

WHAT GOES IN THE FOOD
& GARDEN ORGANICS
(FOGO) WASTE BIN?

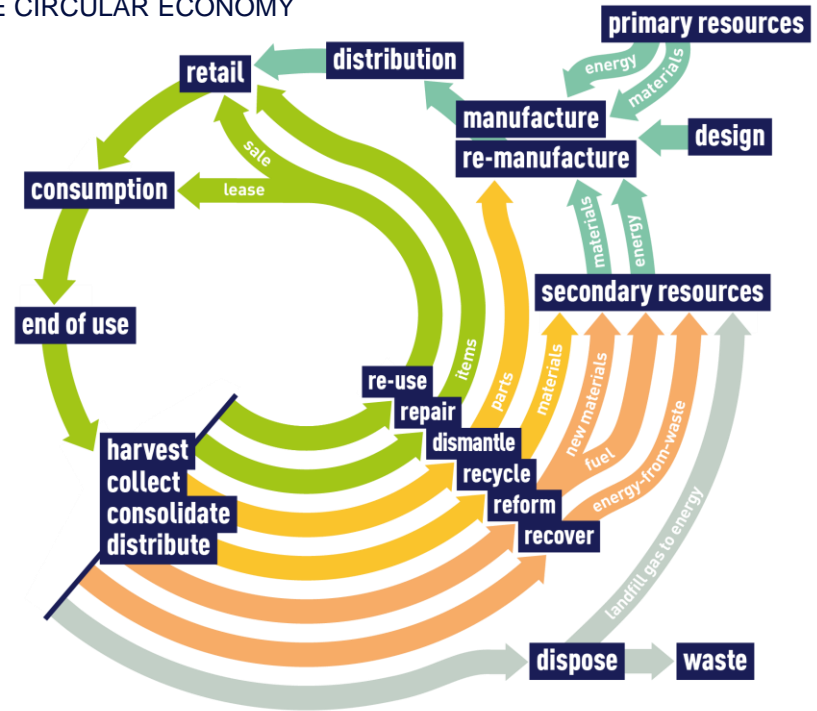


Landfill Diversion v Resource Creation

FIRST PRIORITY

Production of a beneficial resource
(without contamination) not simply to
achieve landfill diversion targets.

THE CIRCULAR ECONOMY



FOGO ACCEPTANCE CRITERIA – WRIWA LIST (DRAFT)



FOGO Acceptance Criteria – Draft WRIWA List

Food Organics	Garden Organics	Prohibited Items
Fruit & Vegetables	Grass clippings & leaves	Bagged Garden Organics
Meat & Bones*	Flowers & Weeds	Grass sods
Tea Bags & Coffee Grinds	Pruning's & Twigs	Garden Pruning's in excess of 300mm (e.g. tree stumps)
Bread & Dairy	Plants & small shrubs	Soil & Sand
Seafood including shells	Small branches	Timber (treated & untreated)
All food leftovers / scraps		Textiles
Out of date food (unpackaged)		Plastic packaging & bags
Egg Shells		Garden reticulation pipes and plants
Shredded Paper*		Animal droppings
Used Paper Towels, tissues and food contaminated cardboard (e.g. pizza boxes)*		Biodegradable packaging*
		Glass
* considered in this presentation		Nappies & Hygiene products

BIODEGRADABLE PACKAGING



Biodegradable Packaging

“Biodegradable” is used for a wide range of materials that are biobased, biodegradable or both. Some proven to degrade into microplastics.

Compostability of all this material is not certain including final product value.

Education programs should be clear that **biodegradable products are not accepted** in the FOGO waste stream.



COMPOSTABLE PACKAGING



Standard for compostable material (commercial scale)

Compostable material

If a material claims to be compostable in Australia, it must comply with Australian standard AS 4736-2006.

Australia: AS 4736-2006

This standard provides assessment criteria for plastic materials that are to be compostable in municipal and industrial aerobic composting facilities. AS4736-2006 is similar to the European EN 13432 standard and has an additional requirement of a worm test.

Requirement AS 4736-2006:

1. minimum of 90% biodegradation of plastic materials within 180 days in compost.
2. minimum of 90% of plastic materials should disintegrate into less than 2mm pieces in compost within 12 weeks.
3. no toxic effect of the resulting compost on plants and earthworms.
4. hazardous substances such as heavy metals should not be present above the maximum allowed levels.
5. plastic materials should contain more than 50% organic materials.



Common Compostable Packaging



PLA straws



Wooden knife



Paper cup



Paper straw



Wooden knife



Clear BioBowl



Tea spoon



PLA knife



Soup bowl

Compostable 'Kitchen Caddy' liners in FOGO collections

Compostable liners should be standardised (colour & specification) across all Metro & Peel councils:

1. Enables consistent education around use
2. Readily identifiable by 'sorters' at decontamination facility
3. Reduce risk of contamination in the end product
4. Preference for kitchen caddy liners is paper liners (easily compostable)

Well-known brands in Australia: Biotuff, Biogone, BioBag, BioPak, Cardia bioproducts



In consultation with various local stakeholders, we understand that no liner in the Kitchen Caddy could compromise the effectiveness of a FOGO collection system

SUEZ TRIAL (FRANCE) -PERFORMANCE OF COMPOSTABLE PACKAGING



SUEZ group position in Europe

“Compost is used to enrich soil, not as a means to treat plastic waste”

Based on a SUEZ study in Europe

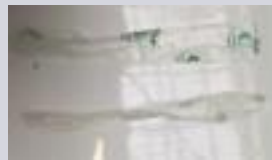
- Paper-bags decompose no matter the temperature
- Standard industrial open windrow composting at 55°C for 4 months
- Compostable plastic remained intact in ambient conditions while material at 55°C showed fragmentation (except for the rigid compostable material)



SUEZ group position in Europe (cont.)

Anerobic Digestion:

- Method: Automated AMPTS system, mesophilic anaerobic digestion (37°C), 27 days.
- Almost no degradation in compostable plastics during AD conditions and micro-plastic contamination can be expected in digestate.



“Even if the base plastic molecule can degrade, other additives could be released in the soil and in the oceans. The release of additives in the soil and in the oceans should also be evaluated”

Compostable plastics (including bio-sourced compostable plastics) should be excluded from FOGO given uncertainty around the ability to fully compost in standard commercial processes.

PAPER & CARDBOARD IN FOGO




Paper & Cardboard in FOGO – Risk of Contamination

Shredded Paper, Used Paper Towel, Tissues & Contaminated Cardboard

Clear education around types of paper & cardboard suitable for disposal via FOGO is essential. Examples of potential sources of contamination have been identified:

1. Laminated Paper
2. Waxed Cardboard
3. Plastic/ Metal bound items
4. Metal Staples



Increased levels of rate payer education should be implemented to ensure only compliant paper & cardboard items are included in the FOGO waste stream

BONES IN FOGO



Bones

Commercial Composting Process

All bones may not breakdown under standard commercial composting conditions.

This may result in the coarse fraction of composted product (mulch) being unsaleable or in a reduction in final markets

Bones be excluded from acceptance list for FOGO waste stream to maximise product quality.



REGULATORS POSITION



Regulators point of view

EPA NSW

EPA NSW requires a scientific justification to prove that there are no adverse impacts to the final product from compostable material.

1. With FOGO; compostable bags can be accepted (low proportion of the total compostable material)
2. Acceptance of other compostable materials (as listed in the table) need specific EPA approval (**after a scientific justification with site trial**)

Item	Paper	Compostable	Wooden	Other	Note
Cups	No	No	No	No	Until proven otherwise
Lids (for cups)	No	No	No	No	Until proven otherwise
Cutleries	No	No	No	No	Until proven otherwise
Trays	No	No	No	No	Until proven otherwise
Straws	No	No	No	No	Until proven otherwise
Takeaway plates, trays, bowls & boxes	No	No	No	No	Until proven otherwise

RECOMMENDATIONS & NEXT STEPS



Summary

- 1** Compostable plastics should be avoided in the FOGO stream.
- 2** Based on scientific trials, compostable plastics (including bio-sourced compostable plastics) not processed under specific conditions including extended length of time will result in plastics not fully degrading.
- 3** Strong preference is for kitchen caddy liners to be paper based (which are easily compostable). If compostable plastic liners are used, standard colour and specification are preferred for effective identification of contamination.
- 4** Composting processes to create product to enrich soils and not to treat plastic waste.
- 5** Simplified acceptance criteria is essential to minimising contamination in the bin.

THANK YOU

