

Submission to the Ministry for the Environment on the Government's proposed phase-out of single-use plastic shopping bags.

Introduction and summary

1. This submission is from Tony Garnier, an Auckland-based business consultant (& director of TG Enterprises Ltd), submitted in his private citizen context and resident of Parnell.
2. The core message of the submission to Government (and Plastics NZ) is that ultimately a mandatory phase out of single-use plastic shopping bags will make little measurable difference to the problem that Government is seeking to solve;
 - That is, to significantly reduce the millions of single-use plastic shopping bags (and other plastic (polymer) waste that ends up in the environment every year, and particularly in our marine environments¹ where they are harming marine life and entering the food chain, which is a real concern for human health.
3. Instead, what is required is a whole-of-New Zealand industrial scale plastics waste mitigation policy and strategy.
4. The bottom line of this submission is that all plastics are a resource; there is no 'waste' or 'away'. Every piece of plastics 'waste' has the potential to be rebranded as a 'resource' and recycled. Plastics waste removal or recycling is an engineering opportunity for the NZ Plastics industry to grasp and exploit.
5. **Accordingly, the submission has been copied to Plastics NZ, New Zealand's plastics industry association, whose members with other industrial entrepreneurs arguably have big opportunities to convert plastic 'waste' items into usable (money-makeable) products and services.**
6. As an alternative to banning single-use plastic bags, the submission **recommends** that the Government incentivise the NZ plastics and construction industries (and plastic product users) to invest in the development of industrial scale ventures aimed at recycling waste plastics; and to,
 - Compliment (and congratulate) the initiatives of NZ supermarkets already taking actions to voluntarily phase out use of single-use plastic bags; and,
 - Encourage the private sector to establish an industrial scale waste-to-heat energy scheme, matching the Swedish model in which just 1% of the countries waste ends up in a land fill.
7. More detailed recommendations are set out below.

¹ See Minister Eugene Sage media release 6 September 2018, and discussion document supporting the proposed phase-out of single-use plastic shopping bags.

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8. To adapt a quote from London-based physicist Laurie Winkless, *'If we don't implement better ways to manage the (plastics) waste cycle in the near future, we will be in deep doo-doo.'*²
9. As many other countries and industry entrepreneurs are demonstrating, effective action on plastic bags needs to be undertaken within the context of joint government-private sector industrial scale initiatives to totally reinvent the reduce-reuse-recycle approach to managing all plastics (and other) waste.
10. The scale of our plastics 'waste' problem requires a multi-faceted, integrated response encouraged by government and delivered by industry, on a scale matching the initiatives of previous governments to establish a hydro-electric, forestry/ tree-planting and house building industries in the 1930s.
11. In India, for example, every form of plastic 'waste' - plastic bags, plastic bottles, or packing foams – are being turned into roads. The scale required to have a measurable impact on India's waste mountain has some way to go. But the potential to do so is apparent. The process is simple: first, waste plastic is collected, cleaned and shredded. The gravel that gives the road its strength is added and then it is all heated to around 150°C and mixed until every pebble is covered in plastic; it is then added to bitumen to comprise as much as 15% of the material used on a standard road.
12. The Marshall Stability test, which determines the maximum load a surface can support, shows that plasticised roads can carry more than double the weight of standard bitumen roads, and potholes have been virtually eliminated. As of 2016, around 20,000km across 11 states in India had built plastic waste roads without any issues.
13. Related initiatives elsewhere include:
 - Dutch construction firm VolkerWessels using old water bottles to produce tough plastic slabs for road building;
 - French and other researchers are well advanced in the development on an industrial scale of plastic waste-to-bioplastics; biodegradable products (like coffee cups) created from the waste products of the food and paper industries.
 - Less than one percent of Sweden's household waste winds up in a landfill; roughly 50% of waste is converted into energy through incineration and 50% is the nation's is recycled with the help of tax incentives.

Recommendations

14. As an alternative to banning single-use plastic bags, the submission **recommends** that Government incentivise the NZ plastics and construction industries (and plastic product users) to invest in the development of industrial scale recycling ventures aimed at recycling waste starting with the following NZ-wide initiatives:

² See "Science and the City: the mechanics behind the metropolis," by Laurie Winkless, published by Bloomsbury Sigma, p.119.

15. First, to use waste plastic in the building of roads and like products. The Indian examples indicates that the roads made from plastic waste cost less and require less maintenance than traditional bitumen.
16. Second, provide a tax incentive/ research grant to the plastics industry to assess the potential to mass produce plastic slabs suitable for use in the building industry.
17. Third, compliment (and congratulate) the initiatives of NZ supermarkets to voluntarily phase out use of single-use plastic bags, with a campaign to encourage other businesses to do similar.

Rationale and concluding comments

18. A positive bottom-up education campaign will have greater impact and behavior change outcome on what is a small-part of the NZ/global waste & recycling problem than a top-down (government-imposed) ban. A ban won't work.
19. Currently, NZ is ranked well below countries like Japan, Sweden, Germany and Switzerland for the proportion of waste that we recycle. (As wartime leaders knew, if NZ is to work together to achieve a culture behaviour change in dealing to our waste and recycling 'opportunities', policies must be seen to shift the balance from the divisive and 'can't' imposition towards a more socially integrated and affiliative, want to and therefore 'can do,' society.
20. The point also: plastic is a resource with multiple uses and reuses. It is just a matter of time before a NZ/overseas entrepreneur grabs the opportunity to establish a NZ-wide scale plastics recycling industry for plastic bags and bottles.
21. Finally, a Government incentive to the private sector to establish an industrial scale waste-to-heat energy scheme, matching the Swedish model is long overdue.
22. It is in this area that leadership from the Government will have the greatest measurable difference in reducing NZ's plastics and other waste mountain long-term.

Tony Garnier