

**INQUIRY INTO WASTE AVOIDANCE AND RESOURCE
RECOVERY AMENDMENT (PLASTICS REDUCTION)
BILL 2021**

Organisation: Biopak
Date Received: 30 April 2021

NSW PLASTIC REDUCTION

BIOPAK SUBMISSION

FOOD SCRAPS AND COMPOSTABLE
PACKAGING ONLY



COMPOST

#cupsforcompost



**RECYCLE
YOUR COFFEE
CUP HERE**

Bi@Cup

Bi@Pak TURNING YOUR
FOOD SCRAP INTO COMPOST

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BioPak produces plant-based alternatives to conventional single-use plastic packaging for the foodservice industry, offering certified compostable packaging solutions made from rapidly renewable, plant-based raw materials. All BioPak products are carbon neutral (certified Climate Active).

BioPak designs products for a circular economy – where there is no waste. In 2018, BioPak launched its own Compost Service in Australia and New Zealand – a recycling revolution designed to close the loop on packaging and food waste generated by the foodservice industry. This year, we are launching Compost Connect, a brand-agnostic and independent website to support businesses within the foodservice industry looking for compostable packaging and composting service. Compost Connect has been funded by the National Product Stewardship Investment Fund.



SUMMARY OF RECOMMENDATIONS

With over 15 years of experience designing and producing compostable single-use foodservice disposables, BioPak is well-positioned to share its insights on the NSW plastic ban proposal. The following recommendations are detailed further and supported by industry data and case studies in the rest of this document:



1. Compostable plant-based plastic, such as PLA (Polylactic Acid) shouldn't be included in the proposed definition of plastic

- PLA can be – and is – composted at industrial composting facilities, along with food waste.
- PLA-based products are sometimes the only available alternatives to some banned items.



2. Acceptable compostable packaging alternatives should preferably be certified to Australian Industrial and/or Home Compostability Standards

- Certification and clear labelling is the key to successfully work with the composting industry and ensure products are recycled into compost. PLA is currently the only clear compostable bioplastic available on the market and is used to produce cups, container and lids where visibility of the contents of the packaging is preferred or required.



3. A systemic approach is required to eliminate all non-compostable materials from the foodservice waste stream which will allow for the efficient collection and recycling of the organic waste generated by this industry

- The foodservice industry largest waste stream by far is food waste which is estimated to be around 1,000,000 tonnes.
- The packaging material used within the foodservice industry is estimated to be around 200,000 tonnes.
- Currently, there are a variety of material formats used including PE, PS, PET, PP, PE, and PE coated paper, the products are usually heavily contaminated with food residue which makes conventional recycling impractical.

FACTS: COMPOSTABLE PACKAGING END-OF-LIFE

1. Compostable packaging is designed for the circular economy

When it comes to foodservice packaging, contamination caused by food residue makes conventional recycling impractical. But for composting, food residues are actually an advantage as they are an exceptional source of nitrogen, an important macronutrient needed for healthy plant growth. So compostable packaging used to serve food can be conveniently disposed of in the organics waste bin, along with food scraps. In fact, compostable packaging has been shown to help divert additional food waste from landfills: more food waste is diverted in packaging and food waste programs than in food-only composting programs ([source](#))

This waste, including plant-based compostable packaging, is turned into nutrient-rich compost that can be used to improve our soils and grow more plants, effectively closing the loop. **Therefore, a systemic approach is required to eliminate all non-compostable materials from the foodservice waste stream which will allow for the efficient collection and recycling of the organic waste generated by this industry.**

The Ellen MacArthur Foundation, the leading think-tank on the concept of Circular Economy has published a [case study](#) showing how BioPak's compostable packaging is designed for the circular economy and how composting as an end-of-life solution could and should be scaled up.

What if your takeaway could contribute to better soils?



2. Compostable packaging can be and is currently processed by the Australian compost industry

Biopak began partnering with the compost industry in 2018 when we launched our Compost Service. We started with one partner in Sydney, collecting food waste and packaging from our customers in the area and taking it to Soilco, a local composting facility. Within two years, we had 14 collection partners, covering major urban areas in Australia and approximately 60% of our customer base. An example of an acceptance letter from our compost partners in South Australia is included in Annex A.

Hundreds of small and large customers have been using the service since 2018 and an estimated 2,000 tonnes of organics have been diverted from landfill and turned into nutrient-rich compost. **Commonwealth Bank of Australia** has been an early adopter of composting, they were our first customer – starting with one building in Sydney they were quickly diverting one tonne of organic waste from landfill every week. They now compost across their three buildings in Sydney, including their 6-star rated building in South Everleigh.

In 2020, we decided to take the BioPak Compost service a step further and create a brand agnostic and independent website, Compost Connect, to support businesses looking for compostable packaging and a composting service. This initiative is open to the compostable packaging and foodservice industries and also provides a source of trusted information for consumers. This project has been funded by the National Product Stewardship Investment Fund. We anticipate that the project will significantly increase acceptance of compostable packaging at composting site as well as the availability of collection services.

In parallel, an increasing number of councils are implementing FOGO (Food & Garden Organics) collections that allow compostable packaging. It's the case in the Adelaide area for instance ([Source](#)). We strongly believe that Single-Use Plastic bans will give councils the confidence that plastic contamination will be greatly reduced, resulting in wider acceptance of compostable packaging in FOGO bins.



REPLACEMENTS FOR PROPOSED BANNED ITEMS

In certain closed-loop contexts, such as canteens, air travel, or sport and music events, compostable bioplastics are an indispensable and efficient solution to guarantee safety and hygiene for food and drinks while ensuring at the same time waste collection and recycling. The biodegradability of industrially compostable bioplastics in the marine environment is a concern. However, products made from PLA need to be clearly defined and should be used to replace conventional fossil-based plastic where alternatives do not exist. Improving waste management on land and building efficient mechanical and organic recycling infrastructures across Australia remain a priority when it comes to fighting marine pollution.

PLA bioplastic continues to evolve and there are PLA blends that are able to be composted in a home compost environment. ([source](#)).

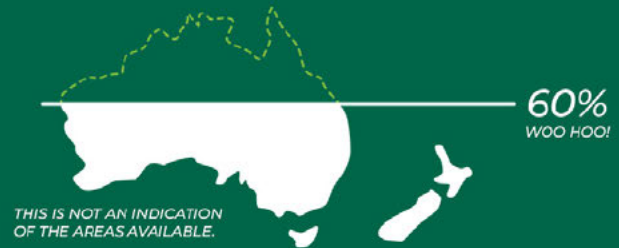
For the reasons listed above, we recommend not to include compostable plant-based plastic, such as PLA (Polylactic Acid) in the proposed definition of plastic. The following table shows readily available and scaled up alternatives for the foodservice items on the ban list:

Item type	Replacement item	Availability	Replacement item current share of the market
Single-use plastic bags	BioPlastic Home Compostable Bags	Ample supply	30%
Single-use plastic bags	Paper Bags	Ample supply	5%
Oxo-degradable plastic	BioPlastic Home Compostable Bags	Ample supply	30%
Oxo-degradable plastic	Paper Bags	Ample supply	5%
Plastic drinking straws	Paper Straws	Ample supply	60%
Plastic drink stirrers	Paper Straws	Ample supply	60%
Plastic ring carriers for beverage containers	Home Compostable pulp can ring holders	Ample supply	1%
Reusable plastic bags	BioPlastic Home Compostable Bags	Ample supply	30%
Reusable plastic bags	Paper Bags	Ample supply	5%
Single-use expanded polystyrene food and beverage containers	Paper Cups lined with PLA (Industrially Compostable). Some Home Compostable options are currently being developed	Ample supply	50%
Plastic takeaway sauce containers	Home Compostable Pulp or Industrial Compostable PLA	Ample supply	5%
Plastic fruit and vegetable packaging	Home Compostable Pulp	Ample supply	20%
Single-use plastic cutlery	Wooden and PLA options	Ample supply	20%
Polystyrene packaging	Home Compostable Pulp or Industrial Compostable PLA	Ample supply	5%
Plastic takeaway food containers, other than plastic takeaway sauce containers	Home Compostable Pulp, Industrial Compostable PLA or Paper lined with PLA	Ample supply	5%
Non-recyclable and non-compostable beverage containers	Paper Cups lined with PLA (Industrially Compostable). Some Home Compostable options are currently being developed	Ample supply	50%

OUR 12 INDUSTRIAL COMPOST PARTNERS



CAN COVER MORE THAN 60% OF BIOPAK CUSTOMERS



COMPOSTABILITY CERTIFICATIONS

The packaging industry is ripe with misleading unverified 'degradability' or 'compostability' claims. However, the only way of substantiating the compostability of a product is to have it certified by a third party. That is what the Australian Home Compostability (AS5810) and Industrial Compostability (AS4736) offer: an independent verification that gives consumers and composters the reassurance that the products will actually break down given the right conditions.

Most compost sites that accept compostable packaging will demand product to be certified to the AS4736 or AS5810 (see Annex A) and **we strongly recommend that acceptable compostable packaging alternatives be certified to these standards.**



HOME
COMPOSTABLE
AS5810



INDUSTRIALLY
COMPOSTABLE
AS4736

CLOSED LOOP CASE STUDIES

Qantas

BioPak working with Qantas to launch the world's first zero-waste flight. Flying from Sydney to Adelaide in May 2019, the ground-breaking flight is part of the most ambitious environmental push by any airline, with BioPak at the helm in trialling this major zero-waste initiative. BioPak's certified compostable packaging was used on the flight and was commercially composted in Adelaide. It is possible to remove and replace all single-use plastic packaging on this flight and achieve a waste-free experience. [Read more.](#)



Atiyah

Atiyah is Australia's first zero-carbon, off-grid street food kitchen. The greenhouse gas emissions created by the production of their meals and drinks have been assessed and quantified across their total life-cycle. "At Atiyah, we want to set an example that you don't need emissions to run a kitchen, and really, there's never been a better time to think about renewable energy in this way," says founder Ben Armstrong. Their menu shows the carbon emissions that have been saved from every meal and drink. BioPak supplies their carbon-neutral, compostable packaging combined with innovative composting services to turn Atiyah's takeaway packaging and food waste into nutrient-rich soil. [Read more.](#)



Sea Life Kelly Tarlton's

BioPak has teamed up with Sea Life in Auckland, New Zealand, in a bid to reduce the negative environmental impacts caused by single-use plastics. Sea Life has replaced conventional single-use foodservice packaging with compostable, carbon-neutral packaging, and implemented strict waste-disposal systems to reduce their contribution to landfill. Opting for composting collection services and a stronger understanding of waste management across all staff, Sea Life has been able to reduce their waste from 5 tonnes per week to 1.5 tonnes of compostable waste after adopting BioPak. [Read more.](#)



Commonwealth Bank of Australia

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ANNEX A – JEFFRIES AND PEATS SOIL & GARDEN SUPPLIES LETTER



1 October 2019

To Whom it may concern,

We are writing to confirm that both Jeffries and Peats Soil & Garden Supplies, organics recyclers in South Australia, are able to collect and receive compostable packaging that is certified to AS-4736 and AS-5810, along with recyclable organics, in the extended Adelaide metropolitan area.

This includes Council green lid bin, household and commercial organics bin collections, where available.


The recyclable organics collected will be processed at local facilities owned and operated by Jeffries or Peats Soil & Garden Supplies and turned into nutrient-rich compost products.

Please feel free to contact either Lachlan or Peter if you have any further questions.

Yours sincerely,

Lachlan Jeffries
Executive Director

Jeffries Group

 Peter Wadewitz
Managing Director

Peats Soil & Garden Supplies