Committee Secretary

Standing Committee on Industry, Innovation, Science and Resources

Parliament House

Canberra ACT 2600

Email: iisr.reps@aph.gov.au

24 February, 2020

***Re:*** **Submission to the Inquiry into Australia's Waste Management and Recycling Industries**

Thank you for the opportunity for the public to give feedback to the *Inquiry into Australia's Waste Management and Recycling Industries*.

Zero Waste Victoria (ZWV) is a community organisation whose mission is to empower people to rethink waste and value resources. ZWV facilitates community engagement, education, provides sustainable living advice, and leads conversations on the growing issues of our waste and recycling system with councils, businesses, schools and community groups. ZWV is supported by, and represents, a broad demographic including sustainability & waste consultants, environmental educators and everyday people who are taking action to reduce their waste.

ZWV also provides a forum where people can discuss ideas, seek advice from one another, and connect with resources to support and enable waste avoidance. It is our community connection that places ZWV as an advocate for the community who are striving to avoid and reduce waste.

ZWV was established in 2016, when members of the community joined forces to showcase ways people can reduce waste in everyday life and the Sustainable Living Festival. In March 2019 ZWV became an incorporated association, as a result of growth due to increasing public concern and the growing issues of our waste and recycling system. ZWV and associated consultants have effectively become a 'go-to' organisation for people and organisations who are seeking to avoid and reduce unnecessary waste.

ZWV welcomes the opportunity to provide a response on behalf of the community to the *Inquiry into Australia's Waste Management and Recycling Industries*. We are happy to answer further questions to support Australia's initiatives to better manage waste.

Kind regards,

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President
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# 1. Introduction

Every person is responsible for waste. For consumers, it begins when they purchase products, and it turns into waste when the remnants of their consumption are discarded. Most try to separate recyclables from waste destined for landfill, but there are inconsistences which challenge recycling which causes confusion. This has left the community frustrated and disillusioned with regards to what can be, and what is actually recycled. People want to know their efforts to sort recyclables means it is recycled, but it is evident that is not always the case.

The ABC series War on Waste, has informed the public and also government and businesses about misnomers in the waste industry. This increased public awareness has been a catalyst for many to reconsider the waste they create. So with an already heightened awareness of waste, when the public learnt that the recycling they had meticulously sorted was going to landfill, it created a high level of disappointment, frustration, and outrage for many.

Waste and recycling processes are not transparent, there is little accountability from industry, businesses, government, and individuals, and this must be reviewed. For waste management to be effective the community, businesses and government all have a part. This inquiry must address the supply chain of waste from design to manufacture, sale, use, transportation and disposal.

We must also take into account that manufacturers, importers, distributors and consumers are contributors to our problems with waste management. While the waste industry should be accountable for the way waste is managed, there should also be accountability for the quantity and type of waste that the waste industry is obligated to take care of.

Decisions are now being made about infrastructure investment in waste management and resource recovery which will set the direction for the waste sector for decades to come. The present generation must ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.

Ultimately this inquiry must address transparency and accountability with the supply chain of waste, from design of a product and its packaging through to the management of its disposal.

# 2. Confusion with recycling

The community regularly reach out to ZWV querying how to correctly dispose of specific items. The challenge to answering these questions is that it varies in accordance to the Local Governments waste service provider. An example of an inconsistency is meat trays.

- Metropolitan Waste and Resource Recovery Group (MWRRG) in Victoria states that "*No meat trays or other similar food packaging*" can be recycled
- Yet Glen Eira council, a Melbourne council says that "*Plastic meat trays can be recycled*."
- Which Bin in South Australia says "*Black plastics are tricky to recycle as they don't reflect light so this means that they can't be identified and sorted by the optical scanners at recycling facilities. Recyclable materials collected by East Waste are processed by Northern Adelaide Waste Management Authority (NAWMA) where the majority of plastic is sorted by hand. This means that most black plastic items can still be recycled*."



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Meat trays is one example of inconsistency, however there is an extensive list of products and packaging that this applies to. This causes confusion and inevitably contamination of recycling streams and / or materials sent to landfill that could have been recovered.

A national review and assessment should be undertaken to develop strategies to enable consistency of materials that are recycled in Australia.

# 3. Packaging and Product Labelling

## 3.1 Labelling complexities

Some packaging has the recycling symbol, even if it cannot be recycled in kerbside collections. This ultimately results in contamination of recycling streams, and misleads consumers who attempt to make sustainable choices when purchasing, and disposing of waste. As this labelling isn't standardised or effectively regulated, it makes it difficult for consumers to know what can and can't be recycled.

The myriad of packaging choices causes confusion for the average consumer. Terms like compostable, degradable, biodegradable and oxo-degradable packaging are marketed as a better environmental alternative to plastic bags. But if it ends up as litter, it behaves like plastic in the environment, or worse breaks into tiny pieces, causing additional problems. Compostable packaging in landfill can still produce methane, so it is of no added value, unless it is composted.

The differences between packaging types need to be clearer so people aren't misled by eco-marketing claims. If a packaging can't be recycled or readily composted, then its use ought to restricted, or disallowed where reusable, or recyclable options are available. The classification of recyclable should be in consultation with recyclers.

An example of this is with the guidelines for a local council's festival I reviewed, I noted that vendors were required to have recyclable or compostable packaging. I asked how the council were going to manage any compostable packaging, and they listed which packaging types could be recycled and which would be landfilled. The event organisers were advised that consumers and businesses who were obligated to use compostable packaging were being misled if this packaging were to be landfilled instead diverted to a compost facility, as implied. As a result the guidelines were amended to stipulate that recyclable packaging must be used. If local government sends a mixed message with this, you can guarantee that the general public will be confused by this too.

Use of compostable packaging should only be used if it is likely to be composted. If use of compostable packaging is more widely adopted, it should be supported by infrastructure to properly manage it.

## 3.2 Australasian Recycling Label

The Australasian Recycling Label (ARL) has been developed to give consumers guidance on the correct disposal method. We support the concept of this, but for it to be effective there needs to be education campaigns and community engagement to ensure the public are aware and understands how to use the label.

However the label can be contradictory to some local council recycling information, because of the variance of what is collected in different municipalities. This is something this inquiry should address, as effective use of the label will result in more efficient recycling streams.

For the ARL to be effective we need to

- Have a national standard of what is collected for recycling in kerbside collection that aligns with the ARL.
- Standardise Materials Recovery Facilities (MRF's) for consistency of recycling products and packaging in kerbside recycling collections.
- Support MRF's with funding to update their technology and systems for increased sorting capacity and consistency throughout Australia to align with the ARL.
- Make it a requirement that the ARL is used on all products packaged or sold in Australia, including takeaway packaging and non-food packaging.
- The ARL should be extended to take into account product disposal, especially on products that are likely to have a short lifespan.
- Monitor claims to ensure that if a product or packaging is labelled as recyclable, that if correctly disposed of, it will be recycled.
- Have targeted education campaigns directed at all stakeholders. The focus is often only on consumers, but distributors and manufacturers should be accountable too.
- Promote nationwide recycling education campaigns to ensure consumers understand how to interpret the ARL.

A national review and assessment should be undertaken to ensure Australia wide consistency of labelling of any packaged product that is sold or imported into the country

## 3.3 Problematic packaging and products

A focus needs to be directed to phasing out problematic and unnecessary single-use plastic packaging. Consumers often have little choice with over packaged products, and are left with managing waste that could have been avoided or minimised by the manufacturer or seller.

There is also packaging which is labelled implying it is an 'eco' friendly option, or a better waste option, which is often misleading. It is essential that substitutes for problematic packaging are a sound alternative which provide genuine environmental benefit.

Manufacturers and retailers should be encouraged to avoid problematic materials in favour of readily recyclable options.

Some problematic materials to be prioritised for review

- Polyvinyl Chloride (PVC) is rarely recycled and not accepted by most recycling programs. It will contaminate other plastics being recycled, with MRF's going to great efforts to remove it from other recycling streams. PVC is not limited to packaging, it is used in pipes, hosing, floor mats children's toys and much more.
- Expanded Polystyrene (EPS) is problematic, largely due to collection logistics. When compressed, EPS becomes economically viable to transport and recycle. However it is not

accepted in most kerbside recycling schemes, so while it is recyclable the majority of EPS goes to landfill.
    - We either need to enable infrastructure for EPS to be recycled
    - Or it needs to be phased out of packaging where alternatives are available
- Composite packaging adds complexities to recycling. For example two or more different types of plastic for the same product like shrink PVC sleeves on HDPE or PET bottles, with a polypropylene, or unlabelled lid. The lid can also have an additional lining.
  There are many examples of composite packaging, which combine materials together which inhibit or prevent recycling happen as a result
- Coloured plastics have a lower value than clear plastics, as the colour can contaminate recycling streams, particularly with beverage containers. While coloured plastics are recyclable, the use of them should be reconsidered, particularly in packaging and single use items
- The need to encouraging and ultimately require manufacturers to use materials that can readily be recycled, will increase recycling rates.

### 3.4 Reusable Packing

To reduce packaging waste, a greater emphasis need to be placed on packaging that is reusable

- Refillable Glass Milk bottles are making a comeback with companies like Schulz, Barambah, Bassine to name a few.
- Wine and beer, have since emerged with Rewine
- There are an increasing amount of business who allow or encourage customers to bring their own containers to refill shampoos detergents, through to off the shelf goods
- Deli's also enable consumers to avoid waste by bring their own containers
- Consumers bringing their own containers to stores to purchase goods and the reintroduction of washable and reusable beverage bottles should be incentivised
- Manufacturers should be encouraged to consider if packaging could be reusable, and government should support them to enable this
- An extended container deposit scheme could support the return of refillable containers, in addition to recyclable beverage containers

### 3.5 Supply chain waste

There is a significant amount of packaging and plastic waste that retailers and manufacturers manage, that isn't often taken into account such as

- Pallet wrap and strapping
- Excess stock that is saleable, but discarded
- Materials that are useable, but discarded
- Edible food that is discarded to landfill

## 4. Product Stewardship

To assess accountability with waste streams we need to ensure that no commercial advantage is obtained by any person who fails to comply with environmental requirements. It can cost more to

use recycled and readily recyclable products, which can put business at a financial disadvantage to do the right thing for waste and the environment. This is something that needs to be addressed.

## 4.1Extended Producer Responsibility

To effectively manage waste we must take a holistic approach, taking into account the full supply chain and all the elements of waste, from manufacture through to disposal. The spotlight is on how the waste industry is managing the material they receive, and while that is important, we must also look at the source of the issue, the producers and sellers.

There is no regulation, or standard guidelines to encourage manufactures to produce products or packaging that is designed to be recycled at the end if the life-cycle. In some instances manufacturers claim that the product or packaging is recyclable, when that is not the case.

Manufacturers need to encouraged or required to rethink their product design and use of materials to make packaging and products that are easier to recycle or repurpose at the end of their life. Currently manufacturers and retailers can produce whatever they like and the cost to dispose of this is passed to the community via rates, regardless of their individual consumption choices.

The *Product Stewardship Act 2011* is under review, the consultation for this closed on 29 June 2018. At the time this submission was written, the review was not yet released. Increasing the number of schemes supported by this act needs to be a high priority.

## 4.2 Product Stewardship schemes

If Australia is seeking to responsibly manage waste, then Extended Producer Responsibility (EPR), or Product Stewardship must be considered as fundamental. The regulation of products or materials that are difficult, or have higher costs, to recycle aligned with the introduction of 'advance disposal fees', would level the equity of accountability for manufacturers and businesses that inadvertently create waste with the products they sell.

While EPR should consider all elements of environmental impact with manufacture and distribution of products, the waste element is a significant aspect. The National Television and Computer Recycling Scheme (NTCRS), requires companies who import or manufacture television and computer products to pay a fee towards recycling the product. So

Schemes can be extended and additional products or materials included such as

- NTCRS which can be extended to include all e-waste, as in anything with a battery and / or power cord
- NTCRS should also include packaging
- Photovoltaic systems to be in a co-regulated or mandatory schemes
- Plastic oil containers need to become a co-regulated or mandatory scheme
- Microbeads prohibited from use
- Tyres needs to move to a co-regulated scheme and be accessible to all Australians for correct disposal
- Paint through the voluntary Paintback stewardship scheme needs to be co-regulated to ensure that it is accessible to and viable for all Australians to access.

Schemes that could readily be implemented are

- National Container deposit scheme (detailed in 4.3)
- Single-use plastic items including: straws, disposable coffee cups, plates, containers, cutlery, light weight and thicker weight plastic bags including plastic carrier bags, plastic bottles, plastic cotton buds, balloons, plastic packets and packaging, plastic wrappers, nappies and sanitary items
- Plastics, particularly hard to recycle plastics including polystyrene, PVC and 'other' ie#7
- Mattresses and mattress bases. Recycling schemes are already tried and tested, in a growing number of locations. This scheme needs to be co-regulated and accessible to all Australians.
- Cigarettes butts ought to be levied, as they are one of the highest littered items in the country, and do not break down in the environment.
- Toys – rigid plastic toys, soft toys, and single-use party toys such as glow sticks – none of this is recycled
- Sports equipment – tennis balls, football, basketball etc. and sports shoes. Silicon and latex swimming caps and goggles. Sports equipment is frequently replaced. ASGA has recently started collecting sports shoes for recycling, which is a step in the right direction
- Plastic cards eg drivers licence & ID, membership / gift / credit cards.
- Clothing and manchester
- Nylon, polyester and synthetic materials release microfiber particles, and have the same detrimental effect as microbeads, this need to be considered
- Soft furnishings, including carpets and textiles. There is limited recovery and recycling options for couches, as the process is cost prohibitive.
- Hair and beauty products are often over packaged in non-recyclable containers in. There can also be chemicals to be disposed of. Hairdressers and beauty practitioners need a regulated scheme such as the scheme already in place with http://sustainablesalons.org/
- Pharmaceutical packing needs to be review and encouraged to seek recyclable options eg inhalers can be recycled in the UK http://uk.gsk.com/en-gb/responsibility/our-planet/complete-the-cycle Australia should adopt this practice too.
- Stationary – pens, highlighters etc, need to be placed on a voluntary product stewardship scheme, with innovation towards refillable options. Office works is now a collection point for recycling stationary and other items https://www.officeworks.com.au/information/about-us/sustainability/environment/recycling
- Helium filled balloons can land hundreds of kilometres from where they were released, causing litter and great harm to the environment and wildlife. In Queensland, the release of balloons into the environment is considered littering under the Waste Reduction and Recycling Act 2011—whether released deliberately or by accident.
  https://www.qld.gov.au/environment/pollution/management/waste/balloons
  NSW also has legislation http://www.environment.nsw.gov.au/questions/release-helium-balloons
  This legislation should be adopted by the Commonwealth Government.

Please note effectively every product that may become waste, should be a consideration for producer responsibility. But we should start with highly littered and problematic plastics.



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## 4.3 Container Deposit Schemes

Container deposit schemes (CDS) need to be consistent nationally

- Evidence suggests that container deposit schemes are effective in reducing beverage container litter.
- A national CDS could support standardisation of packaging which can, and will, be recycled
- CDS should ultimately be extended to other plastic packaging, such as plastic takeaway cups and containers
- Additionally CDS could be extended to support reusable and refillable glass bottles and containers, in addition to single-use plastic containers.
- A national scheme will enable standardisation of a deposit levy which can be adjusted if required to ensure the cost of disposal / recycling is adequately covered.

## 4.4 Phasing out of plastic bags

Use of lightweight plastic bags has been phased out in all states except NSW. Making this Australia wide is a natural progression. There are some distinct advantages for making this a national policy and regulation

- Currently the cost of the bag is at the liberty, and of benefit to the seller, but there is no financial contribution towards the management of the waste when disposed of.
- Plastic carry bags should be sold with a levy, with a set amount to be allocated to a fund or scheme dedicated to managing and reducing waste. This should not be considered a tax and all funds should be directed to environmental fund to support a range of initiatives such as
    - Subsidising start-up packaging reuse initiatives
    - Community groups cleaning up litter and improving the environment
    - Enabling environmental groups to document pollution from litter cleans and identify sources of pollution.
    - Waste-wise and recycling education programs for businesses, schools and the community to enable better waste disposal and recycling practises
    - Research & development to develop products or components supporting improved environmental outcomes such as refillable bottles and reusable packaging schemes.
    - Innovations aimed at better managing resource recovery and applications for product development from reclaimed materials

## 4.5 Pricing mechanisms

Some manufacturers use recycled resin because of the ethos of their business, or as a market driver to have an environmental conscious. But it's generally more costly to buy recycled plastics, which inevitably skews procurement to favour of using virgin materials. Therefore products and packaging made from virgin plastics are favoured economically.

From a consumers perspective, to purchase something from recycled plastic it comes at a premium price, effectively paying for the 'privilege' of using recycled plastic. There is no financial contribution from the manufacturer or user for the waste they created. The real disposal cost of plastics is something that must be reviewed and should be considered in this inquiry.

This can be addressed with improved valuation, pricing and incentive mechanisms in the recycling market. There should be incentives in places for manufacturers who take into account the full life cycle costs of providing the goods and services, including disposal, to create a level playing field taking into account the use of natural resources and the ultimate disposal of wastes.

If recycled plastic was more economical to use, then it will be an easier transition for manufacturers to opt for this.

## 5. Planned obsolescence

Product obsolescence decreases the lifespan of products, which impacts waste. Product stewardship objectives can be put in place to reuse and recycle products at the end of their life-cycle, it is also important to ensure that consumers are able to repair products to increase the life of them. For example, if a product cannot be disassembled to enable repair or battery replacement, that is a design decision which limits the life of the product, which is effectively in-built in obsolescence.

Mandatory environmental design standards need to be applied to relevant products. These standards would require Australian companies to manufacture, import or sell only products that are designed with the whole product life-cycle in mind, taking into consideration upgrade, repair and recycling. It is fair to say that many products were made better 30 years ago, and lasted much longer than they do today.

Products that cannot be reasonably repaired should be prohibited from manufacture and distribution into Australia.

## 6. Government Collaboration

Protection of the environment is a responsibility shared by all levels of Government, industry, business, communities and the people of Australia. It is clear that all levels of government are affected by the impacts of waste, and they all have a role to play.

State and territory governments are responsible for the regulation and management of waste and resource recovery and have their own laws and policies to regulate waste management. As a result States governments operate almost like separate countries with regards to policies and regulations when it comes to waste management. And while Local Governments operate under state policies, municipal waste collections and processes vary significantly too.

We need the Commonwealth government to take a leadership role and work with industry, state, territory and local governments, community and other stakeholders. There needs to be more unity and consistency to enable

- Harmonisation of landfill fees
- Nationwide approach to container deposit and plastic bags
- Product stewardship schemes with a focus on using materials which are sustainable and pricing mechanisms to ensure they are financially viable

The Commonwealth government can support a reduction in landfill and plastic pollution in the waterways, oceans and land by

- Restricting avoidable and unnecessary sources of waste and problematic plastics
- Regulating materials, and single-use items which are difficult, or not possible to recycle within Australia
- Ensuring waste is managed responsibly, taking into account economic, social and environmental considerations.
- Restrict landfills from taking organics, the contributors to methane
    - Preferred methods of management via composting and / or biological waste to energy processes, such as anaerobic digesters
- Engage with industry, state and local governments, the community and other relevant stakeholders to understand the existing waste management and recycling problems.
- Learn from community projects that are already in action to avoid waste disposal. Acknowledge this foundation and aim to replicate effective initiatives across Australia.
- Setting packaging standards to enable more efficient recycling
- Develop guidelines and / or enforceable regulations for Producer Responsibility, holding manufacturers and retailers to account for the waste created from products they sell
- Develop pricing and incentive mechanisms so that the persons (i.e. Manufacturer, retailer, consumer) who generate pollution and waste should bear the cost of containment, avoidance and management of waste generated.
- Develop national recycling standards to enable consistency across the country with regards to
    - Collections
    - Management
    - Industry standards and regulation
- National standards will enable consistent community engagement and education to avoid, reuse and recycle waste

## 6.1 Exports & imports

Australia needs to take responsibility for our own waste and we should enable this to happen locally. However a blanket ban on exporting poses risks such as stockpiling of waste and / or more waste going to landfill.

To effectively manage this situation, we need to

- Ensure we are not fixing one problem by creating another
- Acknowledge that recycling is exported, because Australia does not have sufficient infrastructure to process it locally
- Restrict or ban the imports of materials and products that are problematic for recyclers (as detailed in 3.3) if there are more sustainable options available
- Encourage products that can be reasonably repaired (as detailed in section 5)
- Support the development of end markets for recyclable materials with Australia
- Inject funding into recycling infrastructure i.e. the ability to physically recycle material in Australia

## 7. Recycling Process and transparency

The Wikipeida definition of recycling is: "*Recycling is the process of converting waste materials into new materials and objects*." However there can be many stages prior to the conversion of waste back to a resource

- Co-mingled recycling is picked up by waste transport companies with waste packed into the truck as much as possible
- These mixed materials are separated at MRF's using a combination of human and mechanical means, which is expensive but necessary as we don't have effective source separation procedures
- MRF's sort recyclable material, bale it then trade it as a commodity
- While some physical recycling happens in Australia, significant quantities have been exported because we don't have infrastructure and / or demand

For more effective recycling and transparency we need to

- Enable better source separation for cleaner recycling streams
- Inject funding into infrastructure to enable localised recycling initiatives
- Understand the processes involved for physical recyclers to receive and process recycled materials
- Apply the real disposal and recycling cost to the user / manufacturer to price
- Develop uniformity with MRF's to enable consistency across Victoria with kerbside collections

## 8. Waste to Energy

This is an important topic which needs to be addressed in its own right, as it is a means for diversion of waste from landfill. Recovery of Energy processes refer to a range of technologies and are often referred to as Waste to Energy (WtE) or Energy from Waste (EfW).

There are a range of technologies which vary significantly, and leave the experts debating which is considered best practice. Regardless there are different technologies for different applications

- Capturing methane from landfill emissions for use in electricity generation. Avoiding organic waste in landfill is preferable, but as it needs to be managed, creating energy is a practical solution
- Biological processes such as Anaerobic Digestion, effectively manage clean streams of food waste, with any residual waste streams being used as an agricultural application.
- Thermal processes include incineration, gasification, pyrolysis and plasma arc technologies which are process requiring temperatures of 800-1200 degrees Celsius. While this reduces landfill, these processes still result waste streams, some of which is classified as hazardous
- Thermal WtE technologies are something that Australia should tread carefully with
    - Because once established, they can create a demand for feedstock which puts them in competition with avoiding and / or recycling waste. These operations might

appear to provide an 'easy way out' for councils today, but they require a large amount of waste on a continual basis to be viable.

- There needs to be Australia wide policy taking our waste management requirement into consideration. WtE facilities require significant financial investment, so we do not want to over capitalise on infrastructure that we do not need. Currently applications are assessed as individual facilities, without government policy or strategy to guide them.
- Victoria has recently approved a 650,000 tonne / annum incinerator, of which 550,000 tonne will be MSW, in the Latrobe Valley. A facility in Laverton has been approved for 200,000 tonne / annum of MSW. There is a proposal for 100,000 tonne / annum of MSW in Dandenong and there are others in the pipeline. Victoria has 1.18 million tonnes of MSW collected at the kerbside in 2017/18
  We cannot approve facilities in Victoria, or Australia that have the collective capacity exceeding our requirements, or the price mechanisms to gain feedstock will undermine recycling and higher order outcomes for the waste hierarchy.

- Contracts to supply waste feedstock should be 'waste arising' without minimum contractual obligations. This contractual structure has been applied in the East Rockingham project, allowing local council to maintain or increase recycling rates for waste to be diverted to higher value purpose without financial penalty in order of the waste hierarchy

- There should be a hold on the approval and construction of WtE facilities in Australia, while strategies are developed for waste avoidance, reuse, recycling and managing residual waste

Waste to Energy policies need to

- Be Technology agnostic, to ensure we achieve the most environmentally sound outcomes for Australia
- Take into account regional requirements and long terms needs
- Facilities should only be located with consideration of long term appropriate land use
- Clarify disposal of by-products
- With advancements in technology we are progressively changing what is recyclable, and waste should be diverted to a higher value uses, such as using organics for composting or recycling of materials.
- Ensure waste to energy is a last resort alternative to landfill, it cannot be done as an easy replacement for recycling or poor source separation

# 9. Other points for consideration

## 9.1 Landfill diversion

- There should be a restriction of organics to landfill
  - Starting with edible food

    - All food and garden waste
- Recyclable or reusable materials should be a requirement for all businesses, organisations and households to divert from landfill for recycling. There are still schools, hospitality, commercial and industrial businesses that have no facility to recycle onsite.
- It is also common practice for commercial and industrials businesses to discard materials and products for convenience in preference to putting these goods to use. This results in materials and products that were never used ending up in landfill. This practice must change.

## 9.2 Employment

- According to the Department of Environment and Energy, the estimated direct Full Time Equivalent (FTE) employment per 10 000 tonnes of waste is 9.2 for recycling and 2.8 for landfill disposal. On a national level, this corresponds to an estimated direct labour force of 22 243 FTEs in recycling activities and 6 695 FTEs in landfill operations, a total of 28 930 FTE jobs across Australia.
- More job creation can be anticipated in the reuse, repair, repurposing of recovered waste, which will also reduce the energy expenditure associated with the extraction, refinement, transportation and processing of raw materials into products.

## 9.3 Litter

Litter is a symptom of mismanaged waste and resources. Australia might have more sophisticated collection systems than some places in the world, which distracts from the level of waste we create. But it is time we stop talking about what we can do to better manage waste, and start acting on it, as the highest matter of urgency.

## 9.4 Acknowledging communities role

Issues with waste management are not new, Keep Australia Beautiful Council (VIC) Inc. began in 1963, and Keep Australia Beautiful National Association Ltd (KABNA) commenced in 1971. This organisation was founded to tackle litter, over 50 years ago. Today there is a growing list of community groups and individuals who are taking actions because of litter pollution in our waterways, oceans and environment.

There are too many community organisations and groups too list, that play a vital role in managing our waste. Some of their activities include

- Litter clean ups
- Litter auditing and monitoring programs
- Beach and waterway cleans
- Repair initiatives such as repair café
- Community engagement and education
- Personal waste avoidance opting for refillable containers
- Advocacy encouraging businesses to reduce waste

If it wasn't for the tireless work that thousands of volunteers contribute around the country to managing litter in public spaces, then some regions in Australia would be excessively littered, as the

norm. We should recognise and express gratitude to these groups for their part they do to manage litter pollution.

## Summary

No one is effectively held to account for waste, not the manufacturer who creates it, the agent who imports it, the retailer who sells it, the consumer who disposes of it, the waste industry who collects or receives it, or the government who regulates. Accountability of the full waste supply chain must be an underlying consideration throughout this inquiry.

If it is of benefit to this inquiry or waste management in Australia, we are happy to provide further information or detail on any topic covered in this submission.



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