



Environment,  
Climate Change  
& Water

# NSW Litter Report 2010

Department of Environment, Climate Change and Water NSW

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## Executive Summary

*The Protection of the Environment Operations Act 1997* (section 146D) requires the Department of Environment, Climate Change and Water (DECCW) to report estimates of the composition and quantity of litter types in sites that represent significant littering activity, once in every two years. The *2010 NSW Litter Report* is based on the results of the litter and illegal dumping survey undertaken by McGregor Tan Research for the Keep Australia Beautiful National Association (KAB) and reported in the KAB National Litter Index (NLI). The NLI provides national and state-based data for the volume and number of items littered and illegally dumped. It is funded by all Australian jurisdictions.

The KAB NLI survey has been conducted annually in NSW for the past 5 years, which provides time series data allowing for an analysis of NSW-based performance over time. The survey covered 151 sites across NSW in nine site types with the litter and illegal dumping coded into one of seven material categories (refer to 'methodology' below for details).

### Comparison to other states and territories (litter and illegal dumping)

The KAB National Litter Index provides performance data for litter and illegal dumping in all states and territories. Comparing performance from different states and territories should be undertaken with caution, as the data in the KAB National Litter Index does not account for population density.

When the data is normalised to account for population density, NSW was the second best performing of all the states and territories in terms of the number of items littered and third in terms of volume of items littered. It also placed NSW significantly below the national averages of 2.43 items and 0.27 litres respectively. The NSW average number of items per 1,000m<sup>2</sup> per 100,000 persons was 1.05, while the NSW average estimated volume per 1,000m<sup>2</sup> per 100,000 persons was 0.19 litres. On an absolute basis, ignoring population density, the NSW ranking was less favourable in terms of number of items littered and volume of litter.

### Litter and Illegal dumping in the 2009–10 KAB National Litter Index

2009–10 is the first KAB National Litter Index that included an appendix with NSW and average national litter-only data with illegal dumping data excluded. Illegal dumping is considered to be a separate issue to litter in NSW. It is regulated separately to litter and addressed through separate anti-dumping programs.

The illegal dumping data in the KAB National Litter Index was a strong contributor to the average "litter" volume reported for NSW. Illegally dumped objects were associated with an estimated 5.47 litres of litter volume per 1,000m<sup>2</sup>, 41 per cent of the NSW total volume estimated in the Index.

According to the KAB litter-only data, the average volume of litter in NSW in 2009–10 was 7.96 litres per 1,000m<sup>2</sup>. The average number of items littered was not changed by excluding the illegal dumping data, as the number of illegal dumping incidents was very low.

In terms of litter only volumes, the site type with the highest average volumes was industrial sites (20.37 litres per 1,000m<sup>2</sup>). This was significantly higher than all other site types. The next highest were highway sites, with an average volume of 11.59 litres per 1,000m<sup>2</sup> and retail sites at 7.56 litres. Recreational parks had the lowest average volume of NSW sites (1.63 litres per 1,000m<sup>2</sup>).

## Comparison to national averages (litter only)

According to the litter and illegal dumping data reported in the KAB National Litter Index, the national average number of items per 1,000m<sup>2</sup> was 66 and the average volume was 7.55 litres per 1,000m<sup>2</sup>. NSW figures of 75 items and 13.43 litres per 1000m<sup>2</sup> were above the national averages.

When Illegal Dumping figures are excluded, the NSW litter only average volume is 7.96 litres per 1,000m<sup>2</sup> compared to the national average of litter only volume of 5.70 litres.

A comparison of NSW site types to the national averages indicated that by item count, most sites in NSW are cleaner than the national average. Beaches, recreational parks, retail sites, shopping centres and residential areas all have lower average litter counts than the national averages for these site types. Industrial sites, car parks and highways have higher counts than the national averages for these sites and contribute to NSW having above the national average overall litter count. By volume, all site types in NSW have above the national average litter volumes, except recreational parks, which had below the national average.

KAB has not provided litter only data for other individual states and territories. It is therefore not possible to compare NSW results which exclude Illegal Dumping to these.

## NSW performance in the 2009–10 KAB National Litter Index

The 2009–10 KAB National Litter Index showed that the average volume of litter and illegal dumping per NSW survey site was 13.43 litres per 1,000m<sup>2</sup> which was 11 per cent higher than the previous year (12.13 litres) and 13 per cent higher than in 2007–08 (11.9 litres). The average number of items per site also increased compared to 2008–09, up 10 items per site (or 15 per cent) to 75 items. However, the total item count was down slightly (3 per cent) on 2007–08. Item count and volume were both down compared to 2005–06 (6 per cent and 10 per cent respectively). Appendix 2 lists the NSW data provided through the KAB National Litter Index.

Additional key findings for NSW:

- Cigarettes continue to be the most littered item in NSW at 46 per cent of all items littered
- The proportion of materials in the litter stream by counts remained similar to previous years
- Plastic contributed the largest amount of volume amounting to 3.00 litres per 1000m<sup>2</sup>, up from 2.67 litres in 2008–09
- Paper/paperboard objects contributed the second largest volume to the litter stream with 2.72 litres of volume per 1,000m<sup>2</sup> (an increase on the 2.24 litres recorded in 2008–09)
- The most littered NSW sites, in terms of both items and volume per 1000m<sup>2</sup>, occurred in industrial areas, car parks and along highways
- Retail sites contributed large numbers of litter items per 1,000m<sup>2</sup>, however, they were associated with lower but still appreciable volumes of litter per 1,000m<sup>2</sup>

- Increases in the litter items recorded per 1,000m<sup>2</sup> compared to the previous year, were most strongly evident at shopping centres, beaches, retail sites and industrial sites
- There is also some seasonal fluctuation evident in volume estimates of litter within site types in NSW where there are higher litter volumes among residential and shopping centre sites in May compared to lower litter volumes in November. Conversely, there are higher litter volumes among beach and highway sites in the November and lower volumes in May.

## Introduction

'Litter' is any solid waste object (disposable item or resource) that can be held or carried in a person's hand that is left behind or placed in an inappropriate location. Any such material or item disposed in an inappropriate manner is to be regarded as litter – the end outcome of an environmentally undesirable disposal action.<sup>1</sup>

Litter includes a wide variety of solid waste materials. Common types of litter include cigarette butts, cigarette packaging, chewing gum, confectionery wrappers, glass pieces and soft drink containers (both plastic and metal).

*The Protection of the Environment Operations Act 1997* (section 146D) requires DECCW to report estimates of the composition and quantity of litter types in sites that represent significant littering activity, once in every two years. The first two NSW Litter Reports: 2004<sup>2</sup> and 2006<sup>3</sup> were based on surveys commissioned by the then Department of Environment and Conservation NSW (DEC). The *NSW Litter Report 2008* report<sup>4</sup> was the third in this series, however it was a different methodology following DECCW's decision to fund Keep Australia Beautiful National Association (KAB) to survey litter in NSW as part of the National Litter Index (NLI). The Index provides litter and illegal dumping data based on a standard methodology that measures both volume and number of items littered and illegally dumped. It is now used by all State and Territory Governments and provides a consistent way of measuring and comparing performance over time. Surveys are conducted twice per year and a national report is released annually. This *NSW Litter Report 2010* is the fourth in the series and uses the same KAB methodology as the 2008 report.

The data provided in regular litter surveys assists the government, industry and the community to further improve the management of litter and littering.

NSW Government action to tackle litter includes:

- Changes to environmental regulations to increase fines for littering, prevent littering on private land and decrease the quantity of unwanted advertising material that often ends up as litter;
- Media campaigns to make people aware of the impacts of litter on the environment and encourage behaviours that reduce littering;
- Local and regional community education activities that build on media campaigns such as resource kits and community workshops; and
- Information and training for regulatory agencies, such as councils and government agencies, to enable them to better target littering and prevent littering; and
- Enforcement by authorized officers and issuing of warning letters from community reports.

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<sup>1</sup> (Community Change (2003) Littering Behaviour Studies, National Benchmark 2002, Beverage Industry Environment Council).

<sup>2</sup> *NSW Litter Report 2004*, Department of Environment and Conservation NSW (DEC) 2004

<sup>3</sup> *2006 NSW Litter Report*, Department of Environment and Conservation NSW (DEC) 2006

<sup>4</sup> *NSW Litter Report 2008*, DECCW 2008

KAB describes the National Litter Index as follows<sup>5</sup>:

The National Litter Index was initially developed by the KAB Network member in South Australia, KESAB. The methodology has been refined over many years of continuous surveying in South Australia with periodic extensions to cover the whole of Australia when funding has been available. NSW co-funds the Index with all jurisdictions in Australia.

The National Litter Index is not a study of littering behaviour. It is exclusively intended as an assessment of the presence of litter objects within surveyed regions. As such, no corrections for population densities are carried out. The information derived from the Index provides no indication of whether residents of a particular region litter more or less frequently than those in a different region. It does, however, provide insight regarding the relative presence or absence of litter objects and particular material types within the regions surveyed.

Results specific to NSW are detailed below. It should be noted that the methodology used to determine the NLI is quite different to the methodology used previously by DECCW in determining NSW litter data for the first two litter reports and caution should be applied when comparing that data with the KAB data.

The *2008 NSW Litter Report* detailed the key differences between the two methodologies. However it should be emphasised here that the KAB survey includes illegally dumped materials as part of the litter stream. DECCW does not consider illegal dumping as part of the litter stream; separate programs are run to deal with this material. In 2010, KAB provided DECCW with a recast data set which excludes illegally dumped materials. This data set covers both NSW and the National figures but excludes all other States and territories.

The majority of the following sections, Methodology and Results, are extracts taken from the KAB annual report. They detail the methodology used in the National Litter Index survey and the specific results of that survey which are relevant to NSW. They are reprinted here with the permission of the Keep Australia Beautiful National Association.

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<sup>5</sup> Keep Australia Beautiful - National Litter Index Annual Report 2009–10 by McGregor Tan Research

# Methodology

## Scope

Sites surveyed within the research program were sampled primarily from urban and near-urban areas (i.e. generally within 50km of the urban areas surrounding each state capital). Generalisation of findings to regional locations must therefore be made with caution.

The total area surveyed across all sites nationally was 1,499,791m<sup>2</sup>. This area spanned a total of 983 sites, and the average site size was 1,526m<sup>2</sup>. A complete table of site area information across all states is provided in Appendix 1.

## Material Categorisation

All litter items counted were incorporated within seven main material type categories. These main material types were further broken down into object sub-categories, as follows:

Main material type	Object Sub-Category
<b>Cigarette butts</b>	Total
<b>Glass</b>	Alcoholic beverage container
	Non-alcoholic beverage container
	Plain water container
	Other
<b>Illegal dumping</b>	Total
<b>Metal</b>	Alcoholic beverage container
	Food container or utensil
	Non-alcoholic beverage container
	Plain water container
	Other
<b>Miscellaneous</b>	Total
<b>Paper/paperboard</b>	Cigarette packets
	Food container or utensil
	Non-alcoholic beverage container
	Publication
	Other
<b>Plastic</b>	Alcoholic beverage container
	Food container or utensil
	Non-alcoholic beverage container
	Plain water container
	Shopping bag
	Other

These object sub-categories were further broken down into a total of 84 separate item-type distinctions (a full list of these is shown in Appendix 2). Litter counters were required to record the numbers of items within each of these item types that were present at any given site surveyed.

## **Sites**

All sites incorporated within the survey were categorised according to 8 different site types. Uniform guidelines were conformed to during site selection. Site specifications vary from 500 square metres (beaches) to 3,000 square metres (highways).

### **Residential**

A street area approximately 150 metres in length, along both sides of the road from the front of the properties on each side of that road extending to the gutter including litter in the gutter.

### **Beach**

An area of approximately 50 metres long and 10 metres wide, positioned on one or across both sides of a jetty, boat ramp or main entry access point to beach.

### **Industrial**

A street area approximately 150 metres long within an industrial area, the count area to be from the fence line or immediate front of the properties to the gutter including litter in the gutter

### **Car Park**

An area of approximately 30 by 50 metres in an open space public car park at a point distant from the entrance to the car park.

### **Shopping Centre**

An area approximately 50 metres long and 25 metres wide, directly outside of the main shopping centre building and including one or across both sides of a major entrance.

### **Retail Strip/Shops – Street Precinct**

An area approximately 150 metres long in front of a strip of shops, extending from the front of the shops to the street gutter and including litter in the gutter.

### **Recreational Park**

An area of approximately 40 by 50 metres in a park area which includes a playground but which is not in the immediate vicinity of a shop or kiosk. The areas should be within a frequently used park.

### **Highway**

Highways include open major roadways bounded by a vegetated area that may include an open drain.

The count area commences from the area beginning at the edge of the road, and extending out from the road to the nearest fence/boundary or up to a distance of 10 meters out from the road side if no such fence/boundary exists. Two such areas should be collected from, one on each side of the road. Each region should extend for a length of approximately 200 meters along the road.

### **Additional Rural Highway Sites**

In addition to the eight current site types used for the National Litter Index, a new site type designated as 'Rural Highways' has been introduced to monitor litter item numbers and volumes in rural areas.

Rural highways include roads that are major country roads with road markings and have one lane of traffic only in each direction.

The count area for rural highways commences from the area beginning at the edge of the road, and extending out from the road to the nearest fence/boundary or up to a distance of 10 meters out from the road side if no such fence/boundary exists. Two such areas should be collected from, one on each side of the road, with each area extending for a length of approximately 100 meters along the road.

76 rural highway sites were selected and scoped for the National Litter Index. The following number of sites were assigned for each state and territory:

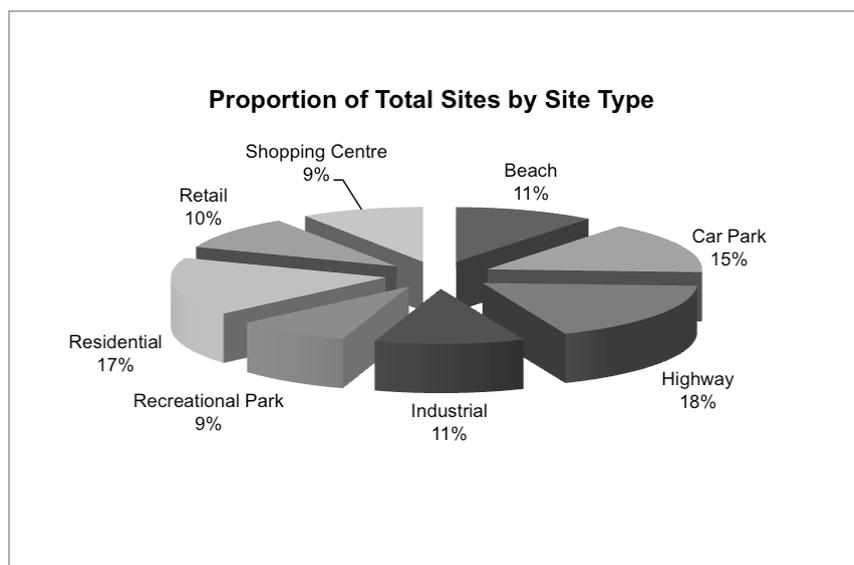
- 8 sites each for both the Northern Territory and Tasmania
- 15 sites each for New South Wales, Queensland, Victoria and Western Australia.

The litter count results in this report are based on the initial count conducted at these sites, this took place during the May 2010 count. To maintain the continuity of comparative and trend data reported below additional Rural Highway data is not included. Instead results of a separate analysis of this data are presented in the section on Comparison to National, State and Territory Data.

### Site Type Representation

The following table outlines the number of sites within each of the 8 distinct site types that were sampled within NSW and overall for the states participating in the Index. All of the larger states had the same number of sites sampled with each site type. Smaller states e.g. ACT and Tasmania had smaller sample sizes.

	NSW	Total Sites Surveyed Nationally
<b>Beach</b>	16	<b>104</b>
<b>Car Park</b>	23	<b>148</b>
<b>Highway</b>	27	<b>174</b>
<b>Industrial</b>	17	<b>112</b>
<b>Recreational Park</b>	13	<b>86</b>
<b>Residential</b>	26	<b>169</b>
<b>Retail</b>	15	<b>99</b>
<b>Shopping Centre</b>	14	<b>91</b>
<b>Total</b>	<b>151</b>	<b>983</b>



## Volumes

Litter volumes were estimated from extensive historical litter data recorded within South Australia.

Each litter type incorporated within the study was associated with an individual figure which represented an average volume for each litter item of that type.

In order to reflect a more realistic scenario the final volumes for each litter category item take into account that a certain proportion of all items found would be crushed and weathered.

These volumetric profiles were then extrapolated to calculate estimated volumes of the national data based on the numbers of litter items recorded per category. It should be noted that these volumes represent estimates only, and as such they should be interpreted with caution.

For example, the volume estimates based upon the numbers of items found in the following categories were calculated as follows:

Item Type	Estimated volume of one item of this type in litres	Number of items recorded nationally 2006–07	Estimated volume in litres
<b>Glass</b> – Plain water (carbonated or non-carb.), 1 litre+	1.05925	33	34.96
<b>Metal</b> – Aerosols – pressure packs	0.68424	57	39.00
<b>Paper/paperboard</b> – Cigarette packets	0.21787	3,121	679.97
<b>Plastic</b> – Flav. milk, <1 litre	0.5327	544	289.79

## Timing

The 2009–10 NSW litter counts were conducted during November 2009 and May 2010.

## Litter Counter Training

The litter categorisations and assumptions used during the counts of designated sites were broadly as follows:

- A standard data collection form, was used when conducting the litter counts.
- Brand names were recorded when such were visible. Branded litter results have been reported in a separate document.
- Counters were trained to carefully analyse the litter to ensure that it was properly identified before recording it on the survey form. For example, to determine whether an item is glass and not clear plastic, or to differentiate between fruit juice and fruit drink as these are recorded on different sections of the form.
- Broken bottles were counted as one bottle, a bag of dumped garbage was considered to be one item of “illegal dumping”, and scattered newspaper pages were counted as one newspaper.

- While individual cigarette butts are counted, where there are large volumes of cigarette butts an estimated count is acceptable.
- For the purpose of the Litter Count, all waste located within any count site is litter apart from that properly disposed of in a waste receptacle.
- Organic matter (including food, chewing gum, and dog faeces) was not recorded during the count.

## **Auditing**

An audit of site counts and recorded counts that have been data entered is planned and conducted and based on the findings an audit report is prepared and provided separately to the KAB Board. The audit is carried out to provide assurance that the reported results are free from material misstatement.

## **Reporting**

### **Annual Results**

Litter counts have been conducted bi-annually in November and May across the years of 2005–06, 2006–07, 2007–08 and 2009–10 respectively. Unless stated otherwise, results are reported on an annual basis incorporating average figures corresponding to the combined November and May counts across these years.

### **Litter per 1,000m<sup>2</sup>**

Numbers of litter items and volumes are quoted against an average 1,000 square metre area, in order to allow for the detailed analysis of data within an established comparative framework.

This analysis has been applied to all data collected since November 2005, and consequently results are now tracked across 2005–06, 2006–07, 2007–08 and 2009–10 using a reliable benchmark comparison.

The current litter per area measurement methodology enables meaningful and valid comparisons of the amounts of litter in the litter stream nationally, regionally, and across material types.

### **Illegal Dumping and Miscellaneous Litter**

Previous to 2006–07, illegally dumped items were incorporated within the miscellaneous material category. However, the large volumes of these items necessitate the separation of such items into a specific material category.

Furthermore, comparisons between main material types do not incorporate illegal dumping or miscellaneous litter on the basis that the material type of such litter items is not identified.

For the 2009–10 data a separate NSW and National analysis has been provided for site types, overall item counts and overall volume which excludes illegally dumped materials.

# Results

## NSW at a Glance

The overall average number of items per 1,000m<sup>2</sup> across all of the 151 sites surveyed within NSW during the counts for the year 2009–10 was 75, while the overall average estimated volume per 1,000m<sup>2</sup> was 13.43 litres.

The number of litter items per 1,000m<sup>2</sup> represents an increase from the previous year (up from 65 items in 2008–09, but down from 77 items in 2007–08, up from 71 items in 2006–07 and down from 80 items in 2005–06). The current volume total is also higher than volumes recorded in the previous two years (up from 12.13 litres in 2008–09 and 11.90 litres in 2007–08), however, it remains lower than those recorded in 2006–07 (14.69 litres) and 2005–06 (14.95 litres).

When illegally dumped materials are excluded the overall average number of items per 1,000m<sup>2</sup> across all of the 151 sites surveyed within NSW during the counts for the year 2009–10 was 75, while the overall average estimated volume per 1,000m<sup>2</sup> was 7.96 litres. The most littered sites surveyed within NSW remained industrial sites, car parks and highway sites which were associated with large numbers of litter items and litter volume per 1,000m<sup>2</sup>.

Retail sites contributed large numbers of litter items per 1,000m<sup>2</sup>, however, they were associated with lower but still appreciable volumes of litter per 1,000m<sup>2</sup>.

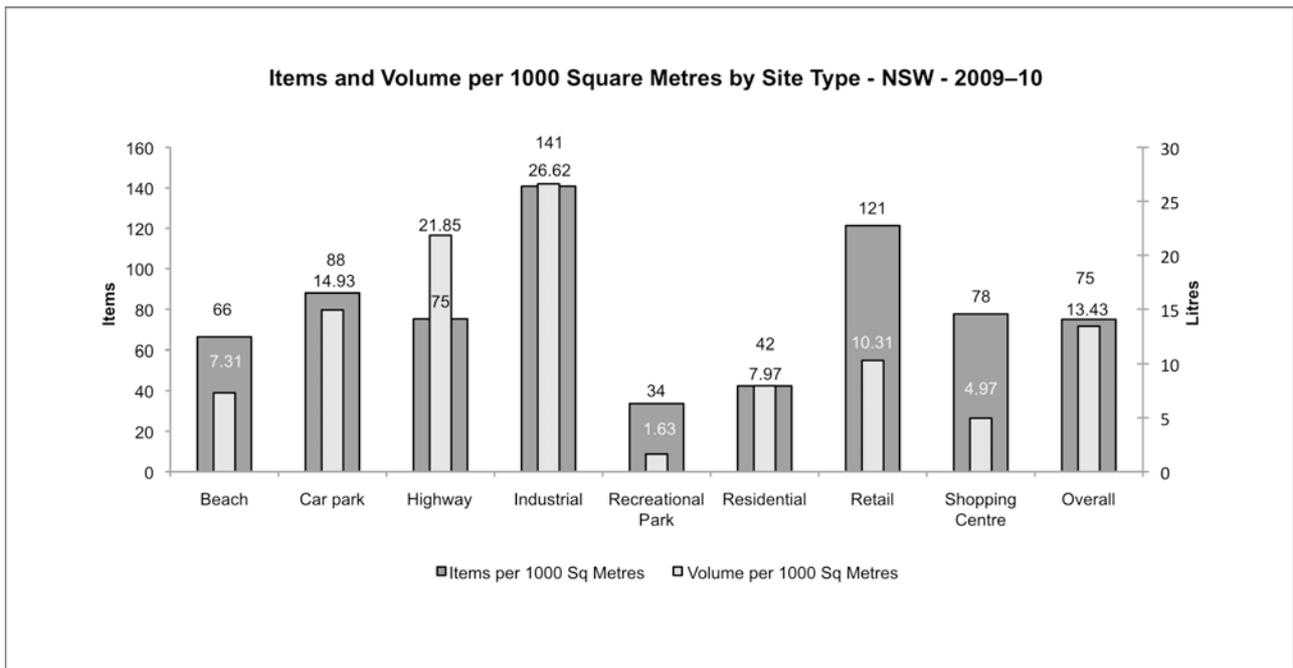
Cigarette butts were the most frequently identified item, with 35 butts per 1,000m<sup>2</sup> (up from 31 butts in 2008–09, but down or similar to 39 butts in 2007–08, 34 butts in 2006–07 and 40 butts in 2005–06) recorded within NSW for the year 2009–10, they were however, associated with only a very small proportion of the overall litter volume (0.004 litres per 1,000m<sup>2</sup>).

Plastic litter objects continued to contribute the largest amount of volume to the litter stream, adding 3.00 litres of volume per 1,000m<sup>2</sup> (up from 2.67 litres in 2008–09 and 2.95 litres in 2007–08, but down from 3.50 litres in 2006–07 and 4.19 litres in 2005–06). Paper/paperboard objects contributed the second largest volume to the litter stream, with 2.72 litres of volume per 1,000m<sup>2</sup> (up from 2.24 litres in 2008–09, 2.03 litres in 2007–08, 2.21 litres in 2006–07 and 2.68 litres in 2005–06).

## Comparisons by Site Types

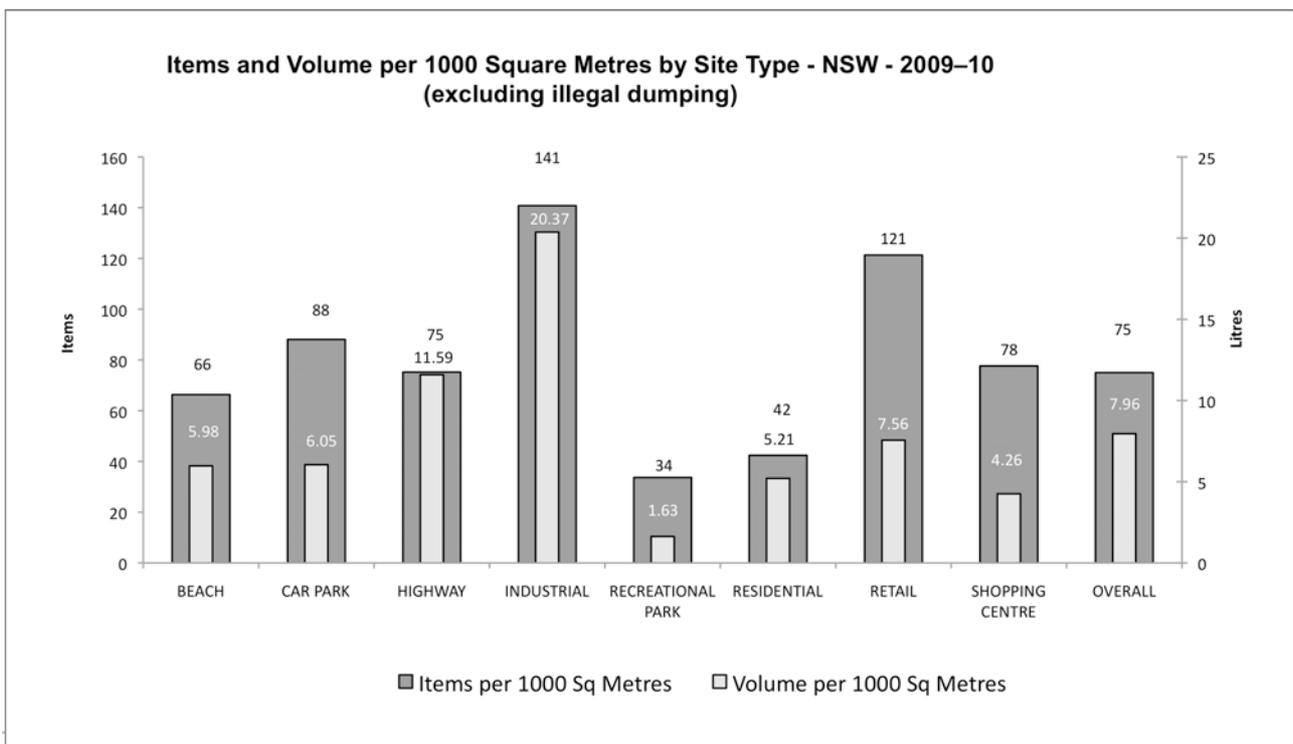
The largest numbers of items per 1,000 m<sup>2</sup> were associated with industrial sites (141 items, up from 122 items in 2008–09 and 2007–08) retail locations (121 items, up from 101 items in 2008–09 and 103 items in 2007–08) and car park sites (88 items, down from 95 items in 2008–09, up from 76 items in 2007–08, but below the 94 items recorded in 2005–06).

Industrial sites also displayed higher volume totals per 1,000 m<sup>2</sup> in comparison to other site types (26.62 litres, down from 34.86 litres in 2008–09). A considerable estimated volume of litter was also recorded at highway sites (21.85 litres, up from 13.99 litres in 2008–09) and car parks (14.93 litres, down from 14.64 litres in 2008–09).



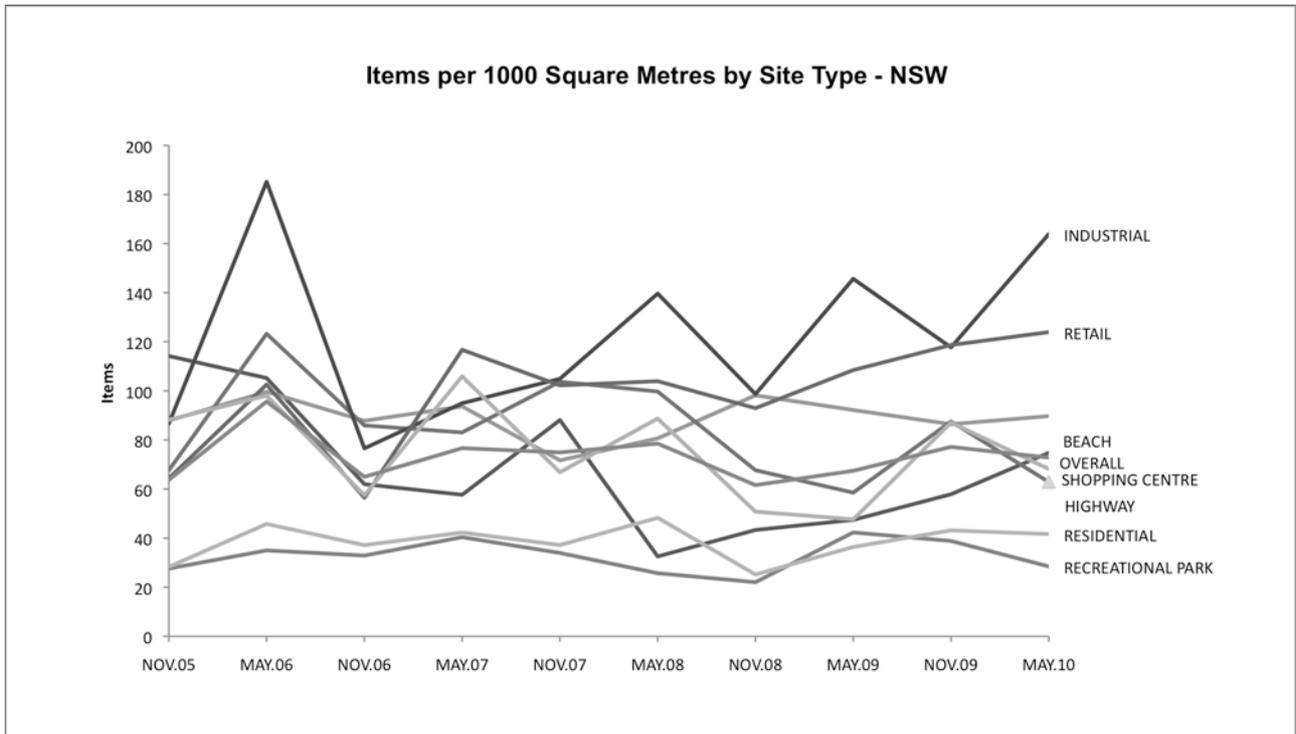
When illegally dumped materials are excluded Industrial sites (20.37 litres) displayed higher volume totals per 1,000 m<sup>2</sup> in comparison to other site types and a considerable estimated volume of litter was also recorded at highway sites (11.59 litres). At other site types the litter volume per 1,000m<sup>2</sup> estimates were:

- Retail sites (7.56 litres per 1,000m<sup>2</sup>)
- Car parks (6.05 litres per 1,000m<sup>2</sup>)
- Beaches (5.96 litres per 1,000m<sup>2</sup>)
- Residential sites (5.21 litres per 1,000m<sup>2</sup>)
- Shopping centres (4.26 litres per 1,000m<sup>2</sup>)
- Recreational parks (1.63 litres per 1,000m<sup>2</sup>)



Tracked results from November 2005 demonstrate seasonal fluctuations among shopping centres, residential and industrial sites with an increase in the overall numbers of items per 1,000m<sup>2</sup> recorded in the May counts, and lower results in figures for November counts.

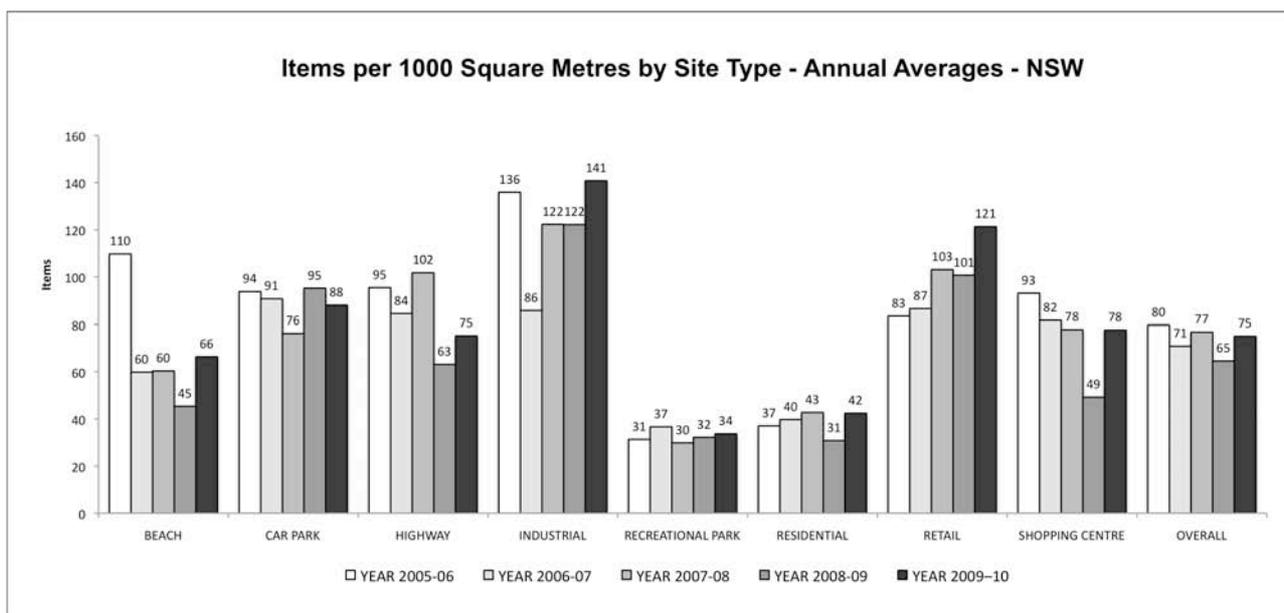
Since the inception of the litter monitors there also appears to be a gradual increase in the number of litter items per 1,000m<sup>2</sup> at retail and industrial sites.



The annual average number of litter items per 1,000m<sup>2</sup> within NSW for the year of 2009–10 (75 items) represented an increase from the figure recorded in 2008–09 (65 items), but remained lower than the number of litter items recorded in 2007–08 (77 items).

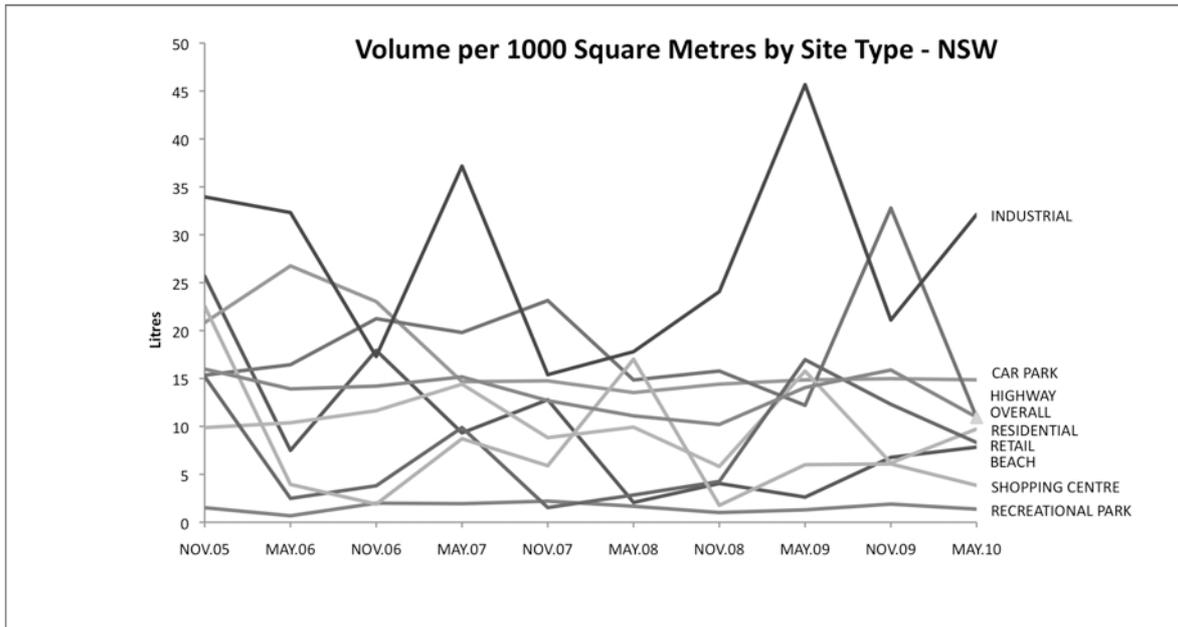
Increases in the litter recorded per 1,000m<sup>2</sup> were most strongly evident at shopping centres (78 items, up from 49 items in 2008–09), beaches (66 items, up from 45 items in 2008–09), retail sites (121 items, up from 101 items in 2008–09) and industrial sites (141 items, up from 122 items in 2008–09).

There was however, a decrease in the litter recorded per 1,000m<sup>2</sup> at car park sites (88 items, down from 95 items in 2008–09).



There is also some seasonal fluctuation evident in volume estimates of litter within site types in NSW, where there are higher litter volumes among residential and shopping centre sites in May compared to lower litter volumes in November. Conversely, there are higher litter volumes among beach and highway sites in November and lower volumes in May.

The volume estimates from the other site types show fluctuations across count results but without evidence of predictable seasonal activity. Fluctuations in litter volumes at industrial and highway sites are mainly due to the discarding of high volume materials through illegal dumping.

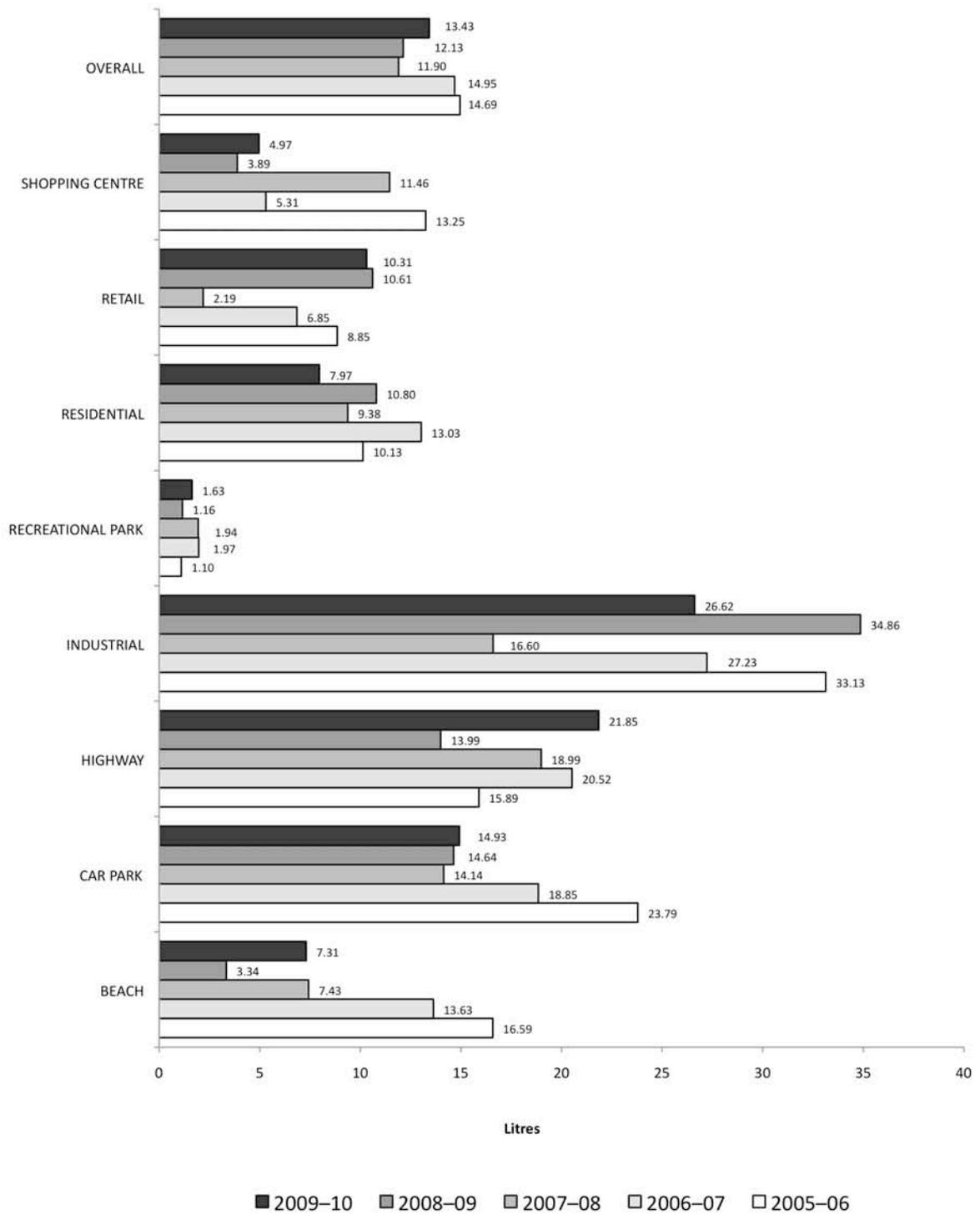


The overall annual average estimated litter volume per 1,000m<sup>2</sup> across all sites within NSW for the year 2009–10 (13.43 litres) was marginally higher than the results recorded in the previous two years (up from 12.13 litres in 2008–09 and 11.90 litres in 2007–08) but still remain lower however, than the results for 2006–07 (14.69 litres) and 2005–06 (14.95 litres).

The increase in litter volume per 1,000m<sup>2</sup> was most strongly reflected within the recorded results from highway sites (21.85 litres, up from 13.99 litres in 2008–09 and 18.99 litres in 2007–08) and beach sites (7.31 litres, up from 3.34 litres in 2008–09, but down from 7.43 litres in 2007–08).

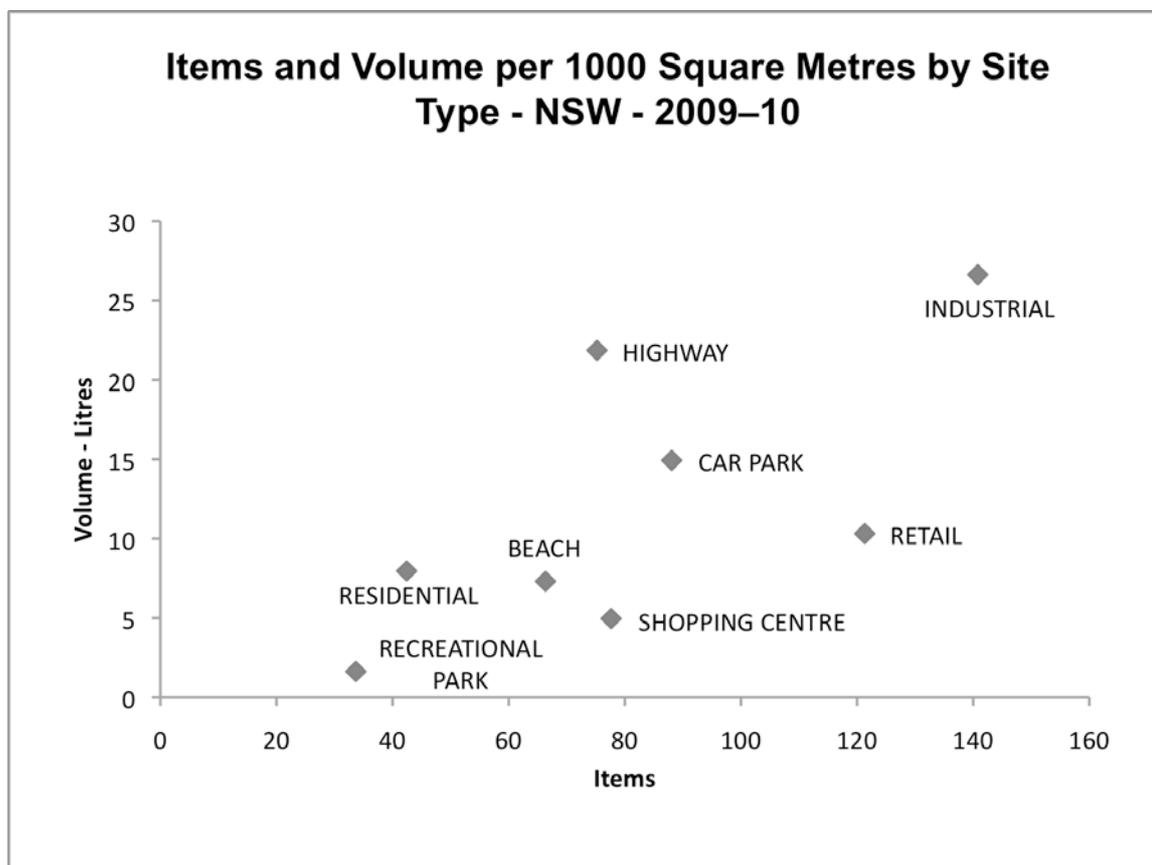
Conversely, decreases in the annual average estimated litter volume per 1,000m<sup>2</sup> were most evident at industrial sites (26.62 litres, down from 34.86 litres in 2008–09) and residential sites (7.97 litres, down from 10.80 litres in 2008–09).

### Volume per 1000 Square Metres by Site Type - Annual Averages - NSW



Items and volume estimates per 1,000m<sup>2</sup> within NSW identify the following site characteristics across the respective site types surveyed in 2009–10:

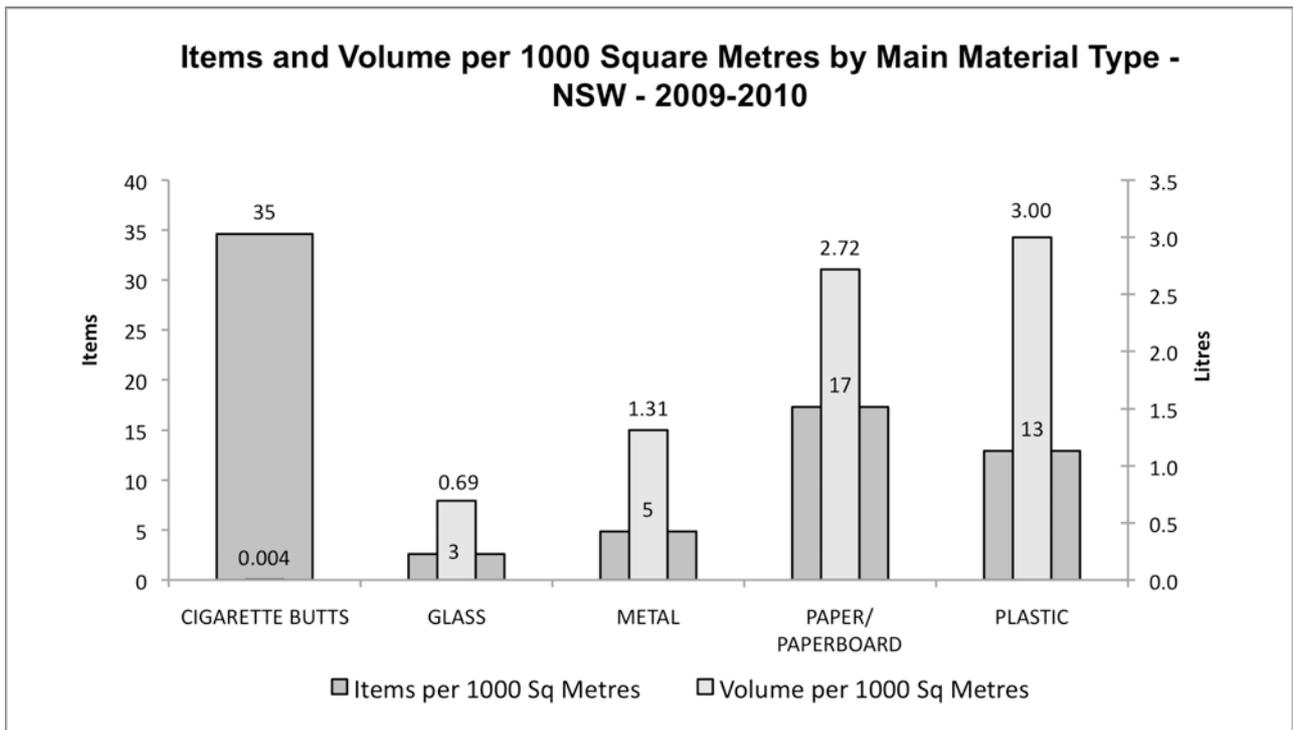
- Industrial sites were associated with both large numbers of litter items as well as high levels of litter volumes
- Retail sites were associated with high numbers of litter items and moderate levels of litter volumes
- Car park sites were associated with both moderate levels of litter items and litter volumes
- Shopping centres were associated with moderate levels of litter items and low levels of litter volumes
- Beaches, recreational parks and residential sites were associated with both lower levels of litter items and litter volumes.



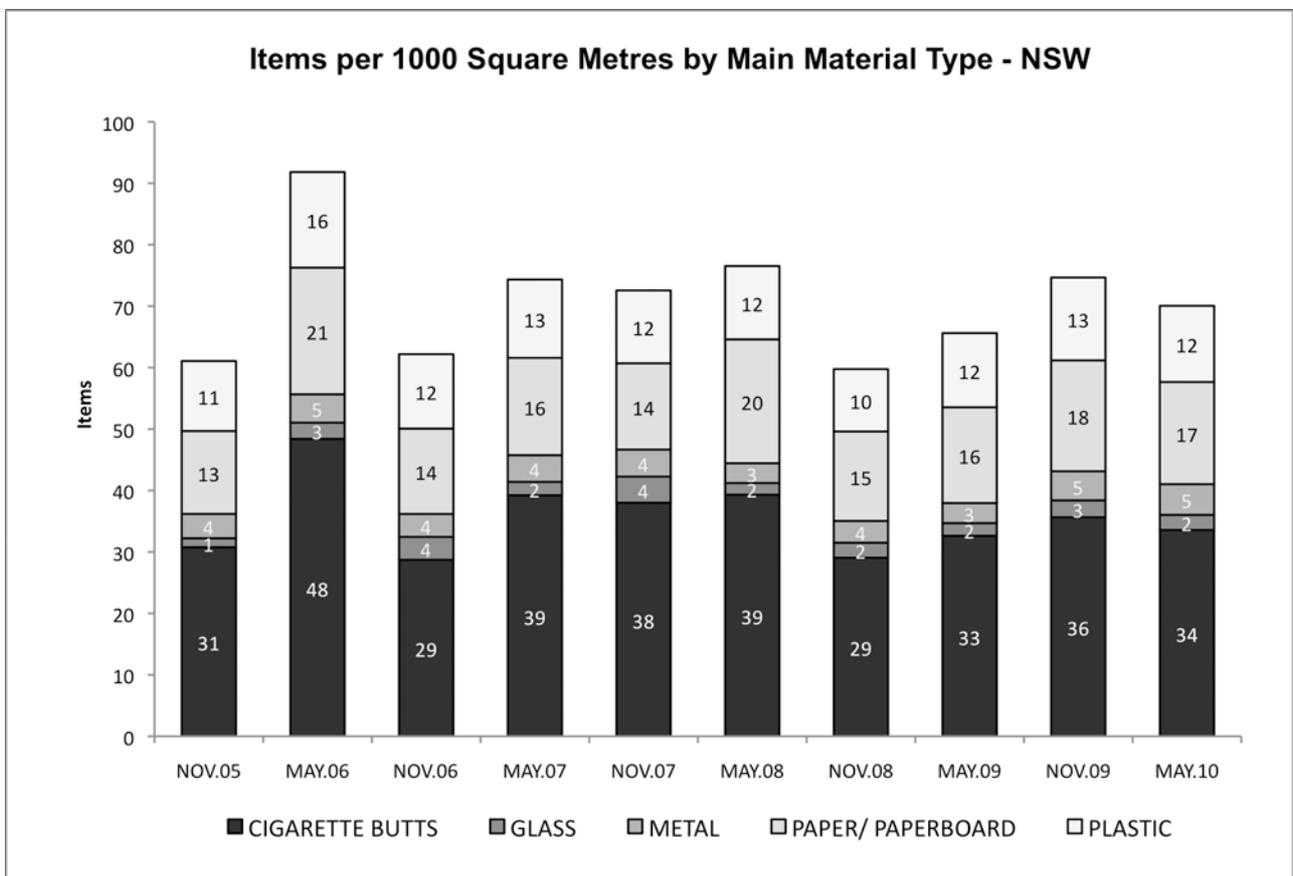
### Comparison by Main Material Types

An average of 35 cigarette butts per 1,000m<sup>2</sup> were identified across all sites surveyed within NSW during the year of 2009–10. These items however, only contributed 0.004 litres per 1,000m<sup>2</sup> in volume to the litter stream in that state.

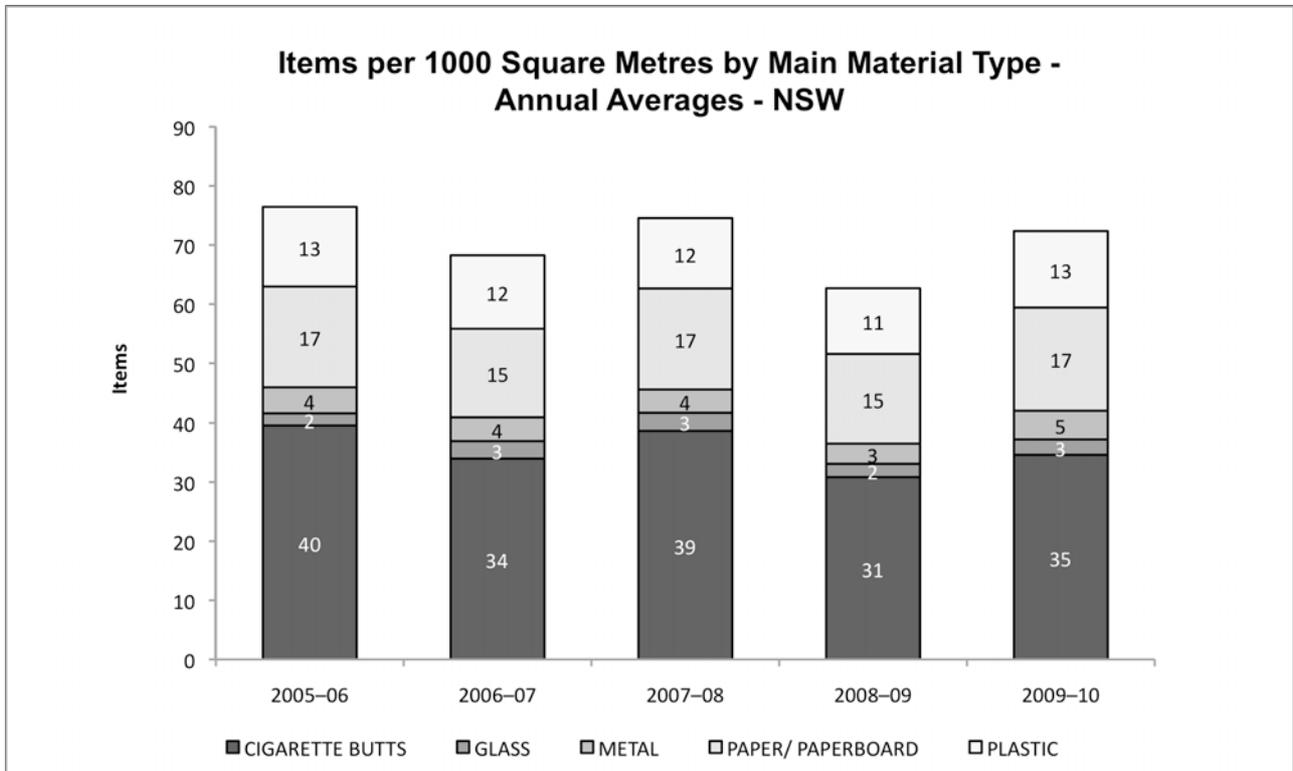
Items which contributed the greatest volumes to the litter stream in NSW in 2009–10 were plastic objects (3.00 litres per 1,000m<sup>2</sup>) and paper/paperboard objects (2.72 litres per 1,000m<sup>2</sup>).



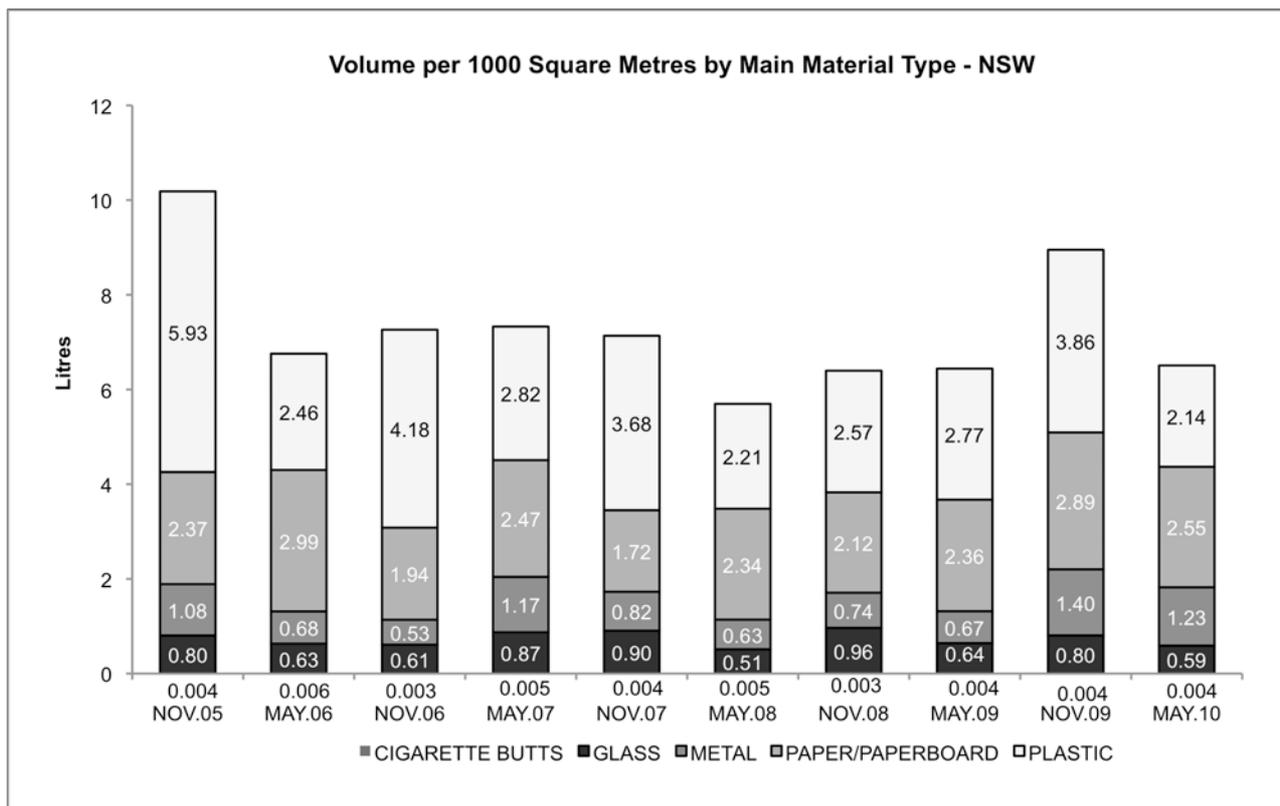
There is no evidence to support the notion of a seasonal pattern among material categories, the contribution of each main material type to the overall litter stream, however, has remained proportionally consistent across each count. The only significant variance remains the cigarette butt litter count recorded in May 2006 which remains well above all other counts.



There has been a marginal increase over all material categories in 2009–10 from the results recorded in 2008–09. The contribution of each main material type to the overall litter stream however, has maintained a similar proportional contribution to the overall totals.



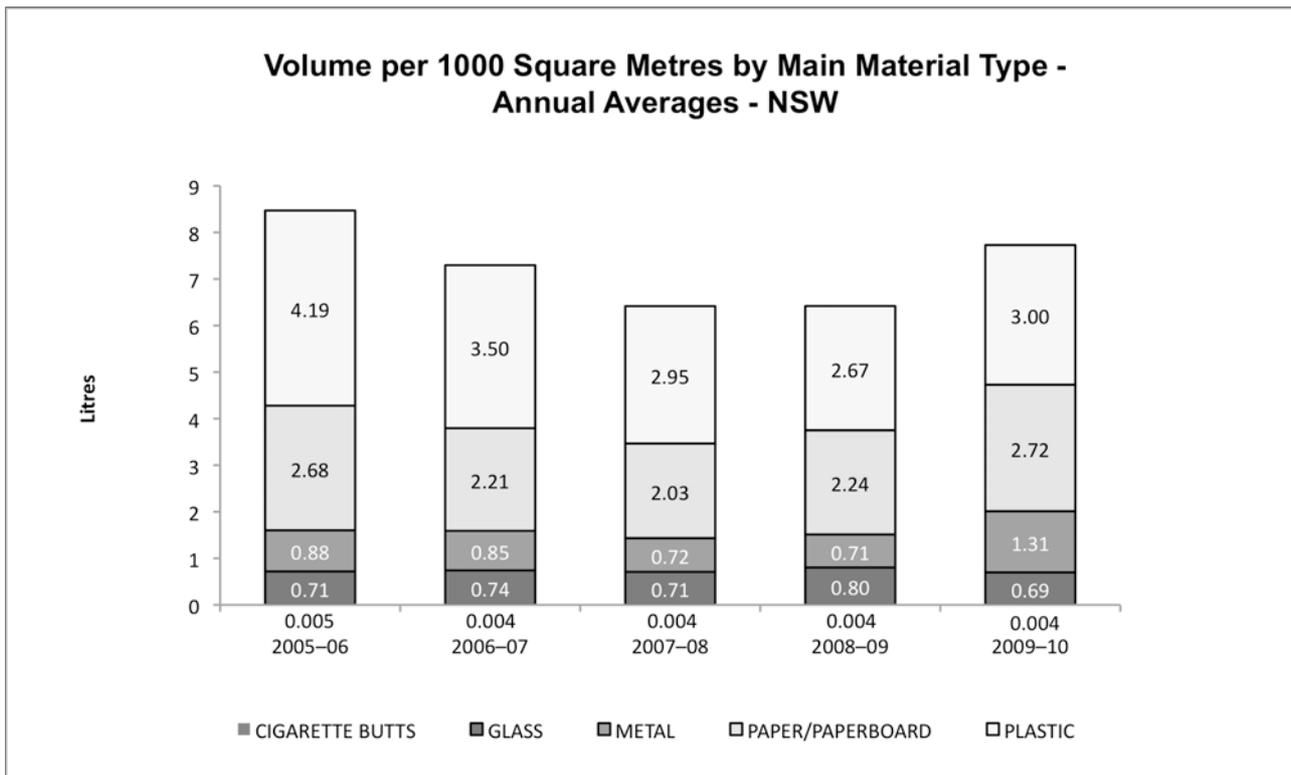
In terms of volume, there is the absence of evidence to support the notion of a seasonal pattern among material categories. Each of the main material types maintained a similar proportional contribution to the overall estimated litter volume across seasonal counts.



Annual results for the year 2009–10 revealed an overall increase in the volume of litter per 1,000m<sup>2</sup> in NSW across all main material types except glass. Glass declined to the lowest volume recorded across all litter monitors in 2009–10 (0.69 litres, down from 0.80 litres in 2008–09, 0.71 litres in 2007–08, 0.74 litres in 2006–07 and 0.71 litres in 2005–06).

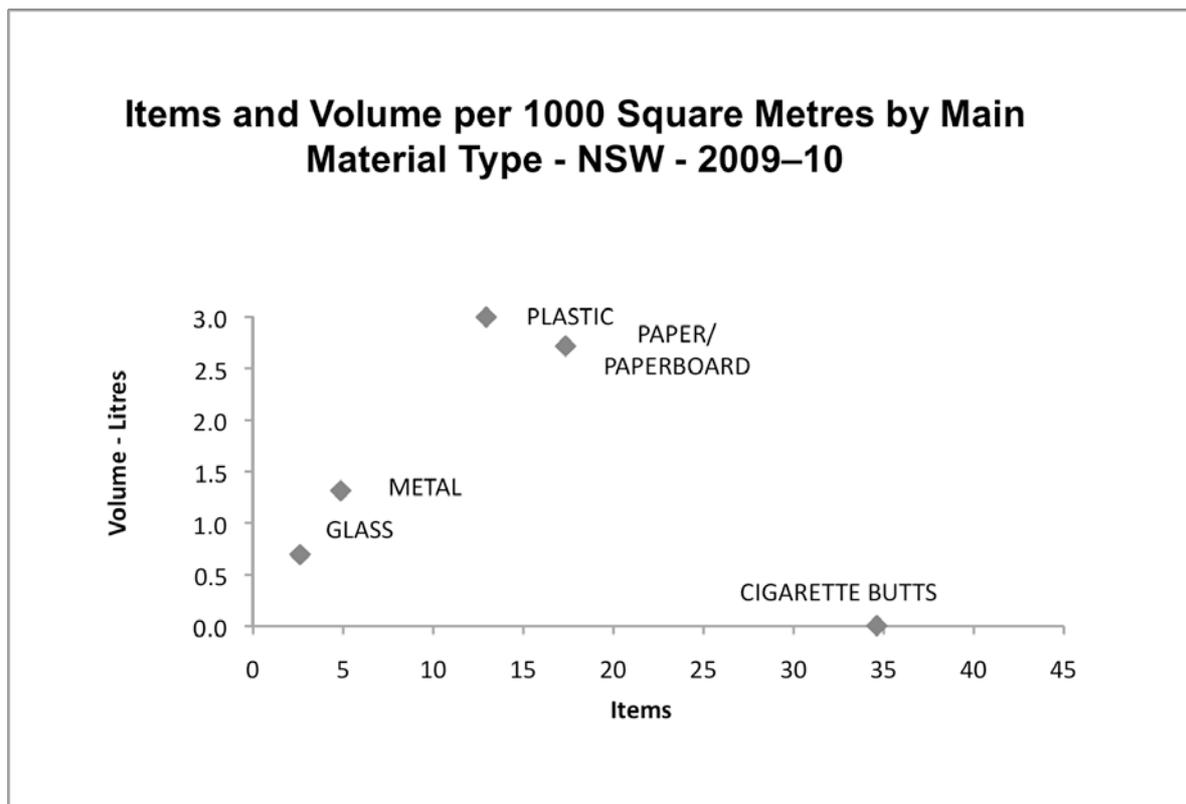
The largest increase in 2009–2010 among the other main material types was the increase in the volumes per 1,000m<sup>2</sup> of metal litter (1.31 litres, up from 0.71 litres in 2008–09, 0.72 litres in 2007–08, 0.85 litres in 2006–07 and 0.88 litres in 2005–06). Paper/paperboard and plastic volumes per 1,000m<sup>2</sup> also increased marginally from 2008–09 to 2009–10, as outlined:

- Paper (2.72 litres, up from 2.24 litres in 2008–09, 2.03 litres in 2007–08, 2.21 litres in 2006–07 and 2.68 litres in 2005–06)
- Plastic (3.00 litres, up from 2.67 litres in 2008–09, down from 2.95 litres in 2007–08, but down from 3.50 litres in 2006–07 and 4.19 litres in 2005–06).



Figures for items and volumes per 1,000m<sup>2</sup> across main material types identify the following characteristics of litter objects recorded within NSW during the year of 2009–10:

- Plastic and paper/paperboard items contribute large volumes to the litter stream and were also associated with a moderate number of litter items
- Cigarette butts are associated with large numbers of litter items but they contribute only a negligible volume to the overall litter stream in the state
- Metals items contributed a lower number of litter items and moderate volumes to the litter stream
- Glass items are associated with a lower number of litter items and lower volumes in the litter stream

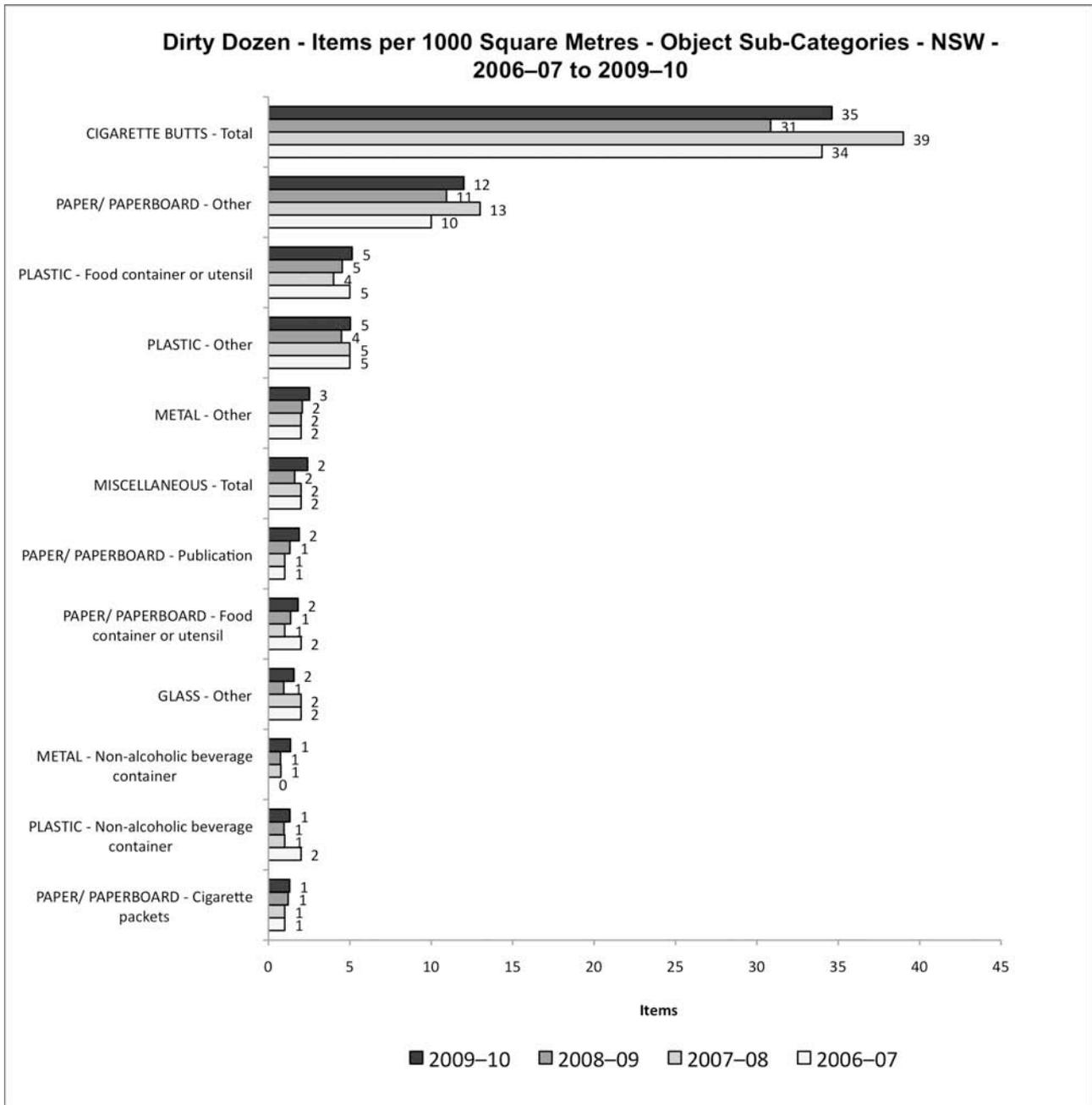


### The Dirty Dozen

Within object type sub-categories, cigarette butts remained the strongest contributor to the presence of litter objects at sites within NSW, with 35 butts per 1,000m<sup>2</sup> identified on average across the 2009-10 counts (up from 31 butts in 2008-09, down from 39 in 2007-08 and up from 34 butts in 2006-07).

Other object sub-categories associated with large litter counts included:

- Uncategorised paper/paperboard objects (12 items per 1,000m<sup>2</sup>, up from 11 items in 2008-09, down from 13 items in 2007-08 and up from 10 items in 2006-07)
- Plastic food containers or utensils (5 items per 1,000m<sup>2</sup>, unchanged from 2008-09, up from 4 items in 2007-08 and the same as 2006-07)
- Uncategorised plastic objects (5 items per 1,000m<sup>2</sup>, up from 5 items in 2008-09 and the same as 2007-08 and 2006-07).

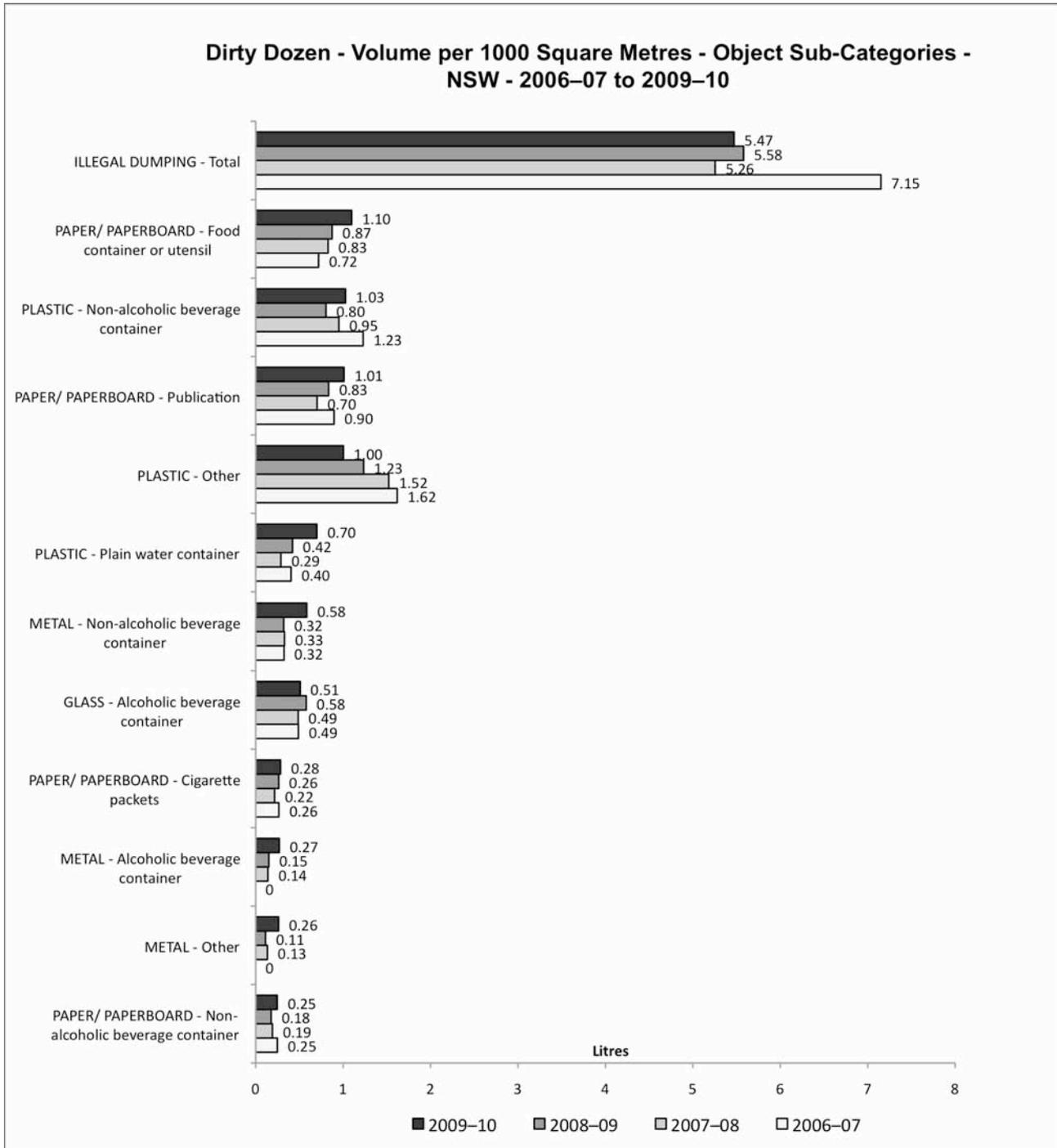


Illegal dumping was strongly associated with litter volume present at sites within NSW and contributed 5.47 litres of litter volume per 1,000m<sup>2</sup> (down from 5.58 litres in 2008-09, up from 5.26 litres in 2007-08 but still down substantially from 7.15 litres in 2006-07).

Other object sub-categories associated with large litter volume estimates included:

- Paper/paperboard – food containers or utensils (1.10 litres per 1,000m<sup>2</sup>, up from 0.87 litres in 2008-09, 0.83 litres in 2007-08 and 0.72 litres in 2006-07)

- Plastic – non-alcoholic beverage containers (1.03 litres per 1,000m<sup>2</sup>, up from 0.80 litres in 2008–09 and 0.95 litres in 2007–08 and down from 1.23 litres in 2006–07)
- Paper/paperboard – publications (1.01 litres per 1,000m<sup>2</sup>, down from 0.83 litres in 2008–09, 0.70 litres in 2007–08 and 0.90 litres in 2006–07)
- Uncategorised plastic objects (1.00 litres per 1,000m<sup>2</sup>, down from 1.23 litres in 2008–09, 1.52 litres in 2007–08 and 1.62 litres in 2006–07).



## Comparison to National, State and Territory data

The KAB National Litter Index provides performance data for litter and illegal dumping in all states and territories. Comparing performance from different states and territories should be undertaken with caution, as the data in the KAB National Litter Index does not account for population density.

When normalised to reflect population density, NSW was the second best performing of all the states and territories in terms of the number of items littered and third in terms of volume of items littered. The overall average number of items per 1,000m<sup>2</sup> per 100,000 persons was 1.05, while the overall average estimated volume per 1,000m<sup>2</sup> per 100,000 persons was 0.19 litres.

Nationally, littering trends showed an overall decrease when collated across Australia, in comparison to figures from 2009–10, 2008–09, 2007–08, 2006–07 and 2005–06:

	Items per 1,000m <sup>2</sup>					Volume (litres) per 1,000m <sup>2</sup>				
	05–06	06–07	07–08	08–09	09–10	05–06	06–07	07–08	08–09	09–10
<b>NATIONAL</b>	70	74	68	63	66	8.86	9.68	8.59	7.73	7.55
<b>NSW</b>	80	71	77	65	75	14.95	14.69	11.90	12.13	13.43

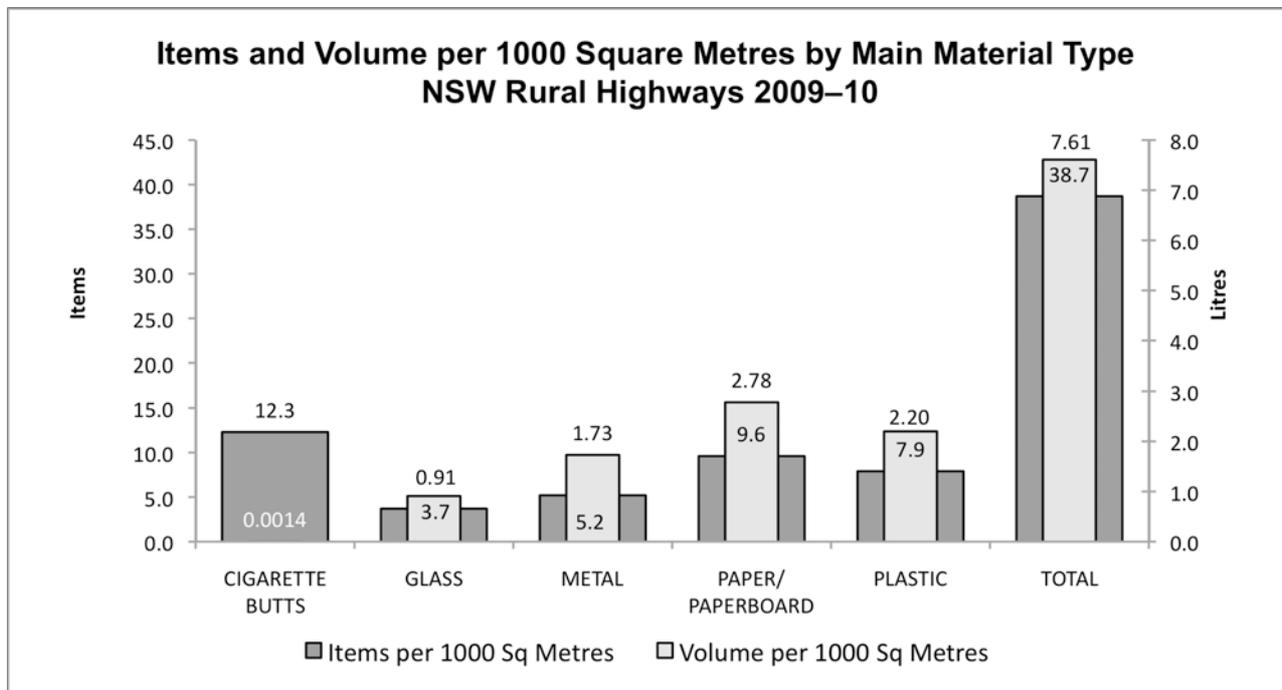
The overall average number of items per 1,000m<sup>2</sup> across all 983 sites surveyed in the 2009–10 National Litter Index was 66, while the overall average estimated volume per 1,000m<sup>2</sup> was 7.55 litres. Ignoring population density, NSW figures of 75 items and 13.43 litres per 1000m<sup>2</sup> were substantially higher than the National averages.

### Additional Rural Highway Sites

The overall average number of items per 1,000m<sup>2</sup> across the 15 rural highway sites surveyed within NSW during the count for the year 2009–10 was 38.7, similar to the National average of 38.2. The overall average estimated volume per 1,000m<sup>2</sup> was 7.61 litres lower than the National average of 8.52 litres.

	Items per 1,000m <sup>2</sup>	Volume (litres) per 1,000m <sup>2</sup>
	09/10	09/10
<b>National</b>	38.2	8.52
<b>NSW</b>	38.7	7.61
<b>NT</b>	75.4	7.70
<b>QLD</b>	34.7	6.96
<b>TAS</b>	54.7	17.97
<b>VIC</b>	17.8	1.44
<b>WA</b>	32.7	13.48

Cigarette butts contributed the largest number of items (12.3 items per 1,000m<sup>2</sup>) and paper/paperboard litter objects contributed the largest litter volumes (2.78 litres per 1,000m<sup>2</sup>).



Apart from cigarette butts, other object type sub-categories objects frequently identified included:

- Uncategorised paper/paperboard objects (4.9 items per 1,000m<sup>2</sup>)
- Uncategorised plastic objects (3.3 items per 1,000m<sup>2</sup>)
- Plastic food containers and utensils (2.6 items per 1,000m<sup>2</sup>)
- Uncategorised glass objects (2.4 items per 1,000m<sup>2</sup>)
- Paper/paperboard food containers and utensils (2.3 items per 1,000m<sup>2</sup>)

Paper/paperboard - food containers or utensils represented the largest contribution to estimated litter volume among NSW rural highway sites in 2009–10 (0.0016 litres per 1,000m<sup>2</sup>). Other object sub-categories which were associated with higher estimated volume measurements included:

- Plastic - non-alcoholic beverage containers (0.0011 litres per 1,000m<sup>2</sup>)
- Uncategorised plastic objects (0.0008 litres per 1,000m<sup>2</sup>)
- Metal – non-alcoholic beverage containers (0.0007 litres per 1,000m<sup>2</sup>)
- Metal – alcoholic beverage containers (0.0007 litres per 1,000m<sup>2</sup>)
- Glass – alcoholic beverage containers (0.0005 litres per 1,000m<sup>2</sup>)

Appendix 1: Areas Surveyed KAB NLI Surveys<sup>6</sup>

		NSW
BEACH	Averages site area	563
	Number of sites surveyed	16
	<b>Total area</b>	<b>9,000</b>
CAR PARK	Averages site area	1,528
	Number of sites surveyed	23
	<b>Total area</b>	<b>35,148</b>
HIGHWAY	Averages site area	2,209
	Number of sites surveyed	27
	<b>Total area</b>	<b>59,636</b>
INDUSTRIAL	Averages site area	1,017
	Number of sites surveyed	17
	<b>Total area</b>	<b>17,288</b>
RECREATIONAL PARK	Averages site area	2,061
	Number of sites surveyed	13
	<b>Total area</b>	<b>26,790</b>
RESIDENTIAL	Averages site area	1,509
	Number of sites surveyed	26
	<b>Total area</b>	<b>39,237</b>
RETAIL	Averages site area	1,163
	Number of sites surveyed	15
	<b>Total area</b>	<b>17,450</b>
SHOPPING CENTRE	Averages site area	1,211
	Number of sites surveyed	14
	<b>Total area</b>	<b>16,950</b>
<b>Average area across all sites</b>		1,407
<b>Total number of sites</b>		151
<b>Total area surveyed</b>		<b>221,499</b>

<sup>6</sup> Keep Australia Beautiful - National Litter Index Annual Report 2009–10 by McGregor Tan Research

## Appendix 2: NSW Raw Data from KAB NLI Survey - November 2009<sup>7</sup>

Items

	Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total
<b>NSW - NOV 2009</b>									
<b>CIGARETTE BUTTS</b>									
	195	1433	2423	797	665	471	1152	761	7897
Alcoholic sodas / spirit-based mixers, all sizes	0	2	12	0	1	2	0	0	17
Beer, all colours of glass, <750ml	10	18	64	6	5	6	14	0	123
Beer, all colours of glass, 750ml+	12	18	33	4	3	3	0	0	73
Cider/fruit based etc.	0	0	0	0	0	0	0	0	0
Flav.wtr/fruit j. dr/sprts dr. (non-carb), <1 litre	0	2	1	0	0	1	0	0	4
Flav.wtr/fruit j. dr/sprts dr. (non-carb), 1 litre+	0	0	1	7	0	0	0	0	8
Flav. water/soft drink (carbonated) <1 litre	0	3	6	8	2	1	4	1	25
Flav. water/soft drink (carbonated) 1 litre+	0	0	0	0	2	0	0	0	2
Fruit juice, < 1 litre	0	0	2	0	0	0	0	0	2
Fruit juice, 1 litre+	0	3	1	0	0	0	0	0	4
Other glass	0	94	75	58	52	12	41	4	336
Plain water (carbonated or non-carb.), <1 litre	0	0	2	0	0	0	0	0	2
Plain water (carbonated or non-carb.), 1 litre+	0	0	0	0	0	0	1	0	1
Wine & spirit, all sizes	0	5	3	1	0	2	1	0	12
Wine cooler, all sizes	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>22</b>	<b>145</b>	<b>200</b>	<b>84</b>	<b>65</b>	<b>27</b>	<b>61</b>	<b>5</b>	<b>609</b>
<b>METAL</b>									
Aerosols - pressure packs	0	0	2	0	0	1	0	0	3
Alcoholic sodas & spirit-based mixers	0	6	62	2	5	4	3	0	82
Beer, aluminium, all types, all sizes	0	9	42	4	4	1	9	0	69
Cider/fruit based etc.	0	0	0	0	0	0	0	0	0
Flav. water/soft drink, (carbonated), all sizes	5	31	139	49	16	35	36	22	333
Flav. water/soft drink, (non-carb), all sizes	0	3	12	2	1	3	0	1	22
Foil take away	1	6	30	6	1	8	6	8	66
Food cans (including pet food)	0	1	1	1	1	4	2	2	12
Industrial cans - all types	0	0	4	5	0	0	0	0	9
Metal bottle tops and can pull rings	5	39	29	18	35	34	46	20	226
Metal pieces	0	17	30	11	1	11	3	3	76
Other foil	3	29	31	32	4	25	17	9	150
<b>Total</b>	<b>14</b>	<b>141</b>	<b>382</b>	<b>130</b>	<b>68</b>	<b>126</b>	<b>122</b>	<b>65</b>	<b>1048</b>

<sup>7</sup> Keep Australia Beautiful - National Litter Index Annual Report 2009-10 by McGregor Tan Research

NSW - NOV 2009		Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total
MISCELLANEOUS	Clothing & materials	8	14	67	11	2	6	6	1	115
	Condoms	0	0	0	0	1	0	0	0	1
	Construction materials	0	3	25	58	0	5	1	0	92
	Disposable nappies	0	2	3	0	1	0	2	0	8
	Ice cream sticks	1	22	29	10	9	21	25	13	130
	Other miscellaneous	1	9	14	15	1	11	4	1	56
	Rubber pieces (not tyres)	3	2	47	9	2	9	2	2	76
	Syringes	0	0	0	0	0	0	0	0	0
	Tyres & pieces	1	1	14	2	0	1	0	0	19
	<b>Total</b>	<b>14</b>	<b>53</b>	<b>199</b>	<b>105</b>	<b>16</b>	<b>53</b>	<b>40</b>	<b>17</b>	<b>497</b>
PAPER/PAPERBOARD	Cartons, flavoured milk < 1 litre	0	5	23	7	0	3	5	2	45
	Cartons, flavoured milk 1 litre+	0	0	0	0	0	1	0	0	1
	Cartons, fruit juice, < 1 litre	0	1	5	2	0	1	0	11	20
	Cartons, fruit juice, 1 litre+	0	0	0	0	0	0	0	0	0
	Cartons, milk, plain (white) all sizes	0	0	0	0	0	2	1	1	4
	Cigarette packets	5	54	129	58	3	56	32	24	361
	Cups/take away containers	19	48	151	18	6	19	23	12	296
	Flav. water/fruit j. drink/sports drink, non-carb, <1 litre	0	2	9	0	0	0	4	0	15
	Flav. water / fruit j. drink/ sports drink, (non-carb), 1 litre+	0	0	2	1	0	0	0	0	3
	Ice cream wrappers	2	20	23	5	4	14	19	9	96
PLASTIC	Junk mail / free circulars	2	32	40	44	10	121	38	34	321
	Newspapers & magazines	0	5	38	36	3	50	26	19	177
	Other paper	77	477	436	246	48	332	110	199	1925
	Packages & boxes	0	8	81	27	0	11	8	4	139
	Paper bags	5	10	33	8	1	10	8	11	86
	Shopper dockets & related shopping paper (eg, lists)	3	76	39	8	9	23	89	73	320
	Tickets, e.g. bus, ATM, vending machine etc.	2	42	26	6	7	16	45	45	189
	<b>Total</b>	<b>115</b>	<b>780</b>	<b>1035</b>	<b>466</b>	<b>91</b>	<b>659</b>	<b>408</b>	<b>444</b>	<b>3998</b>
	6 ring can holders	0	0	1	1	0	0	2	0	4
	Bags - heavier glossy typically branded carry bags	2	2	2	0	0	1	0	0	8
Bags - supermarket type light weight carry bags	6	18	52	11	2	6	13	10	118	
Bread bag tags	0	6	20	5	1	11	10	3	56	
Containers, domestic type	1	0	21	1	0	2	2	0	27	
Containers, industrial e.g. oil	0	2	2	0	0	0	0	0	4	
Drink pouches	0	3	18	5	0	0	0	0	26	
Flav. milk, <1 litre	2	8	21	10	2	3	4	1	51	
Flav. milk, 1 litre+	0	0	0	1	0	0	0	0	1	

NSW - NOV 2009		Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total
	Flav. wtr/fruit j. dr. sprts dr etc.(non-carb) <1 litre	0	4	24	4	0	8	3	1	44
	Flav. wtr/fruit j. dr. sprts dr etc.(non-carb) 1 litre+	0	4	14	1	0	0	0	1	20
	Flav. water/soft drink (carbonated) <1 litre	5	23	78	20	4	12	20	23	185
	Flav. water/soft drink (carbonated) 1 litre+	4	2	26	0	1	0	0	0	33
	Fruit juice <1 litre	0	5	17	4	2	5	1	2	36
	Fruit juice, 1 litre+	1	0	2	0	3	0	0	0	6
	Lollipop sticks	13	26	15	4	16	14	25	12	125
	Other plastic	24	82	66	109	14	70	45	20	430
	Packing tape & straps	6	8	52	43	1	13	6	8	137
	Plain water (carbonated or non-carb) <1 litre	5	23	49	24	2	29	25	17	174
	Plain water (carbonated or non-carb) 1 litre+	0	0	19	0	0	0	0	0	19
	Plastic bottle tops	24	65	39	33	15	43	25	27	271
	Sacks - sheeting - other bags	7	0	33	26	0	0	0	0	66
	Snack bags & confectionary wrappers	16	57	117	36	10	52	34	22	344
	Spoons/ cutlery	2	28	18	14	8	7	5	3	85
	Straws	33	71	80	39	49	43	36	19	370
	Styrene foam boxes, sheets, etc	2	4	34	26	0	5	3	2	76
	Take away & cups	8	33	115	31	6	31	27	12	263
	White milk, all sizes	0	0	4	0	0	2	0	0	6
	Wine cask bladders	0	0	0	0	0	0	0	0	0
	<b>Total</b>	<b>161</b>	<b>474</b>	<b>939</b>	<b>448</b>	<b>136</b>	<b>357</b>	<b>286</b>	<b>184</b>	<b>2985</b>
	<b>GRAND TOTAL</b>	<b>521</b>	<b>3038</b>	<b>5220</b>	<b>2035</b>	<b>1041</b>	<b>1694</b>	<b>2071</b>	<b>1476</b>	<b>17096</b>

Volume – Litres

NSW - NOV 2009		Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total
<b>CIGARETTE BUTTS</b>		<b>0.0224</b>	<b>0.1648</b>	<b>0.2786</b>	<b>0.0917</b>	<b>0.0765</b>	<b>0.0542</b>	<b>0.1325</b>	<b>0.0875</b>	<b>0.9082</b>
Alcoholic sodas / spirit-based mixers, all sizes		0.0000	0.7486	4.4916	0.0000	0.3743	0.7486	0.0000	0.0000	6.3631
Beer, all colours of glass, <750ml		4.7950	8.6310	30.6880	2.8770	2.3975	2.8770	6.7130	0.0000	58.9785
Beer, all colours of glass, 750ml+		9.7236	14.5854	26.7399	3.2412	2.4309	2.4309	0.0000	0.0000	59.1519
Cider/fruit based etc.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Flav.wtr/fruit j. dr/sprts dr, (non-carb), <1 litre		0.0000	1.6206	0.8103	0.0000	0.0000	0.8103	0.0000	0.0000	3.2412
Flav.wtr/fruit j. dr/sprts dr, (non-carb), 1 litre+		0.0000	0.0000	1.6540	11.5780	0.0000	0.0000	0.0000	0.0000	13.2320
Flav. water/soft drink (carbonated) <1 litre		0.0000	0.9033	1.8066	2.4088	0.6022	0.3011	1.2044	0.3011	7.5275
Flav. water/soft drink (carbonated) 1 litre+		0.0000	0.0000	0.0000	0.0000	3.3080	0.0000	0.0000	0.0000	3.3080
Fruit juice, < 1 litre		0.0000	0.0000	0.5672	0.0000	0.0000	0.0000	0.0000	0.0000	0.5672
Fruit juice, 1 litre+		0.0000	4.7100	1.5700	0.0000	0.0000	0.0000	0.0000	0.0000	6.2800
Other glass		0.0000	1.8462	1.4730	1.1391	1.0213	0.2357	0.8052	0.0786	6.5990
Plain water (carbonated or non-carb.), <1 litre		0.0000	0.0000	0.8296	0.0000	0.0000	0.0000	0.0000	0.0000	0.8296
Plain water (carbonated or non-carb.), 1 litre+		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0593	0.0000	1.0593
Wine & spirit, all sizes		0.0000	4.4570	2.6742	0.8914	0.0000	1.7828	0.8914	0.0000	10.6968
Wine cooler, all sizes		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>14.5186</b>	<b>37.5021</b>	<b>73.3044</b>	<b>22.1355</b>	<b>10.1342</b>	<b>9.1864</b>	<b>10.6733</b>	<b>0.3797</b>	<b>177.8341</b>
<b>METAL</b>										
Aerosols - pressure packs		0.0000	0.0000	1.3685	0.0000	0.0000	0.6842	0.0000	0.0000	2.0527
Alcoholic sodas & spirit-based mixers		0.0000	3.3714	34.8378	1.1238	2.8095	2.2476	1.6857	0.0000	46.0758
Beer, aluminium, all types, all sizes		0.0000	3.8826	18.1188	1.7256	1.7256	0.4314	3.8826	0.0000	29.7666
Cider/fruit based etc.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Flav. water/soft drink, (carbonated), all sizes		2.1570	13.3734	59.9646	21.1386	6.9024	15.0990	15.5304	9.4908	143.6562
Flav. water/soft drink, (non-carb), all sizes		0.0000	1.1448	4.5792	0.7632	0.3816	1.1448	0.0000	0.3816	8.3952
Foil take away		0.4624	2.7743	13.8714	2.7743	0.4624	3.6990	2.7743	3.6990	30.5171
Food cans (including pet food)		0.0000	0.4638	0.4638	0.4638	0.4638	1.8552	0.9276	0.9276	5.5656
Industrial cans - all types		0.0000	0.0000	18.2802	22.8502	0.0000	0.0000	0.0000	0.0000	41.1304
Metal bottle tops and can pull rings		0.0000	0.1560	0.1160	0.0720	0.1400	0.1360	0.1840	0.0800	0.9040
Metal pieces		0.0000	0.1802	0.3180	0.1166	0.0106	0.1166	0.0318	0.0318	0.8056
Other foil		0.0047	0.0452	0.0484	0.0499	0.0062	0.0390	0.0265	0.0140	0.2340
<b>Total</b>		<b>2.6441</b>	<b>25.3917</b>	<b>151.9666</b>	<b>51.0780</b>	<b>12.9021</b>	<b>25.4529</b>	<b>25.0429</b>	<b>14.6249</b>	<b>309.1032</b>

NSW - NOV 2009

	Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total	
MISCELLANEOUS	Clothing & materials	0.1224	1.0251	0.1683	0.0306	0.0918	0.0918	0.0153	1.7595	
	Condoms	0.0000	0.0000	0.0000	0.0003	0.0000	0.0000	0.0000	0.0003	
	Construction materials	0.0000	1.0800	20.8800	0.0000	1.8000	0.3600	0.0000	33.1200	
	Disposable nappies	0.0000	2.2500	3.3750	0.0000	1.1250	2.2500	0.0000	9.0000	
	Ice cream sticks	0.0009	0.0202	0.0267	0.0092	0.0083	0.0230	0.0120	0.1196	
	Other miscellaneous	0.0135	0.1215	0.1890	0.2025	0.0135	0.0540	0.0135	0.7560	
	Rubber pieces (not tyres)	0.0005	0.0003	0.0077	0.0015	0.0003	0.0003	0.0003	0.0125	
	Syringes	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	Tyres & pieces	0.2250	0.2250	3.1500	0.4500	0.0000	0.2250	0.0000	4.2750	
	<b>Total</b>	<b>0.3623</b>	<b>3.9113</b>	<b>16.7735</b>	<b>21.7115</b>	<b>1.1780</b>	<b>2.2861</b>	<b>2.7791</b>	<b>0.0411</b>	<b>49.0429</b>
	Cartons, flavoured milk < 1 litre	0.0000	3.7485	17.2431	5.2479	0.0000	2.2491	3.7485	1.4994	33.7365
	Cartons, flavoured milk 1 litre+	0.0000	0.0000	0.0000	0.0000	0.0000	1.0127	0.0000	0.0000	1.0127
	Cartons, fruit juice, < 1 litre	0.0000	0.6248	3.1238	1.2495	0.0000	0.6248	0.0000	6.8723	12.4950
Cartons, fruit juice, 1 litre+	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Cartons, milk, plain (white) all sizes	0.0000	0.0000	0.0000	0.0000	0.0000	2.0253	1.0127	1.0127	4.0506	
Cigarette packets	1.0894	11.7650	28.1052	12.6365	0.6536	12.2007	6.9718	5.2289	78.6511	
Cups/take away containers	13.8501	34.9896	110.0715	13.1211	4.3737	13.8501	16.7659	8.7474	215.7692	
Flav. water/fruit j. drink/sports drink, non-carb, <1 litre	0.0000	0.5242	2.3589	0.0000	0.0000	0.0000	1.0484	0.0000	3.9315	
Flav. water / fruit j. drink/ sports drink, (non-carb), 1 litre+	0.0000	0.0000	4.1400	2.0700	0.0000	0.0000	0.0000	0.0000	6.2100	
Ice cream wrappers	0.0048	0.0480	0.0552	0.0120	0.0096	0.0336	0.0456	0.0216	0.2304	
Junk mail / free circulars	0.3480	5.5680	6.9600	7.6560	1.7400	21.0540	6.6120	5.9160	55.8540	
Newspapers & magazines	0.0000	5.9000	44.8400	42.4800	3.5400	59.0000	30.6800	22.4200	208.8600	
Other paper	0.2603	1.6123	1.4737	0.8315	0.1622	1.1222	0.3718	0.6726	6.5065	
Packages & boxes	0.0000	0.6400	6.4800	2.1600	0.0000	0.8800	0.6400	0.3200	11.1200	
Paper bags	0.0529	0.1058	0.3491	0.0846	0.0106	0.1058	0.0846	0.1164	0.9099	
Shopper dockets & related shopping paper (eg, lists)	0.0061	0.1543	0.0792	0.0162	0.0183	0.0467	0.1807	0.1482	0.6496	
Tickets, e.g. bus, ATM, vending machine etc.	0.0018	0.0370	0.0229	0.0053	0.0062	0.0141	0.0396	0.0396	0.1663	
<b>Total</b>	<b>15.6132</b>	<b>65.7173</b>	<b>225.3025</b>	<b>87.5706</b>	<b>10.5142</b>	<b>114.2189</b>	<b>68.2016</b>	<b>53.0150</b>	<b>640.1533</b>	
PLASTIC	6 ring can holders	0.0000	0.0000	0.0015	0.0000	0.0000	0.0030	0.0000	0.0060	
	Bags - heavier glossy typically branded carry bags	0.1752	0.1752	0.0000	0.0000	0.0876	0.0000	0.0876	0.7008	
	Bags - supermarket type light weight carry bags	0.2036	0.6109	1.7649	0.3733	0.0679	0.2036	0.4412	4.0049	
	Bread bag tags	0.0000	0.0014	0.0046	0.0012	0.0002	0.0025	0.0023	0.0129	
	Containers, domestic type	8.3240	0.0000	174.8040	8.3240	0.0000	16.6480	16.6480	0.0000	224.7480
	Containers, industrial e.g. oil	0.0000	44.9160	44.9160	0.0000	0.0000	0.0000	0.0000	0.0000	89.8320
	Drink pouches	0.0000	0.2588	1.5525	0.4313	0.0000	0.0000	0.0000	0.0000	2.2425
	Flav. milk, <1 litre	1.0654	4.2616	11.1867	5.3270	1.0654	1.5981	2.1308	0.5327	27.1677
	Flav. milk, 1 litre+	0.0000	0.0000	0.0000	2.1367	0.0000	0.0000	0.0000	0.0000	2.1367
	Flav. wtr/fruit j. dr. sprts dr etc.(non-carb) <1 litre	0.0000	2.2244	13.3466	2.2244	0.0000	4.4489	1.6683	0.5561	24.4688
	Flav. wtr/fruit j. dr. sprts dr etc.(non-carb) 1 litre+	0.0000	6.6160	23.1560	1.6540	0.0000	0.0000	0.0000	1.6540	33.0800
	Flav. water/soft drink (carbonated) <1 litre	3.1106	14.3085	48.5246	12.4422	2.4884	7.4653	12.4422	14.3085	115.0904

NSW - NOV 2009		Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total
	Flav. water/soft drink (carbonated) 1 litre+	6.6160	3.3080	43.0040	0.0000	1.6540	0.0000	0.0000	0.0000	<b>54.5820</b>
	Fruit juice <1 litre	0.0000	2.6635	9.0559	2.1308	1.0654	2.6635	0.5327	1.0654	<b>19.1772</b>
	Fruit juice, 1 litre+	2.1367	0.0000	4.2734	0.0000	6.4101	0.0000	0.0000	0.0000	<b>12.8201</b>
	Lollipop sticks	0.0069	0.0138	0.0080	0.0021	0.0085	0.0074	0.0133	0.0064	<b>0.0663</b>
	Other plastic	0.0300	0.1025	0.0825	0.1363	0.0175	0.0875	0.0563	0.0250	<b>0.5375</b>
	Packing tape & straps	0.0016	0.0022	0.0140	0.0116	0.0003	0.0035	0.0016	0.0022	<b>0.0370</b>
	Plain water (carbonated or non-carb) <1 litre	3.9395	18.1217	38.6071	18.9096	1.5758	22.8491	19.6975	13.3943	<b>137.0946</b>
	Plain water (carbonated or non-carb) 1 litre+	0.0000	0.0000	29.2898	0.0000	0.0000	0.0000	0.0000	0.0000	<b>29.2898</b>
	Plastic bottle tops	0.1921	0.5203	0.3122	0.2642	0.1201	0.3442	0.2001	0.2161	<b>2.1694</b>
	Sacks - sheeting - other bags	0.0022	0.0000	0.0104	0.0082	0.0000	0.0000	0.0000	0.0000	<b>0.0208</b>
	Snack bags & confectionary wrappers	0.1253	0.4463	0.9161	0.2819	0.0783	0.4072	0.2662	0.1723	<b>2.6935</b>
	Spoons/ cutlery	0.0192	0.2688	0.1728	0.1344	0.0768	0.0672	0.0480	0.0288	<b>0.8160</b>
	Straws	0.1361	0.2929	0.3300	0.1609	0.2021	0.1774	0.1485	0.0784	<b>1.5263</b>
	Styrene foam boxes, sheets, etc	0.0750	0.1500	1.2750	0.9750	0.0000	0.1875	0.1125	0.0750	<b>2.8500</b>
	Take away & cups	1.6562	6.8317	23.8073	6.4176	1.2421	6.4176	5.5895	2.4842	<b>54.4463</b>
	White milk, all sizes	0.0000	0.0000	8.5468	0.0000	0.0000	4.2734	0.0000	0.0000	<b>12.8201</b>
	Wine cask bladders	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.0000</b>
	<b>Total</b>	<b>27.8156</b>	<b>106.0944</b>	<b>479.1379</b>	<b>62.3481</b>	<b>16.0729</b>	<b>67.9396</b>	<b>60.0021</b>	<b>35.0271</b>	<b>854.4375</b>
	<b>GRAND TOTAL</b>	<b>60.9762</b>	<b>526.7816</b>	<b>1954.7635</b>	<b>364.9353</b>	<b>50.8779</b>	<b>243.1380</b>	<b>214.8314</b>	<b>103.1752</b>	<b>3519.4791</b>

## Appendix 3: NSW Raw Data from KAB NLI Survey - May 2010<sup>8</sup>

### Items

	Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total
<b>NSW - MAY 2010</b>									
<b>CIGARETTE BUTTS</b>									
Alcoholic sodas / spirit-based mixers, all sizes	0	4	2	11	0	3	0	1	21
Beer, all colours of glass, <750ml	1	10	29	9	1	6	0	0	56
Beer, all colours of glass, 750ml+	4	7	14	32	1	0	3	0	61
Cider/fruit based etc.	0	0	0	0	0	0	0	0	0
Flav.wtr/fruit j. dr/sprts dr. (non-carb), <1 litre	1	0	1	2	0	2	0	0	6
Flav.wtr/fruit j. dr/sprts dr. (non-carb), 1 litre+	0	3	0	6	0	0	0	0	9
Flav. water/soft drink (carbonated) <1 litre	0	7	1	6	0	0	0	0	14
Flav. water/soft drink (carbonated) 1 litre+	0	0	0	2	0	0	0	0	2
Fruit juice, < 1 litre	0	0	0	0	0	1	0	0	1
Fruit juice, 1 litre+	0	0	0	0	0	0	1	0	1
Other glass	1	123	93	104	3	18	16	1	359
Plain water (carbonated or non-carb.), <1 litre	0	0	0	3	0	4	1	0	8
Plain water (carbonated or non-carb.), 1 litre+	0	0	0	0	0	0	0	0	0
Wine & spirit, all sizes	0	1	1	3	0	1	1	0	7
Wine cooler, all sizes	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>7</b>	<b>155</b>	<b>141</b>	<b>178</b>	<b>5</b>	<b>35</b>	<b>22</b>	<b>2</b>	<b>545</b>
<b>METAL</b>									
Aerosols - pressure packs	0	0	2	9	0	1	1	0	13
Alcoholic sodas & spirit-based mixers	3	5	11	14	4	5	2	0	44
Beer, aluminium, all types, all sizes	1	5	18	12	0	5	3	0	44
Cider/fruit based etc.	0	0	0	0	0	0	0	0	0
Flav. water/soft drink, (carbonated), all sizes	10	38	83	68	14	25	18	11	267
Flav. water/soft drink, (non-carb), all sizes	0	0	5	4	0	4	0	0	13
Foil take away	3	12	10	9	3	6	5	5	53
Food cans (including pet food)	0	3	6	10	2	4	4	1	30
Industrial cans - all types	0	0	6	7	0	0	0	0	13
Metal bottle tops and can pull rings	8	77	36	29	21	22	46	12	251
Metal pieces	3	6	33	35	1	9	4	1	92

<sup>8</sup> Keep Australia Beautiful - National Litter Index Annual Report 2009-10 by McGregor Tan Research

NSW - MAY 2010		Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total
	Other foil	9	75	58	48	16	42	25	13	286
	<b>Total</b>	<b>37</b>	<b>221</b>	<b>268</b>	<b>245</b>	<b>61</b>	<b>123</b>	<b>108</b>	<b>43</b>	<b>1106</b>
	Clothing & materials	0	8	36	34	0	6	1	3	88
	Condoms	0	5	0	0	2	0	0	0	7
	Construction materials	0	2	13	46	0	12	0	0	73
	Disposable nappies	0	7	1	0	1	1	3	0	13
	Ice cream sticks	1	19	10	3	7	6	21	8	75
	Other miscellaneous	10	39	48	64	7	18	18	15	219
	Rubber pieces (not tyres)	0	9	26	22	0	3	4	1	65
	Syringes	0	1	1	0	0	0	0	0	2
	Tyres & pieces	0	0	22	5	0	0	0	0	27
	<b>Total</b>	<b>11</b>	<b>90</b>	<b>157</b>	<b>174</b>	<b>17</b>	<b>46</b>	<b>47</b>	<b>27</b>	<b>569</b>
	Cartons, flavoured milk < 1 litre	0	0	5	2	1	3	2	0	13
	Cartons, flavoured milk 1 litre+	0	0	2	0	0	0	1	0	3
	Cartons, fruit juice, < 1 litre	0	0	2	5	4	2	2	0	15
	Cartons, fruit juice, 1 litre+	0	2	0	1	0	0	1	0	4
	Cartons, milk, plain (white) all sizes	0	0	2	7	0	1	1	0	11
	Cigarette packets	3	35	70	58	4	25	15	7	217
	Cups/take away containers	17	59	152	75	9	34	8	17	371
	Flav. water/fruit j. drink/sports drink, non-carb, <1 litre	0	0	5	1	0	1	0	0	7
	Flav. water / fruit j. drink/ sports drink, (non-carb), 1 litre+	0	0	2	0	0	0	0	0	2
	Ice cream wrappers	0	4	15	6	2	4	9	2	42
	Junk mail / free circulars	2	31	38	28	9	51	34	24	217
	Newspapers & magazines	0	11	29	18	4	43	14	4	123
	Other paper	35	484	349	404	111	323	156	165	2027
	Package & boxes	0	18	34	21	3	5	2	2	85
	Paper bags	3	12	53	23	2	6	5	3	107
	Shopper dockets & related shopping paper (eg. lists)	0	80	26	30	9	25	31	54	255
	Tickets, e.g. bus, ATM, vending machine etc.	2	49	16	10	0	14	70	24	185
	<b>Total</b>	<b>62</b>	<b>785</b>	<b>800</b>	<b>689</b>	<b>158</b>	<b>537</b>	<b>351</b>	<b>302</b>	<b>3684</b>
	6 ring can holders	0	1	5	0	0	0	0	0	6
	Bags - heavier glossy typically branded carry bags	0	3	3	0	0	2	0	0	8
	Bags - supermarket type light weight carry bags	9	23	30	28	6	18	11	11	136
	Bread bag tags	0	1	2	8	0	10	5	2	28
	Containers, domestic type	0	1	1	5	0	1	1	0	9
	Containers, industrial e.g. oil	0	0	0	2	0	0	0	0	2
	Drink pouches	0	0	3	0	0	2	0	0	5
	Flav. milk, <1 litre	0	9	11	5	1	1	0	0	27

NSW - MAY 2010		Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total
	Flav. milk, 1 litre+	0	0	6	1	0	0	0	0	7
	Flav.wtr/fruit j. dr. sprts dr etc.(non-carb) <1 litre	2	2	3	3	0	0	0	1	11
	Flav. wtr/fruit j. dr. sprts dr etc.(non-carb) 1 litre+	0	1	8	4	0	0	0	0	13
	Flav. water/soft drink (carbonated) <1 litre	3	18	25	25	2	10	8	1	92
	Flav. water/soft drink (carbonated) 1 litre+	4	1	8	1	0	2	0	0	16
	Fruit juice <1 litre	0	1	1	0	0	1	0	0	3
	Fruit juice, 1 litre+	0	0	0	0	0	1	0	0	1
	Lollipop sticks	8	30	12	19	45	9	29	5	157
	Other plastic	63	98	144	212	19	127	33	20	716
	Packing tape & straps	6	9	27	51	1	7	1	0	102
	Plain water (carbonated or non-carb) <1 litre	6	16	37	34	3	26	15	6	143
	Plain water (carbonated or non-carb) 1 litre+	2	0	3	9	0	4	2	0	20
	Plastic bottle tops	22	35	44	40	22	30	11	14	218
	Sacks - sheeting - other bags	1	2	13	11	0	2	1	0	30
	Snack bags & confectionary wrappers	12	45	77	51	21	29	17	21	273
	Spoons/ cutlery	9	27	8	20	6	6	6	4	86
	Straws	28	64	96	61	27	51	36	17	380
	Styrene foam boxes, sheets, etc	2	1	20	19	0	4	3	0	49
	Take away & cups	10	25	44	54	4	29	17	12	195
	White milk, all sizes	0	0	0	3	0	0	0	0	3
	Wine cask bladders	0	0	2	6	0	1	1	0	10
	<b>Total</b>	<b>187</b>	<b>413</b>	<b>633</b>	<b>672</b>	<b>157</b>	<b>373</b>	<b>197</b>	<b>114</b>	<b>2746</b>
	<b>GRAND TOTAL</b>	<b>673</b>	<b>3153</b>	<b>3750</b>	<b>2833</b>	<b>763</b>	<b>1635</b>	<b>2163</b>	<b>1156</b>	<b>16126</b>

Volume – Litres

NSW - MAY 2010		Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total
<b>CIGARETTE BUTTS</b>		<b>0.0423</b>	<b>0.1696</b>	<b>0.2003</b>	<b>0.1002</b>	<b>0.0420</b>	<b>0.0590</b>	<b>0.1651</b>	<b>0.0767</b>	<b>0.8553</b>
Alcoholic sodas / spirit-based mixers, all sizes		0.0000	1.4972	0.7486	4.1173	0.0000	1.1229	0.0000	0.3743	7.8603
Beer, all colours of glass, <750ml		0.4795	4.7950	13.9055	4.3155	0.4795	2.8770	0.0000	0.0000	26.8520
Beer, all colours of glass, 750ml+		3.2412	5.6721	11.3442	25.9296	0.8103	0.0000	2.4309	0.0000	49.4283
Cider/fruit based etc.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Flav. wtr/fruit j. dr/sprts dr. (non-carb), <1 litre		0.8103	0.0000	0.8103	1.6206	0.0000	1.6206	0.0000	0.0000	4.8618
Flav. wtr/fruit j. dr/sprts dr. (non-carb), 1 litre+		0.0000	4.9620	0.0000	9.9240	0.0000	0.0000	0.0000	0.0000	14.8860
Flav. water/soft drink (carbonated) <1 litre		0.0000	2.1077	0.3011	1.8066	0.0000	0.0000	0.0000	0.0000	4.2154
Flav. water/soft drink (carbonated) 1 litre+		0.0000	0.0000	0.0000	3.3080	0.0000	0.0000	0.0000	0.0000	3.3080
Fruit juice, < 1 litre		0.0000	0.0000	0.0000	0.0000	0.0000	0.2836	0.0000	0.0000	0.2836
Fruit juice, 1 litre+		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.5700	0.0000	1.5700
Other glass		0.0196	2.4157	1.8265	2.0426	0.0589	0.3535	0.3142	0.0196	7.0508
Plain water (carbonated or non-carb.), <1 litre		0.0000	0.0000	0.0000	1.2444	0.0000	1.6592	0.4148	0.0000	3.3184
Plain water (carbonated or non-carb.), 1 litre+		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Wine & spirit, all sizes		0.0000	0.8914	0.8914	2.6742	0.0000	0.8914	0.8914	0.0000	6.2398
Wine cooler, all sizes		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>4.5506</b>	<b>22.3411</b>	<b>29.8276</b>	<b>56.9828</b>	<b>1.3487</b>	<b>8.8082</b>	<b>5.6213</b>	<b>0.3939</b>	<b>129.8744</b>
<b>METAL</b>										
Aerosols - pressure packs		0.0000	0.0000	1.3685	6.1582	0.0000	0.6842	0.6842	0.0000	8.8951
Alcoholic sodas & spirit-based mixers		1.6857	2.8095	6.1809	7.8666	2.2476	2.8095	1.1238	0.0000	24.7236
Beer, aluminium, all types, all sizes		0.4314	2.1570	7.7652	5.1768	0.0000	2.1570	1.2942	0.0000	18.9816
Cider/fruit based etc.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Flav. water/soft drink, (carbonated), all sizes		4.3140	16.3932	35.8062	29.3352	6.0396	10.7850	7.7652	4.7454	115.1838
Flav. water/soft drink, (non-carb), all sizes		0.0000	0.0000	1.9080	1.5264	0.0000	1.5264	0.0000	0.0000	4.9608
Foil take away		1.3871	5.5486	4.6238	4.1614	1.3871	2.7743	2.3119	2.3119	24.5061
Food cans (including pet food)		0.0000	1.3914	2.7828	4.6380	0.9276	1.8552	1.8552	0.4638	13.9140
Industrial cans - all types		0.0000	0.0000	27.4202	31.9903	0.0000	0.0000	0.0000	0.0000	59.4105
Metal bottle tops and can pull rings		0.0320	0.3080	0.1440	0.1160	0.0840	0.0980	0.1840	0.0480	1.0040
Metal pieces		0.0318	0.0636	0.3498	0.3710	0.0106	0.0954	0.0424	0.0106	0.9752
Other foil		0.0140	0.1170	0.0905	0.0749	0.0250	0.0655	0.0390	0.0203	0.4462
<b>Total</b>		<b>7.8961</b>	<b>28.7883</b>	<b>88.4399</b>	<b>91.4147</b>	<b>10.7215</b>	<b>22.8405</b>	<b>15.2999</b>	<b>7.6000</b>	<b>273.0009</b>

NSW - MAY 2010

	Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total
MISCELLANEOUS	Clothing & materials	0.0000	0.5202	0.0000	0.0918	0.0153	0.0459	1.3464	
	Condoms	0.0000	0.0016	0.0000	0.0000	0.0000	0.0000	0.0022	
	Construction materials	0.0000	4.6800	16.5600	4.3200	0.0000	0.0000	26.2800	
	Disposable nappies	0.0000	7.8750	1.1250	1.1250	3.3750	0.0000	14.6250	
	Ice cream sticks	0.0009	0.0175	0.0092	0.0064	0.0193	0.0074	0.0690	
	Other miscellaneous	0.1350	0.5265	0.6480	0.8640	0.0945	0.2430	2.9565	
	Rubber pieces (not tyres)	0.0000	0.0015	0.0043	0.0036	0.0000	0.0005	0.0002	0.0107
	Syringes	0.0000	0.0023	0.0023	0.0000	0.0000	0.0000	0.0000	0.0045
	Tyres & pieces	0.0000	0.0000	4.9500	1.1250	0.0000	0.0000	0.0000	6.0750
	<b>Total</b>	<b>0.1359</b>	<b>9.2667</b>	<b>11.9695</b>	<b>19.0756</b>	<b>1.2266</b>	<b>5.7858</b>	<b>0.2559</b>	<b>51.3694</b>
	Cartons, flavoured milk < 1 litre	0.0000	0.0000	3.7485	1.4994	0.7497	2.2491	0.0000	9.7461
	Cartons, flavoured milk 1 litre+	0.0000	0.0000	2.0253	0.0000	0.0000	1.0127	0.0000	3.0380
	Cartons, fruit juice, < 1 litre	0.0000	0.0000	1.2495	3.1238	2.4990	1.2495	0.0000	9.3713
Cartons, fruit juice, 1 litre+	0.0000	4.1400	0.0000	2.0700	0.0000	2.0700	0.0000	8.2800	
Cartons, milk, plain (white) all sizes	0.0000	0.0000	2.0253	7.0886	0.0000	1.0127	0.0000	11.1393	
Cigarette packets	0.6536	7.6255	15.2509	12.6365	0.8715	5.4468	3.2681	47.2778	
Cups/take away containers	12.3922	43.0081	110.8004	54.6713	6.5606	24.7843	5.8316	270.4405	
Flav. water/fruit j. drink/sports drink, non-carb, <1 litre	0.0000	0.0000	1.3105	0.2621	0.0000	0.2621	0.0000	1.8347	
Flav. water / fruit j. drink/ sports drink, (non-carb), 1 litre+	0.0000	0.0000	4.1400	0.0000	0.0000	0.0000	0.0000	4.1400	
Ice cream wrappers	0.0000	0.0096	0.0360	0.0144	0.0048	0.0096	0.0216	0.1008	
Junk mail / free circulars	0.3480	5.3940	6.6120	4.8720	1.5660	8.8740	5.9160	37.7580	
Newspapers & magazines	0.0000	12.9800	34.2200	21.2400	4.7200	50.7400	16.5200	145.1400	
Other paper	0.1183	1.6359	1.1796	1.3655	0.3752	1.0917	0.5273	6.8513	
Packages & boxes	0.0000	1.4400	2.7200	1.6800	0.2400	0.4000	0.1600	6.8000	
Paper bags	0.0317	0.1270	0.5607	0.2433	0.0212	0.0635	0.0529	1.1321	
Shopper docketts & related shopping paper (eg. lists)	0.0000	0.1624	0.0528	0.0609	0.0183	0.0508	0.0629	0.5177	
Tickets, e.g. bus, ATM, vending machine etc.	0.0018	0.0431	0.0141	0.0088	0.0000	0.0123	0.0616	0.1628	
<b>Total</b>	<b>13.5456</b>	<b>76.5655</b>	<b>185.9457</b>	<b>110.8365</b>	<b>17.6261</b>	<b>96.2463</b>	<b>39.2662</b>	<b>563.7301</b>	
PLASTIC	6 ring can holders	0.0000	0.0015	0.0075	0.0000	0.0000	0.0000	0.0090	
	Bags - heavier glossy typically branded carry bags	0.0000	0.2628	0.2628	0.0000	0.0000	0.1752	0.0000	0.7008
	Bags - supermarket type light weight carry bags	0.3055	0.7806	1.0182	0.9503	0.2036	0.6109	0.3733	4.6158
	Bread bag tags	0.0000	0.0002	0.0005	0.0018	0.0000	0.0023	0.0012	0.0064
	Containers, domestic type	0.0000	8.3240	8.3240	41.6200	0.0000	8.3240	0.0000	74.9160
	Containers, industrial e.g. oil	0.0000	0.0000	0.0000	44.9160	0.0000	0.0000	0.0000	44.9160
	Drink pouches	0.0000	0.0000	0.2588	0.0000	0.0000	0.1725	0.0000	0.4313
	Flav. milk, <1 litre	0.0000	4.7943	5.8597	2.6635	0.5327	0.5327	0.0000	14.3829
	Flav. milk, 1 litre+	0.0000	0.0000	12.8201	2.1367	0.0000	0.0000	0.0000	14.9568
	Flav.wtr/fruit j. dr. sprts dr etc.(non-carb) <1 litre	1.1122	1.1122	1.6683	1.6683	0.0000	0.0000	0.0000	6.1172

NSW - MAY 2010		Beach	Car Park	Highway	Industrial	Recreational Park	Residential	Retail	Shopping Centre	Total
	Flav. wtr/fruit j. dr, sprts dr etc.(non-carb) 1 litre+	0.0000	1.6540	13.2320	6.6160	0.0000	0.0000	0.0000	0.0000	21.5020
	Flav. water/soft drink (carbonated) <1 litre	1.8663	11.1980	15.5528	15.5528	1.2442	6.2211	4.9769	0.6221	57.2341
	Flav. water/soft drink (carbonated) 1 litre+	6.6160	1.6540	13.2320	1.6540	0.0000	3.3080	0.0000	0.0000	26.4640
	Fruit juice <1 litre	0.0000	0.5327	0.5327	0.0000	0.0000	0.5327	0.0000	0.0000	1.5981
	Fruit juice, 1 litre+	0.0000	0.0000	0.0000	0.0000	0.0000	2.1367	0.0000	0.0000	2.1367
	Lollipop sticks	0.0042	0.0159	0.0064	0.0101	0.0239	0.0048	0.0154	0.0027	0.0832
	Other plastic	0.0788	0.1225	0.1800	0.2650	0.0238	0.1588	0.0413	0.0250	0.8950
	Packing tape & straps	0.0016	0.0024	0.0073	0.0138	0.0003	0.0019	0.0003	0.0000	0.0275
	Plain water (carbonated or non-carb) <1 litre	4.7274	12.6064	29.1523	26.7886	2.3637	20.4854	11.8185	4.7274	112.6697
	Plain water (carbonated or non-carb) 1 litre+	3.0831	0.0000	4.6247	13.8741	0.0000	6.1663	3.0831	0.0000	30.8314
	Plastic bottle tops	0.1761	0.2802	0.3522	0.3202	0.1761	0.2402	0.0881	0.1121	1.7451
	Sacks - sheeting - other bags	0.0003	0.0006	0.0041	0.0035	0.0000	0.0006	0.0003	0.0000	0.0095
	Snack bags & confectionary wrappers	0.0940	0.3524	0.6029	0.3993	0.1644	0.2271	0.1331	0.1644	2.1376
	Spoons/cutlery	0.0864	0.2592	0.0768	0.1920	0.0576	0.0576	0.0576	0.0384	0.8256
	Straws	0.1155	0.2640	0.3960	0.2516	0.1114	0.2104	0.1485	0.0701	1.5675
	Styrene foam boxes, sheets, etc	0.0750	0.0375	0.7500	0.7125	0.0000	0.1500	0.1125	0.0000	1.8375
	Take away & cups	2.0702	5.1755	9.1089	11.1791	0.8281	6.0036	3.5193	2.4842	40.3689
	White milk, all sizes	0.0000	0.0000	0.0000	6.4101	0.0000	0.0000	0.0000	0.0000	6.4101
	Wine cask bladders	0.0000	0.0000	0.9200	2.7600	0.0000	0.4600	0.4600	0.0000	4.6000
	<b>Total</b>	<b>20.4126</b>	<b>49.4309</b>	<b>118.9509</b>	<b>180.9593</b>	<b>5.7297</b>	<b>56.1826</b>	<b>33.1533</b>	<b>9.1763</b>	<b>473.9957</b>
	<b>GRAND TOTAL</b>	<b>70.5832</b>	<b>522.5622</b>	<b>651.3339</b>	<b>555.3691</b>	<b>36.6946</b>	<b>381.9225</b>	<b>145.1592</b>	<b>65.2011</b>	<b>2428.8257</b>

