

# **Review of the *Plastic Shopping Bags* (*Waste Avoidance*) Act 2008**

(Version 1.1.2009)

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## Executive Summary

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The Plastic Shopping Bag (Waste Avoidance) Act 2008 has 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.

According to the Plastic Bag Ban Empirical Study conducted by the Ehrenberg Bass Institute for Marketing Science at the University of South Australia in July and August 2011, approximately 80% of the community supports the ban, twice as many households regularly carry their own bags at any given time than before the ban and only 4% of households claim to never carry their own bags.

Waste stream data from Keep Australia Beautiful (KAB) yearly litter count indicates a significant 45% decrease in the percentage of lightweight single-use plastic shopping bags contributing to the litter stream in South Australia, a big improvement compared to the other Australian states and territories. This is a good proxy indicator of the impact on the total waste stream, however inconclusive as it includes all litter.

The transition for retailers was reported to be smooth with the Retailers Group Task Force reporting over 50% of retailers had no issues. Some of the minor issues recorded included increases in shoplifting due to concealed items in false bottoms, and OHS issues related to transmission of disease due to dirty bags and injury due to lifting of heavier individual bags.

The study highlighted that with the ban there was a perceived reduction of lightweight single-use plastic bags in landfill and households bringing bags is now considered normal, however the purchase of bin liners by households has increased from 15% to 80%, increasing some skepticism about the broader environmental benefit of the ban. Any future initiatives should include a focus on changing household bin liner behaviour.

There is also potential to extend the ban to include some of the alternatives to lightweight single-use plastic shopping bags. More than half (56%) of the exit interviewees were supportive of extending the ban to include heavy and thick plastic bags<sup>1</sup>, which have a limited lifespan (2.8 months for thicker plastic bags and 5.2 for heavy plastic bags compared with 15.9 for green bags and 17.8 for cotton bags). The Task Force recommended that any extension of the ban should also include further education regarding heavy plastic versus biodegradable, the lifespan of the bags and the impact these choices make on the waste stream.

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<sup>1</sup> Defined as plastic bags over 36 microns in thickness, made of low density polyethylene (LDPE), usually with a carry handle and dispensed at stores.

# 1. Introduction

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The ban on lightweight single-use shopping bags in South Australia came into effect on 4 May 2009. South Australia was the first state in Australia to ban their use. Since then, the Northern Territory and Australian Capital Territory have also moved the ban their use.

The following document is a review of the *Plastic Shopping Bags (Waste Avoidance) Act 2008* (1.1.2009 – South Australia) ('the Act'). As per section 8 of the Act this review details:

- (a) the effect on the community of section 5; and
- (b) the extent to which this Act has been effective in restricting the supply of plastic shopping bags; and
- (c) other matters determined by the Minister to be relevant to a review of this Act.

The Minister for Sustainability, Environment and Conservation has not determined other matters for the purpose of this review. A number of additional issues have become evident in reviewing the Act and these are documented within this report as additional to the legislative requirements under section 8 of the Act.

Unless otherwise indicated all evidence is sourced from the Plastic Bag Ban Empirical Study commissioned by Zero Waste SA and conducted by the Ehrenberg Bass Institute for Marketing Science at the University of South Australia in July and August 2011. This study is based upon the observation of 614 supermarket shoppers across a range of retail grocery stores and geographic locations, exit interviews with 278 of the observed shoppers, 77 intercept interviews within a general shopping mall setting and in-depth interviews with 13 members of the Plastic Bag Phase Out Task Force. This study also builds on three previous phases conducted by the Ehrenberg Bass Institute.

## 2. Findings

### 2.1 The effect on the community of section 5 (Retailer not to provide plastic shopping bag).

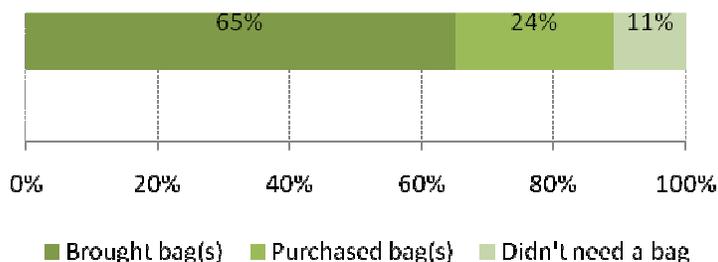
The Plastic Shopping Bag (Waste Avoidance) Act has had a positive effect on the attitude and behaviour of consumers within South Australia. In addition, whilst the changes caused some implementation issues to retailers they are mostly positive towards the overall effectiveness of the ban.

#### 2.1.1 Consumer - Attitudes

Consumer attitude toward the ban is positive. Exit interviews conducted by Ehrenberg-Bass indicate that consumers are supportive of the ban on lightweight single-use plastic bags with a mean of 7.8 out of 10. Those unsupportive (defined as a score of 4 out of 10 or lower) were less likely to have taken their own shopping bags. In addition, less than 1% of the exit interviewees did not own shopping bags. This suggests that there is no discernable group of shoppers with negative attitudes to the ban.

#### 2.1.2 Consumer - Behaviour

The positive attitude of consumers towards the ban is supported by a change in their behaviour indicating a diminished reliance on lightweight single-use plastic shopping bags. The majority of consumers indicated that they remember to take their own bags in 8 out of 10 trips. Most consumers (65%) were observed to not only take their own bags but also take enough bags for their total shop, only a quarter (24%) of consumers purchased bag(s) from the supermarket. A further 11% of consumers purchased so few goods that they did not require a bag. Exit interviews indicate a positive response by consumers with only 4% claiming to never take bags and a further 20% to take bags less than 50% of the time.



**Figure 1: Observed behaviour of supermarket shoppers**

Most consumers have a more than sufficient stock of reusable bags at home, with an average of 25 bags per household. This is significantly higher than the average of 10 pre-ban and immediately post-ban. This is also significantly higher than the average of three bags used in a single shop. This can be contributed to the fact that consumers take bags on only 8 out of 10 trips, resulting in the purchase of additional bags. These bags are not thrown away and instead used within the home. On average respondents own more green bags than any other type, however, they are attempting to reuse all types of bags. The perception among shoppers is that green bags last significantly longer than the heavy plastic or thicker plastic bags (15.9 months compared with 5.2 months and 2.8 months respectively).

Consumer behaviour in the non-grocery context has also been impacted by the ban, with 51% observed to be carrying their own shopping bags. However, 3 in 10 indicated that they never carry bags in the non-grocery context representing polarized results. Additionally of those who had purchased in the non-grocery context, 51% obtained a bag from the store and in 92% of cases this bag was provided by the store for free.

### **2.1.3 Retailer - Issues**

The implementation of the ban was relatively uneventful and approximately half of the retailers said they encountered no issues at all. Some of the issues caused to retailers by the ban included:

- Financial issues caused as a result of stocking different bags in different states, unused leftover lightweight single-use plastic shopping bags and in some cases redesigning checkouts to cater for the variety of bags now presented. However it should be noted that a significant proportion of these costs should have been offset by the sale of reusable bags.
- Perceptions of smaller purchases and less spontaneous purchases due to carrying capacity.
- Increase in shoplifting by hiding items under the false bottoms of green bags.
- A range of OH&S issues specifically the transmission of disease from dirty bags and the increase in weight of an individual bag of shopping due to less bags and stronger bags.

Overall retailers were positive about the implementation of the ban, although a few felt the time frame for implementation was too fast. They believed that the marketing campaign played a significant role in the smooth implementation, and communication from the government ensured that retailers were not seen as profiteering but simply implementing new government legislation. The Direct Mail Info Kit to small businesses was also considered useful and well implemented.

#### **2.1.4 Retailer - Effectiveness**

The task force members perceived the ban to be effective because there are no longer lightweight single-use plastic bags available in South Australia, there is a perceived reduction of plastics to landfill, they received minimal complaints from customers, bringing bags is now considered normal by customers and shoppers are complying with the ban. A small number of task force retailers thought that the ban was not effective as there has been an increase in the purchase of bin liners and some consumers are still frustrated by the ban. However consumer frustration was not identified as an issue in the consumer research component of the study. There is still some skepticism among the task force as to the extent of the wider impact of the ban and its environmental benefits.

Actual EPA compliance data indicates a strong level of compliance after the ban demonstrated by less than 10%<sup>2</sup> of retailers failing part of an inspection and resulting in only one expiation notice issued in the three years following the ban. Although the EPA is responsible for the compliance monitoring of this Act, the task force was unaware if any retailers had actually been monitored to date or about how to access this information.

### **2.2 The extent of which this Act has been effective in restricting the supply of plastic shopping bags.**

The Act has been effective in restricting the supply of lightweight single-use plastic shopping bags. Monitoring by EPA resulted in only one observed expiation notice issued for a breach over a period of three years.

Further to this, the supply of shopping bags in general has changed significantly. During observations at a sample of South Australian supermarkets almost 7 out of 10 cases (69%) shoppers were observed to take their own bags. Consumers purchasing a small number of goods and those consumers who were not their household's primary shopper were more likely to forget bags. Exit interviews indicated that almost half of the respondents always take enough bags for all their groceries. However, the consistency of bag use has fallen with only 31% never forgetting their bags in the 2011 study compared with previous 45% in 2009.

There is also a visible flow on effect in the broader shopping environment with an increase in usage of reusable bags in the non-grocery context. Of those surveyed 4 in 10 indicated they always carried/used bags compared with only 25% pre-ban. In addition, 51% were carrying bags with them during the shopping mall intercept survey.

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<sup>2</sup> Plastic Shopping Bags (Waste Avoidance) Act 2008 EPA Compliance KPIs 2008/9 – 2011/12

## **2.3 Other matters considered relevant to the review of this Act.**

Other matters that have resulted from the ban on lightweight single-use plastic shopping bags that are relevant to this report and worthy of discussion include, an increase in the purchase of bin liners, questions on the reduction in the waste stream, recycling of reusable bags and extending the ban to include thick and heavy plastic bags.

### **2.3.1 Bin Liners increase**

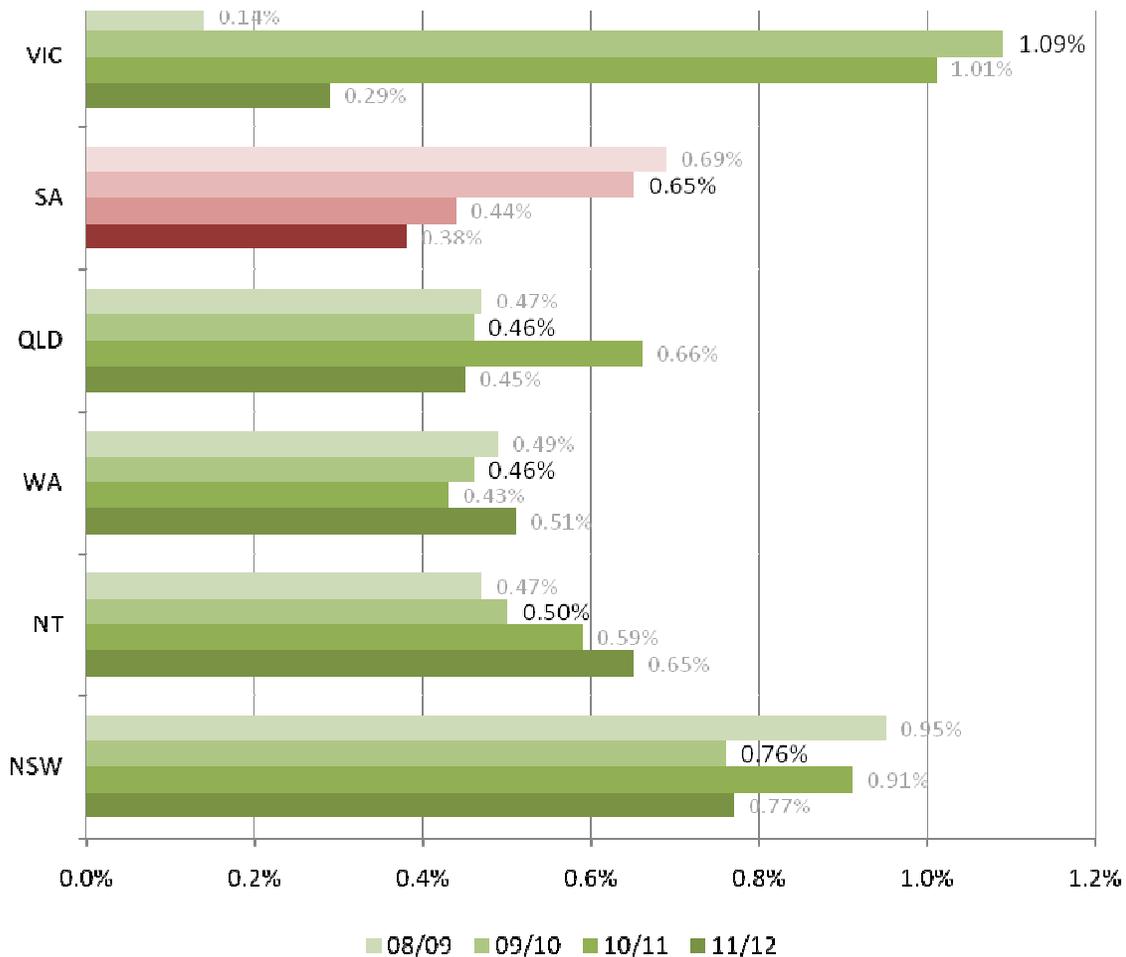
The ban on lightweight single-use plastic shopping bags has resulted in a significant increase in bin liner sales in South Australia. Nine out of 10 households line their bins. Households have not stopped lining their bins as a result of the ban. Previously many households used lightweight single-use plastic shopping bags to line their bins, as a result of the ban more consumers have turned to purchasing bin liners. Pre-ban 15% of consumers purchased bin-liners and post-ban 80% purchase bin liners. This change in behaviour will have an environmental impact and may negate the success of the ban. As one of the overarching aims of the ban was to cause consumers to behave in a greener way, future initiatives should examine how also to change bin-lining behaviour.

### **2.3.2 Waste stream**

As discussed previously, the supply of plastic shopping bags has been reduced and in turn this has reduced households reliance on plastic shopping bags. However, the overarching aim of the Act was to change consumer behaviour more broadly. Therefore, it is expected that a resulting reduction in the quantity of lightweight single-use plastic bags in the waste stream also occur. Data from the Keep Australia Beautiful (KAB) yearly litter count is a good proxy indicator of the impact on the total waste stream. Nationwide, data shown in the chart below indicates that the percentage of the litter stream consisting of plastic shopping bags has seen the biggest decrease in South Australia with 45% decrease from the 2008/09 count to the 2011/12 count.<sup>3</sup> This is a very positive but inconclusive as litter is only a small component of the total waste stream.

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<sup>3</sup> The KAB litter count is currently tabulated by McGregor Tan Research on behalf of the Keep Australia Beautiful national association in association with the governments of NSW, VIC, QLD, WA, SA, TAS, ACT, NT & National Packaging Covenant Industry Association (NPCIA). Full data tables are available at <http://kab.org.au/litter-research/national-litter-index-2/>



**Figure 2: Percentage of plastic shopping bags in the litter stream<sup>45</sup>**

### 2.3.3 Recycling of Reusable bags

Lightweight single-use plastic shopping bags have been successfully removed from households in South Australia. However, their removal has resulted in an increase in the number of reusable shopping bags households own. These bags are often also made of plastic and have a limited lifespan. Almost half of the exit interviewees claimed to have thrown out at least one reusable bag in the last six months. Of these, 58% threw out a green bag and 48% a heavy plastic bag. The reasons for the disposal of the bags was 60% because the bag had worn out, 34% the bag was dirty and 15% because they had too many. Of concern however is the lack of consumer knowledge on the most appropriate way to recycle these bags. Only 1 in 3 (31%) claim to have recycled their reusable bags, therefore consumers need to be better

<sup>4</sup> McGregorTan Research, CDL Containers and Plastic Shopping Bags in the litter stream. Prepared for KESAB October 2011.

<sup>5</sup> McGregorTan Research, National Litter Index – Annual Tabulations 2011/12 Results. Prepared for Keep Australia Beautiful July 2012.

informed about the options available to recycle their bags.

### **2.3.4 Extending ban to include heavy plastics**

Currently, the ban is for lightweight single-use plastic carry bags only. It has been suggested by members of the task force that the ban could be expanded to also include heavy and thick plastic bags. According to consumers these bags have a reduced lifespan compared with green bags and other alternatives (2.8 months for thicker plastic bags and 5.2 for heavy plastic bags compared with 15.9 for green bags and 17.8 for cotton bags). More than half (56%) of the exit interviewees were supportive of extending the ban to include heavy and thick plastic bags.

More than half of the shoppers own heavy plastic bags and 16% own thick plastic bags. Additionally, many non-grocery retailers provide customers with these bags. The KAB litter count showed significantly more heavy bags in the litter stream in SA than any other state. Therefore, correlating between litter and waste, banning these bags in both settings could have a significant impact on the quantity of plastic in the waste stream. Based on the positive attitude of consumers to the ban on plastic shopping bags and the resulting change in behaviour a positive response to such a ban would be expected.

Some task force members were critical of the lack of understanding on alternative bags prior to implementation of the ban. In particular a lack of understanding in regards to heavy plastic versus biodegradable, the lifespan of the bags and the impact these choices make on the waste stream. Further initiatives should consider these issues.

### **2.3.5 Minor legislative amendments to be considered**

The following legislative amendments should be considered to strengthen the operation of the *Plastic Shopping Bags (Waste Avoidance) Act 2008*:

- Amend the definition of a plastic shopping bag to make it clear that the minimum thickness requirement applies across all parts of a bag;
- Require biodegradable /compostable bags to be approved by the EPA (based on testing undertaken by a facility approved by the EPA);
- Introduce an offence to provide bags different from those tested and approved by the EPA.

## **3. Conclusion**

The ban on lightweight single-use plastic bags has been highly effective at reducing the supply of lightweight single-use plastic bags from South Australia and changing consumer behaviour to alternatives to plastic shopping bags. Moving forward, consideration should be given to extending the ban to address the new alternatives including thick and heavy plastic

bags as well as providing further education and advocacy to promote greener overall behaviour of consumers.

## **4. Reference**

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Sharp A & Wheeler M 2012 *South Australian Plastic Bag Ban, An empirical evaluation*, Ehrenberg-Bass Institute for Marketing Science, University of South Australia, prepared for Zero Waste SA, Government of South Australia