

# NSW Litter Report 2012-2017

February 2020



# Contents

<b>1. Introduction</b>	<b>3</b>
Scope of Report	3
NSW Litter Report background	3
<b>2. NSW policy settings – waste and litter</b>	<b>5</b>
Litter as a Priority	5
Waste Less Recycle More	5
Waste Less Recycle More 2012-2016	5
Waste Less Recycle More 2017-2021	5
Container Deposit Scheme – Litter Prevention Beyond 2017	7
<b>3. National Litter Index</b>	<b>7</b>
NLI Methodology	7
NLI methodology limitations	8
Exclusion of illegal dumping	8
<b>4. Results: Litter Data 2012-2017</b>	<b>9</b>
Headline results	9
Litter in NSW: 2012- 2017	9
Litter composition: 2017	10
Littered items	11
Litter across site types 2017	12
Changes in litter across site types – 2012-17	12
Litter volume	12
Litter items	13
<b>5. A closer look – key litter categories</b>	<b>13</b>
Take away coffee cups	16
Plastic water bottles	16
Plastic litter trends and plastic bags	17
2016-17 litter spike	18
<b>6. Appendices</b>	<b>18</b>
Appendix 1 – NLI methodology	18
Litter per 1,000m <sup>2</sup>	20
Litter counter training	20

# 1. Introduction

This NSW Litter Report provides an overview of the state of litter in NSW from 2012 to 2017. The report highlights key trends in the quantities and locations of litter across the state. This is the fifth NSW Litter Report in the series and the first since 2010.

A key part of addressing the litter issue is having a good understanding of the amount of litter in the environment and the types of places it is found. This information is reported every year by the NSW Environment Protection Authority (EPA), as required under section 146D of the Protection of the Environment Operations Act 1997. The Act requires the EPA to report estimates of the composition and quantity of litter types across NSW.

The Report also provides useful information of the state of litter in NSW prior to the introduction of the Return and Earn Container Deposit Scheme (CDS) on 1 December 2017.

This report will detail:

- overall litter in NSW
- litter composition
- profile of litter across sites types
- a closer look at key littered items
  - beverage containers
  - take away containers
  - cigarette butts
  - plastics.

## Scope of Report

The report presents litter data from the 2012-13 National Litter Index (NLI) results until the November 2017 NLI data count, referred to as 2012-2017. The timeframe for this report looks at the state of litter from the introduction of the NSW Government's Waste Less, Recycle More (WLRM) initiative in 2012, until the NLI count in November 2017, which was the last count before the introduction of the CDS. Therefore, this dataset provides important information of the state of litter prior to the introduction of the scheme - which will target the largest source of litter volume in NSW - beverage containers.

## NSW Litter Report background

There have been four previous NSW Litter Reports (2004<sup>1</sup>, 2006<sup>2</sup>, 2008<sup>3</sup>, and 2010<sup>4</sup>). The first two were based on litter surveys commissioned by the Department of Environment and Climate Change (DECC). Since then, reports have been based on the Keep Australia Beautiful National Litter Index. Details of the National Litter Index methodology are provided below.

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<sup>1</sup> NSW Litter Report 2004, Department of Environment and Conservation NSW (DEC) 2004.

<sup>2</sup> NSW Litter Report 2006, Department of Environment and Conservation NSW (DEC) 2006.

<sup>3</sup> NSW Litter Report 2008, DECCW 2008.

<sup>4</sup> NSW Litter Report 2010, DECCW 2010.

## Litter and its impact

Litter is any solid waste object (disposable item or resource) that has been thrown, blown or left in the wrong place. The end outcome of an environmentally undesirable disposal action.<sup>5</sup>

Common litter items are drink containers (plastic and metal) cigarette butts, small pieces of paper, chip and lolly wrappers, fast-food packaging, bottle caps,

plastic straws and pieces of glass bottles. Litter also includes advertising and promotional material.

Litter damages local communities in a range of ways including impacts on flora and fauna, visual amenity, health and safety and community pride. The presence of litter can also lead to additional socially undesirable behaviours.

**Table 1: The impacts of litter<sup>6</sup>**

Impact	Outcomes
Visual	Litter makes places look unsightly and uncared for and attracts more litter.
Health	Things like broken glass and syringes can injure people. The presence of litter makes it more likely that more serious anti-social behaviour will occur, like graffiti and property damage.
Environmental	Litter damages natural environments and harms wildlife and sea creatures.
Economic	A 2016 survey of NSW local councils, public and private land managers and community groups found that more than \$180 million is spent each year on managing litter.
Resource	Easily recyclable resources, like drink bottles, are lost when people litter.

<sup>5</sup> Community Change (2003) Littering Behaviour Studies, National Benchmark 2002, Beverage Industry Environment Council.

<sup>6</sup> NSW Litter Prevention Strategy 2019 – 2022.

## 2. NSW policy settings – waste and litter

### Litter as a Priority

Since the previous NSW Litter Report, Litter Prevention in NSW has undergone a significant increase in profile. On 14 September 2015, the Premier committed to reduce the volume of litter in NSW by 40% by 2020. Moreover, under the Waste Less Recycle More (WLRM) initiative, significant funding has been invested to reduce litter in NSW and achieve this target.

### Waste Less Recycle More

This program is the largest waste and recycling funding program in Australia. It has transformed the waste and recycling sector, delivering economic and environmental benefits in NSW. The NSW Waste Avoidance and Resource Recovery Strategy 2014–21 was released in 2014 and set targets to:

- reduce the rate of waste generation per capita
- increase recycling rates across all waste streams
- divert 75% of all waste from landfill by 2021
- establish drop-off facilities for managing problem household wastes.

Under the Government's WLRM initiative, \$802.7 million is being invested over nine years from 2012 – 2021 to reach these targets. WLRM aims to drive waste avoidance and to encourage greater recycling, organics collections, market development, deliver better management of problem wastes, accelerate and stimulate investment in waste and recycling infrastructure, and create programs to tackle illegal dumping and litter.

### Waste Less Recycle More 2012-2016

The first phase of WLRM, provided \$465.7 million funded from the waste levy. Of this, \$10.5 million was committed to Litter Prevention. This included \$5.77 million awarded to 152 local councils and community litter prevention projects, using EPA-developed tools, such as local litter checks and branding from the Hey Tosser! community education campaign.

### Waste Less Recycle More 2017-2021

The NSW Government extended the WLRM initiative, guaranteeing \$337 million in funding for 2017-2021. With its rising profile, an overall amount of \$50 million will be provided to litter prevention between 2012-2021. To embed long term anti-litter behaviour, the NSW Government will work in partnership with communities, businesses and government agencies to deliver the following programs.

**Litter Grants** – Provide assistance to roll out integrated programs with renewed infrastructure and clean-up as key elements, along with enforcement, education and evaluation. From 2018 to 2021 the NSW Government is committing \$2 million for local government litter grants. A further \$1.5 million will support renewed prevention, infrastructure and clean-up through Community Litter Grants program to help tackle local litter hotspots.

**The Hey Tosser! Campaign** – The NSW Government launched the Tosser! campaign in 2014 to achieve broad spectrum behaviour change. The campaign will continue to be evaluated and delivered to raise awareness and prompt the right behaviour – that is, taking your rubbish with you or putting it in the bin.

**Regulation and Enforcement** – The NSW Government is committed to leading at least four targeted litter compliance campaigns across NSW each year. It will continue to deliver capacity building courses for all authorised officers to effectively enforce anti-littering legislation.

**Report to EPA** – This online system allows the public to report litter thrown or blown from cars. Enforcement of litter offences is an important strategy for changing the social norm around littering. So far, 90% of reported littering from cars has been cigarette butt litter.

**Cigarette butts** – A targeted approach towards cigarette butt litter will improve the littering behaviour of smokers and provide better infrastructure to reduce litter.

**Return and Earn** – NSW Government initiative to reward responsible behaviour which will reduce beverage container litter and increase recycling. A container deposit scheme is, however, only one part of a broader and soon to be released NSW Litter Prevention Strategy that will have a renewed focus on education and public awareness.

## Litter Prevention Strategy

The NSW Litter Prevention Strategy will set the framework and key actions to achieve NSW's ambitious litter target. This strategy provides the framework we use to prioritise funding and action to reduce litter and achieve our objectives. The strategy

is a first for the state and clearly expresses a litter prevention message that everyone can use - We're all responsible for litter and we can all help. To do this, we need to integrate our approaches to litter prevention across five elements (Figure 1)



## Container Deposit Scheme – Litter Prevention Beyond 2017

This NSW Litter Report is the last to provide an overview of the state of litter before the introduction of the NSW Government's Container Deposit Scheme (CDS). Drink container litter makes up 44% of the volume of all litter in NSW and costs more than \$162 million to manage. The NSW CDS, Return and Earn, started on 1 December 2017. It is the largest litter reduction scheme introduced in NSW and will help meet the Premier's goal of reducing the volume of litter in NSW by 40% by 2020.

The scheme addresses littering behaviour in two ways: by encouraging the person consuming the drink to hold onto the empty container for later redemption and by providing an incentive for the community to pick up littered eligible containers to receive the refund.

A CDS has a proven track record in reducing the amount and volume of drink container litter in more than 40 places around the world. It is estimated that by 2020 the NSW CDS will reduce litter volumes by 25% with the remaining 15% of volume reduction coming through continuing education, better infrastructure and clean up, and enforcement activity<sup>6</sup>.

## 3. National Litter Index

The primary purpose of a National Litter Index is for State and Territory jurisdictions and other stakeholders to regularly have the best possible estimate about the amount of litter in the environment. This information is used to measure the impact of litter reduction initiatives and to benchmark levels of litter over time and across jurisdictions .

As with the two previous reports, the data provided in this litter report is based on data from the Keep Australia Beautiful (KAB) NLI. The NLI is a national litter survey funded by all Australian States and Territories. It has been conducted annually since 2005-06 allowing for an analysis of NSW-based performance over time. The NLI is the only current survey that measures litter across Australia and provides a consistent way of measuring and comparing performance in different states.

## NLI Methodology

The litter survey is conducted in November and May every year, with the combined counts reported as the annual figures. The NLI provides litter data based on a standard methodology that measures both volume and number of items littered across over 1,000 sites nationally. The NSW results are based on a survey of 151 sites, which are divided into eight types:

- beaches
- car parks
- highways
- industrial
- recreational parks
- residential
- retail
- shopping centres

Every piece of litter is counted on the ground, and then a formula is applied to that category to arrive at a litter volume figure for that category. The volume figure is therefore an estimate of litter volume rather than an exact figure . Details regarding the NLI methodology and the techniques used are presented in Appendix 1.

The NLI codes litter into six broad categories - glass, metal, miscellaneous, plastic, paper/cardboard, and cigarette butts. Within those broad categories, litter is classified into 83 separate types. For policy purposes, the EPA split the data into more relevant categories such as CDS materials, non-CDS eligible beverage containers, take away food and cigarette-related materials (butts, packaging, lighters etc). For the purposes of this report, the NSW NLI results are presented and analysed into eight key litter categories (table 2) as defined by the EPA.

<sup>7</sup> NLI Review Draft Discussion Paper.

<sup>8</sup> NSW KAB NLI 2016-17.

Table 2: EPA litter categories

CDS beverage container
Non CDS beverage container
Industrial container
Domestic container
Cigarette
Print and advertising
Take away container
Miscellaneous

### NLI methodology limitations

The NLI survey only provides a snapshot of litter at certain sites at certain times and does not provide enough information to explain year-to-year fluctuations. For example, the NLI does not measure littering behaviour, nor a range of other key factors that influence the presence of litter in the environment, such as population density, recent clean up activity or weather conditions. It does, however, provide insight regarding the relative presence or absence of litter objects and material types within the regions surveyed, and result trends over time. Findings are considered to be broadly but tentatively standardised to regions of a similar type. However, it cannot be used in isolation to measure the effectiveness of anti-littering policies or programs<sup>2</sup>.

### Exclusion of illegal dumping

The KAB NLI survey includes illegally dumped materials as part of the litter stream, with each instance of dumping counted as one item, whether it be a couch, a tyre, a brick or a full garbage bag. When it reports national figures, KAB includes illegal dumping within its figure on total litter volume and items. **NSW does not include illegal dumping figures in its litter figures.** The EPA does not consider illegal dumping as a litter issue – dumping involves different items and different behaviours. The EPA runs separate and targeted programs to address illegal dumping under WLRM.



A Report Littering officer from the Hey Tossler! campaign.



## 4. Results: Litter Data 2012-2017

As outlined in the introduction, the data presented below ranges from the 2012-13 NLI results until the November 2017 NLI data count – referred to as 2012-2017.

### Headline results

The 2017 National Litter Index Report indicates the following changes for litter in NSW:

- estimated volume of litter per 1,000m<sup>2</sup> – 5.2 litres
- number of littered items per 1,000m<sup>2</sup> – 46
- most littered site type in both number of items and volume – industrial
- most littered item, with 19 items per 1,000m<sup>2</sup> – cigarette (including packaging)

- biggest contributor to litter volume, making up 56% of the composition – beverage containers
- greatest recorded decrease in litter volume – take away containers.

### Litter in NSW: 2012- 2017

#### Litter volume: NSW and national

There has been a 19% reduction in the volume of litter in NSW from 2012-17 (from 7.7 litres of litter per 1,000m<sup>2</sup> to 5.2 litres per 1,000m<sup>2</sup>). Apart from an unusual spike in litter in 2016-17, there has been a steady downward trend in litter volume. The 2017 count represents the lowest recorded volume of litter in NSW since the inaugural NLI in 2005-06.

Figure 2: Estimated volume of litter per 1,000m<sup>2</sup> in NSW and nationally 2012-17

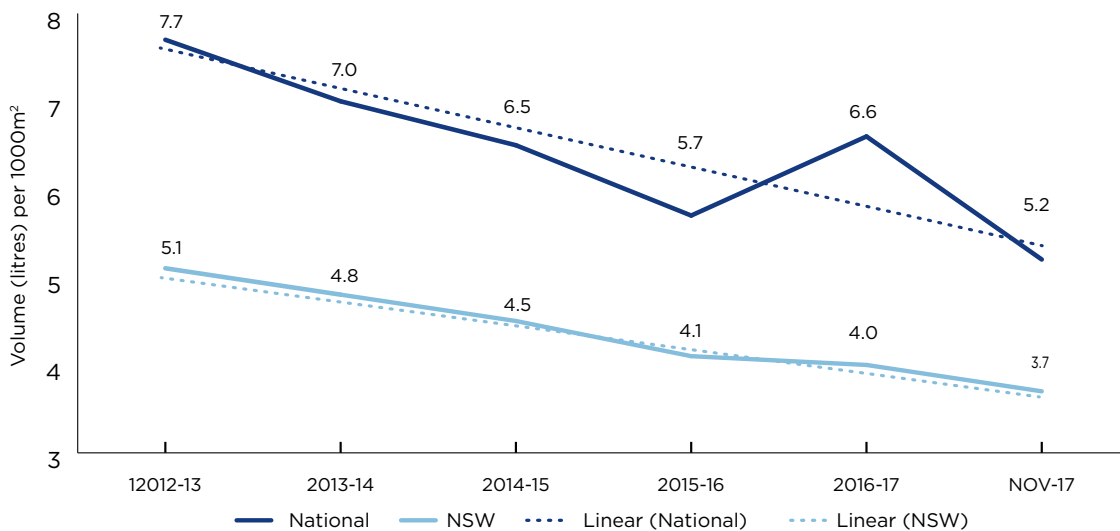
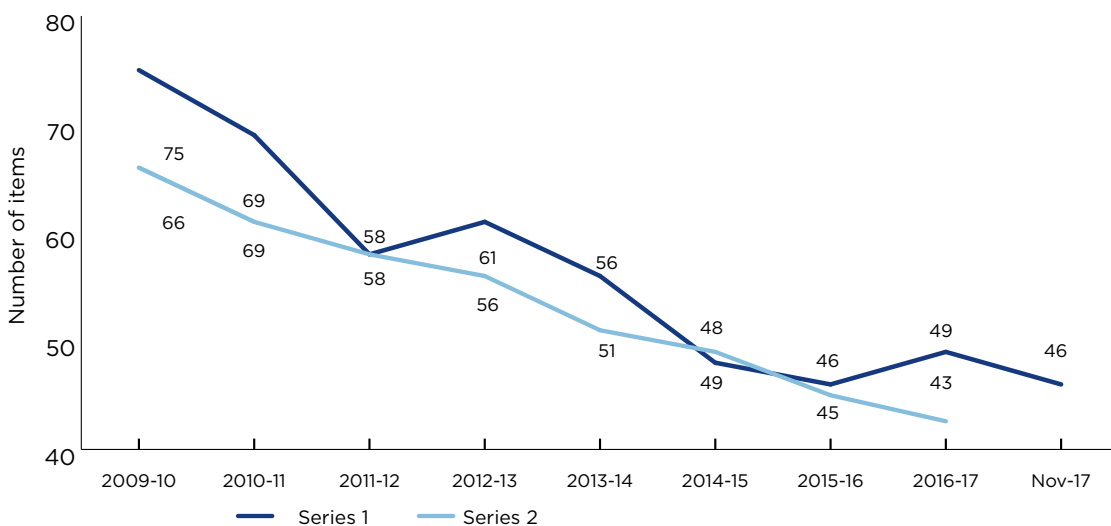


Figure 3: Number of littered items per 1,000m<sup>2</sup> including trend lines in NSW and nationally 2012-17



## Litter composition: 2017

### Litter volume

Between 2012 and 2017, the greatest increase in litter composition in NSW was found from both CDS and Non CDS beverage containers. These items had a combined recording of 56% of the total litter volume composition in NSW at 2017.

- The volume of litter from CDS beverage containers increased from 38% in 2012 to 46% in 2017
- The volume of litter from non CDS beverage containers increased from 3% in 2012 to 10% in 2017
- Domestic containers decreased from 10% in 2012 to 4% in 2017
- Industrial containers reveal a similar decrease, from 9% in 2012 to 4% in 2017
- Take away containers have remained a significant proportion of the litter stream (20% in 2017), although they have recorded the greatest decrease in volume from 1.61 litres in 2012 to 1.06 litres in 2017

Cigarettes (including packaging) and miscellaneous items contribute the smallest volume, 0.19 litres per 1,000m<sup>2</sup>.

Figure 4: Composition of litter volume (EPA categories) per 1,000m<sup>2</sup> in NSW in 2017

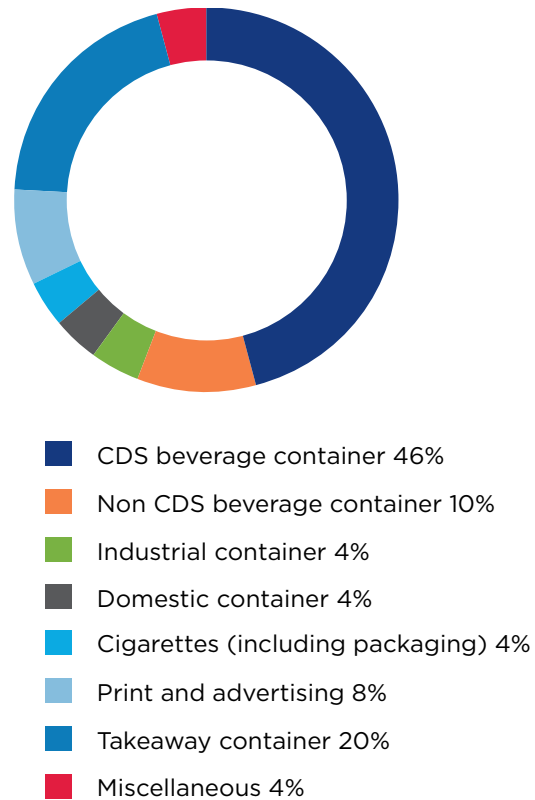
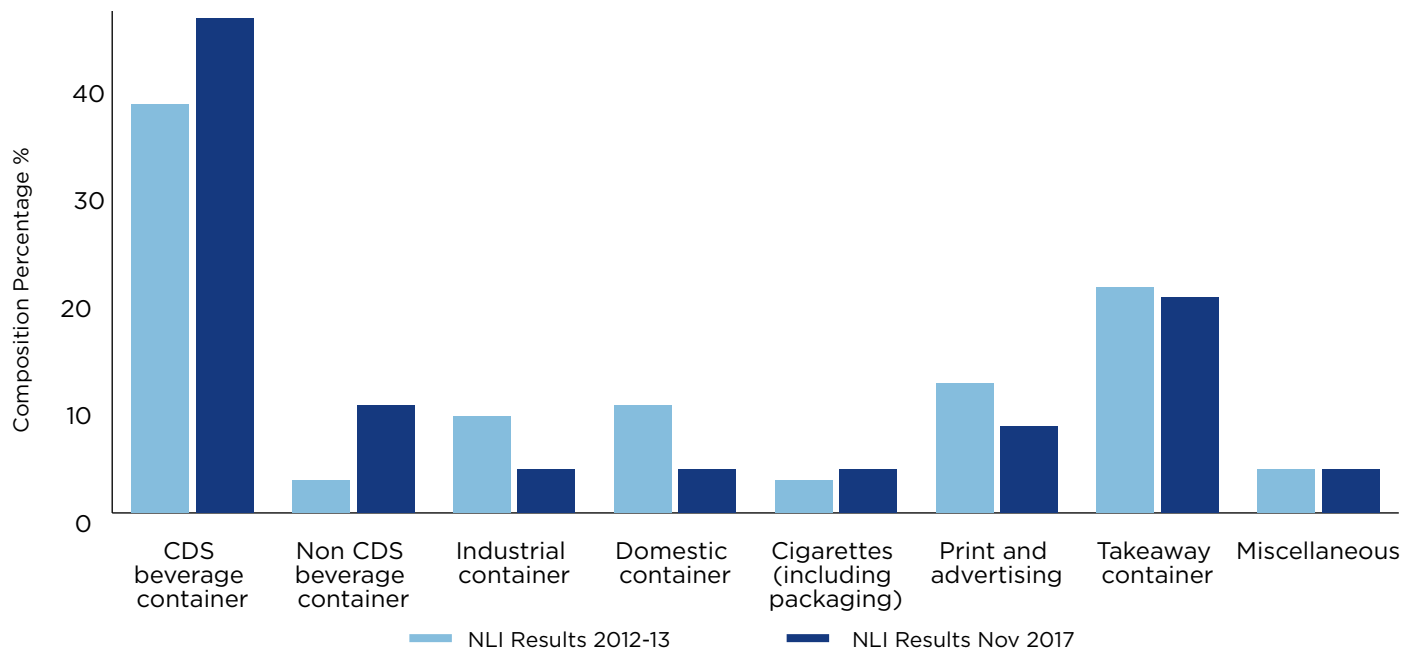


Figure 5: Comparison of litter volumes (EPA categories) from 2012 to 2017



## Littered items

Cigarettes (including packaging) continue to be the highest recorded littered item in NSW. Combined with miscellaneous items, they record 77% of the number of littered items counted in NSW in 2017. These items represent only a very small proportion of the overall litter volume.

- NLI results from 2012 to 2017 reveal an overall decrease in the number of litter items per 1,000m<sup>2</sup> in NSW across all EPA material types except Non CDS beverage containers
- Cigarettes (including packaging) recorded the greatest decrease, 19 items in 2017, down from 26 items in 2012
- Miscellaneous decreased to 16 items in 2017, down from 21 items in 2012
- Non CDS beverage containers increased to 0.24 items in 2017, up from 0.15 items in 2012.

Figure 6: Composition of littered items (EPA categories) per 1,000m<sup>2</sup> in NSW in 2017

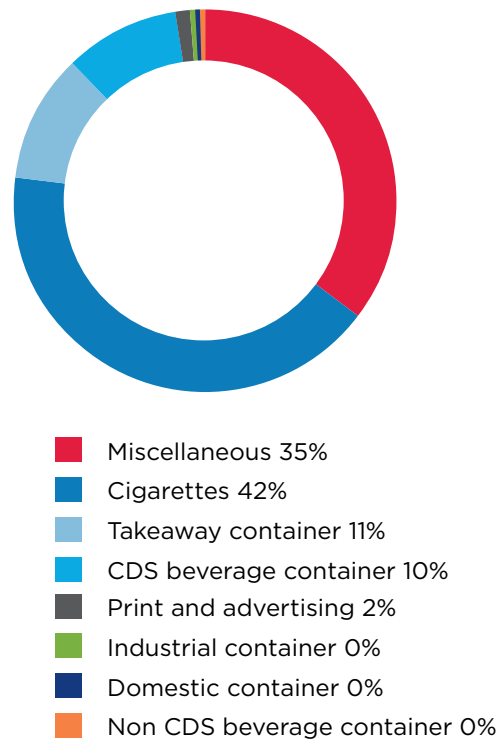
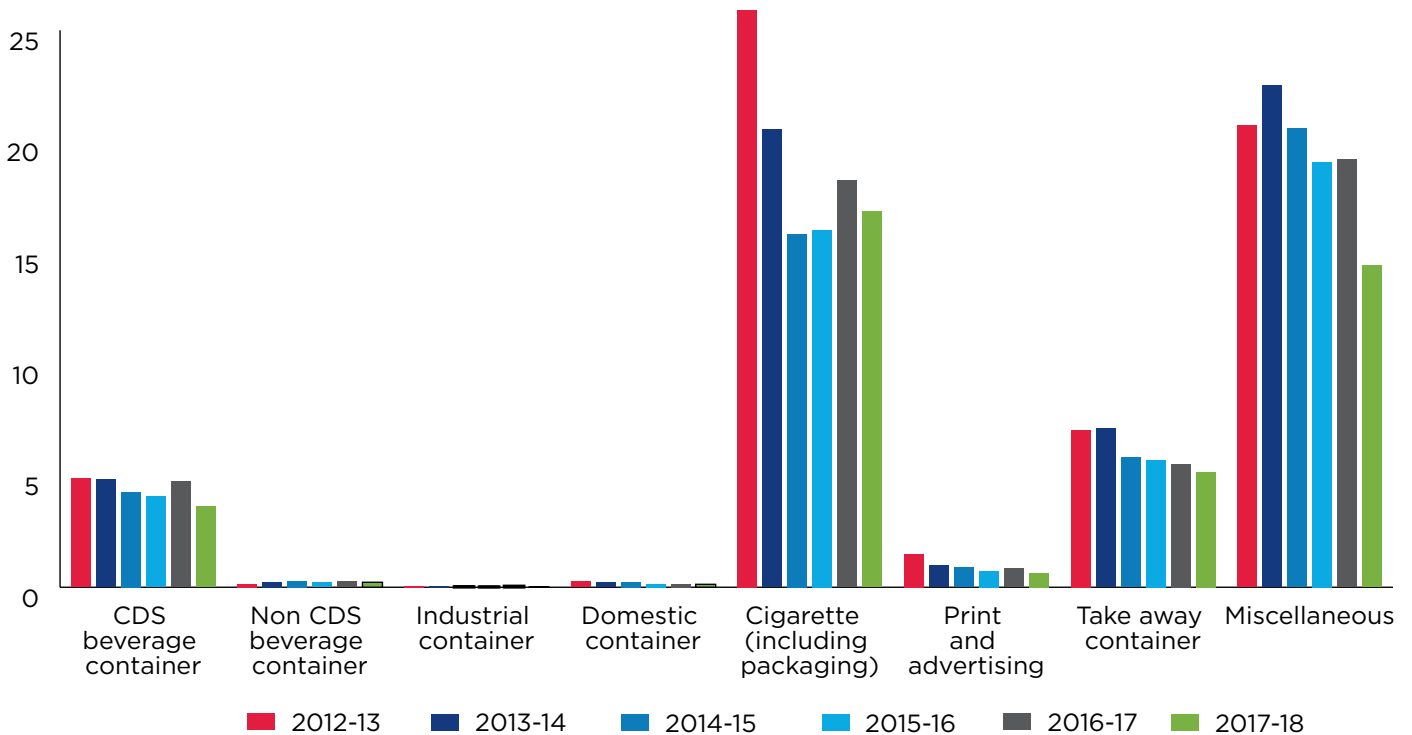


Figure 7: Number of littered items (EPA categories) per 1,000m<sup>2</sup> in NSW 2012-17



## Litter across site types 2017

Industrial sites continue to be the most littered site type by both number of items and volume, with almost one quarter of the littered volume in the 2017 NLI recorded at industrial sites. Car park and highway sites also recorded significant portions of litter volume.

## Changes in litter across site types - 2012-17

### Litter volume

The NLI results display how the volume of litter from 2012 to 2017 has decreased across all sites, with the exception being a minor increase recorded at retail locations. The most significant decrease in litter volumes has been recorded at industrial sites, dropping from 19.66 litres in 2012 to 8.6 litres in 2017. Significant decreases in the volume of litter from 2012 to 2017 were also recorded at car park and highway sites.

Figure 8: Composition of litter volume across site types in NSW in 2017

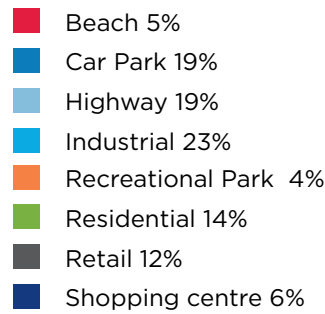
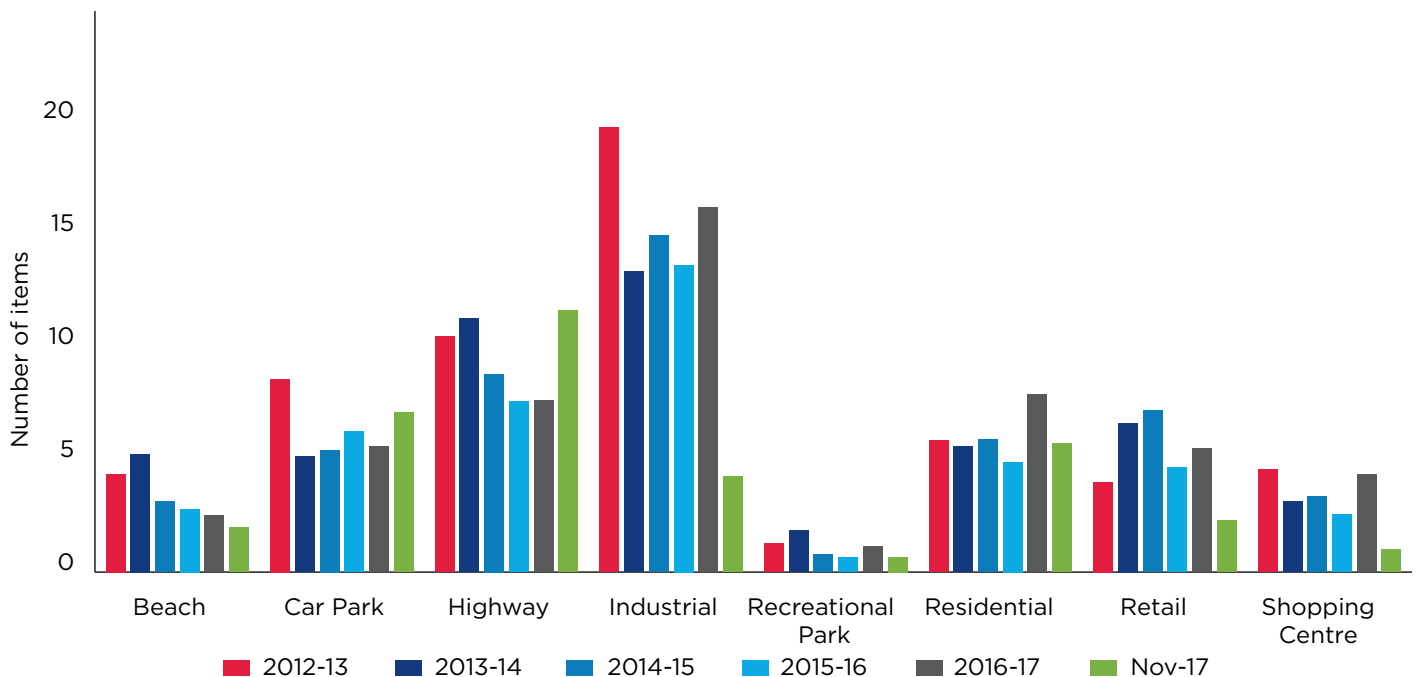


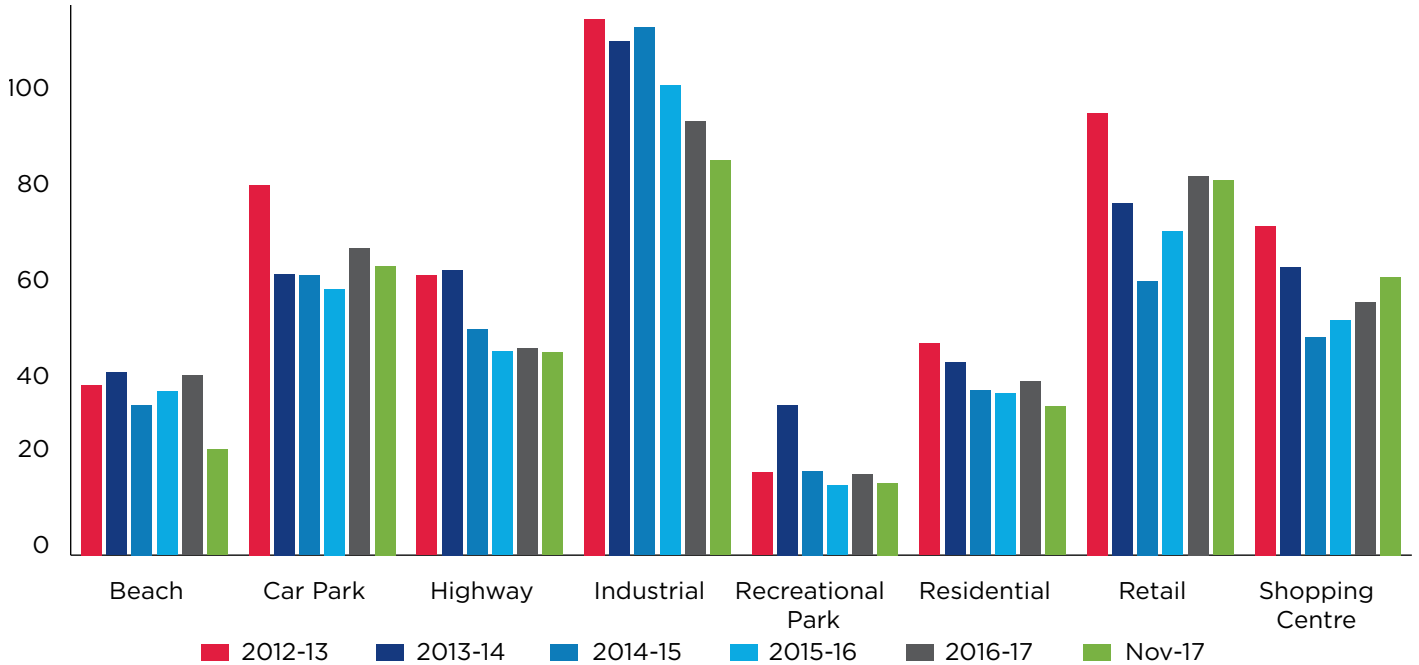
Figure 9: Litter volume per 1,000m<sup>2</sup> by site type in NSW 2012-17



## Litter items

The highest number of littered items from 2012 to 2017 has continually been recorded at Industrial sites. However, the NLI results reveal a positive trend in the number of litter items per 1,000m<sup>2</sup> recorded at Industrial sites, decreasing from 112 items in 2012 to 82 items in 2017. Retail and car park sites both recorded significant numbers of littered items in 2017.

Figure 10: Litter items per 1,000m<sup>2</sup> by site type in NSW 2012-17

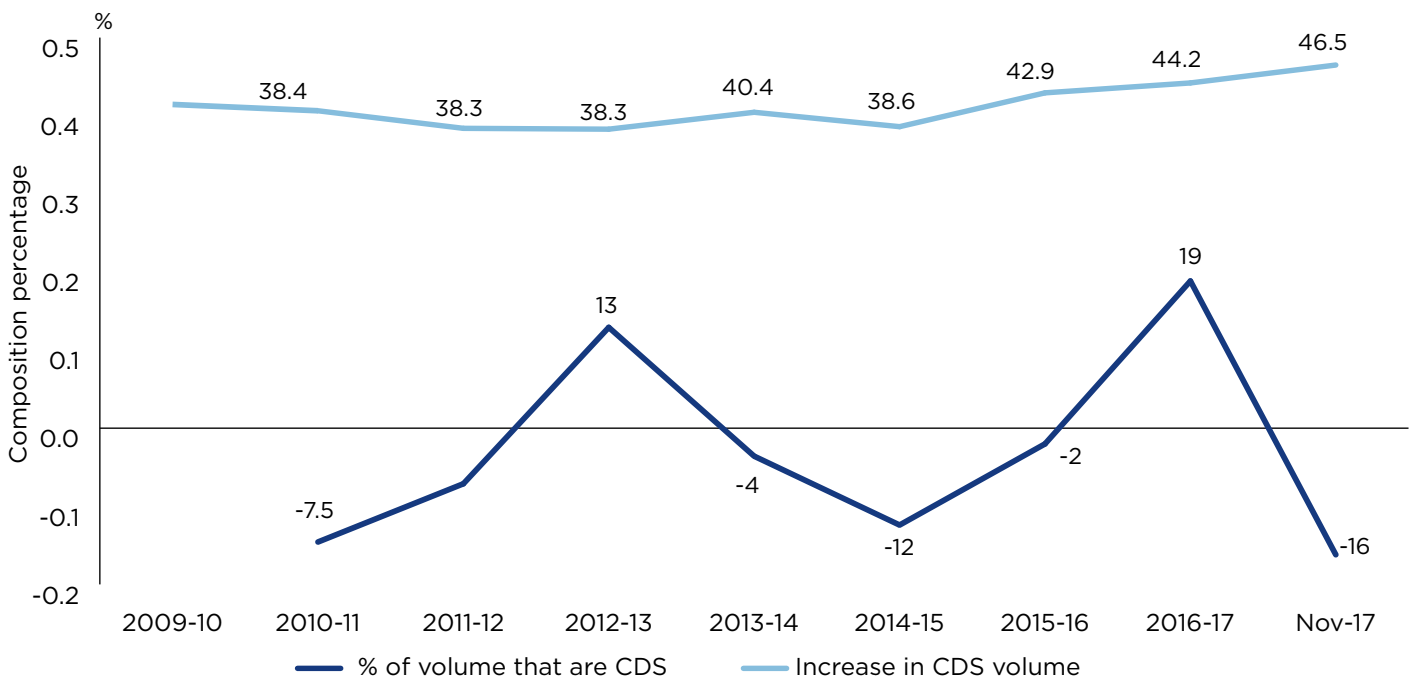


## 5. A closer look – key litter categories

### CDS beverage container

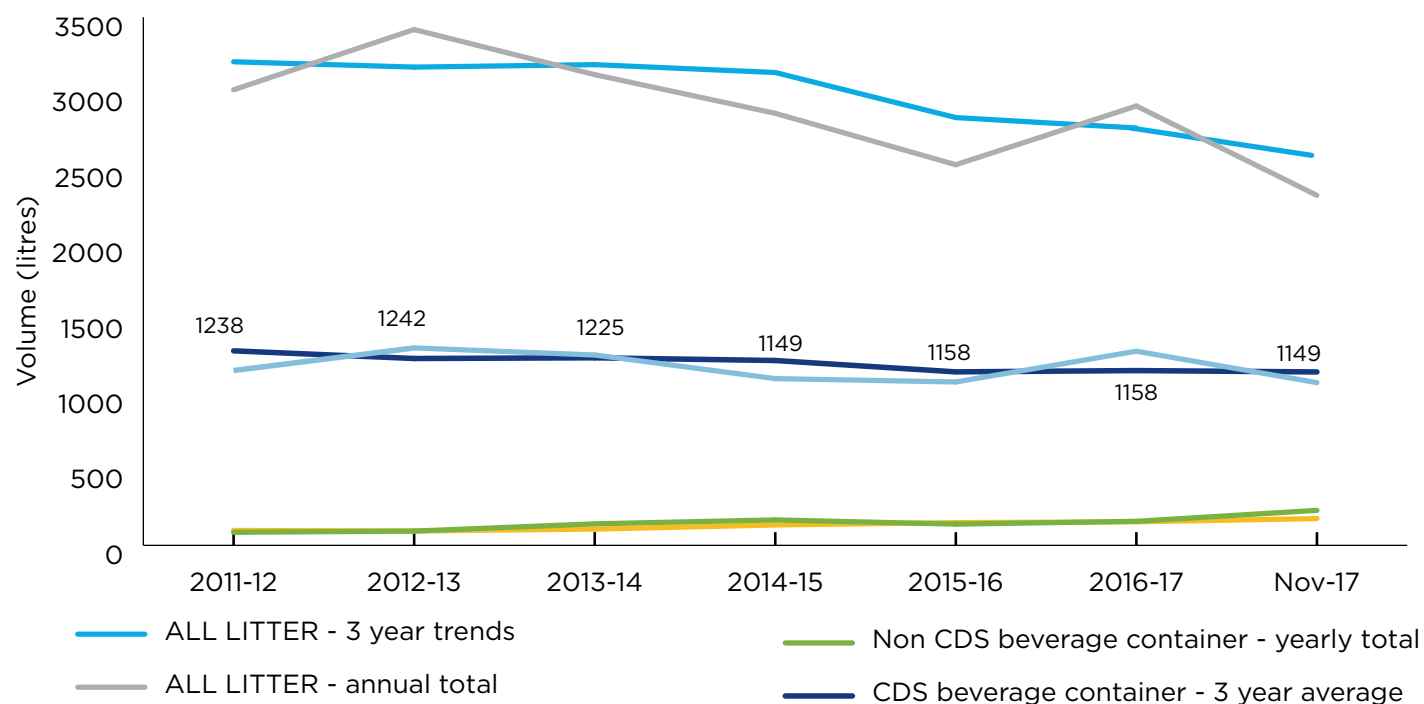
From 2012 to 2017 the percentage of litter made up from CDS beverage containers increased. However, the number of littered CDS beverage containers decreased over this period. NLI data shows an increase in the volume of CDS beverage containers in the litter stream from 2014 to 2016. There was a significant decrease of 35% in the 2017 NLI count, just before the introduction of the CDS.

Figure 11: Percentage of CDS beverage containers in NSW litter stream from 2012 to 2017



Three year moving averages show a decrease in the volume of CDS beverage container litter from 2012 to 2017. The tracked results reveal that a spike in CDS beverage container litter in 2016-17 occurred alongside an evident increase in all litter volumes. Non CDS beverage containers show a slight increase from 2012 to 2017. Despite the increase in All Litter volume recorded in 2016-17, the three-year average shows characteristics of continual decrease in All Litter volume from 2012 to 2017.

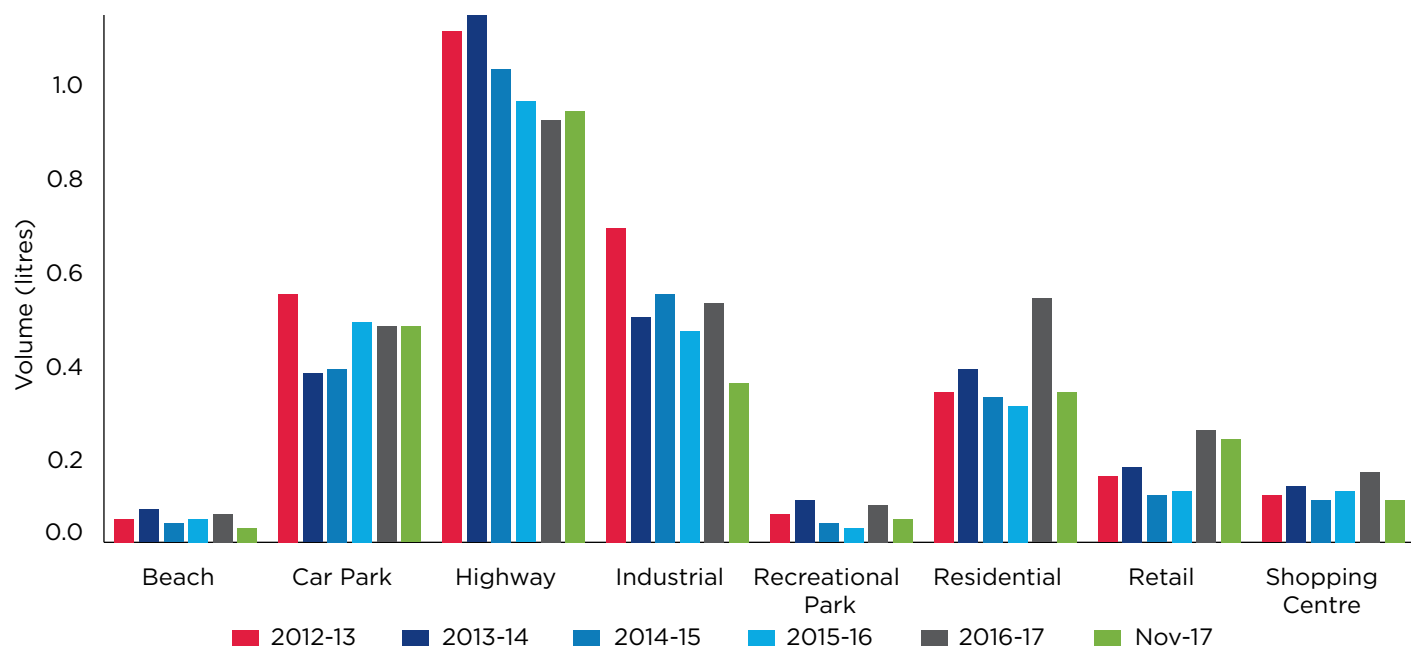
**Figure 12: Littered beverage container volume trends in NSW from 2012-2017**



### CDS litter across site types - 2012-17

NLI results from 2012 to 2017 show an overall decrease in the volume of CDS beverage containers per 1,000m<sup>2</sup> across most site types in NSW. Industrial sites showed the greatest decrease, down to 0.34 litres in 2017, from 0.67 litres in 2012. Highway sites also recorded a significant decrease in the volume of CDS beverage container litter. Retail sites were the only locations in NSW that recorded an increase.

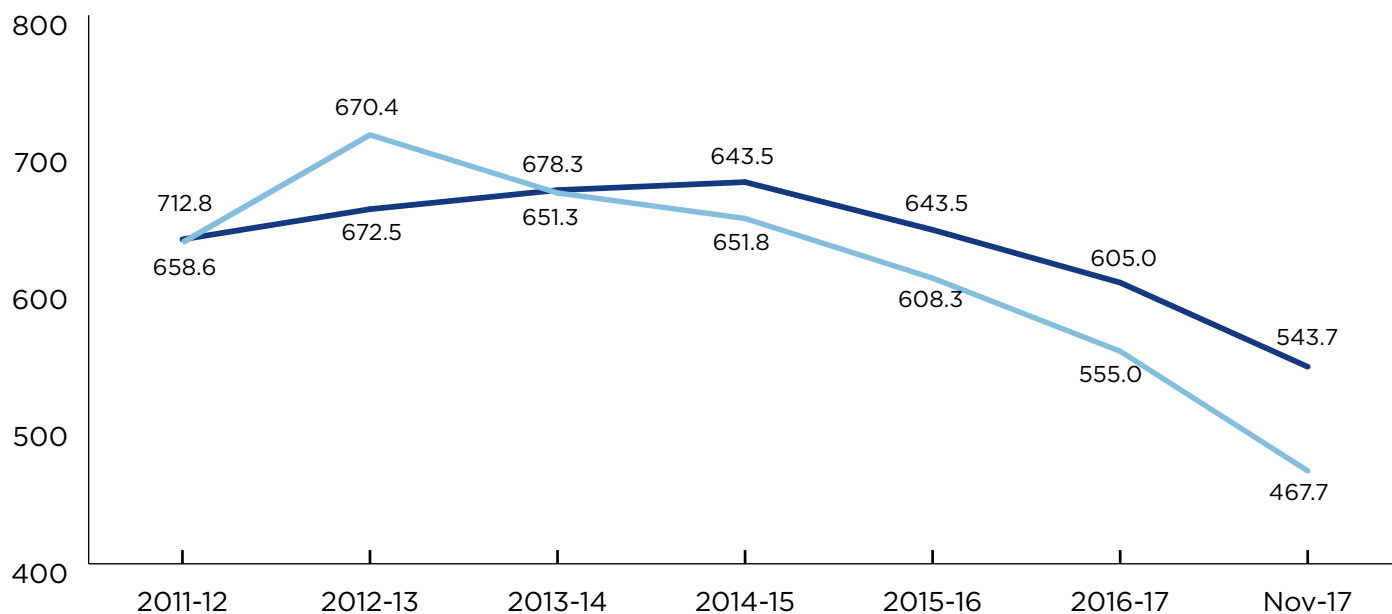
**Figure 13: Estimated volume of littered CDS beverage containers per 1,000m<sup>2</sup> across site types in NSW from 2012-17**



### Take away containers

From 2012 to 2017 there was a considerable decrease in the volume of take away litter containers in NSW. The NLI results show a constant decrease in take away container volume with a similar declining trajectory to the three-year average of take away container litter volume.

**Figure 14: Volume trends of littered take away container in NSW from 2012-2017**

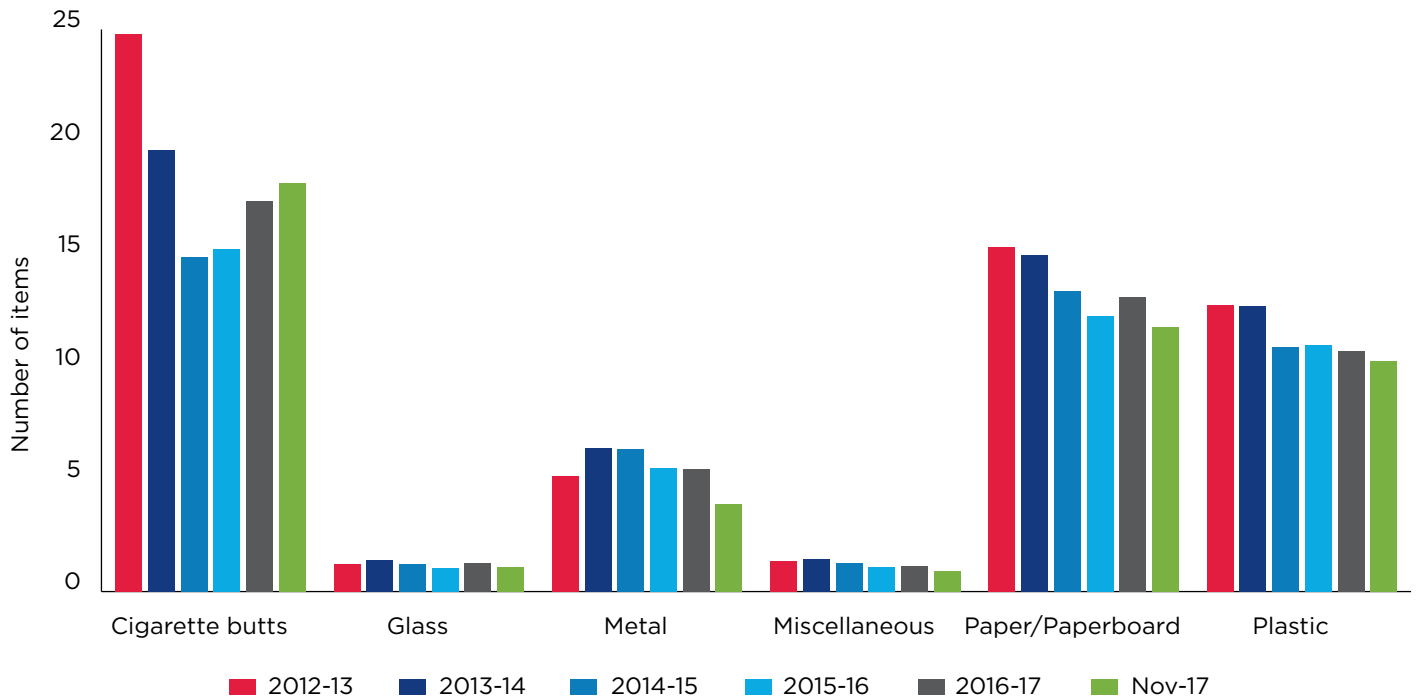


## Cigarette butts

The NLI results show cigarettes (including packaging) recorded the highest number of littered items, with 18 found per 1,000m<sup>2</sup>. However, they are associated with only a very small proportion of the overall litter volume (0.19 litres per 1,000m<sup>2</sup>).

From 2012 to 2017 there was a decrease in the number of cigarette (including packaging) littered items. However, cigarette butts are a priority litter category as they continue to be the most common littered item in NSW (and Australia) with around 7 billion littered in Australia each year.

**Figure 15: Number of littered items (NLI categories) per 1,000m<sup>2</sup> in NSW 2012-17**



## Take away coffee cups

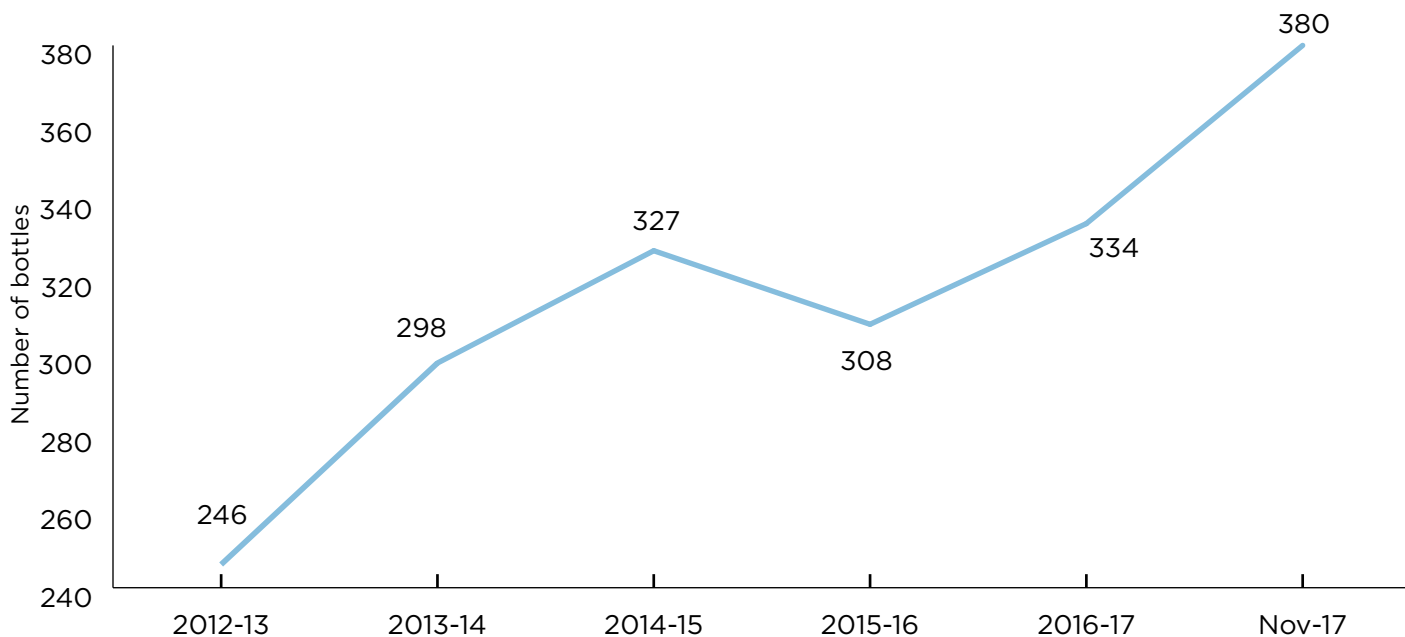
Take away coffee cups (paper/cardboard) became a new litter count category in the November 2017 NLI. This was a result of the growing number of take away coffee cups being consumed and identified in the litter stream. The results from this new category will be monitored closely. Coffee cups are not considered eligible under the CDS.

## Plastic water bottles

The NLI results show from 2012 to 2017 a constant increase in the number of plastic water bottles under one litre present in the litter stream. As outlined previously in this report, CDS beverage containers recorded a significant decrease in the year before the 2017 NLI count. However, the number of plastic water bottles under one litre continued to increase throughout this period.



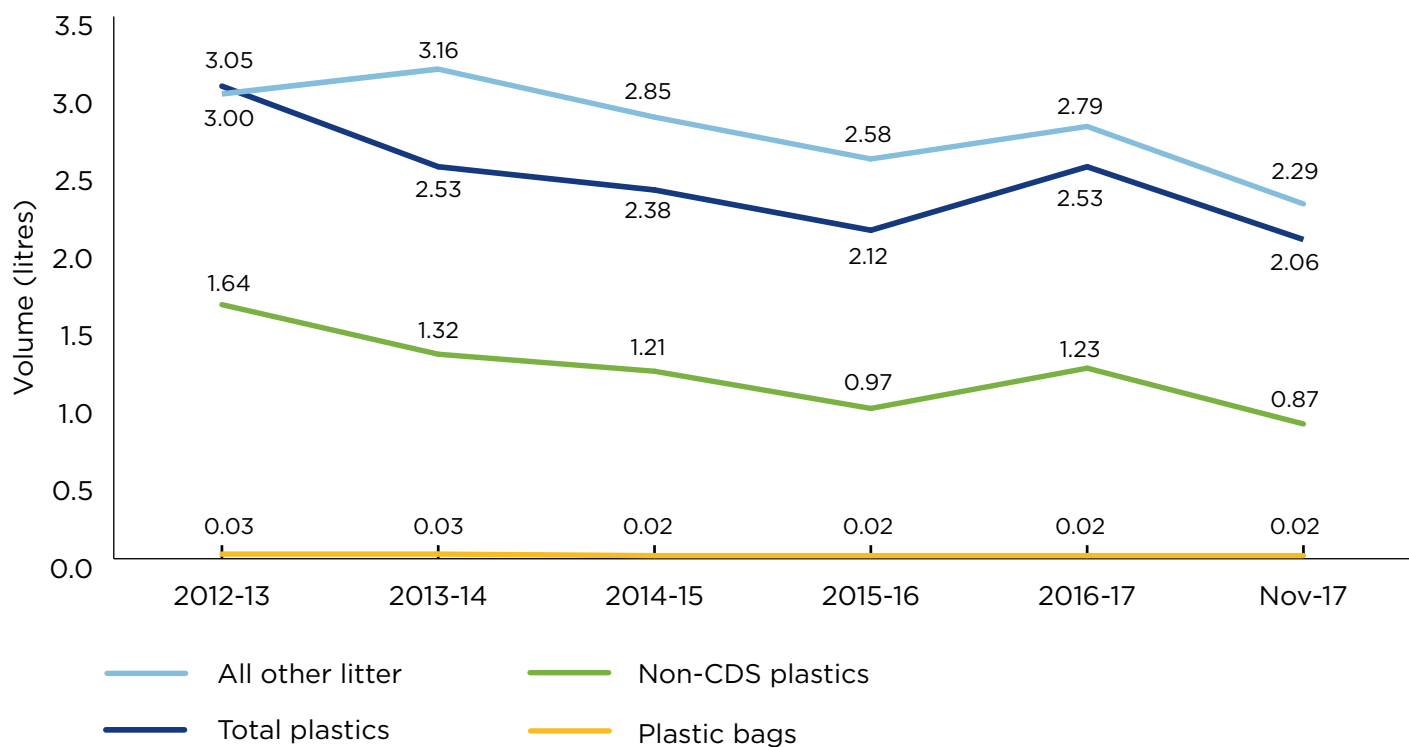
**Figure 16: Number of littered plastic water bottles (under one litre) per 1,000m<sup>2</sup> in NSW 2012-17**



### Plastic litter trends and plastic bags

There has been a steady decline in the volume of plastics in the litter stream. The NLI results reveal the volume of plastic litter has decreased from 3 litres per 1,000m<sup>2</sup> in 2012 to 2.06 litres per 1,000m<sup>2</sup> in 2017. There has been a constant volume of plastic bag litter throughout this reporting period and remains a relatively small volume of 0.02 litres per 1,000m<sup>2</sup>.

**Figure 17: Volume composition of plastics in litter stream per 1,000m<sup>2</sup> in NSW 2012-17**



## 2016-17 litter spike

The 2016-17 NLI recorded a 31% increase in litter volume (excluding illegal dumping) over the previous year's figures (from 5.6 litres per 1000m<sup>2</sup> to 7.4 litres). Of the 31% increase in NSW's litter volume, two thirds were attributable to an uncharacteristically sharp increase for only two NLI item categories:

- Plastic containers, domestic type (up 141% from 2015-16); and
- Plastic containers, industrial type (up 333%)

Each of these categories has a large volume per item, so an increase in only a few items per year can have a significant impact in overall litter volume. The sharp increase in two categories account for two thirds of the increase in litter volume (i.e. 20% out of 31%).

If plastic domestic containers and plastic industrial containers are removed from the total, there is a 12% increase in litter volume in NSW, which is more in keeping with previous fluctuations in volume .

Since the NLI began in 2005-06, the average change in litter volume year on year is within a 10.5% margin, increase or decrease. The 31% change in volume recorded in the 2016-17 NLI results represents an anomaly - it is the biggest fluctuation in litter volume in NSW since the NLI started in 2005-06.

## 6. Appendices

### Appendix 1 - NLI methodology

The litter survey is conducted in November and May every year, with the combined counts reported as the annual figures. The NLI provides litter data based on a standard methodology that measures both volume and number of items littered across over 1,000 sites nationally.

Every piece of litter is counted on the ground, and then a formula is applied to that category to arrive at a litter volume figure for that category. The volume figure is therefore an estimate of litter volume rather than an exact figure. 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. The NSW results are based on a survey of 151 sites, which are divided into eight site types (table 3). The location of the sites is not released. The total areas surveyed at each site type varies. To determine the rate of litter per 1,000 square metres, the EPA divides the total amount of litter by the total NSW survey area. In NSW, the total NLI survey area is 221,499 square metres.

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<sup>9</sup> Tab A The impact of an increase in high volume items on NSW Litter Volume - FURTHER ANALYSIS. 2016/17 *Keep Australia Beautiful National Litter Index Results For NSW*.

**Table 3: Areas Surveyed KAB NLI surveys**

<b>Beach</b>	Average site area (square metres)	563
	Number of sites surveyed	16
	Total area	9,000m <sup>2</sup>
<b>Car Park</b>	Average site area (square metres)	1,528
	Number of sites surveyed	23
	Total area	35,148m <sup>2</sup>
<b>Highway</b>	Average site area (square metres)	2,209
	Number of sites surveyed	27
	Total area	59,636m <sup>2</sup>
<b>Industrial</b>	Average site area (square metres)	1,017
	Number of sites surveyed	17
	Total area	17,288m <sup>2</sup>
<b>Recreational park</b>	Average site area (square metres)	2,061
	Number of sites surveyed	13
	Total area	26,790m <sup>2</sup>
<b>Residential</b>	Average site area (square metres)	1,509
	Number of sites surveyed	26
	Total area	39,237m <sup>2</sup>
<b>Retail</b>	Average site area (square metres)	1,163
	Number of sites surveyed	15
	Total area	17,450m <sup>2</sup>
<b>Shopping centre</b>	Average site area (square metres)	1,211
	Number of sites surveyed	14
	Total area	16,950m <sup>2</sup>
	<b>Average area across all sites</b>	<b>1,407m<sup>2</sup></b>
	<b>Total number of sites</b>	<b>151</b>
	<b>Total area surveyed</b>	<b>221,499m<sup>2</sup></b>

<sup>10</sup> NSW KAB NLI 2016-17

## 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.

To reflect a more realistic scenario, the final volumes for each litter category item consider 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:

**Table 4: Volumes of items recorded 2006-2007**

Item Type	Estimated volume of one item of this type in litres	Number of items recorded nationally 2006-07	Estimated volume in litres
Glass – plain water (carbonated or non-carb.), 1 litre+	1.05925	33	34.96
Metal – aerosols – pressure packs	0.68424	57	39
Paper/paperboard – cigarette packets	0.21787	3,121	679.97
Plastic – flav. milk, <1 litre	0.5327	544	289.79

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

Numbers of litter items and volumes are quoted against an average 1,000 square metre area, 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 annually 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.

### 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 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<sup>4</sup>

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