

*Aim for the highest value recovery system available.*

# 5. Decision making guidance



Click to access the decision tree most appropriate

These two decision trees are designed to help Brand Owners and manufacturers, and food service providers considering where they can use compostable plastic packaging appropriately, based on current accessible infrastructure.

It should be noted that this is a continually evolving field and changing circumstances may affect the outcome, and this guide may not cover every eventuality. In many cases there is no perfect answer and the risks and benefits of any decisions should be fully investigated based on existing conditions.

Brand Owners are always encouraged to assess packaging decisions using APCO's [Sustainable Packaging Guidelines](#) and [Quickstart Guides to Recovery](#).

## Packaging and Product Manufacturers and Brand Owners

This section is for potential users of compostable plastic packaging or those who are considering changing their current packaging material.

## Food Service Providers

This section is for 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 Brand Owners




Click on 'Yes'  
or 'No' to create  
your decision

This section is for designers, makers, fillers and Brand Owners considering potentially changing their current packaging material or items from conventional materials to certified compostable plastic packaging.

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Click on 'Yes' or 'No' to create your decision





# Food Service Providers



Click on 'Yes'  
or 'No' to create  
your decision

This section is for food service providers, especially those that sell food for immediate consumption inside and outside of their premises or during events. It applies to packaging and items like cutlery.

# 6. Glossary and static decision trees

## Glossary

The following are some of the key terms used in this guide. Also included, is a list of the wide range of plastics used by industry to make packaging and food related items.

Terms in this subject area can be confusing and seem contradictory. Therefore, it is important that we all use consistent, reliable words and phrases to inform customers, community and governments on selected packaging materials and items.

### Anaerobic Digestion (AD)

A technical process that breaks down organic matter (primarily food wastes) in the absence of oxygen to produce biogas for energy and organic digestate which is applied to agricultural land.

### Bio-based plastics

Bio-based plastics are those with building blocks that are derived partly or wholly from plant-based feedstocks (see Starch-blended plastics). These are often also part of the group known as bioplastics. Not all bioplastics are made to be compostable.

### Biodegradation

The breakdown of an organic chemical compound by micro-organisms. In the presence of oxygen it becomes biomass, mineral salts, water and carbon dioxide. In the absence of oxygen organics become biomass, mineral salts, water, carbon dioxide and methane.

### Biodegradable

A generic term that indicates a plastic is biologically available for microbial decomposition, with no detail on its breakdown outputs, time or extent of degradation or end environments.

### Bioplastics

A broad term for plastics that are biobased, biodegradable or both. Bioplastics fall into one of three groups:

- Bio-based and biodegradable
- Bio-based (but not biodegradable)
- Biodegradable (but not bio-based).

Conventional polymers (e.g. PET and HDPE) can also be fully or partially bio-based.

### Compostable plastic

Plastic that biodegrades in industrial composting and is compliant with AS 4736:2006.

Only plastic that is labelled as complying with home composting schemes should be composted in home composting systems.

### Compostable plastic packaging

Packaging or item made to compost down through approved processes. It can be called compostable if it is certified to AS4736 and if its successfully collected, sorted, and composted in practice and at scale.

## Glossary

### Conventional plastic

Plastic typically derived from fossil-based feedstock sources that is not considered to be biodegradable or compostable in any reasonable timeframe. This includes the common recyclable plastics of PET, HDPE and PP (see related definitions).

### Home compostable plastic

Home compostable refers to those plastics that have been certified to the Australian Standard AS 5810-2010.

### Industrial composting

A broad term which includes all forms of large scale aerobic organic treatment characterised by high levels of control and that produces soil improver (compost, mulches, liquids) and/or biogas.

### In-vessel composting (IVC)

Composting technology involving the use of a fully enclosed chamber or vessel in which the composting process is controlled by regulating the rate of mechanical aeration with fans. Aeration assists in heat removal, temperature control and oxygenation of the organic mass.

### Open Air Windrow (OAW)

Used for processing garden waste and sometimes

finish off IVC material in either an open-air environment or within large covered areas where the material can break down in the presence of oxygen.

### Oxo-degradable or photodegradable (fragmentable)

Conventional fossil-based polymers (usually polyethylene (PE) or polypropylene (PP)) that have additives incorporated at low rates (2-3%) to cause highly accelerated fragmentation of the plastic in sunlight or in the presence of oxygen or in an anaerobic environment.

These plastics cannot be certified compostable to Australian Standards and therefore are increasingly the focus of government legislators for removal from the Australian market.

### PA

Polyamides (Nylon) comprise the largest family of engineering plastics with a very wide range of applications, generally for industrial products and used in some flexible films especially for food applications. PA is not compostable.

### PBAT and PBS

Polybutylene adipate terephthalate and Polybutylene succinate – two biodegradable plastics that can be made certified compostable.

### PCL

Polycaprolactone - a biodegradable polymer 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. It can be made to be certified compostable.

### PE – HDPE and LDPE

Polyethylene (PE) – a type of resin and a polyolefin and one of the world's most widely produced conventional plastics.

High density PE (HDPE) – used for milk bottles, bleach, cleaners and most shampoo bottles. It is mostly used in rigid packaging, but also in some flexible film applications.

Low density PE (LDPE) – widely used in flexible plastics for carrier bags, bin liners and packaging films.

Rigid HDPE packaging is recyclable through most of Australia's commingled recycling systems. LDPE is recyclable through special collections for flexible packaging.

With special additives PE (HDPE and LDPE) can be made to be degradable, but it is not compostable.

## Glossary

### PET

Polyethylene terephthalate – a type of resin and a form of polyester; it is commonly labelled with the number one 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 highly recyclable through most of Australia's commingled recycling systems. It is a conventional plastic, and not compostable.

### PHA

Polyhydroxyalkanoate – a naturally occurring family of biodegradable polyesters. It can be made to be certified compostable.

### PLA

Polylactic acid – a biodegradable polyester produced from lactic acid, used in range of food/drink service-ware products, such as clear drink cups, and as filament for 3D printing.

### Plastic/Polymer

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, to be flexible or rigid, coloured and printed. Depending upon the specific chemistry it can be made to be composted or mechanically recycled. Plastics are widely used in packaging and in durable products like furniture, flooring and water pipe.

### PP

Polypropylene – a widely used recyclable fossil-based plastic commonly used for clear takeaway food containers, margarine tubs, microwaveable meal trays, also produced as fibres and filaments for carpets, wall coverings and vehicle upholstery. It is a conventional plastic and not compostable.

### PS and EPS

Polystyrene – a plastic used to make single use cutlery and CD cases. It is not compostable and is generally rejected by conventional recycling systems. This plastic is also made into Expanded Polystyrene (EPS) to make white insulating fruit and fish boxes for cold transport. This is not compostable and is highly problematic for litter. Some recycling systems are available for clean EPS.

### PVC

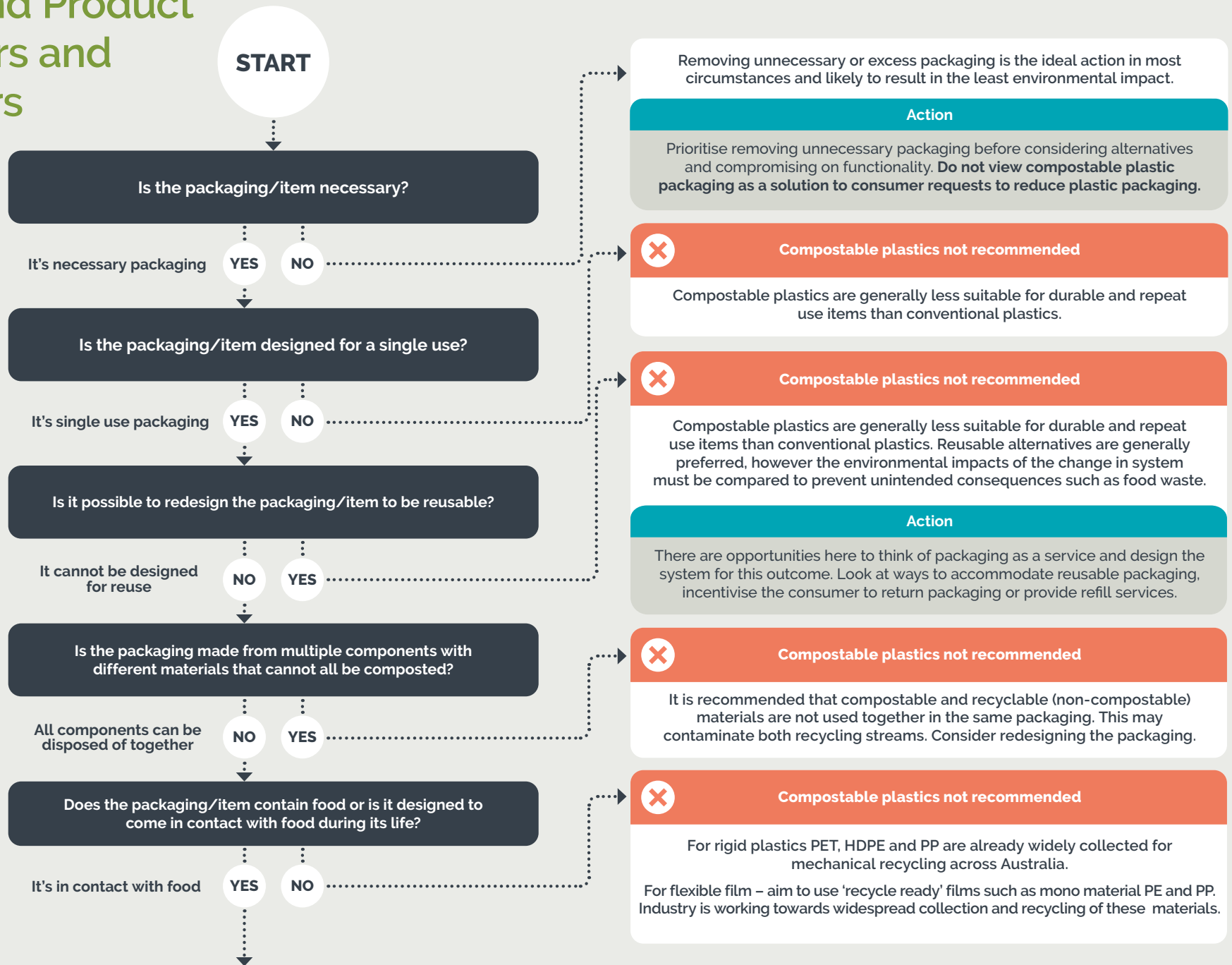
Polyvinyl chloride – occasionally used for rigid packaging like pill blister packs, clear hardware packaging and cake clam shells. Proposed for phase out in certain packaging applications due to its easy confusion with PET and unique recycling requirements. It is widely used in durable industrial products like pipe, flooring and hose. It is not compostable.

### Starch-blended plastics

The majority of bio-based plastics are currently manufactured using starch as a feedstock (~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. They can be made to be certified compostable.

# Packaging and Product Manufacturers and Brand Owners

This section is for designers, makers, fillers and Brand Owners considering potentially changing their current packaging material or items from conventional materials to certified compostable plastic packaging.



# Packaging and Product Manufacturers and Brand Owners

This section is for designers, makers, fillers and Brand Owners considering potentially changing their current packaging material or items from conventional materials to certified compostable plastic packaging.

Is there a collection and mechanical recycling pathway for your current conventional packaging?

It cannot be mechanically recycled

NO

YES

Is it possible to redesign the packaging/item to be reusable?

It's a film

NO

YES



### Compostable plastics not recommended

Low level food contamination is not generally an issue for recyclers and some packaging can be easily rinsed by the consumer. Move to the next box if the packaging 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. Consumers may subsequently place these incorrectly in the mechanical recycling streams. Organic recycling facilities cannot separate compostable from conventional plastics and therefore will treat this as contamination and remove it where possible.



### Potential use of compostable plastic

This is worth evaluating, alongside the question of whether mechanical recycling can be achieved with a redesign of existing packaging and/or investment in new technologies. Note, that currently there is no ideal recycling or composting route that is accessible to all Australian consumers for flexible film packaging. The REDcycle drop off recycling scheme for soft plastics is an initiative that is gaining traction in Australia with collection points in major retailers, Coles and Woolworths and with Brand Owner partners.

#### Action

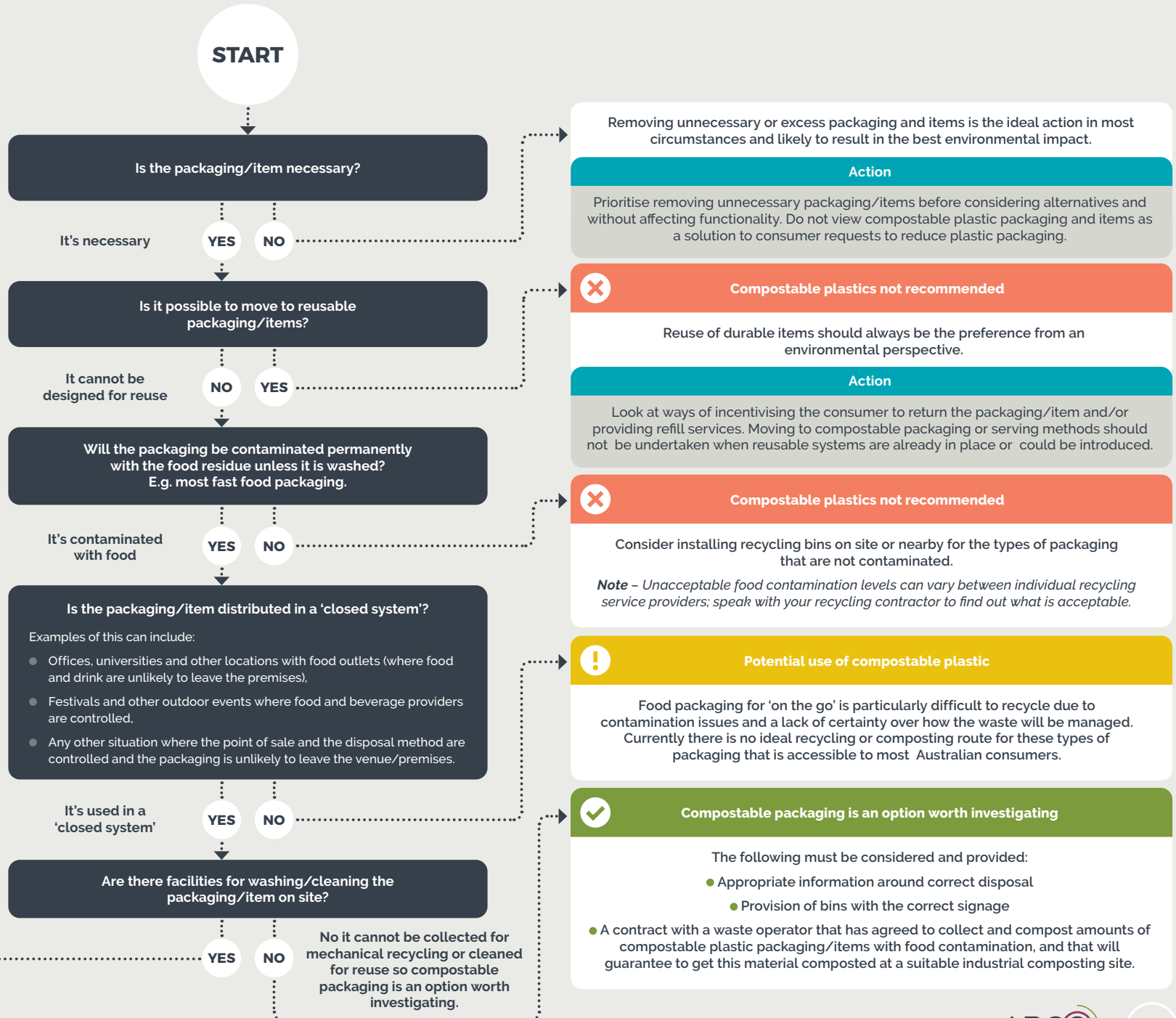
- Questions to ask your compostable material supplier:
- Is the product independently certified to the Australian Industrial Composting Standard AS 4736: 2006?
  - Can the material provide equivalent performance characteristics (such as oxygen and moisture barrier) to conventional plastics and hence maintain shelf-life?
  - Will the material require changes to the packaging production or filling process?

#### Action

Do not use/supply oxo-(bio)degradable plastic items. Despite their name these are not considered biodegradable or compostable, with bans occurring across various states in Australia including the ACT, South Australia and Queensland, and several international jurisdictions. They are a contaminant in conventional plastic recycling systems and are likely to fragment quicker than conventional plastic and thus become microplastics in the environment.

# Food Service Providers

This section is for food service providers, especially those that sell food for immediate consumption inside and outside of their premises or during events. It applies to packaging and items like cutlery.



# Thank you

APCO is a co-regulatory, not for profit organisation partnering with government and industry to reduce the environmental impact of packaging in Australian communities. APCO delivers this model of shared responsibility through the promotion of sustainable packaging activities including sustainable design, recycling initiatives, waste to landfill reduction and circular economy projects.

To bring the 2025 National Packaging Targets to life, APCO has developed a coordinated, whole-of-supply chain approach to promote the avoidance, reduction, reuse, recovery and recycling of packaging materials. There is significant work to be delivered, with engagement and collaboration needed from across

the supply chain. This work will take place across three phases, with activity for the Foundation phase already under way. For more information about the work being delivered to bring the 2025 National Packaging Targets to life, visit the [APCO website](#).

This document has been adapted for the Australian market from the WRAP UK report [Considerations for Compostable Plastic Packaging](#). It was developed in partnership with the [Australian Organics Recycling Association \(AORA\)](#) and [Australasian Bioplastics Association \(ABA\)](#).

## Further information



To contact APCO please visit our website  
[www.packagingcovenant.org.au](http://www.packagingcovenant.org.au)

