

# Submission - Inquiry into the *Environmental Protection Amendment (Banning Plastic bags, Packaging and Microbeads) Bill 2016*

- by Plastic Bag Free Inner West, October 2016

## Summary

This report details why Plastic Bag Free Inner West supports the *Environmental Protection Amendment (Banning Plastic Bags, Packaging and Microbeads) Bill 2016* in full. It outlines the detrimental impacts of plastic pollution and the need for change. It addresses all three elements of the bill - plastic bags, packaging and microbeads. It also makes some recommendations for expanding the bill to address other priority problem plastic litter items.

## The need for change

Plastic Bag Free Inner West supports the *Environmental Protection Amendment (Banning Plastic Bags, Packaging and Microbeads) Bill 2016* in full.

The [World Economic Forum, Ellen MacArthur Foundation and McKinsey & Company \(2016\)](#) released a report in which they predicted that by 2050 there could be more plastics than fish in the ocean by weight. [CSIRO \(2016\) research](#) has found that within Australia, three quarters of the litter found on the coast is plastic. 2015 Clean Up Australia Data suggests that plastic and polystyrene account for 41% of the litter collected by Clean Up Australia Day volunteers ([Clean Up Australia, n.d.](#)). Photographic evidence of plastic pollution is included in Attachment 1. Given the rapid increase in the production of plastics, the CSIRO have predicted that plastics ingestion will increase to 95% of all species of seabirds by 2050 ([CSIRO, 2016](#)).

Plastic isn't biodegradable which means that it never fully goes away. It just breaks down into smaller and smaller pieces until micro-plastics particles remain ([National Geographic, 1996-2015](#)). Accumulated surface plastic blocks sunlight reaching plankton and algae deeper down, which has implications for the animals which depend on it for feeding. Micro-plastics are eaten by marine animals, such as shrimp, birds and fish, and can also be absorbed by the predators that eat them. The chemicals within them increase in concentration with each trophic level of the food chain through biomagnification ([National Geographic, 1996-2015](#))<sup>1</sup>.

There is evidence to suggest that some plastics and the chemicals that adhere to them and get absorbed into the plastics can transfer from mother to foetus ([Senate Environment and Communications References Committee, 2016](#)). One study found that larval perch have been shown to not only take in plastic, but prefer it to plankton, their natural food source. The perch born in an environment rich in microplastics had reduced rates of hatching and development to maturity. Pike ate the perch exposed to microplastics four times more rapidly than the perch reared naturally. The death toll for all these fish exposed to the plastic reached 100% within just 48 hours. If microplastics have a similar impact on other species, the flow-on impact on aquatic ecosystems could be profound ([Harvey, 2016](#)).

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<sup>1</sup> *Biomagnification* is the process whereby there is an incremental increase in the concentration of a contaminant with each level of the food chain, i.e., from each animal containing the contaminant to the predator that eats it ([Dictionary.com, 2015](#))

We must not forget that we are part of the food chain. Changes in the marine environment may have an impact on human health. Some studies have found that humans may ingest microplastic through the consumption of seafood. For instance, one study found that approximately 300 plastic particles (1.5ug) would be consumed in a 300g serving of Belgian mussels. Another found that approximately 50 plastic particles would be consumed in a 100g serving of mussels ([Senate Environment and Communications References Committee, 2016](#)). The intestinal uptake of microplastics in humans is thought to be possible, but may depend on the size of the plastic particles ([Senate Environment and Communications References Committee, 2016](#)). Evidence suggests that ingested and inhaled microplastics enter the circulatory system, where they can be stored for a long time ([Senate Environment and Communications References Committee, 2016](#)). While more research is needed to determine the impacts on human health, a precautionary approach should be taken, as the potential implications for individuals and more broadly to public health are too enormous to risk. Reducing exposure is recommended. Plastic bags, fresh fruit and vegetable plastic and polystyrene packaging and microbeads are obvious places to start.

### Plastic Bags

Victoria's litter report card for 2016, identified that Victoria's top five litter issues are: 1. litter in coastal areas and waterways, 2. illegal dumping of waste, 3. roadside litter 4. cigarette butt litter 5. plastic and microplastic litter ([Sustainability Victoria, 2016](#)). Plastic bags falls into the first, third and fifth of these priority issues identified. Plastic bags are obviously a litter problem before they are an ocean problem. However this is not where the problem starts. Plastic bag litter wouldn't exist if people didn't use them. People wouldn't use them if they weren't available. We existed perfectly well for many generations without plastic bags. We don't need them.

Plastic bags take up unnecessary room in landfill, and due to their light weight, often blow out of bins and landfill. They block storm water drains and entrap wildlife. Marine wildlife choke on them, become entangled and starve after mistakenly ingesting them as they give a false feeling of fullness ([Clean Up Australia, 2010](#)). Plastic bags have recently been rated the second highest most harmful marine debris item, as they are often confused for food by marine animals ([Messenger, 2016](#)).

There are a range of voluntary plastic bag reduction initiatives, led by communities, and particular businesses, and in some cases supported by local councils. Many of these initiatives have helped facilitate behaviour change and reduce plastic bag use. However community initiatives such as plastic bag bans, are usually very reliant on volunteers and are difficult to maintain, particularly in urban areas where the turnover of traders is great. In most areas, voluntary initiatives cannot achieve the same level of plastic bag reductions as a legislated ban, particularly if there is a major retailer such as a Coles or Woolworths store in the area.

Submissions addressing the Environmental Protection Amendment (Banning Plastic bags, Packaging and Microbeads) Bill 2016 are only open during council election period. Due to the legislated restrictions placed on Councils at this time, Plastic Bag Free Inner West understands that it is difficult for councils to make submissions to this inquiry. In light of this, we have attached a letter from Melton City Council responding to our enquiry about strategies to prevent plastic pollution (Attachment 2). This letter is supportive of a Victoria-wide ban on plastic bags.

Some opponents to plastic bag bans (such as Coles and Woolworths), say that they are doing the right thing by giving customers choice and having reusable bags available to purchase. However this is not enough. As long as people are given a choice, there will be people who unthinkingly take that plastic bag that their goods are automatically placed in. In order to achieve real change, there has to

be a legislated ban on plastic bags. The plastic bag bans in South Australia, ACT, Northern Territory and Tasmania have shown that people can and will adapt with a transition period of 4-5 months. The six month transition period suggested in the proposed amendment bill can therefore expect to be more than sufficient.

Plastic Bag Free Inner West recognises that social norms affect behaviour. Social norms tell us what is socially accepted and what is expected of us. Conforming with social norms is instinctual and makes us feel more part of the community where they are present, giving us a sense of belonging (Sanagorski and Monaghan, n.d.). At present, plastic bags are talked about as the norm, and reusable bags are talked about as alternatives. If we want to see significant plastic bag use reduction, this thinking needs to be turned around. Non-plastic reusable bags and their reuse must become the norm. The proposed amendment bill would change plastic bags from the default option to an exception, and could therefore expect to have a positive impact on our attitudes and behaviour. This is a strength of the bill which should not be changed.

The review of the Plastic Shopping Bags Ban Act 2010 in ACT found that the ban on single-use plastic bags was effective in reducing the amount of plastic bag material going to landfill and reducing plastic bag litter ([ACT Government - Environment and Sustainable Development, 2014](#)). The review of the Plastic Shopping Bag (Waste Avoidance) Act 2008 in South Australia found that the ban on single-use plastic bags "provided significant benefit to the community including; restricting supply of lightweight single-use plastic bags, reducing the number of these bags in the litter stream and increasing household acceptance of alternatives to lightweight single-use plastic shopping bags" ([Aspin, 2012](#)). The sale of bin liner sales increased with the introduction of bans in both ACT and South Australia, however they then returned to pre-ban levels in ACT ([ACT Government - Environment and Sustainable Development, 2014](#), [Aspin, 2009](#)). The review of the ban in South Australia recommended considering extending the ban to address the new alternatives, including thick and heavy plastic bags ([Aspin, 2012](#)).

As the definition of 'plastic bag' in the proposed amendment bill is broad, the ban would apply to more types of plastic bags than in the South Australian, ACT, Northern Territory and Tasmanian bans. Adoption of the proposed amendment bill would enable Victoria to lead the way in plastic pollution prevention. Plastic Bag Free Inner West is in support of a plastic bag ban that prevents all types of plastic bags from entering the litter stream and becoming plastic pollution (rather than just single-use plastic bags).

Evidence suggests that biodegradable and degradable bags may "significantly contribute to levels of microplastic pollution in the marine environment" and that there is consumer confusion regarding these types of bags ([Senate Environment and Communications References Committee, 2016](#)). In addition, the use of biodegradable and degradable plastic bags as an alternative to standard plastic bags, does not encourage social change. These bags should be included in any plastic bag ban.

There are numerous countries, cities and towns around the world that recognise the issues associated with single use plastics, in particular, plastic bags. Plastic bags are a great place to start to reduce plastic waste and litter, because they are 'add-on packaging' and hence a choice, not a necessity. Some regions have banned plastic bags, others have placed a levy on them. The Republic of Ireland became the first country to introduce a tax on HDPE carry bags in 2002. The 15 euro cents per bag tax resulted in a 90% reduction in usage in the first 12 months, lowering consumption to 85 million bags. However this didn't last, and consumption later increased significantly (from 85 million per annum in 2003 to 113 million in 2005). The tax on these plastic bags has since been increased to cater for the increase in consumption ([Clean Up Australia 2010](#)). Similar trends of significant consumption reductions, followed by gradual increases in consumption after the first 12

months have also been seen in Wales ([Fogg, 2014](#)), and South Africa ([Dikgang, Leiman and Visser, 2010](#)). A levy on plastic carry bags could be seen as a perverse incentive and remove guilt associated with plastic bag use. If this guilt was curbing consumption, removing it could see consumption increase ([Fogg, 2014](#)). Charging for plastic bags can create an equity issue, with plastic bags being an option for those with sufficient disposable income, but not necessarily for the financially disadvantaged. For these reasons, Plastic Bag Free Inner West support a ban rather than levy or charge on plastic bags.

Plastic bags<sup>2</sup> can be recycled by dropping them off at a soft plastics collection bin, outside some major supermarkets . However these collection bins are not available in some areas ([Redcycle, 2016](#)). Only 3% of plastic bags are actually recycled ([Planet Ark, 2016](#)). While strategies to increase this very low recycling rate should be adopted, it is not enough to do this alone. Recycling still typically requires the use of resources such as energy, water and some raw materials. Reducing consumption (such as by banning plastic bags) should therefore be the number one priority, but be coupled with strategies to increase recycling.

A ban on the sale or supply of plastic bags by retailers is consistent with the non partisan [Senate Environment and Communications References Committee report \(2016\)](#), which makes the following recommendation:

- Recommendation 21 8.91 The committee recommends that the Australian Government support states and territories in banning the use of single-use lightweight plastic bags. In doing so, the Australia Government should ensure that alternatives do not result in other pollutants entering the environment.

### Microbeads

Microbeads are found in particular exfoliating personal care products (such as face and body washes), toothpastes, cosmetics (such as lipsticks and mascaras), household detergents and sunscreens. These products can easily be made **without** the use of microbeads.

The microbeads from these products end up in the ocean via the waste water they are disposed of in, as they are too small to be filtered out at treatment plants. For the reasons outlined above, this is problematic.

The impacts of microbeads are widely recognised by jurisdictions around the world. Canada has added them to the country's list of toxic substances ([Canada Gazette, 2016](#)), and several jurisdictions such as the United States ([Brodwin, E. and Lutz, A., 2015](#)) and United Kingdom ([Department for Environment, Food & Rural Affairs and The Rt Hon Andrea Leadsom MP, 2016](#)) have already decided to ban them.

An immediate ban on the sale, supply or provision of goods containing prohibited plastic microbeads is consistent with the non partisan [Senate Environment and Communications References Committee report \(2016\)](#), which documents:

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<sup>2</sup> Plastic bags are a type of soft plastic

- Evidence of strong community and manufacturer support for a phase out of microbeads
- The threat to coral reefs as corals consume microplastics in sea water at the same rate of normal food and are unable to expel them from their digestive systems, placing them at risk of starvation and death

The Federal Government has committed to introducing a legislative ban if the voluntary industry initiated phase-out does not result in the removal of all such items by 1 July 2017. However after reviewing the evidence, the committee recommended an **immediate ban** on microbeads.

Given that the problem of microbeads is enormous and growing daily, and that it remains to be seen if there will be a legislated nation-wide ban on microbeads, Plastic Bag Free Inner West urge the Victorian Government to introduce legislation to immediately ban the sale, supply or provision of all goods containing plastic microbeads.

### **Fresh fruit and vegetable plastic packaging, including polystyrene**

The World Economic Forum has stated that "A staggering 32% of plastic packaging escapes collection systems, generating significant economic costs by reducing the productivity of vital natural systems such as the ocean and clogging urban infrastructure. The cost of such after-use externalities for plastic packaging, plus the cost associated with greenhouse gas emissions from its production, has been estimated conservatively by UNEP at \$40 billion—exceeding the plastic packaging industry's profit pool." In addition, an estimated \$80-120 billion worth of plastic packaging waste is either disposed of to landfill or becomes pollution ([Senate Environment and Communications References Committee, 2016](#)).

Plastic is problematic for the reasons outlined above. Fresh fruit and vegetable plastic and polystyrene packaging is particularly wasteful, as it is only designed to be used once before it is disposed of and serves no useful purpose. The polystyrene trays cannot be recycled, and the recycling rate of soft plastic packaging such as cling wrap is low. Most fresh fruit and vegetable plastic and polystyrene packaging ends up in landfills or as pollutants in the environment. For these reasons, Plastic Bag Free Inner West supports a ban on plastic and polystyrene packaging for fresh fruit and vegetables.

### **Other recommendations**

The non partisan [Senate Environment and Communications References Committee report \(2016\)](#) documents evidence that lost and deliberately released balloons significantly contribute to plastic pollution. Plastic Bag Free Inner West were appalled to discover from this report that "pretty much fully intact balloons" have been found in the intestines of marine fauna. The report also highlights the excessively high volume of single-use plastic packaging in the food and beverage industry and points to the proven benefits of container deposit schemes. A Victorian container deposit scheme would align nicely with the below Senate committee recommendations:

- Recommendation 15 8.78 The committee recommends that the Australian Government, through the meeting of environment ministers working group, actively encourage the states and territories, which have not already done so, to consider the most effective methods to address marine plastic pollution in their jurisdictions. These should include implementation of container deposit schemes and other anti-littering mitigation strategies.

- Recommendation 16 8.79 The committee recommends that, if all states and territories have not introduced container deposit scheme legislation by 2020, the Australian Government revisit the issue with the view to developing legislation for those jurisdictions which are yet to implement container deposit schemes.

Plastic Bag Free Inner West have also observed a high number of disposable plastic straws littered along Victorian beaches, and believe that a legislated ban on these items would also help address this problem.

Plastic Bag Free Inner West recommends expanding this existing bill, or introducing new legislation in Victoria to:

- Ban the distribution of balloons and the deliberate release of balloons at events
- Ban the provision of single-use plastic straws from food and beverage outlets
- Introduce a Container Deposit Scheme

### References:

1. ACT Government - Environment and Sustainable Development, 2014, *Review of the Plastic Shopping Bags Ban April 2014*, ACT Government, viewed 13 March 2015, [http://www.environment.act.gov.au/\\_data/assets/pdf\\_file/0017/602018/20140407-ESDD\\_BagBan\\_Report\\_2014\\_Final.pdf](http://www.environment.act.gov.au/_data/assets/pdf_file/0017/602018/20140407-ESDD_BagBan_Report_2014_Final.pdf)
2. Aspin, M., 2012, *Review of the Plastic Shopping Bags (Waste Avoidance) Act 2008*, viewed 15 October 2016, [http://www.zerowaste.sa.gov.au/upload/resource-centre/publications/plastic-bag-phase-out/PBActReview\\_maspin\\_Nov2012\\_2%20-%20final.pdf](http://www.zerowaste.sa.gov.au/upload/resource-centre/publications/plastic-bag-phase-out/PBActReview_maspin_Nov2012_2%20-%20final.pdf)
3. Balloons Blow, 2016, *Photo Gallery*, Balloons Blow, viewed 19 October 2016, <http://balloonsblow.org/wp-content/uploads/2015/06/Rusty-blackbird-killed-by-latex-balloons.jpg>
4. Brodwin, E. and Lutz, A., 2015, *The US Bans Soaps, Body Washes, and Toothpastes Containing a Harmful Ingredient*, Business Insider Australia, viewed 15 October 2016, <http://www.businessinsider.com.au/obama-bans-microbead-soap-2015-12>
5. Canada Gazette, 2016, *Order Adding a Toxic Substance to Schedule 1 to the Canadian Environmental Protection Act, 1999*, Government of Canada, viewed 15 October 2016, <http://www.gazette.gc.ca/rp-pr/p2/2016/2016-06-29/html/sor-dors150-eng.php>
6. Clean Up Australia, 2010, *Report on Actions to Reduce Circulation of Single-Use Plastic Bags Around the World*, Clean Up Australia, viewed 15 October 2016, [https://www.cleanup.org.au/PDF/au/cua\\_plastic\\_bag\\_usage\\_around\\_world\\_april\\_2010.pdf](https://www.cleanup.org.au/PDF/au/cua_plastic_bag_usage_around_world_april_2010.pdf)
7. Clean Up Australia, n.d., *2015 Rubbish Report - Victoria*, Clean Up Australia, viewed 15 October 2016, <http://www.cleanup.org.au/files/vic.pdf>
8. Clean Up Australia, n.d., *What is the Problem? Plastic As a Resource*, Clean Up Australia, viewed 07 May 2015, <http://www.cleanup.org.au/au/Campaigns/plastic-bag-facts.html>
9. Cormack, L., 2016, *Marine Plastic Pollution Senate Inquiry Covers the Ugly Truth of the Issue*, The Sydney Morning Herald, viewed 15 October 2016, <http://www.smh.com.au/environment/marine-plastics-pollution-senate-inquiry-covers-the-ugly-truth-of-the-issue-20160218-gmxoe1.html>
10. CSIRO, 2016, *Sources, Distribution and Fate of Marine Debris*, CSIRO, viewed 15 October 2016, <http://www.csiro.au/en/Research/OandA/Areas/Marine-resources-and-industries/Marine-debris>

11. Department for Environment, Food & Rural Affairs and The Rt Hon Andrea Leadsom MP, 2016, *Microbead Ban Announced to Protect Sealife*, UK Government, viewed 15 October 2016, <https://www.gov.uk/government/news/microbead-ban-announced-to-protect-sealife>
12. Dictionary.com, Biomagnification, Dictionary .com, viewed 08 April 2015, <http://dictionary.reference.com/browse/biomagnification>
13. Dikgang, J., Leiman, A., and Visser, M., 2010, *Analysis of the Plastic Bag Levy in South Africa*, University of Cape Town, viewed 15 October 2016, [http://www.econrsa.org/papers/p\\_papers/pp18.pdf](http://www.econrsa.org/papers/p_papers/pp18.pdf)
14. Fogg, A., 2014, *Why Charging for Plastic Bags Doesn't Work*, The Guardian, viewed 15 October 2016, <https://www.theguardian.com/commentisfree/2014/jul/17/charging-for-plastic-bags-doesnt-work>
15. Harvey, F., 2016, *Microplastics Killing Fish Before They Reach Reproductive Age, Study Finds*, The Guardian, viewed 15 October, 2016, [https://www.theguardian.com/environment/2016/jun/02/microplastics-killing-fish-before-they-reach-reproductive-age-study-finds?CMP=share\\_btn\\_tw](https://www.theguardian.com/environment/2016/jun/02/microplastics-killing-fish-before-they-reach-reproductive-age-study-finds?CMP=share_btn_tw)
16. Planet Ark, 2016, *Plastic Bags*, Planet Ark, viewed 15 October 2016, <http://recyclingnearyou.com.au/bags>
17. Messenger, B., 2016, *First-of-Kind Study into 20 Different Waste Streams Entering the Oceans*, Waste Management World, viewed 15 October 2016, <https://waste-management-world.com/a/first-of-kind-study-into-20-different-waste-streams-entering-the-oceans>
18. National Geographic, 1996-2015, *Ocean Gyre*, National Geographic, viewed 05 April 2015, [http://education.nationalgeographic.com.au/education/encyclopedia/ocean-gyre/?ar\\_a=1](http://education.nationalgeographic.com.au/education/encyclopedia/ocean-gyre/?ar_a=1)
19. Redcycle, 2016, *Redcycle*, Red Group, viewed 15 October 2016, <http://redcycle.net.au/redcycle/locator>
20. Sanagorski, L. and Monaghan, P., n.d., *Using Social Norms to Increase Behavior Change in Sustainable Landscaping*, IFAS, University of Florida, viewed 15 October 2016, <http://edis.ifas.ufl.edu/pdffiles/WC/WC15800.pdf>
21. Senate Environment and Communications References Committee, 2016, *Toxic Tide: The Threat of Marine Plastic Pollution in Australia*, viewed 15 October 2016, [file:///C:/Users/hp/Downloads/report%20\(7\).pdf](file:///C:/Users/hp/Downloads/report%20(7).pdf)
22. Sinclair, A., 2016, *Harrowing Video Shows Poor Distressed Sea Turtle Having a Plastic Straw Pulled from its Nose*, Smash, viewed 19 October 2016, <http://www.smash.com/harrowing-video-shows-distressed-sea-turtle-plastic-straw-pulled-nose/>
23. Sustainability Victoria, 2016, *Victoria's Litter Report Card 2016*, Sustainability Victoria, viewed 15 October 2016, [file:///C:/Users/hp/Downloads/Victorias%20Litter%20Report%20Card%20August%202016\\_WEB%20\(2\).pdf](file:///C:/Users/hp/Downloads/Victorias%20Litter%20Report%20Card%20August%202016_WEB%20(2).pdf)
24. World Economic Forum, Ellen MacArthur Foundation and McKinsey & Company, 2016, *The New Plastics Economy: Rethinking the future of Plastics - Background to Key Statistics from the Report*, Ellen MacArthur Foundation, viewed 15 October 2016, [https://www.ellenmacarthurfoundation.org/assets/downloads/news/New-Plastics-Economy\\_Background-to-Key-Statistics\\_19022016v2.pdf](https://www.ellenmacarthurfoundation.org/assets/downloads/news/New-Plastics-Economy_Background-to-Key-Statistics_19022016v2.pdf)