# NATIONAL REPORT
# 2018 - 2019
# NATIONAL LITTER INDEX

**KEEP AUSTRALIA BEAUTIFUL NATIONAL ASSOCIATION**
**September 2019**

**www.kab.org.au**

# Contents

## *Introduction*

Welcome to the 2018/19 Keep Australia Beautiful (KAB) National Litter Index, the thirteenth year in which the survey has been conducted on a national basis.

The 2018/19 survey again reports the results of biannual litter counts at the same, undisclosed 983 sites across the country. While over time additional rural highway sites and surveys of critical litter infrastructure have been added, the heart of the survey remains and the KAB NLI is Australia's only long term, consistent survey of litter. Also unchanged is its aim to build a deeper understanding of what is being littered, and where, and how that is changing over time.

While continuity is critical in a longitudinal study of this type, it is also important that the survey continues to meet the needs of the vast numbers of stakeholders who increasingly rely on its results. Changing policy settings, increasing demands for more fact based and sophisticated approaches to mitigation activities along with a deepening familiarity of the survey methodologies and assumptions have all contributed to an on-going conversation regarding future requirements.

While data continues to be collected in the same way as it always has, in this report individual surveyed items have been consolidated into a few major categories: cigarette related; CDL beverage containers; takeaway food and beverage packaging; and, general other categories. We have also extracted from the data the major other categories, other paper, other plastic and other glass. Full details on this consolidation is contained in the next section of the report. The detail is still visible in the tables at the end of each state report which also identifies the items included in the beverage container and takeaway food and beverage packaging categories.

The report places greater emphasis on the actual litter count and the number of litter items per 1,000m². We have done this because we believe items counted is a more precise measure and also easier to visualise the nature of the litter stream. Those familiar with the survey will be aware that the items counted in the survey are also converted to a volumetric measure using an assumption for the volume of each of the surveyed categories, while the report does include details and commentary on volumetric impacts, the majority of the chart and tables reflect items counted and the number of litter items per 1,000m². Determining whether to use items counted or volume will require readers to apply their own judgement and consider the purpose for which the data is being used.

It is interesting to note that a reduction in "items counted" overall does not automatically result in a corresponding "equivalent volume" reduction. There are some instances where a reduction in overall items counted has resulted in increased litter volumes. We endeavor to report with clarity, and as such both methods of measure (by item & by volume), both of which are referred to in this report and provide important perspectives on litter.

Important structural points about the report include:

- The vast majority of the commentary and reported data excludes illegal dumping. There is a chapter dedicated to illegal dumping but each of the state based reports exclude illegal dumping from the analysis.
- The report only contains limited information on methodology, site and litter category definitions. This has not changed from prior reports and complete details are available, if required, by contacting Keep Australia Beautiful.
- The report provides three case studies on specific items: cigarette litter, plastic bags and CDL beverage containers. Plastic bags and CDL beverage containers have experienced, or are about to experience, changes in policy settings and the KAB NLI examines and reports on the impact of the various policy changes.

Keep Australia Beautiful National Association

## *Acknowledgements*

Without the critical support of the following organisations the KAB NLI would not exist and the Keep Australia Beautiful National Association wishes to thank them for their support, guidance and on-going commitment to strengthening and enhancing the survey and its application.

- ACT Government Environment and Planning Directorate
- Green Industries SA
- KESAB *environmental solutions*
- Keep Australia Beautiful (NSW)
- Keep Australia Beautiful Council Northern Territory
- Keep Australia Beautiful Tasmania
- Keep Australia Beautiful WA
- Keep Victoria Beautiful
- McGregor Tan Research
- NSW EPA
- Queensland Department of Environment and Science
- Sustainability Victoria
- Tasmanian Department of Primary Industries, Parks, Water and Environment

Keep Australia Beautiful National Association Ltd looks forward to continuing to work collaboratively with all stakeholders to enhance and improve the National Litter Index over the years to come.

# *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 1,499,791m2. This area spanned a total of 983 sites, and the average site size was 1,526m2.

## ***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 metres 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 metres along the road.

## ***Site Type Representation***

The following table outlines the number of sites within each of the 8 distinct site types that were sampled within each of the states participating in the Index.

Please note that the numbers of sites sampled from ACT/ NT/ TAS were all designated to represent half the numbers of sites sampled from all other states.

| | ACT/ NT/ TAS | All Other States | Total Sites Surveyed Nationally |
|---|---|---|---|
| Beach | **8** | 16 | **104** |
| Car Park | **11** | 23 | **148** |
| Highway | **13** | 27 | **174** |
| Industrial | **9** | 17 | **112** |
| Recreational Park | **7** | 13 | **86** |
| Residential | **13** | 26 | **169** |
| Retail | **8** | 15 | **99** |
| Shopping Centre | **7** | 14 | **91** |
| **Total** | **76** | **151** | **983** |

## ***Timing***

The National Litter count was initiated in NSW, QLD, SA, TAS, VIC & WA during November 2005, with a second count conducted in May 2006. These counts were conducted at 76 sites within TAS and across 151 sites within each of the other states. Analysis of the ACT and NT was initiated in November 2006. These counts were commenced at 76 sites within each of these territories.

Calculations of average litter figures within areas have taken into account the reduced overall areas corresponding to the litter counts for these regions. The National KAB reporting commenced in 2006/07, the 2018/19 National litter counts were conducted during November 2018 and May 2019.

## ***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.
- 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. The audit is carried out to provide assurance that the reported results are free from material misstatement.

## ***Reporting***

Litter counts have been conducted bi-annually in November and May across the years from 2005/06, unless stated otherwise, the 2018/19 results are reported on an annual basis incorporating average figures corresponding to November 2018 and May 2019 counts.

## ***Litter per 1,000 m²***

When calculating the overall average number of litter items per 1,000m² the average result is calculated using the overall number of litter items and the total square metres of all sites. The following example outlines the calculation to calculate overall averages.

| Site Types | Total area (m²) | Total number of litter items | Number of litter items per 1,000m² |
|---|---|---|---|
| Type 1 | 1,000 | 40 | 40 |
| Type 2 | 2,000 | 80 | 40 |
| Type 3 | 7,000 | 70 | 10 |
| | | | |
| All Site Types | 10,000 | 190 | 19 |

## ***Category Consolidation***

The KAB NLI is a data rich survey and as a result is complex to interpret. Therefore, in an attempt to simplify interpretation, we have consolidated various surveyed items into broader categories. The detail of which items are associated with each category grouping is shown in the following table.

Most of the groupings should be self-evident but it is worth explaining the beverage container category in more detail. In this instance we have included in the beverage container category only those items currently classified as eligible containers as part of the SA, NT and NSW CDL schemes. These schemes exclude items that would, under different circumstances, be regarded as a beverage container. However, given that many of the other State jurisdictions have announced an intention to adopt similar schemes we felt it was easiest to use the SA/NT/NSW "definition" and apply that to all states. It is acknowledged that this is not a legislated policy in other states and is simply an attempt to enable a level of consistency in the way the KAB NLI data is interpreted.

| Consolidated Category | Historical Classification |
|---|---|
| Butts & Packaging | Cigarettes |
| | Paper/Paperboard - Cigarette packets |
| CDL Beverage Containers | Glass - Alcoholic sodas / spirit-based mixers, all sizes |
| | Glass - Beer, all colours of glass, <750ml |
| | Glass - Beer, all colours of glass, 750ml+ |
| | Glass - Cider/fruit based etc. |
| | Glass - Flav. water/soft drink (carbonated) <1 litre |
| | Glass - Flav. water/soft drink (carbonated) 1 litre+ |
| | Glass - Flav.wtr/fruit j. dr/sprts dr, (non-carb), <1 litre |
| | Glass - Flav.wtr/fruit j. dr/sprts dr, (non-carb), 1 litre+ |
| | Glass - Fruit juice, < 1 litre |
| | Glass - Plain water (carbonated or non-carb.), <1 litre |
| | Glass - Plain water (carbonated or non-carb.), 1 litre+ |
| | Glass - Wine cooler, all sizes |
| | Metal - Alcoholic sodas & spirit-based mixers |
| | Metal - Beer, aluminium, all types, all sizes |
| | Metal - Cider/fruit based etc. |
| | Metal - Flav. water/soft drink, (carbonated), all sizes |
| | Metal - Flav. water/soft drink, (non-carb), all sizes |
| | Paper/Paperboard - Cartons, flavoured milk < 1 litre |
| | Paper/Paperboard - Cartons, fruit juice, < 1 litre |
| | Paper/Paperboard - Flav. water / fruit j. drink/ sports drink, (non-carb), 1 litre+ |
| | Paper/Paperboard - Flav. water/fruit j. drink/sports drink, non-carb, <1 litre |
| | Plastic - Drink pouches |
| | Plastic - Flav. milk, <1 litre |
| | Plastic - Flav. water/soft drink (carbonated) <1 litre |
| | Plastic - Flav. water/soft drink (carbonated) 1 litre+ |
| | Plastic - Flav. wtr/fruit j. dr, sprts dr etc.(non-carb) 1 litre+ |
| | Plastic - Flav.wtr/fruit j. dr, sprts dr etc.(non-carb) <1 litre |
| | Plastic - Fruit juice <1 litre |
| | Plastic - Plain water (carbonated or non-carb) <1 litre |
| | Plastic - Plain water (carbonated or non-carb) 1 litre+ |
| Takeaway Food & Beverage Packaging | Metal - Foil take away |
| | Metal - Metal bottle tops and can pull rings |
| | Miscellaneous - Ice cream sticks |
| | Paper/Paperboard - Coffee cups |
| | Paper/Paperboard - Cups/take away containers |
| | Paper/Paperboard - Ice cream wrappers |
| | Plastic - Lollipop sticks |
| | Plastic - Plastic bottle tops |
| | Plastic - Snack bags & confectionary wrappers |
| | Plastic - Spoons/ cutlery |
| | Plastic - Straws |
| | Plastic - Take away & cups |
| Other Glass | Glass - Other glass |
| Other Paper | Paper/Paperboard - Other paper |
| Other Plastic | Plastic - Other plastic |
| Plastic Bags | Plastic - Bags - heavier glossy typically branded carry bags |
| | Plastic - Bags - supermarket type light weight carry bags |
| General Other | Glass - Fruit juice, 1 litre+ |
| | Glass - Wine & spirit, all sizes |
| | Metal - Aerosols - pressure packs |
| | Metal - Food cans (including pet food) |
| | Metal - Industrial cans - all types |
| | Metal - Metal pieces |
| | Metal - Other foil |
| | Miscellaneous - Clothing & materials |
| | Miscellaneous - Condoms |
| | Miscellaneous - Construction materials |
| | Miscellaneous - Disposable nappies |
| | Miscellaneous - Other miscellaneous |
| | Miscellaneous - Rubber pieces (not tyres) |
| | Miscellaneous - Syringes |
| | Miscellaneous - Tyres & pieces |
| | Paper/Paperboard - Cartons, flavoured milk 1 litre+ |
| | Paper/Paperboard - Cartons, fruit juice, 1 litre+ |
| | Paper/Paperboard - Cartons, milk, plain (white) all sizes |
| | Paper/Paperboard - Junk mail / free circulars |
| | Paper/Paperboard - Newspapers & magazines |
| | Paper/Paperboard - Packages & boxes |
| | Paper/Paperboard - Paper bags |
| | Paper/Paperboard - Shopper dockets & related shopping paper (eg, lists) |
| | Paper/Paperboard - Tickets, e.g. bus, ATM, vending machine etc. |
| | Plastic - 6 ring can holders |
| | Plastic - Bread bag tags |
| | Plastic - Containers, domestic type |
| | Plastic - Containers, industrial e.g. oil |
| | Plastic - Flav. milk, 1 litre+ |
| | Plastic - Fruit juice, 1 litre+ |
| | Plastic - Packing tape & straps |
| | Plastic - Sacks - sheeting - other bags |
| | Plastic - Styrene foam boxes, sheets, etc |
| | Plastic - White milk, all sizes |
| | Plastic - Wine cask bladders |
| Illegal Dumping | Illegal Dumping |

# *National Overview*

## ***Key Messages and Insights***

The 2018/19 monitor counted 0.9% more litter than counted in the 2017/18 monitor (57,889 items in 2018/19, up from 57,384 items in 2017/18). Several categories experienced a rise with the biggest rises observed in increases of 26.9% in other glass, 5.3% in takeaway food and beverage packaging, 9.1% in other plastic and 1.8% in general other litter. The increase was offset to some degree mainly by decreases of 11.1% in CDL beverage containers and 0.9% in cigarette related litter.

The marginal rise in litter items in 2018/19 was observed across several site types including increases of 6.5% at industrial sites, 5.8% at highways and 4.9% at shopping centres. The increases were offset to some degree by decreases of 9.1% at beaches, 8.6% at recreational parks, 6.3% at retail precincts, 3.1% at residential sites and 2.0% at car parks. Over the long term, the shape of the overall litter stream by site types remains relatively stable.

The KAB NLI litter count results demonstrate a continuation of a longer-term trend of reducing litter levels and because the reductions across categories were similar there has been little change in the relative composition of the litter stream, however, this year there was a notable decrease of 11.1% in CDL beverage container items.

In terms of items counted, the ACT, NSW and Tasmania were the main contributors to the marginal increase in litter nationally. The increase was offset to some degree by decreases across some states including Queensland, SA, Victoria and WA.

When the area surveyed is taken into account, there was an average of 39 litter items per 1000m² across sites nationally, marginally up from 38 litter items per 1000m² in 2017/18. Retail strips have the highest litter loads with an average 79 items per 1000m² (down from 84 items per 1000m² in 2017/18). The lowest littered sites were at recreational parks with an average of 16 items per 1000m² (down from 17 items per 1000m² in 2017/18).

While there was a marginal increase in litter items there was a 12.9% reduction in the volume of litter estimated (4,672 litres in 2018/19, down from 5,365 litres in 2017/18) (excluding illegal dumping). The biggest contributor to the reduction was a decrease in volume of 14.5% in CDL beverage containers. In volumetric terms, the ACT, Queensland, SA and WA were the main contributors to the reduction in volume, while there were also decreases in volume in Tasmania and Victoria. The volume of litter increased in NSW and NT.

In volumetric terms, when the area surveyed is taken into account there was an average of 3.11 litres per 1000m² of litter across sites nationally in 2018/19, down from 3.58 litres per 1000m² in 2017/18. In volumetric terms, industrial precincts (5.05 litres per 1000m², down from 5.65 litres per 1000m² in 2017/18) have the highest litter loads followed by major roads/highways (4.78 litres per 1000m², down from 5.50 litres per 1000m² in 2017/18), while recreational parks have the lowest litter volume loads (0.60 litres per 1000m², down from 0.83 litres per 1000m² in 2017/18).

## ***Survey Specifics***

The national litter index surveys 983 sites across Australia, with an area surveyed of approximately 1.5 million square metres. While the primary focus of the monitor is across suburban areas in major cities, a number of regional/rural sites, are also surveyed.

| Site Types | Number Surveyed | | | Area Surveyed (sq m) |
|---|---|---|---|---|
| | Suburban | Regional | Total | |
| Beaches | 65 | 39 | 104 | 65,531 |
| Car Parks | 122 | 26 | 148 | 219,716 |
| Major Roads/Highways | 109 | 65 | 174 | 549,689 |
| Industrial Precincts | 86 | 26 | 112 | 117,514 |
| Recreational Parks | 47 | 39 | 86 | 158,675 |
| Residential Streets | 138 | 31 | 169 | 215,261 |
| Retail Precincts | 65 | 34 | 99 | 80,733 |
| Strip Shopping Precincts | 78 | 13 | 91 | 92,672 |
| **TOTAL** | **710** | **273** | **983** | **1,499,791** |

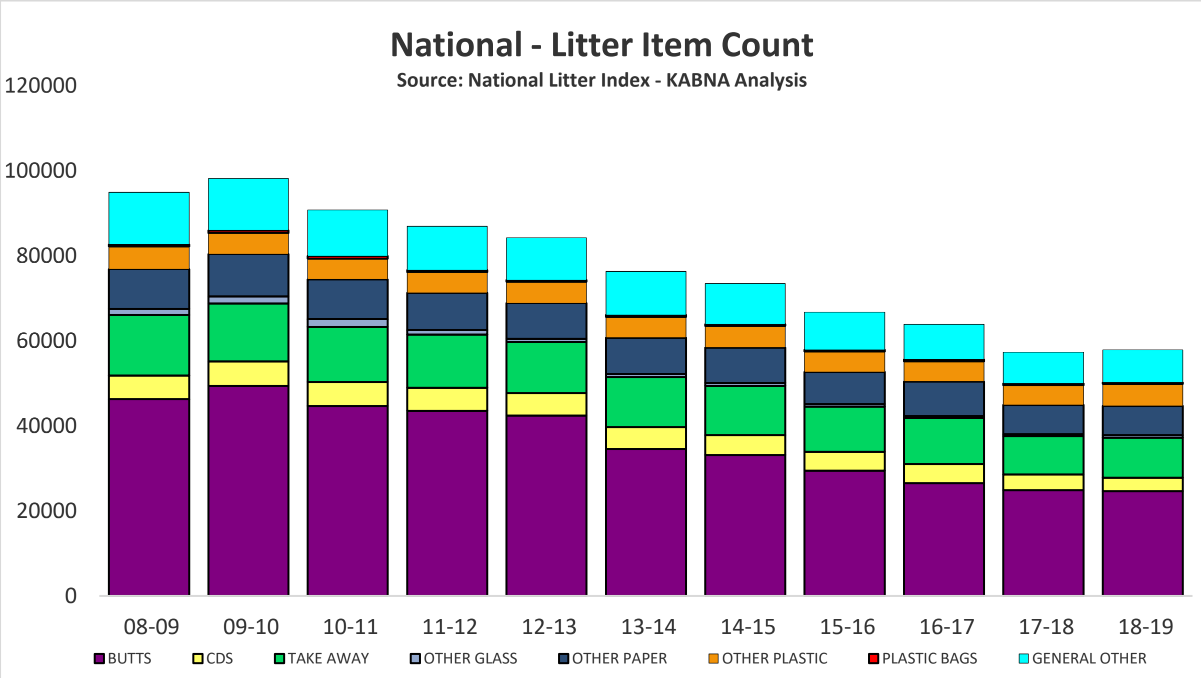
## ***Litter Counts***

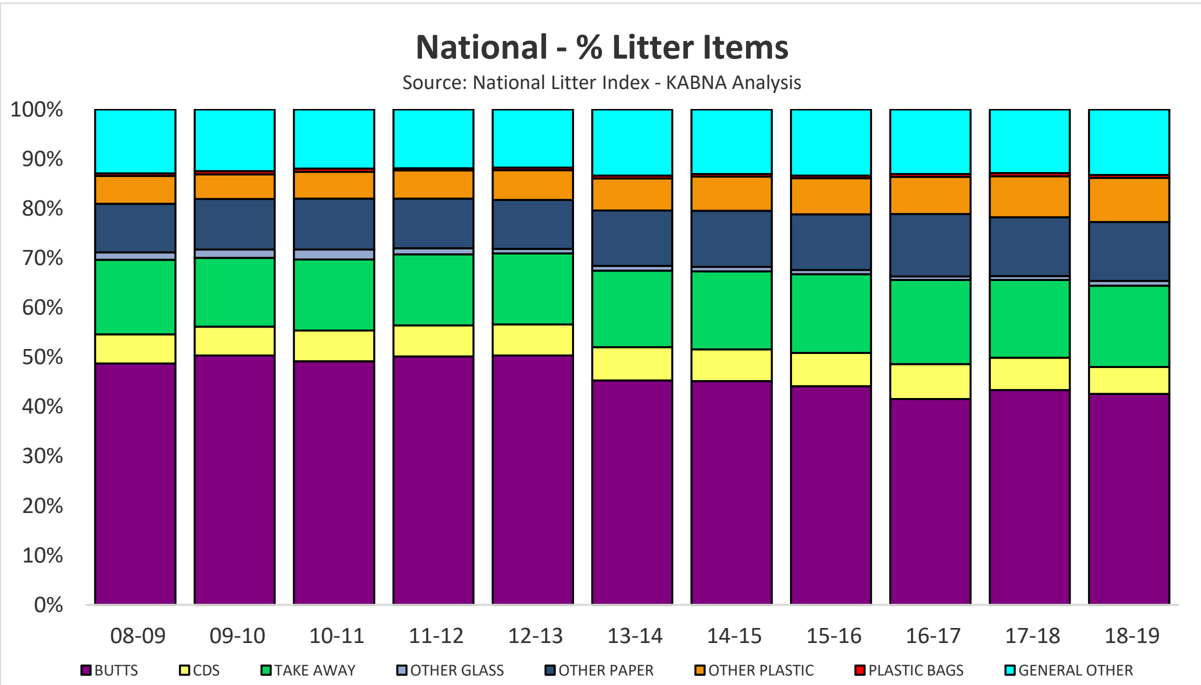
In 2018/19 the KAB NLI counted 0.9% marginal increase in litter nationally than counted in the 2017/18 monitor. Several categories experienced an increase in litter with the biggest rises observed in increases of 26.9% in other glass, 5.3% in takeaway food and beverage packaging, 9.1% in other plastic and 1.8% in general other litter. The increase was offset to some degree mainly by decreases of 11.1% in CDL beverage containers and 0.9% in cigarette related litter.

| NATIONAL | | Items | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Beach | Car Park | Highway | Industrial | Recreational Park | Residential | Retail | Shopping Centre | Total |
| **NATIONAL 2018/19** | Butts & Packaging | 749 | 5201 | 5623 | 2641 | 739 | 1922 | 3987 | 3771 | 24630 |
| | Beverage Containers | 73 | 228 | 2015 | 364 | 57 | 205 | 129 | 76 | 3311 |
| | Takeaway Food & Beverage | 508 | 1268 | 3203 | 1090 | 750 | 1159 | 858 | 650 | 9484 |
| | Other Glass | 26 | 118 | 215 | 78 | 32 | 47 | 27 | 22 | 563 |
| | Other Paper | 267 | 932 | 2408 | 1006 | 358 | 833 | 571 | 505 | 6879 |
| | Other Plastic | 270 | 589 | 2214 | 747 | 261 | 541 | 286 | 263 | 5169 |
| | General Other | 280 | 820 | 3112 | 1153 | 315 | 922 | 489 | 574 | 7498 |
| | Plastic Bags | 11 | 27 | 154 | 50 | 5 | 32 | 18 | 14 | 309 |
| | Illegal Dumping | | 9 | 18 | 12 | 1 | 7 | 1 | | 47 |
| | GRAND TOTAL | 2182 | 9190 | 18961 | 7139 | 2515 | 5666 | 6365 | 5873 | 57889 |
| **NATIONAL 2017/18** | Butts & Packaging | 897 | 5267 | 5221 | 2633 | 876 | 2063 | 4336 | 3571 | 24862 |
| | Beverage Containers | 80 | 303 | 2278 | 443 | 93 | 263 | 138 | 127 | 3723 |
| | Takeaway Food & Beverage | 561 | 1289 | 2886 | 917 | 788 | 1089 | 827 | 650 | 9006 |
| | Other Glass | 17 | 81 | 197 | 58 | 18 | 38 | 24 | 13 | 444 |
| | Other Paper | 293 | 952 | 2463 | 883 | 350 | 833 | 621 | 450 | 6844 |
| | Other Plastic | 252 | 590 | 1728 | 697 | 278 | 606 | 333 | 257 | 4739 |
| | General Other | 288 | 851 | 2965 | 1019 | 334 | 908 | 500 | 503 | 7366 |
| | Plastic Bags | 11 | 35 | 161 | 41 | 16 | 43 | 19 | 28 | 353 |
| | Illegal Dumping | 2 | 9 | 18 | 14 | 2 | 5 | 1 | 1 | 50 |
| | GRAND TOTAL | 2400 | 9375 | 17915 | 6703 | 2752 | 5846 | 6796 | 5600 | 57384 |
| **% REDUCTION** | Butts & Packaging | 16.5% | 1.2% | -7.7% | -0.3% | 15.6% | 6.9% | 8.0% | -5.6% | 0.9% |
| | Beverage Containers | 8.8% | 24.9% | 11.6% | 17.9% | 38.4% | 21.9% | 6.2% | 39.9% | 11.1% |
| | Takeaway Food & Beverage | 9.5% | 1.7% | -11.0% | -18.8% | 4.9% | -6.4% | -3.8% | 0.1% | -5.3% |
| | Other Glass | -52.9% | -46.0% | -9.4% | -34.8% | -82.9% | -25.3% | -10.4% | -65.4% | -26.9% |
| | Other Paper | 8.9% | 2.1% | 2.2% | -13.9% | -2.3% | -0.1% | 8.1% | -12.2% | -0.5% |
| | Other Plastic | -7.1% | 0.2% | -28.1% | -7.2% | 6.1% | 10.7% | 14.1% | -2.3% | -9.1% |
| | General Other | 3.0% | 3.6% | -5.0% | -13.2% | 5.8% | -1.6% | 2.1% | -14.1% | -1.8% |
| | Plastic Bags | | 22.9% | 4.3% | -23.5% | 71.9% | 26.7% | 2.7% | 51.8% | 12.3% |
| | Illegal Dumping | 100.0% | | -2.9% | 14.8% | 33.3% | -30.0% | -100.0% | 100.0% | 6.1% |
| | Grand Total (excluding illegal dumping) | 9.0% | 2.0% | -5.8% | -6.5% | 8.6% | 3.1% | 6.4% | -4.9% | -0.9% |
| | GRAND TOTAL | 9.1% | 2.0% | -5.8% | -6.5% | 8.6% | 3.1% | 6.3% | -4.9% | -0.9% |
| NATIONAL 2018/19 | Areas Surveyed | 65531 | 219716 | 549689 | 117514 | 158675 | 215261 | 80733 | 92672 | 1499791 |
| | Items counted (excl illegal dumping) | 2182 | 9181 | 18943 | 7127 | 2514 | 5660 | 6364 | 5873 | 57842 |
| | Per 1,000 sq m | 33 | 42 | 34 | 61 | 16 | 26 | 79 | 63 | 39 |
| NATIONAL 2017/18 | Areas Surveyed | 65531 | 219716 | 549689 | 117514 | 158675 | 215261 | 80733 | 92672 | 1499791 |
| | Items counted excl illegal dumping | 2398 | 9366 | 17897 | 6689 | 2751 | 5841 | 6795 | 5599 | 57334 |
| | Per 1,000 sq m | 37 | 43 | 33 | 57 | 17 | 27 | 84 | 60 | 38 |

The following charts show the longer-term trends in litter counted nationwide. Firstly, they demonstrate an overall trend in the reduction of litter items since 2008/09, however, this year there has been a marginal increase in the number of litter items counted compared to the previous litter monitor in 2017/18. Secondly, they show that the reductions have occurred relatively uniformly across most litter types, this year however, there was a decrease of 11% in CDL beverage container items. Generally, the proportion each category contributes to the overall litter stream has remained relatively constant.

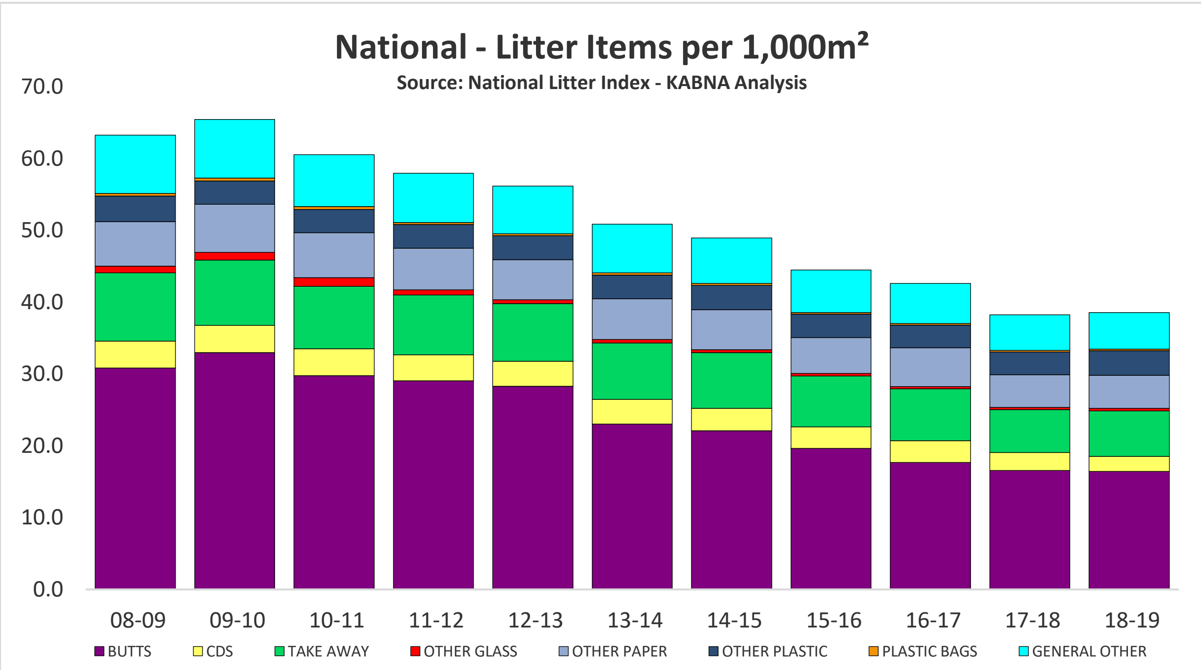
Overall, cigarette, CDL beverage containers and takeaway food and beverage packaging still continue to represent two-thirds (65%) of all the litter counted across the country. Plastic bags represent around 1% with the remaining other categories making up the balance.



## *Litter Items per 1,000m²*

| | | Items | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NATIONALItems (PER 1,000m²) | | Beach | Car Park | Highway | Industrial | Recreational Park | Residential | Retail | Shopping Centre | Total |
| NATIONAL 2018/19 | Butts & Packaging | 11.4 | 23.7 | 10.2 | 22.5 | 4.7 | 8.9 | 49.4 | 40.7 | 16.4 |
| | Beverage Containers | 1.1 | 1.0 | 3.7 | 3.1 | 0.4 | 1.0 | 1.6 | 0.8 | 2.2 |
| | Takeaway Food & Beverage | 7.7 | 5.8 | 5.8 | 9.3 | 4.7 | 5.4 | 10.6 | 7.0 | 6.3 |
| | Other Glass | 0.4 | 0.5 | 0.4 | 0.7 | 0.2 | 0.2 | 0.3 | 0.2 | 0.4 |
| | Other Paper | 4.1 | 4.2 | 4.4 | 8.6 | 2.3 | 3.9 | 7.1 | 5.4 | 4.6 |
| | Other Plastic | 4.1 | 2.7 | 4.0 | 6.4 | 1.6 | 2.5 | 3.5 | 2.8 | 3.4 |
| | General Other | 4.3 | 3.7 | 5.7 | 9.8 | 2.0 | 4.3 | 6.1 | 6.2 | 5.0 |
| | Plastic Bags | 0.2 | 0.1 | 0.3 | 0.4 | 0.0 | 0.1 | 0.2 | 0.1 | 0.2 |
| | Illegal Dumping | | 0.04 | 0.03 | 0.10 | 0.01 | 0.03 | 0.01 | | 0.03 |
| | GRAND TOTAL | 33.3 | 41.8 | 34.5 | 60.7 | 15.8 | 26.3 | 78.8 | 63.4 | 38.6 |
| NATIONAL 2017/18 | Butts & Packaging | 13.7 | 24.0 | 9.5 | 22.4 | 5.5 | 9.6 | 53.7 | 38.5 | 16.6 |
| | Beverage Containers | 1.2 | 1.4 | 4.1 | 3.8 | 0.6 | 1.2 | 1.7 | 1.4 | 2.5 |
| | Takeaway Food & Beverage | 8.6 | 5.9 | 5.2 | 7.8 | 5.0 | 5.1 | 10.2 | 7.0 | 6.0 |
| | Other Glass | 0.3 | 0.4 | 0.4 | 0.5 | 0.1 | 0.2 | 0.3 | 0.1 | 0.3 |
| | Other Paper | 4.5 | 4.3 | 4.5 | 7.5 | 2.2 | 3.9 | 7.7 | 4.9 | 4.6 |
| | Other Plastic | 3.8 | 2.7 | 3.1 | 5.9 | 1.7 | 2.8 | 4.1 | 2.8 | 3.2 |
| | General Other | 4.4 | 3.9 | 5.4 | 8.7 | 2.1 | 4.2 | 6.2 | 5.4 | 4.9 |
| | Plastic Bags | 0.2 | 0.2 | 0.3 | 0.3 | 0.1 | 0.2 | 0.2 | 0.3 | 0.2 |
| | Illegal Dumping | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | GRAND TOTAL | 36.6 | 42.7 | 32.6 | 57.0 | 17.3 | 27.2 | 84.2 | 60.4 | 38.3 |
| % REDUCTION | Butts & Packaging | 16.5% | 1.2% | -7.7% | -0.3% | 15.6% | 6.9% | 8.0% | -5.6% | 0.9% |
| | Beverage Containers | 8.8% | 24.9% | 11.6% | 17.9% | 38.4% | 21.9% | 6.2% | 39.9% | 11.1% |
| | Takeaway Food & Beverage | 9.5% | 1.7% | -11.0% | -18.8% | 4.9% | -6.4% | -3.8% | 0.1% | -5.3% |
| | Other Glass | -52.9% | -46.0% | -9.4% | -34.8% | -82.9% | -25.3% | -10.4% | -65.4% | -26.9% |
| | Other Paper | 8.9% | 2.1% | 2.2% | -13.9% | -2.3% | -0.1% | 8.1% | -12.2% | -0.5% |
| | Other Plastic | -7.1% | 0.2% | -28.1% | -7.2% | 6.1% | 10.7% | 14.1% | -2.3% | -9.1% |
| | General Other | 3.0% | 3.6% | -5.0% | -13.2% | 5.8% | -1.6% | 2.1% | -14.1% | -1.8% |
| | Plastic Bags | | 22.9% | 4.3% | -23.5% | 71.9% | 26.7% | 2.7% | 51.8% | 12.3% |
| | Illegal Dumping | 100.0% | | -2.9% | 14.8% | 33.3% | -30.0% | -100.0% | 100.0% | 6.1% |
| | Grand Total (excluding illegal dumping) | 9.0% | 2.0% | -5.8% | -6.5% | 8.6% | 3.1% | 6.4% | -4.9% | -0.9% |
| | GRAND TOTAL | 9.1% | 2.0% | -5.8% | -6.5% | 8.6% | 3.1% | 6.3% | -4.9% | -0.9% |



## ***Volumetric Impacts***

While there was a marginal increase in litter items there was a 12.9% reduction in the volume of litter found (excluding illegal dumping). The biggest contributor to the reduction was a decrease in volume of 14.5% in CDL beverage containers.

| | | Volume - Litres | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **NATIONAL** | | **Beach** | **Car Park** | **Highway** | **Industrial** | **Recreational Park** | **Residential** | **Retail** | **Shopping Centre** | **Total** |
| **NATIONAL 2018/19** | Butts & Packaging | 1.393 | 18.454 | 51.710 | 25.128 | 1.391 | 14.375 | 10.911 | 7.402 | 130.763 |
| | Beverage Containers | 42.330 | 125.388 | 1162.734 | 202.747 | 31.048 | 113.752 | 72.399 | 40.686 | 1860.603 |
| | Takeaway Food & Beverage | 28.923 | 131.305 | 560.206 | 163.569 | 35.509 | 117.042 | 57.277 | 54.841 | 1148.672 |
| | Other Glass | 0.511 | 2.308 | 4.223 | 1.522 | 0.628 | 0.923 | 0.520 | 0.422 | 11.057 |
| | Other Paper | 0.902 | 3.150 | 8.137 | 3.400 | 1.208 | 2.816 | 1.930 | 1.707 | 23.251 |
| | Other Plastic | 0.338 | 0.736 | 2.768 | 0.934 | 0.326 | 0.676 | 0.357 | 0.329 | 6.461 |
| | General Other | 74.296 | 97.025 | 831.874 | 193.470 | 25.641 | 267.432 | 36.774 | 18.031 | 1475.026 |
| | Plastic Bags | 0.517 | 1.319 | 8.178 | 2.690 | 0.206 | 1.445 | 0.826 | 0.726 | 15.907 |
| | Illegal Dumping | | 204.000 | 432.000 | 276.000 | 24.000 | 156.000 | 24.000 | | 1116.000 |
| | GRAND TOTAL | 149.210 | 583.683 | 3061.830 | 869.460 | 119.959 | 674.460 | 204.994 | 124.145 | 5787.741 |
| **NATIONAL 2017/18** | Butts & Packaging | 2.278 | 20.857 | 52.862 | 23.494 | 2.060 | 15.698 | 7.352 | 7.705 | 132.306 |
| | Beverage Containers | 48.315 | 174.617 | 1325.463 | 253.972 | 56.306 | 151.774 | 85.808 | 80.274 | 2176.529 |
| | Takeaway Food & Beverage | 33.121 | 152.803 | 570.970 | 139.934 | 44.369 | 106.695 | 54.897 | 55.555 | 1158.345 |
| | Other Glass | 0.334 | 1.581 | 3.859 | 1.129 | 0.344 | 0.737 | 0.471 | 0.255 | 8.710 |
| | Other Paper | 0.990 | 3.218 | 8.323 | 2.985 | 1.181 | 2.814 | 2.099 | 1.521 | 23.131 |
| | Other Plastic | 0.315 | 0.737 | 2.160 | 0.871 | 0.347 | 0.757 | 0.417 | 0.321 | 5.925 |
| | General Other | 36.088 | 136.049 | 1053.705 | 239.853 | 26.625 | 247.251 | 59.179 | 45.564 | 1844.314 |
| | Plastic Bags | 0.410 | 1.429 | 7.316 | 1.911 | 0.597 | 1.889 | 0.735 | 1.084 | 15.371 |
| | Illegal Dumping | 48.000 | 204.000 | 420.000 | 324.000 | 36.000 | 120.000 | 12.000 | 24.000 | 1188.000 |
| | GRAND TOTAL | 169.851 | 695.292 | 3444.658 | 988.149 | 167.829 | 647.613 | 222.959 | 216.280 | 6552.631 |
| **% REDUCTION** | Butts & Packaging | 38.9% | 11.5% | 2.2% | -7.0% | 32.5% | 8.4% | -48.4% | 3.9% | 1.2% |
| | Beverage Containers | 12.4% | 28.2% | 12.3% | 20.2% | 44.9% | 25.1% | 15.6% | 49.3% | 14.5% |
| | Takeaway Food & Beverage | 12.7% | 14.1% | 1.9% | -16.9% | 20.0% | -9.7% | -4.3% | 1.3% | 0.8% |
| | Other Glass | -52.9% | -46.0% | -9.4% | -34.8% | -82.9% | -25.3% | -10.4% | -65.4% | -26.9% |
| | Other Paper | 8.9% | 2.1% | 2.2% | -13.9% | -2.3% | -0.1% | 8.1% | -12.2% | -0.5% |
| | Other Plastic | -7.1% | 0.2% | -28.1% | -7.2% | 6.1% | 10.7% | 14.4% | -2.3% | -9.1% |
| | General Other | -105.9% | 28.7% | 21.1% | 19.3% | 3.7% | -8.2% | 37.9% | 60.4% | 20.0% |
| | Plastic Bags | -26.2% | 7.7% | -11.8% | -40.7% | 65.4% | 23.5% | -12.3% | 33.0% | -3.5% |
| | Illegal Dumping | 100.0% | | -2.9% | 14.8% | 33.3% | -30.0% | -100.0% | 100.0% | 6.1% |
| | Grand Total (excluding illegal dumping) | -22.5% | 22.7% | 13.1% | 10.6% | 27.2% | 1.7% | 14.2% | 35.4% | 12.9% |
| | GRAND TOTAL | 12.2% | 16.1% | 11.1% | 12.0% | 28.5% | -4.1% | 8.1% | 42.6% | 11.7% |
| NATIONAL 2018/19 | Areas Surveyed | 65531 | 219716 | 549689 | 117514 | 158675 | 215261 | 80733 | 92672 | 1499791 |
| | Volume (excl illegal dumping) | 149.210 | 379.683 | 2629.830 | 593.460 | 95.959 | 518.460 | 180.994 | 124.145 | 4671.741 |
| | Per 1,000 sq m | 2.28 | 1.73 | 4.78 | 5.05 | 0.60 | 2.41 | 2.24 | 1.34 | 3.11 |
| NATIONAL 2017/18 | Areas Surveyed | 65531 | 219716 | 549689 | 117514 | 158675 | 215261 | 80733 | 92672 | 1499791 |
| | Volume (excl illegal dumping) | 121.851 | 491.292 | 3024.658 | 664.149 | 131.829 | 527.613 | 210.959 | 192.280 | 5364.631 |
| | Per 1,000 sq m | 1.86 | 2.24 | 5.50 | 5.65 | 0.83 | 2.45 | 2.61 | 2.07 | 3.58 |

## ***Litter Volume per 1,000m²***

| **NATIONALItems (PER 1,000m²)** | | **Beach** | **Car Park** | **Highway** | **Industrial** | **Recreational Park** | **Residential** | **Retail** | **Shopping Centre** | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|
| **NATIONAL 2018/19** | Butts & Packaging | 2.278 | 20.857 | 52.862 | 23.494 | 2.060 | 15.698 | 7.352 | 7.705 | 132.306 |
| | Beverage Containers | 48.315 | 174.617 | 1325.463 | 253.972 | 56.306 | 151.774 | 85.808 | 80.274 | 2176.529 |
| | Takeaway Food & Beverage | 33.121 | 152.803 | 570.970 | 139.934 | 44.369 | 106.695 | 54.897 | 55.555 | 1158.345 |
| | Other Glass | 0.334 | 1.581 | 3.859 | 1.129 | 0.344 | 0.737 | 0.471 | 0.255 | 8.710 |
| | Other Paper | 0.990 | 3.218 | 8.323 | 2.985 | 1.181 | 2.814 | 2.099 | 1.521 | 23.131 |
| | Other Plastic | 0.315 | 0.737 | 2.160 | 0.871 | 0.347 | 0.757 | 0.417 | 0.321 | 5.925 |
| | General Other | 36.088 | 136.049 | 1053.705 | 239.853 | 26.625 | 247.251 | 59.179 | 45.564 | 1844.314 |
| | Plastic Bags | 0.410 | 1.429 | 7.316 | 1.911 | 0.597 | 1.889 | 0.735 | 1.084 | 15.371 |
| | Illegal Dumping | 48.000 | 204.000 | 420.000 | 324.000 | 36.000 | 120.000 | 12.000 | 24.000 | 1188.000 |
| | GRAND TOTAL | 169.851 | 695.292 | 3444.658 | 988.149 | 167.829 | 647.613 | 222.959 | 216.280 | 6552.631 |
| **NATIONAL 2017/18** | Butts & Packaging | 3.049 | 20.452 | 50.610 | 27.030 | 3.063 | 18.623 | 17.859 | 8.589 | 149.276 |
| | Beverage Containers | 154.638 | 200.914 | 1364.697 | 352.494 | 74.751 | 217.423 | 99.658 | 68.918 | 2533.495 |
| | Takeaway Food & Beverage | 51.811 | 172.000 | 690.531 | 211.910 | 53.430 | 130.963 | 76.513 | 45.978 | 1433.137 |
| | Other Glass | 0.619 | 1.326 | 3.899 | 1.247 | 0.403 | 0.805 | 0.619 | 0.324 | 9.241 |
| | Other Paper | 1.186 | 4.132 | 9.038 | 4.347 | 1.413 | 3.176 | 2.352 | 1.634 | 27.278 |
| | Other Plastic | 0.323 | 0.683 | 2.163 | 1.010 | 0.328 | 0.712 | 0.401 | 0.321 | 5.941 |
| | General Other | 111.177 | 131.698 | 776.084 | 359.283 | 62.484 | 321.145 | 46.663 | 66.749 | 1875.283 |
| | Plastic Bags | 1.068 | 2.133 | 10.327 | 2.610 | 0.769 | 1.839 | 1.305 | 1.175 | 21.226 |
| | Illegal Dumping | 48.000 | 444.000 | 468.000 | 504.000 | 84.000 | 228.000 | | | 1776.000 |
| | GRAND TOTAL | 371.870 | 977.339 | 3375.349 | 1463.931 | 280.642 | 922.687 | 245.371 | 193.689 | 7830.877 |
| **% REDUCTION** | Butts & Packaging | 25.3% | -2.0% | -4.4% | 13.1% | 32.7% | 15.7% | 58.8% | 10.3% | 11.4% |
| | Beverage Containers | 68.8% | 13.1% | 2.9% | 28.0% | 24.7% | 30.2% | 13.9% | -16.5% | 14.1% |
| | Takeaway Food & Beverage | 36.1% | 11.2% | 17.3% | 34.0% | 17.0% | 18.5% | 28.3% | -20.8% | 19.2% |
| | Other Glass | 46.0% | -19.3% | 1.0% | 9.4% | 14.6% | 8.5% | 23.8% | 21.2% | 5.7% |
| | Other Paper | 16.5% | 22.1% | 7.9% | 31.3% | 16.4% | 11.4% | 10.8% | 6.9% | 15.2% |
| | Other Plastic | 2.5% | -7.9% | 0.1% | 13.7% | -5.7% | -6.3% | -3.9% | | 0.3% |
| | General Other | 67.5% | -3.3% | -35.8% | 33.2% | 57.4% | 23.0% | -26.8% | 31.7% | 1.7% |
| | Plastic Bags | 61.6% | 33.0% | 29.2% | 26.8% | 22.4% | -2.7% | 43.7% | 7.7% | 27.6% |
| | Illegal Dumping | 0.0% | 54.1% | 10.3% | 35.7% | 57.1% | 47.4% | | | 33.1% |
| | Grand Total (excluding illegal dumping) | 62.4% | 7.9% | -4.0% | 30.8% | 33.0% | 24.1% | 14.0% | 0.7% | 11.4% |
| | GRAND TOTAL | 54.3% | 28.9% | -2.1% | 32.5% | 40.2% | 29.8% | 9.1% | -11.7% | 16.3% |

## ***Jurisdictional Contribution***

The contribution each state made to the overall changes is summarised below. (NB: It is important to note that these changes are a simple statement of fact and cannot be used to confer any relativities between jurisdictions as the areas surveyed in each state is different). The State based reports will expand on these results in greater detail.

In terms of items counted, the ACT, NSW and Tasmania made the biggest contributions to the marginal increase in litter. These reductions were offset by decreases across some states including Queensland, SA, Victoria and WA.

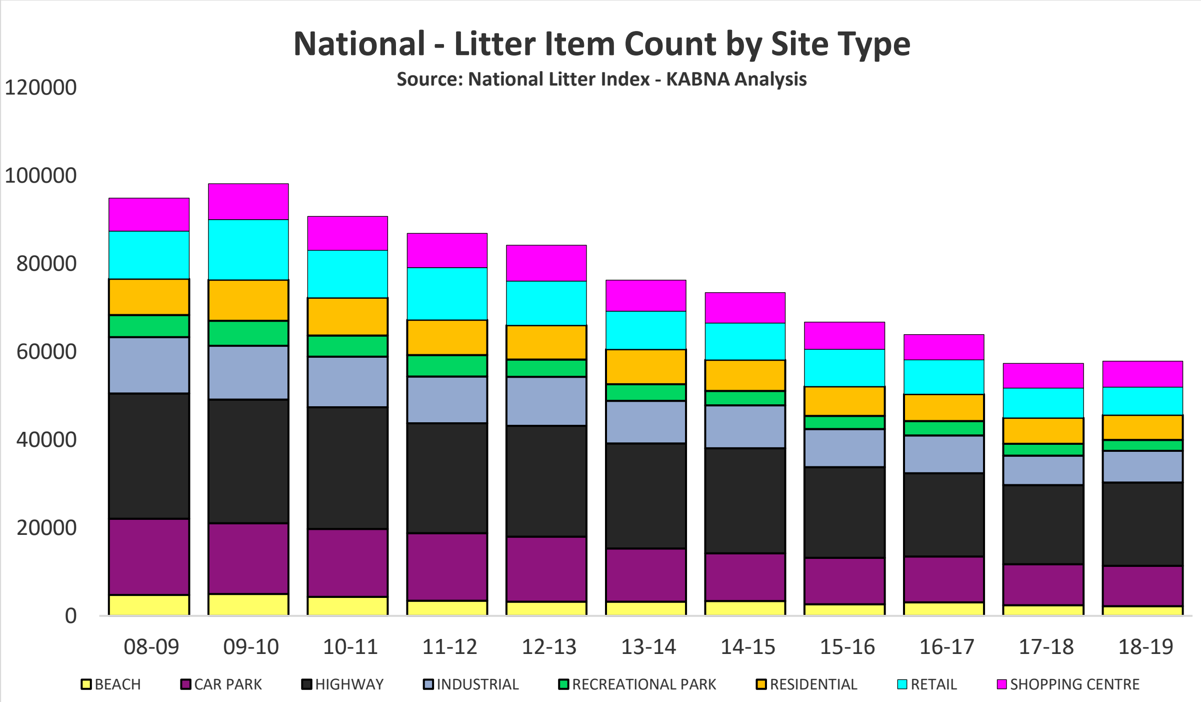
| | Items | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Change between 2017/18 and 2018/19** | **Beach** | **Car Park** | **Highway** | **Industrial** | **Recreational Park** | **Residential** | **Retail** | **Shopping Centre** | **Total** |
| ACT | 47 | 346 | 30 | 18 | 20 | -139 | 195 | 151 | 666 |
| NSW | 70 | -131 | 495 | 112 | -32 | -26 | 31 | 95 | 613 |
| NT | 90 | -38 | 170 | -16 | -94 | 53 | -16 | -124 | 26 |
| QLD | -3 | -292 | 62 | -103 | -106 | -168 | -387 | 73 | -924 |
| SA | -58 | -210 | -40 | 253 | -67 | -38 | -132 | 10 | -281 |
| TAS | -49 | 145 | 641 | -7 | 77 | 198 | 295 | 232 | 1531 |
| VIC | -78 | -334 | 21 | 148 | -33 | -98 | 158 | -110 | -324 |
| WA | -236 | 324 | -335 | 38 | -4 | 35 | -578 | -54 | -809 |
| NATIONAL | -218 | -185 | 1046 | 436 | -237 | -180 | -431 | 274 | 505 |
| | | | | | | | | | |
| ACT | 71% | 79% | 3% | 3% | 21% | -24% | 53% | 36% | 19% |
| NSW | 36% | -7% | 21% | 9% | -8% | -2% | 3% | 11% | 7% |
| NT | 43% | -5% | 21% | -3% | -54% | 12% | -3% | -23% | 1% |
| QLD | 0% | -16% | 1% | -8% | -11% | -16% | -30% | 12% | -7% |
| SA | -19% | -16% | -2% | 34% | -20% | -7% | -17% | 1% | -4% |
| TAS | -17% | 18% | 36% | -1% | 25% | 47% | 31% | 23% | 25% |
| VIC | -32% | -27% | 2% | 29% | -10% | -10% | 27% | -17% | -6% |
| WA | -59% | 28% | -8% | 3% | -2% | 5% | -47% | -9% | -8% |
| NATIONAL | -9% | -2% | 6% | 7% | -9% | -3% | -6% | 5% | 1% |

In volumetric terms, the ACT, Queensland, SA and WA were the main contributors to the reduction in volume, while there were also decreases in volume in Tasmania and Victoria. The volume of litter increased in NSW and NT.

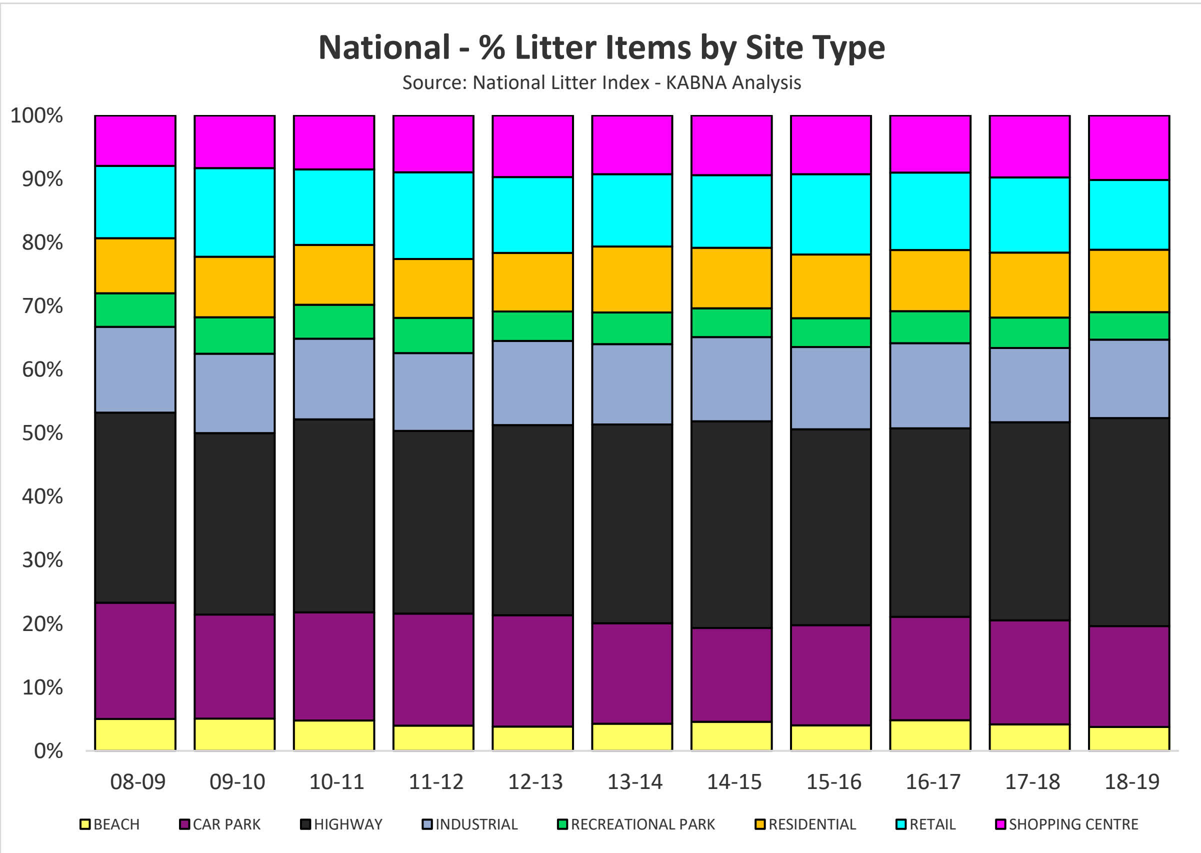
| | Volume - litres | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Change between 2017/18 and 2018/19** | **Beach** | **Car Park** | **Highway** | **Industrial** | **Recreational Park** | **Residential** | **Retail** | **Shopping Centre** | **Total** |
| ACT | 7 | -2 | -67 | -50 | 2 | -14 | -5 | -7 | -136 |
| NSW | -18 | -62 | -3 | -90 | -1 | 30 | 15 | 1 | -127 |
| NT | 18 | 14 | 52 | -17 | -27 | 2 | 4 | -13 | 33 |
| QLD | 29 | 16 | -79 | -34 | 13 | -54 | -4 | -15 | -128 |
| SA | -38 | -18 | -163 | 76 | -9 | 24 | -22 | -7 | -157 |
| TAS | -9 | 3 | -27 | -4 | -14 | 4 | 11 | -14 | -49 |
| VIC | -4 | -53 | -43 | 19 | -5 | 34 | 10 | -15 | -56 |
| WA | -4 | -14 | -55 | -14 | -8 | -1 | -30 | -23 | -149 |
| NATIONAL | -21 | -112 | -383 | -119 | -48 | 27 | -18 | -92 | -765 |
| | | | | | | | | | |
| ACT | 218% | -11% | -48% | -48% | 91% | -27% | -42% | -54% | -40% |
| NSW | -63% | -18% | -1% | -30% | -4% | 16% | 26% | 1% | -9% |
| NT | 156% | 57% | 48% | -29% | -89% | 2% | 20% | -46% | 9% |
| QLD | 64% | 24% | -13% | -32% | 28% | -40% | -21% | -64% | -12% |
| SA | -76% | -22% | -30% | 35% | -45% | 51% | -69% | -25% | -15% |
| TAS | -61% | 29% | -21% | -10% | -64% | 23% | 114% | -53% | -18% |
| VIC | -53% | -59% | -24% | 49% | -26% | 64% | 105% | -53% | -13% |
| WA | -42% | -19% | -4% | -12% | -60% | -1% | -47% | -80% | -9% |
| NATIONAL | -12% | -16% | -11% | -12% | -29% | 4% | -8% | -43% | -12% |

## ***Littering Location***

There was a marginal rise in litter observed overall nationally in 2018/19 across several site types including increases of 6.5% at industrial sites, 5.8% at highways and 4.9% at shopping centres. The increases were offset to some degree by decreases of 9.1% at beaches, 8.6% at recreational parks, 6.3% at retail precincts, 3.1% at residential sites and 2.0% at car parks.



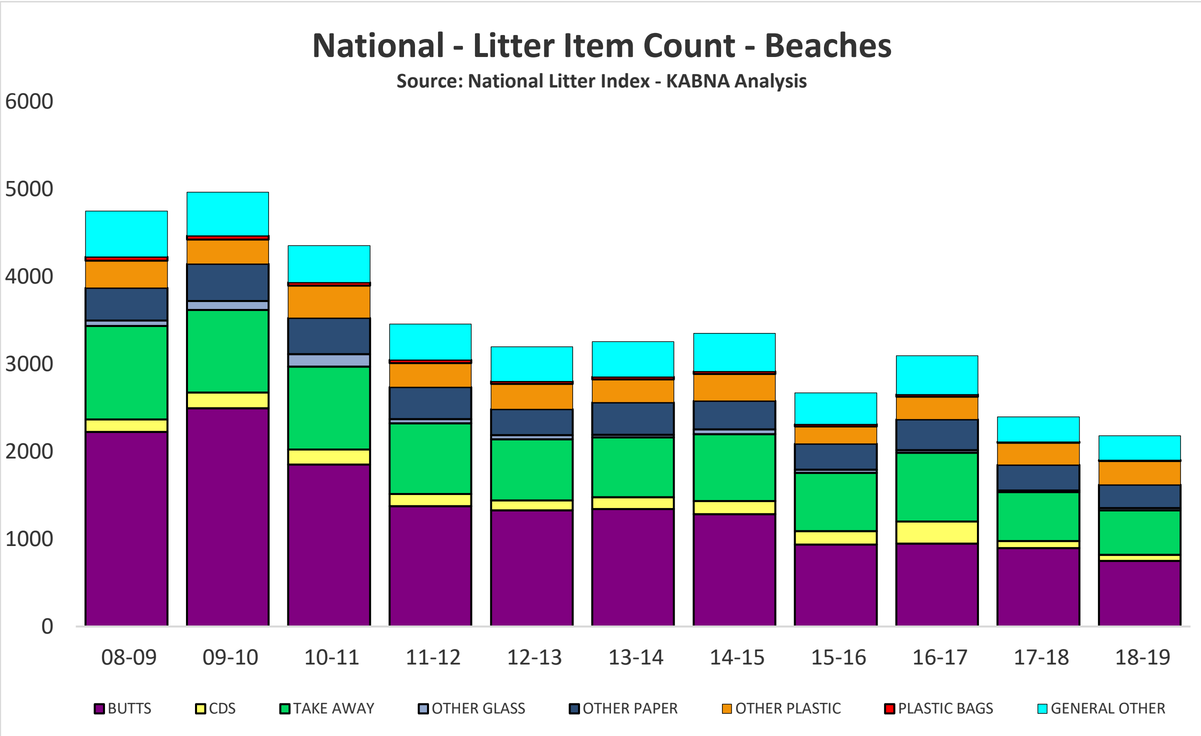

While these changes did shift the shape of the overall litter stream, when looked at over the long term it remains relatively stable.



## ***Beaches***

In 2018/19 the KAB NLI counted 9.1% less litter nationally at beaches than counted in the 2017/18 monitor. Several categories experienced a reduction in litter with the largest reductions observed in decreases of 16.5% in cigarette related litter, 9.5% in takeaway food and beverage packaging, 8.9% in other paper litter and 8.8% in CDL beverage containers.

In terms of the number of items per 1,000m² the largest decreases in litter at beaches were attributed to cigarette related litter (11.4 items, down from 13.7 items in 2017/18), followed by take away food and beverage packaging (7.7 items, down from 8.6 items in 2017/18), other paper litter (4.1 items, down from 4.5 items in 2017/18) and CDL beverage containers (1.1 items, down from 1.2 items in 2017/18).




| NATIONAL BEACHES Items per 1,000m² (excluding illegal dumping) | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BUTTS | 33.9 | 38.1 | 28.2 | 21.0 | 20.3 | 20.5 | 19.6 | 14.3 | 14.5 | 13.7 | 11.4 |
| CDS | 2.2 | 2.8 | 2.7 | 2.1 | 1.8 | 2.0 | 2.3 | 2.3 | 3.8 | 1.2 | 1.1 |
| TAKE AWAY | 16.3 | 14.4 | 14.4 | 12.3 | 10.7 | 10.4 | 11.7 | 10.2 | 12.0 | 8.6 | 7.7 |
| OTHER GLASS | 1.0 | 1.6 | 2.2 | 0.7 | 0.7 | 0.5 | 0.8 | 0.5 | 0.5 | 0.3 | 0.4 |
| OTHER PAPER | 5.7 | 6.4 | 6.3 | 5.6 | 4.5 | 5.6 | 5.0 | 4.5 | 5.4 | 4.5 | 4.1 |
| OTHER PLASTIC | 4.7 | 4.3 | 5.6 | 4.2 | 4.4 | 4.0 | 4.7 | 3.1 | 3.9 | 3.8 | 4.1 |
| PLASTIC BAGS | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 0.2 |
| GENERAL OTHER | 8.0 | 7.6 | 6.4 | 6.3 | 6.0 | 6.1 | 6.7 | 5.5 | 6.8 | 4.4 | 4.3 |
| TOTAL | 72.5 | 75.7 | 66.4 | 52.8 | 48.8 | 49.7 | 51.1 | 40.8 | 47.2 | 36.6 | 33.3 |

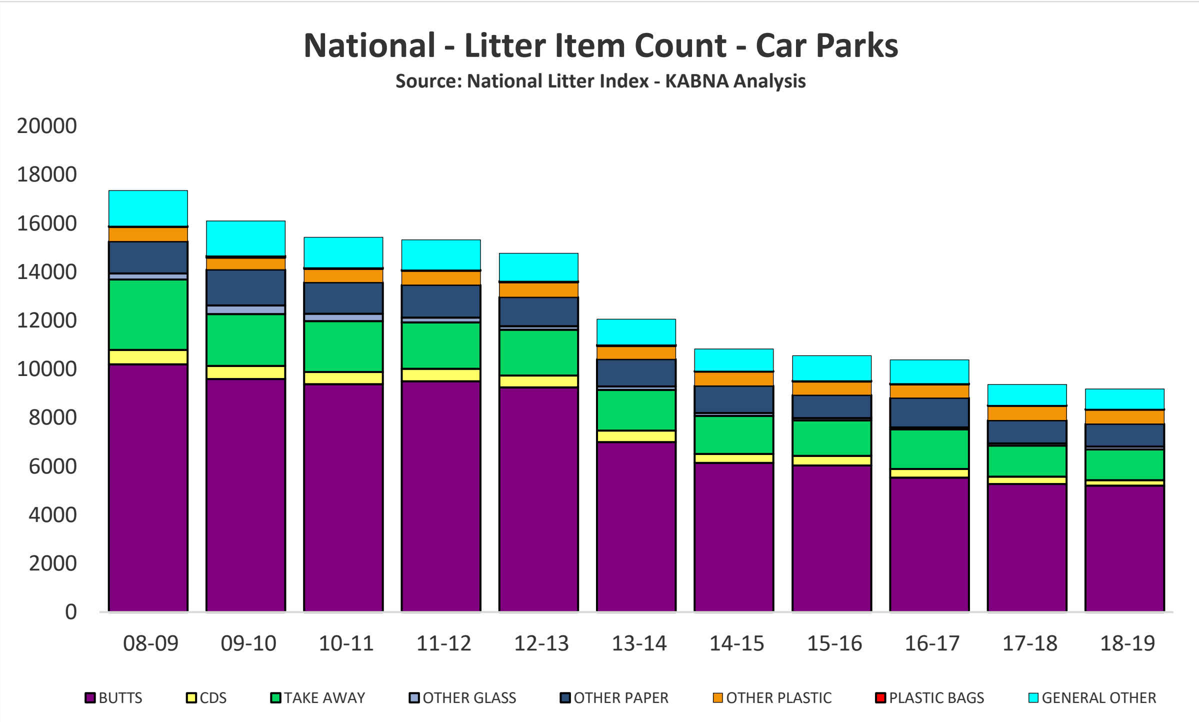
The biggest contributors to the reduction in litter counted at beaches were decreases of 58.6% in WA and 32.3% in Victoria, with smaller decreases observed of 18.6% in SA and 16.9% in Tasmania. There were however some rises in litter observed, these included increases of 71.0% in the ACT, 42.9% in NT and 36.5% in NSW.

## ***Car Parks***

There was a 2.0% reduction in litter counted in car parks in the 2018/19 KAB NLI with reductions across most material categories with the exception of other glass litter items. The largest reductions in litter were observed with decreases of 24.9% in CDL beverage containers and 1.2% in cigarette related litter.

In terms of the number of items per 1,000m² the largest decreases in litter at car parks were attributed to CDL beverage containers (1.0 items, down from 1.4 items in 2017/18), followed by cigarette related litter (23.7 items, down from 24.0 items in 2017/18).

Over the longer term, litter in car parks has fallen steadily with the biggest change in the 2013/14 monitor with a substantive reduction in cigarette litter.



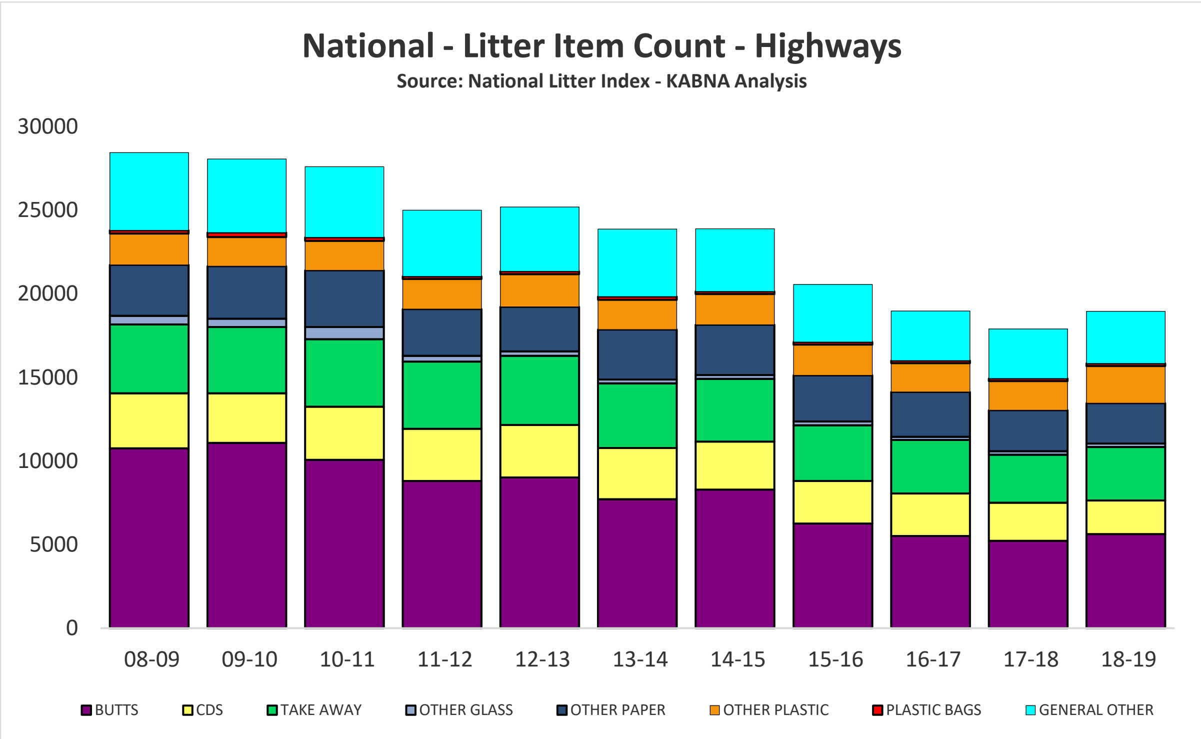

| NATIONAL CAR PARKS Items per 1,000m² (excluding illegal dumping) | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BUTTS | 46.4 | 43.6 | 42.7 | 43.2 | 42.1 | 31.8 | 27.9 | 27.5 | 25.2 | 24.0 | 23.7 |
| CDS | 2.7 | 2.5 | 2.3 | 2.4 | 2.2 | 2.2 | 1.7 | 1.8 | 1.6 | 1.4 | 1.0 |
| TAKE AWAY | 13.2 | 9.7 | 9.5 | 8.7 | 8.6 | 7.6 | 7.2 | 6.6 | 7.5 | 5.9 | 5.8 |
| OTHER GLASS | 1.1 | 1.6 | 1.4 | 0.9 | 0.6 | 0.7 | 0.6 | 0.4 | 0.3 | 0.4 | 0.5 |
| OTHER PAPER | 6.0 | 6.7 | 5.9 | 6.1 | 5.5 | 5.1 | 5.1 | 4.3 | 5.6 | 4.3 | 4.2 |
| OTHER PLASTIC | 2.7 | 2.3 | 2.5 | 2.7 | 2.7 | 2.5 | 2.6 | 2.5 | 2.5 | 2.7 | 2.7 |
| PLASTIC BAGS | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 |
| GENERAL OTHER | 6.7 | 6.6 | 5.7 | 5.6 | 5.2 | 4.8 | 4.1 | 4.7 | 4.4 | 3.9 | 3.7 |
| TOTAL | 79.0 | 73.3 | 70.2 | 69.7 | 67.2 | 54.9 | 49.3 | 48.0 | 47.3 | 42.6 | 41.8 |

The biggest contributors to the reduction in litter counted at car parks were decreases of 27.5% in Victoria, 16.1% in Queensland and 15.8% in SA, while smaller reductions observed were decreases of 7.1% in NSW and 4.8% in NT. Offsetting these reductions to some degree were increases of 78.8% in ACT, 27.7%in WA and 18.4% in Tasmania.

## ***Major Roads/Highways***

There was a 5.8% increase in litter counted at major roads and highways with rises across several material categories except beverage containers, other paper litter and plastic bags. The biggest contributors to rise were increases of 28.1% in other plastic litter, 11.0% in take away food and beverage packaging, 7.7% in cigarette related litter and 5.0% in general other litter. The overall increase was offset to some degree mainly by a decrease of 11.6% in CDL beverage containers.

In terms of the number of items per 1,000m² the largest increases in litter at major roads and highways were attributed to other plastic litter (4.0 items, up from 3.1 items in 2017/18), followed by cigarette related litter (10.2 items, up from 9.5 items in 2017/18) and take away food and beverage packaging (5.8 items, up from 5.2 items in 2017/18). While the largest decrease was attributed to, CDL beverage containers (3.7 items, down from 4.1 items in 2017/18).



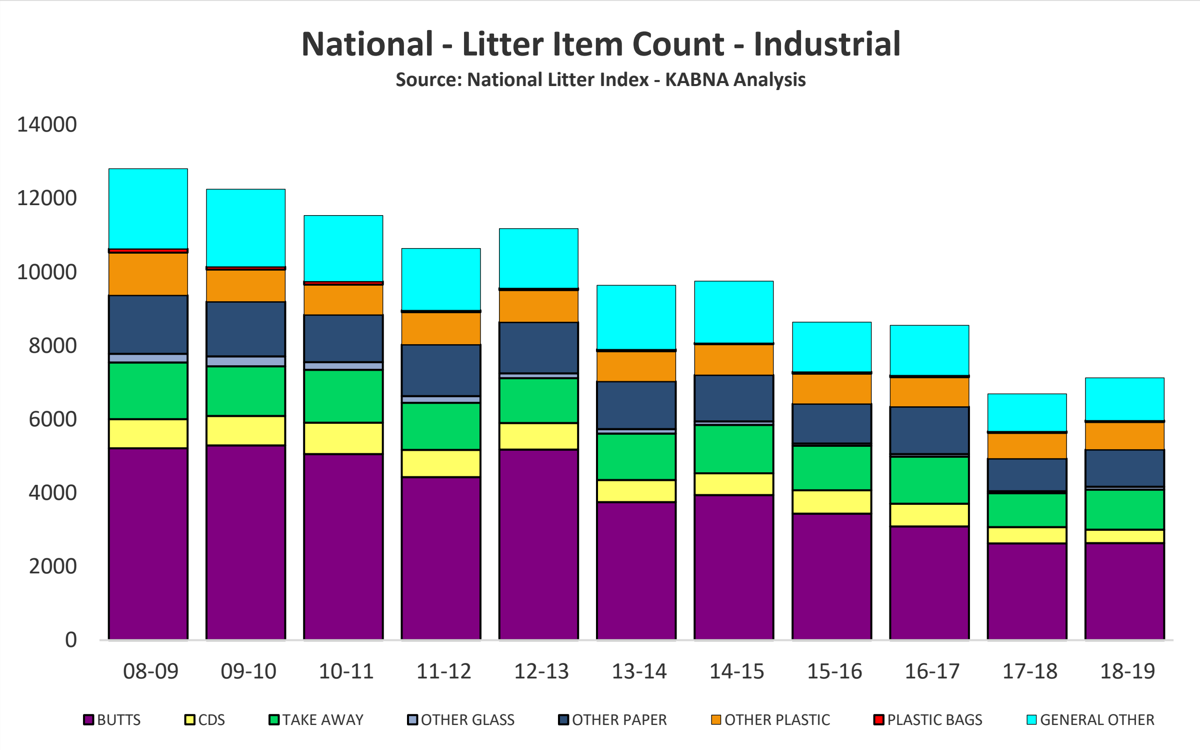

| NATIONAL HIGHWAYS Items per 1,000m² (excluding illegal dumping) | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BUTTS | 19.6 | 20.2 | 18.3 | 16.0 | 16.4 | 14.0 | 15.1 | 11.4 | 10.0 | 9.5 | 10.2 |
| CDS | 6.0 | 5.4 | 5.8 | 5.7 | 5.7 | 5.6 | 5.2 | 4.6 | 4.6 | 4.1 | 3.7 |
| TAKE AWAY | 7.5 | 7.2 | 7.4 | 7.3 | 7.5 | 7.0 | 6.8 | 6.1 | 5.8 | 5.2 | 5.8 |
| OTHER GLASS | 0.9 | 0.9 | 1.3 | 0.6 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| OTHER PAPER | 5.5 | 5.7 | 6.2 | 5.1 | 4.9 | 5.4 | 5.5 | 5.0 | 4.9 | 4.5 | 4.4 |
| OTHER PLASTIC | 3.4 | 3.2 | 3.2 | 3.3 | 3.5 | 3.2 | 3.4 | 3.3 | 3.1 | 3.1 | 4.0 |
| PLASTIC BAGS | 0.3 | 0.5 | 0.4 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| GENERAL OTHER | 8.5 | 8.0 | 7.7 | 7.2 | 7.0 | 7.3 | 6.8 | 6.3 | 5.4 | 5.4 | 5.7 |
| TOTAL | 51.7 | 51.0 | 50.2 | 45.5 | 45.8 | 43.4 | 43.5 | 37.4 | 34.5 | 32.6 | 34.5 |

Litter rose in most states and territories at major roads and highways with the biggest contributors to the rise in litter observed with increases of 36.3% in Tasmania, 21.4% in NT and 20.7% in NSW, while smaller rises were observed with increases of 3.4% in the ACT, 2.4% in Victoria and 1.3% in Queensland. Decreases were observed at major roads and highways of 8.2% in WA and 1.6% in SA.

## ***Industrial Precincts***

There was a 6.5% increase in litter at industrial precincts in the 2018/19 monitor, however, the result was still below the 2016/17 count and all other previous monitors. Litter rose across all categories, except CDL beverage containers, with the biggest contributors to the overall rise observed by increases of 18.8% in takeaway food and beverage packaging, followed by a 13.9% increase of other paper litter, 13.2% of general other litter and 7.2% of other plastic litter. The overall increase was offset to some extent by the decrease of 17.9% CDL beverage containers.

In terms of the number of items per 1,000m² the largest increases in litter at industrial precincts were attributed to take away food and beverage packaging (7.3 items, down from 7.8 items in 2017/18), followed by general other litter (9.8 items, up from 8.7 items in 2017/18), other plastic litter (6.4 items, up from 5.9 items in 2017/18) and other paper (8.6 items, up from 7.5 items in 2017/18). The only decrease was in CDL beverage containers (3.1 items, down from 3.8 items in 2017/18).



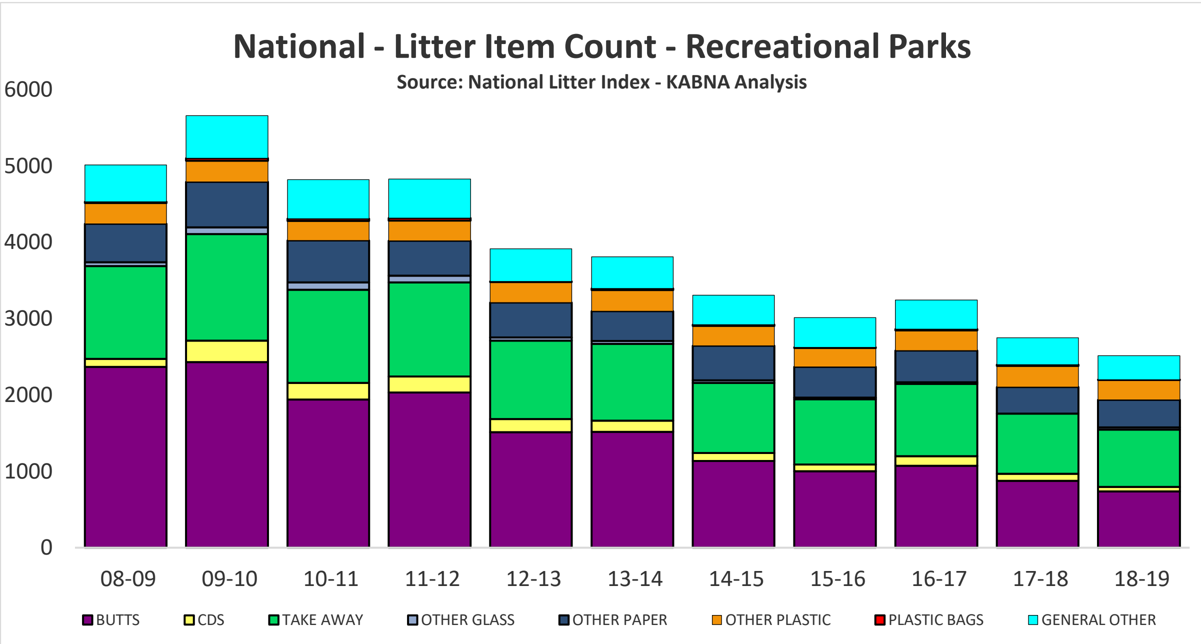

| NATIONAL INDUSTRIAL Items per 1,000m² (excluding illegal dumping) | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BUTTS | 44.3 | 45.0 | 43.0 | 37.7 | 44.0 | 31.9 | 33.5 | 29.3 | 26.3 | 22.4 | 22.5 |
| CDS | 6.8 | 6.8 | 7.3 | 6.2 | 6.2 | 5.1 | 5.0 | 5.4 | 5.3 | 3.8 | 3.1 |
| TAKE AWAY | 13.0 | 11.4 | 12.2 | 10.9 | 10.4 | 10.8 | 11.2 | 10.3 | 10.9 | 7.8 | 9.3 |
| OTHER GLASS | 2.0 | 2.3 | 1.8 | 1.5 | 1.1 | 1.0 | 0.8 | 0.5 | 0.5 | 0.5 | 0.7 |
| OTHER PAPER | 13.6 | 12.7 | 10.9 | 11.9 | 11.8 | 11.1 | 10.7 | 9.2 | 10.9 | 7.5 | 8.6 |
| OTHER PLASTIC | 9.8 | 7.4 | 7.0 | 7.5 | 7.4 | 6.9 | 7.1 | 6.9 | 6.9 | 5.9 | 6.4 |
| PLASTIC BAGS | 0.9 | 0.7 | 0.7 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.4 |
| GENERAL OTHER | 18.5 | 17.9 | 15.3 | 14.3 | 13.8 | 14.8 | 14.3 | 11.5 | 11.6 | 8.7 | 9.8 |
| TOTAL | 109.0 | 104.2 | 98.2 | 90.6 | 95.1 | 82.1 | 83.0 | 73.5 | 72.8 | 56.9 | 60.6 |

The main contributors to the rise of litter at industrial precincts were increases of 34.5% in SA and 29.0% in Victoria, with smaller rises associated with increases of 8.8% in NSW, 3.5% in WA and 2.7% in the ACT. However, there were falls in litter observed at industrial precincts with decreases of 8.1% in Queensland, 3.1% in NT and 1.0% in Tasmania.

## ***Recreational Parks***

The 2018/19 monitor counted 8.6% less litter in recreational parks than in 2017/18, with less litter in all categories except other paper litter and other glass litter. The categories which contributed the largest reductions in litter were decreases of 38.4% in CDL beverage containers, 15.6% in cigarette related litter and 4.9% in takeaway food and beverage packaging.

In terms of the number of items per 1,000m² the largest decreases in litter at recreational parks were attributed to cigarette related litter (4.7 items, down from 5.5 items in 2017/18) followed by take away food and beverage packaging (4.7 items, down from 5.0 items in 2017/18) and CDL beverage containers (0.4 items, down from 0.6 items in 2017/18).



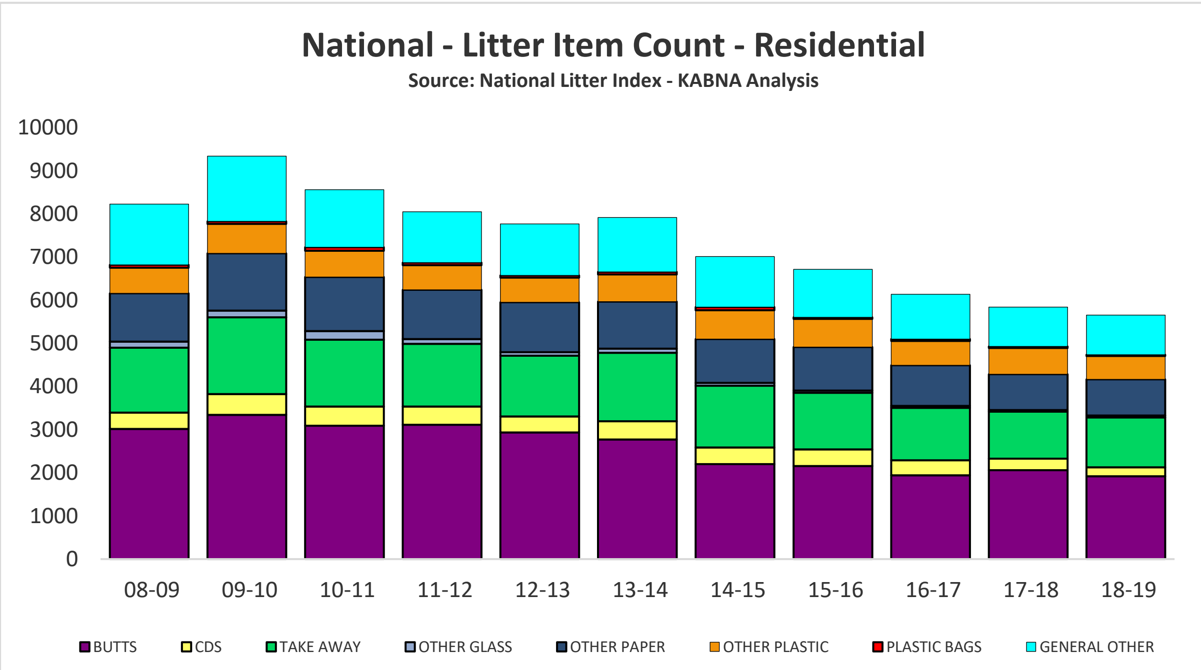

| NATIONAL RECREATIONAL PARKS Items per 1,000m² (excluding illegal dumping) | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BUTTS | 14.9 | 15.3 | 12.2 | 12.8 | 9.5 | 9.6 | 7.2 | 6.3 | 6.8 | 5.5 | 4.7 |
| CDS | 0.7 | 1.8 | 1.4 | 1.3 | 1.1 | 0.9 | 0.6 | 0.6 | 0.8 | 0.6 | 0.4 |
| TAKE AWAY | 7.7 | 8.8 | 7.7 | 7.8 | 6.5 | 6.3 | 5.8 | 5.4 | 6.0 | 5.0 | 4.7 |
| OTHER GLASS | 0.3 | 0.6 | 0.6 | 0.6 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.2 |
| OTHER PAPER | 3.2 | 3.8 | 3.5 | 2.9 | 2.9 | 2.5 | 2.9 | 2.5 | 2.6 | 2.2 | 2.3 |
| OTHER PLASTIC | 1.7 | 1.8 | 1.6 | 1.7 | 1.7 | 1.7 | 1.6 | 1.6 | 1.7 | 1.7 | 1.6 |
| PLASTIC BAGS | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 |
| GENERAL OTHER | 3.1 | 3.5 | 3.2 | 3.2 | 2.7 | 2.6 | 2.4 | 2.5 | 2.4 | 2.2 | 2.0 |
| TOTAL | 31.6 | 35.7 | 30.4 | 30.4 | 24.7 | 24.0 | 20.8 | 19.0 | 20.5 | 17.3 | 15.8 |

The main contributors to the reduction of litter at recreational parks were decreases of 54.5% in NT and 20.2% in SA, 11.5% in Queensland, 10.0% in Victoria and 8.4% in NSW, with a smaller fall associated with a decrease of 1.5% in WA. There were however rises in litter observed at recreational parks with increases of 25.2% in Tasmania and 21.1% in the ACT.

## ***Residential Streets***

Litter in residential areas fell again in the 2018/19 count by 3.1% representing a continuation of a long-term trend of reducing litter levels. There was a reduction of litter across several litter categories with falls associated with decreases of 26.7% in plastic bags, 21.9% in CDL beverage containers, 10.7% in other plastic litter and 6.9% in cigarette litter related litter. The fall in litter was offset to some degree mainly due to an increase of 6.4% in takeaway food and beverage packaging.

In terms of the number of items per 1,000m² the decreases in litter at residential areas were mainly attributed to cigarette related litter (8.9 items, down from 9.6 items in 2017/18), other plastic (2.5 items, down from 2.8 items in 2017/18) and CDL beverage containers (1.0 items, down from 1.2 items in 2017/18). Increase in litter at residential areas was mainly associated with take away food and beverage packaging (5.4 items, up from 5.1 items in 2017/18).



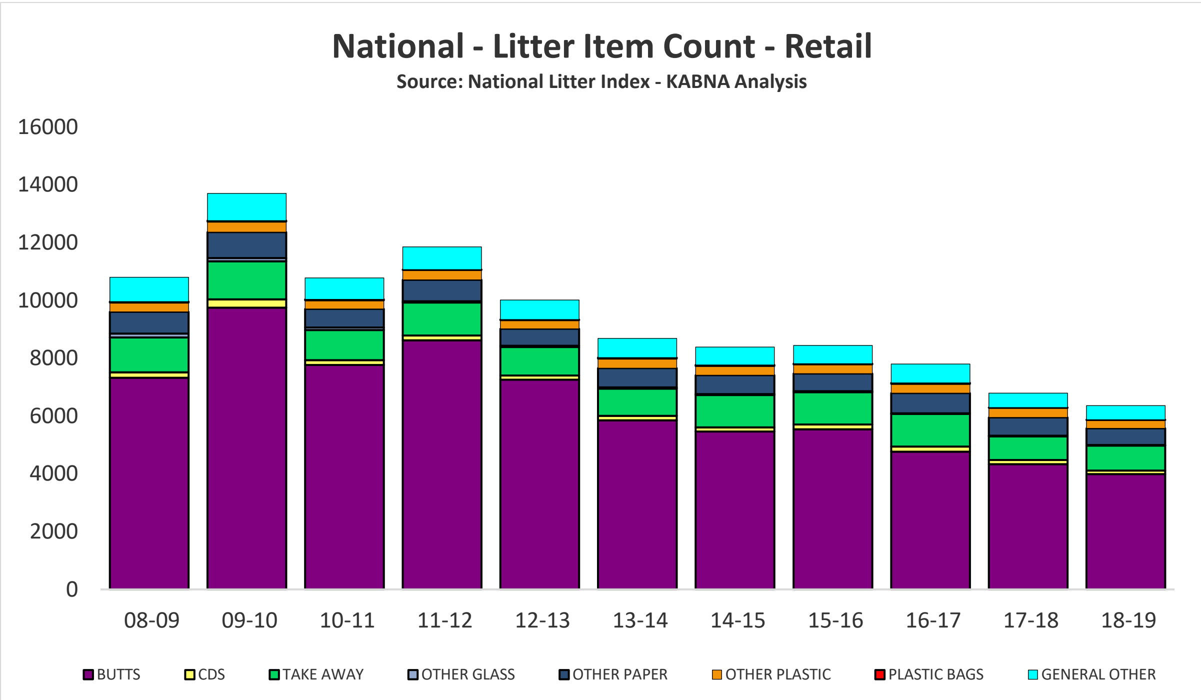

| NATIONAL RESIDENTIAL Items per 1,000m² (excluding illegal dumping) | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BUTTS | 14.0 | 15.5 | 14.4 | 14.5 | 13.6 | 12.9 | 10.2 | 10.0 | 9.0 | 9.6 | 8.9 |
| CDS | 1.8 | 2.3 | 2.1 | 1.9 | 1.7 | 1.9 | 1.8 | 1.8 | 1.6 | 1.2 | 1.0 |
| TAKE AWAY | 7.0 | 8.3 | 7.2 | 6.8 | 6.5 | 7.4 | 6.7 | 6.1 | 5.7 | 5.1 | 5.4 |
| OTHER GLASS | 0.7 | 0.7 | 0.9 | 0.5 | 0.4 | 0.5 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 |
| OTHER PAPER | 5.2 | 6.2 | 5.8 | 5.3 | 5.4 | 5.1 | 4.7 | 4.7 | 4.4 | 3.9 | 3.9 |
| OTHER PLASTIC | 2.8 | 3.2 | 2.8 | 2.7 | 2.7 | 2.9 | 3.1 | 3.0 | 2.6 | 2.8 | 2.5 |
| PLASTIC BAGS | 0.3 | 0.3 | 0.4 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 |
| GENERAL OTHER | 6.6 | 7.0 | 6.2 | 5.5 | 5.5 | 5.8 | 5.5 | 5.2 | 4.8 | 4.2 | 4.3 |
| TOTAL | 38.2 | 43.4 | 39.8 | 37.4 | 36.1 | 36.8 | 32.6 | 31.2 | 28.5 | 27.1 | 26.3 |

The main contributors to the reduction of litter in residential areas were decreases of 24.0% in the ACT, 16.0% in Queensland while there were smaller reductions in litter associated with decreases of 9.9% in Victoria, 7.3% in SA and 2.3% in NSW. The overall decrease was offset to some degree by rises in litter at residential areas with increases of 46.9% in Tasmania, 11.9% in NT and 4.7% in WA.

## ***Retail Precincts***

Litter counted at retail sites dropped by 6.3% in 2018/19 with litter decreasing across all categories except takeaway food and beverage packaging and other glass litter. The biggest contributors to the fall in litter items were observed in decreases of 14.1% in other plastic litter, 8.1% in other paper litter and 8.0% in cigarette related litter. The fall in litter was offset to some extent by an increase of 3.8% in takeaway food and beverage packaging. Cigarette butts still represent almost two thirds (62.6%) of all litter observed at retail precincts.

In terms of the number of items per 1,000m² the largest decreases in litter at retail precincts were attributed to cigarette related litter (49.4 items, down from 53.7 items in 2017/18), while moderate decreases were associated with other paper litter (7.1 items, down from 7.7 items in 2017/18) and other plastic (3.5 items, down from 4.1 items in 2017/18). Increase in litter at residential areas was also mainly associated with take away food and beverage packaging (10.6 items, up from 10.2 items in 2017/18).



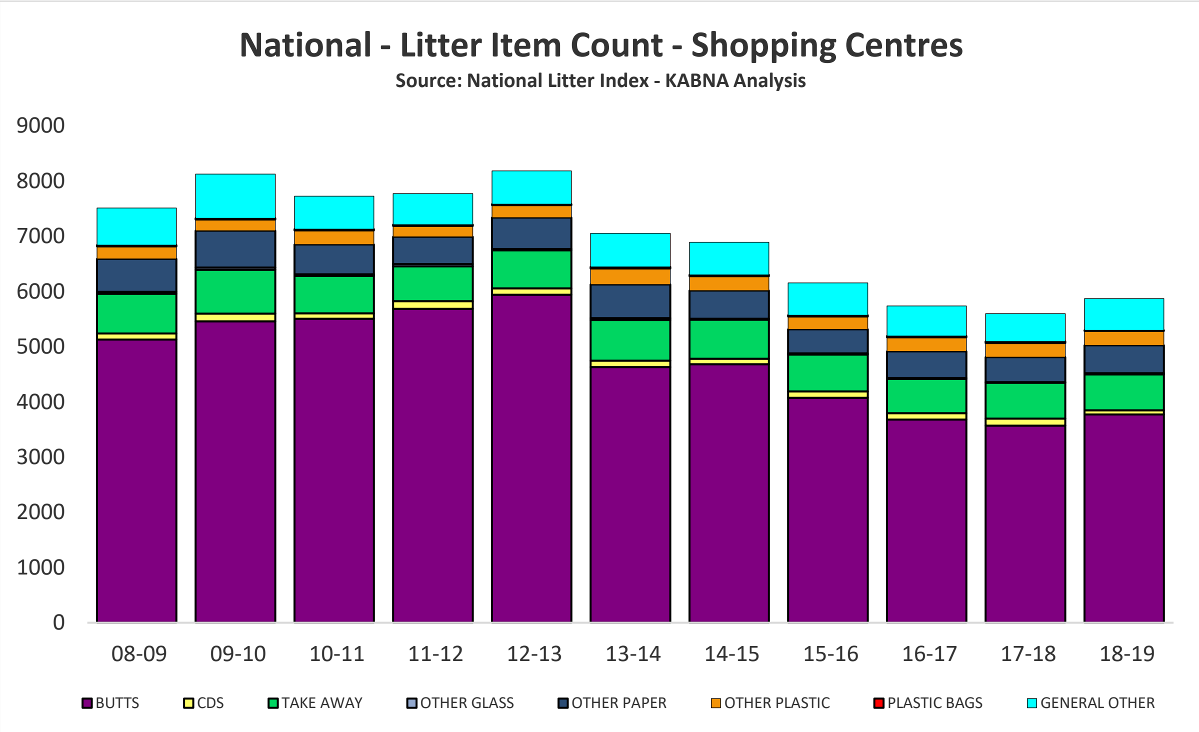

| NATIONAL RETAIL Items per 1,000m² (excluding illegal dumping) | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BUTTS | 90.7 | 120.8 | 96.2 | 106.7 | 89.8 | 72.5 | 67.7 | 68.6 | 59.0 | 53.7 | 49.4 |
| CDS | 2.4 | 3.5 | 2.0 | 2.1 | 1.9 | 1.9 | 1.7 | 2.2 | 2.2 | 1.7 | 1.6 |
| TAKE AWAY | 14.9 | 16.4 | 12.9 | 14.1 | 12.2 | 11.7 | 13.8 | 13.8 | 14.0 | 10.2 | 10.6 |
| OTHER GLASS | 1.7 | 1.4 | 1.2 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 |
| OTHER PAPER | 9.4 | 11.0 | 7.9 | 9.2 | 7.3 | 8.3 | 8.0 | 7.5 | 8.6 | 7.7 | 7.1 |
| OTHER PLASTIC | 4.0 | 4.7 | 3.7 | 4.2 | 3.6 | 4.1 | 4.0 | 4.0 | 4.0 | 4.1 | 3.5 |
| PLASTIC BAGS | 0.4 | 0.4 | 0.4 | 0.2 | 0.3 | 0.3 | 0.4 | 0.3 | 0.4 | 0.2 | 0.2 |
| GENERAL OTHER | 10.4 | 11.5 | 9.2 | 9.7 | 8.5 | 8.3 | 7.8 | 7.8 | 8.1 | 6.2 | 6.1 |
| TOTAL | 133.8 | 169.7 | 133.5 | 146.8 | 124.1 | 107.6 | 103.9 | 104.5 | 104.5 | 84.2 | 78.8 |

The main contributors to the reduction of litter at retail precincts were decreases of 46.9% in WA, 30.3% in Queensland and 17.3% in SA, with a smaller reduction observed with a decrease of 3.0% in NT. There were, however, rises in litter observed at retail precincts with increases of 52.9% in the ACT, 31.0% in Tasmania, 26.6% in Victoria and 2.8% in NSW.

## ***Shopping Centres***

In 2018/19 there was a 4.9% increase in litter recorded nationally at shopping centres, the biggest contributors to the rise in litter items were attributed to increases of 14.1% in general other litter, 12.2% in other paper litter and 5.6% in cigarette related litter. While there were reductions in the litter associated with decreases of 51.8% in plastic bags and 39.9% in CDL beverage containers. Cigarette butts also represented almost two thirds (64.2%) of litter items observed at shopping centres during 2018/19.

In terms of the number of items per 1,000m² the largest increase in litter at shopping centres was attributed to cigarette related litter (40.7 items, up from 38.5 items in 2017/18), while smaller increases were associated with general other litter (6.2 items, up from 5.4 items in 2017/18) and other paper (5.4 items, up from 4.9 items in 2017/18). Decrease in litter at shopping centres was mainly associated with CDL beverage containers (0.8 items, down from 1.4 items in 2017/18).




| NATIONAL SHOPPING CENTRES Items per 1,000m² (excluding illegal dumping) | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BUTTS | 55.3 | 58.9 | 59.4 | 61.3 | 64.1 | 50.0 | 50.5 | 44.0 | 39.7 | 38.5 | 40.7 |
| CDS | 1.2 | 1.5 | 1.1 | 1.5 | 1.2 | 1.3 | 1.1 | 1.3 | 1.2 | 1.4 | 0.8 |
| TAKE AWAY | 7.8 | 8.6 | 7.3 | 6.8 | 7.5 | 7.9 | 7.6 | 7.2 | 6.7 | 7.0 | 7.0 |
| OTHER GLASS | 0.4 | 0.4 | 0.3 | 0.4 | 0.2 | 0.4 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 |
| OTHER PAPER | 6.4 | 7.2 | 5.8 | 5.3 | 6.1 | 6.6 | 5.5 | 4.7 | 5.2 | 4.9 | 5.4 |
| OTHER PLASTIC | 2.4 | 2.2 | 2.7 | 2.1 | 2.5 | 3.2 | 2.8 | 2.5 | 2.8 | 2.8 | 2.8 |
| PLASTIC BAGS | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 | 0.1 |
| GENERAL OTHER | 7.3 | 8.7 | 6.4 | 6.1 | 6.5 | 6.6 | 6.4 | 6.4 | 5.8 | 5.4 | 6.2 |
| TOTAL | 81.1 | 87.7 | 83.3 | 83.8 | 88.3 | 76.1 | 74.4 | 66.4 | 66.4 | 60.4 | 63.4 |

The main contributors to the rise of litter at shopping centres were increases of 36.3% in the ACT, 23.1% in Tasmania, 12.3% in Queensland and 11.1% in NSW, with a smaller rise observed with an increase of 1.0% in SA. The rise was offset to some degree by decreases of 23.0% in NT, 17.1% in Victoria and 9.3% in WA.

## ***Normalisation for Area Surveyed***

Litter items per 1,000m²

The following analysis normalises the litter loads based on the area surveyed and then compares patterns across the jurisdictions.

As illustrated in the tables below, when the area surveyed is taken into account, there was an average of 39 litter items per 1000m² across sites nationally, marginally up from 38 litter items per 1000m² in 2017/18.

Retail strips have the highest litter loads with an average of 79 items per 1000m² (down from 84 items per 1000m² in 2017/18). The lowest littered sites are recreational parks with an average of 16 items per 1000m² (down from 17 items per 1000m² in 2017/18).

| | | Items | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NATIONAL | | Beach | Car Park | Highway | Industrial | Recreational Park | Residential | Retail | Shopping Centre | Total |
| NATIONAL 2018/19 | Areas Surveyed | 65531 | 219716 | 549689 | 117514 | 158675 | 215261 | 80733 | 92672 | 1499791 |
| | Items counted (excl illegal dumping) | 2182 | 9181 | 18943 | 7127 | 2514 | 5660 | 6364 | 5873 | 57842 |
| | Per 1,000 sq m | 33 | 42 | 34 | 61 | 16 | 26 | 79 | 63 | 39 |
| NATIONAL 2017/18 | Areas Surveyed | 65531 | 219716 | 549689 | 117514 | 158675 | 215261 | 80733 | 92672 | 1499791 |
| | Items counted excl illegal dumping) | 2398 | 9366 | 17897 | 6689 | 2751 | 5841 | 6795 | 5599 | 57334 |
| | Per 1,000 sq m | 37 | 43 | 33 | 57 | 17 | 27 | 84 | 60 | 38 |

This picture is relatively uniform across the jurisdictions with many States having the lowest litter loads in recreational parks and the highest in retail precincts.

| Normalised Litter Loads (items counted per 1000 sq metres) | | |
|---|---|---|
| **State** | **Lowest Litter Load** | **Highest Litter Load** |
| ACT | Recreational Parks | Retail |
| NSW | Recreational Parks | Industrial |
| NT | Recreational Parks | Retail |
| QLD | Residential | Shopping Centres |
| SA | Recreational Parks | Shopping Centres |
| TAS | Recreational Parks | Retail |
| VIC | Major Roads/Highways | Retail |
| WA | Recreational Parks | Industrial |
| National | Recreational Parks | Retail |

Litter volume per 1,000m² (excluding illegal dumping)

When the area surveyed is taken into account there was an average of 3.11 litres per 1000m² of litter across sites nationally in 2018/19, down from 3.58 litres per 1000m² in 2017/18.

In volumetric terms, industrial precincts (5.05 litres per 1000m², down from 5.65 litres per 1000m² in 2017/18) have the highest litter loads followed by major roads/highways (4.78 litres per 1000m², down from 5.50 litres per 1000m² in 2017/18), while recreational parks have the lowest litter volume loads (0.60 litres per 1000m², down from 0.83 litres per 1000m² in 2017/18).

| | | Volume - Litres | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NATIONAL | | Beach | Car Park | Highway | Industrial | Recreational Park | Residential | Retail | Shopping Centre | Total |
| NATIONAL 2018/19 | Areas Surveyed | 65531 | 219716 | 549689 | 117514 | 158675 | 215261 | 80733 | 92672 | 1499791 |
| | Volume (excl illegal dumping) | 149.210 | 379.683 | 2629.830 | 593.460 | 95.959 | 518.460 | 180.994 | 124.145 | 4671.741 |
| | Per 1,000 sq m | 2.28 | 1.73 | 4.78 | 5.05 | 0.60 | 2.41 | 2.24 | 1.34 | 3.11 |
| NATIONAL 2017/18 | Areas Surveyed | 65531 | 219716 | 549689 | 117514 | 158675 | 215261 | 80733 | 92672 | 1499791 |
| | Volume (excl illegal dumping) | 121.851 | 491.292 | 3024.658 | 664.149 | 131.829 | 527.613 | 210.959 | 192.280 | 5364.631 |
| | Per 1,000 sq m | 1.86 | 2.24 | 5.50 | 5.65 | 0.83 | 2.45 | 2.61 | 2.07 | 3.58 |

This picture is relatively uniform across the jurisdictions with many States having the lowest volumetric litter loads in recreational parks and the highest in industrial precincts.

| **Normalised Litter Loads (volume per 1000 sq metres)** | | |
|---|---|---|
| **State** | **Lowest Litter Load** | **Highest Litter Load** |
| ACT | Recreational Parks | Industrial |
| NSW | Recreational Parks | Industrial |
| NT | Recreational Parks | Beaches |
| QLD | Car Parks | Beaches |
| SA | Recreational Parks | Industrial |
| TAS | Recreational Parks | Industrial |
| VIC | Beaches | Industrial |
| WA | Recreational Parks | Major Roads/Highway |
| National | Recreational Parks | Industrial |

# *Detailed Litter Count Tables – National*

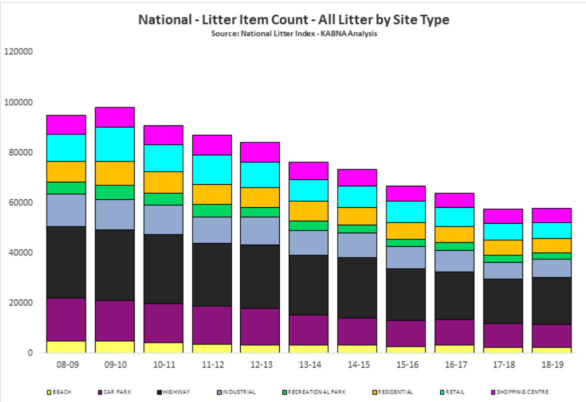
| | | Items | | | | | | | | | Beverage Containers | | Takeaway Food | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NATIONAL - NOV 2018 & MAY 19 AVERAGE | | Beach | Car Park | Highway | Industrial | Recreational Park | Residential | Retail | Shopping Centre | Total | Beverage container | Items | Takeaway Food | Items |
| CIGARETTE BUTTS | | 742.5 | 5119 | 5388 | 2526.5 | 732.5 | 1856.5 | 3938.5 | 3738.5 | **24042** | | | | |
| GLASS | Alcoholic sodas / spirit-based mixers, all sizes | 3 | 5 | 38.5 | 7 | 0.5 | 2 | 1.5 | 0.5 | **58** | y | 58 | | |
| | Beer, all colours of glass, <750ml | 15 | 25.5 | 239.5 | 25 | 6.5 | 16 | 9 | 3 | **340** | y | 340 | | |
| | Beer, all colours of glass, 750ml+ | 1 | 2.5 | 38 | 10.5 | 0.5 | 4.5 | 2.5 | | **60** | y | 60 | | |
| | Cider/fruit based etc. | 1.5 | 4 | 8.5 | 2.5 | | 2.5 | 1 | 0.5 | **21** | y | 21 | | |
| | Flav.wtr/fruit j. dr/sprts dr, (non-carb), <1 litre | | | 1 | 1 | | 1.5 | | | **4** | y | 4 | | |
| | Flav.wtr/fruit j. dr/sprts dr, (non-carb), 1 litre+ | | 0.5 | | 0.5 | | 0.5 | | | **2** | y | 2 | | |
| | Flav. water/soft drink (carbonated) <1 litre | 0.5 | 5.5 | 14 | 7 | 0.5 | 8.5 | 4.5 | 2.5 | **43** | y | 43 | | |
| | Flav. water/soft drink (carbonated) 1 litre+ | | | 2.5 | 0.5 | | | 0.5 | | **4** | y | 4 | | |
| | Fruit juice, < 1 litre | | 2 | 2 | 2.5 | | 0.5 | 0.5 | | **8** | y | 8 | | |
| | Fruit juice, 1 litre+ | | 0.5 | 1 | 0.5 | | 0.5 | | | **3** | | | | |
| | Other glass | 26 | 117.5 | 215 | 77.5 | 32 | 47 | 26.5 | 21.5 | **563** | | | | |
| | Plain water (carbonated or non-carb.), <1 litre | | 2.5 | 7 | 1 | 0.5 | | 1 | 4 | **16** | y | 16 | | |
| | Plain water (carbonated or non-carb.), 1 litre+ | | | 3.5 | | | | | 0.5 | **4** | y | 4 | | |
| | Wine & spirit, all sizes | 7 | 7 | 19 | 6 | | 4 | 2 | | **45** | | | | |
| | Wine cooler, all sizes | 1.5 | | 4.5 | | | 0.5 | 1.5 | | **8** | y | 8 | | |
| | **Total** | **56** | **173** | **594** | **142** | **41** | **88** | **51** | **33** | **1175** | | **565** | | |
| ILLEGAL DUMPING | | | 8.5 | 18 | 11.5 | 1 | 6.5 | 1 | | **47** | | | | |
| METAL | Aerosols - pressure packs | | 4 | 12.5 | 2 | 0.5 | 5 | 2 | 2.5 | **29** | | | | |
| | Alcoholic sodas & spirit-based mixers | 4 | 15.5 | 173 | 33 | 4.5 | 11.5 | 6.5 | 2 | **250** | y | 250 | | |
| | Beer, aluminium, all types, all sizes | 7 | 11.5 | 141 | 28.5 | 3.5 | 9.5 | 5 | 3.5 | **210** | y | 210 | | |
| | Cider/fruit based etc. | | 1 | 8 | | | | | | **9** | y | 9 | | |
| | Flav. water/soft drink, (carbonated), all sizes | 10.5 | 64.5 | 618 | 109.5 | 20 | 65.5 | 47.5 | 28 | **964** | y | 964 | | |
| | Flav. water/soft drink, (non-carb), all sizes | 1.5 | 2 | 12 | 3 | | 2 | 0.5 | 1.5 | **23** | y | 23 | | |
| | Foil take away | 11.5 | 13.5 | 74 | 27.5 | 6 | 21 | 11.5 | 13 | **178** | | | y | 178 |
| | Food cans (including pet food) | 2 | 8 | 32.5 | 15 | | 6.5 | 2.5 | | **67** | | | | |
| | Industrial cans - all types | | 0.5 | 2.5 | 2 | | | | | **5** | | | | |
| | Metal bottle tops and can pull rings | 74 | 277.5 | 344.5 | 137.5 | 104.5 | 155 | 190.5 | 104 | **1388** | | | y | 1388 |
| | Metal pieces | 6 | 50.5 | 248 | 110.5 | 18 | 55.5 | 20.5 | 13.5 | **523** | | | | |
| | Other foil | 58 | 184 | 409 | 165 | 103.5 | 158 | 98 | 117 | **1293** | | | | |
| | **Total** | **175** | **633** | **2075** | **634** | **261** | **490** | **385** | **285** | **4935** | | **1455** | | **1566** |
| MISCELLANEOUS | Clothing & materials | 44 | 74.5 | 355 | 98.5 | 23.5 | 46.5 | 21 | 12.5 | **676** | | | | |
| | Condoms | 1 | 1 | 2.5 | 0.5 | 0.5 | 1.5 | 0.5 | | **8** | | | | |
| | Construction materials | 1 | 4.5 | 38 | 23 | 5 | 14 | 10.5 | | **96** | | | | |
| | Disposable nappies | 2 | 6.5 | 5.5 | 2.5 | 1 | 1.5 | 1.5 | | **21** | | | | |
| | Ice cream sticks | 33.5 | 27.5 | 36.5 | 11.5 | 31.5 | 43.5 | 48.5 | 23.5 | **256** | | | y | 256 |
| | Other miscellaneous | 5.5 | 26 | 67 | 65.5 | 7.5 | 30 | 18.5 | 11 | **231** | | | | |
| | Rubber pieces (not tyres) | 18.5 | 29.5 | 192.5 | 53.5 | 20.5 | 27 | 18 | 15 | **375** | | | | |
| | Syringes | | 1.5 | 1.5 | 2.5 | | 0.5 | | 0.5 | **7** | | | | |
| | Tyres & pieces | 0.5 | 1 | 119 | 8.5 | 4 | 4 | | 7 | **144** | | | | |
| | **Total** | **106** | **172** | **818** | **266** | **94** | **169** | **119** | **70** | **1812** | | | | **256** |
| PAPER/PAPERBOARD | Cartons, flavoured milk < 1 litre | 0.5 | 11.5 | 64.5 | 20.5 | 2.5 | 11 | 5 | 4.5 | **120** | y | 120 | | |
| | Cartons, flavoured milk 1 litre+ | | 1 | 3 | | | 1 | 1 | | **6** | | | | |
| | Cartons, fruit juice, < 1 litre | | 3 | 11.5 | 2 | 3 | 5.5 | 2 | 3 | **30** | y | 30 | | |
| | Cartons, fruit juice, 1 litre+ | | 0.5 | 4 | 0.5 | | 1 | 0.5 | 0.5 | **7** | | | | |
| | Cartons, milk, plain (white) all sizes | | | 10 | 4 | 0.5 | 2.5 | 0.5 | | **18** | | | | |
| | Cigarette packets | 6 | 82 | 234.5 | 114 | 6 | 65 | 48 | 32 | **588** | | | | |
| | Cups/take away containers | 14.5 | 85 | 405 | 87.5 | 21.5 | 80 | 30 | 28 | **752** | | | y | 752 |
| | Coffee cups | 10 | 76 | 288.5 | 109.5 | 13.5 | 62 | 38 | 35.5 | **633** | | | y | 633 |
| | Flav. water/fruit j. drink/sports drink, non-carb, <1 litre | 0.5 | 2.5 | 8 | 1 | | 3.5 | 1 | 1 | **18** | y | 18 | | |
| | Flav. water / fruit j. drink/ sports drink, (non-carb), 1 litre+ | | 1.5 | 2 | | | 0.5 | | | **4** | y | 4 | | |
| | Ice cream wrappers | 7 | 9 | 47 | 6 | 4 | 23.5 | 15 | 5.5 | **117** | | | y | 117 |
| | Junk mail / free circulars | 4 | 36 | 76.5 | 38.5 | 12.5 | 106.5 | 20.5 | 27.5 | **322** | | | | |
| | Newspapers & magazines | 5.5 | 9 | 44 | 24.5 | 3 | 106 | 9 | 2.5 | **204** | | | | |
| | Other paper | 267 | 932 | 2407.5 | 1006 | 357.5 | 833 | 571 | 505 | **6879** | | | | |
| | Packages & boxes | 9.5 | 51 | 242.5 | 101 | 10 | 40 | 10.5 | 17.5 | **482** | | | | |
| | Paper bags | 24.5 | 50 | 243.5 | 63 | 24 | 49.5 | 34 | 38 | **527** | | | | |
| | Shopper dockets & related shopping paper (eg, lists) | 7 | 149 | 206 | 44.5 | 15 | 85 | 87 | 203.5 | **797** | | | | |
| | Tickets, e.g. bus, ATM, vending machine etc. | 3 | 54 | 27.5 | 17.5 | 5 | 43 | 52 | 54 | **256** | | | | |
| | **Total** | **359** | **1553** | **4326** | **1640** | **478** | **1519** | **925** | **958** | **11757** | | **172** | | **1502** |
| PLASTIC | 6 ring can holders | 10 | 5.5 | 9 | 4 | 4 | 7 | 4 | 3 | **47** | | | | |
| | Bags - heavier glossy typically branded carry bags | 3 | 7.5 | 55 | 18.5 | 1 | 7 | 4 | 5 | **101** | | | | |
| | Bags - supermarket type light weight carry bags | 7.5 | 19.5 | 99 | 31.5 | 3.5 | 24.5 | 14 | 8.5 | **208** | | | | |
| | Bread bag tags | 13.5 | 15 | 19 | 13.5 | 29.5 | 29 | 20.5 | 18 | **158** | | | | |
| | Containers, domestic type | 5 | 2.5 | 20 | 5 | 1 | 6 | | | **40** | | | | |
| | Containers, industrial e.g. oil | | 0.5 | 14 | 2 | | 1.5 | | | **18** | | | | |
| | Drink pouches | 0.5 | 3.5 | 7 | 5.5 | 0.5 | 4.5 | 0.5 | 0.5 | **23** | y | 23 | | |
| | Flav. milk, <1 litre | 1 | 9.5 | 123.5 | 14 | 5 | 8 | 5.5 | 2.5 | **169** | y | 169 | | |
| | Flav. milk, 1 litre+ | | 0.5 | 10 | 0.5 | | | | | **11** | | | | |
| | Flav.wtr/fruit j. dr, sprts dr etc.(non-carb) <1 litre | 1.5 | 4 | 51.5 | 6 | 4 | 3.5 | 3 | 1 | **75** | y | 75 | | |
| | Flav. wtr/fruit j. dr, sprts dr etc.(non-carb) 1 litre+ | 1.5 | 1 | 15.5 | 1 | | 1 | 1.5 | 0.5 | **22** | y | 22 | | |
| | Flav. water/soft drink (carbonated) <1 litre | 6.5 | 18 | 220 | 29.5 | 3.5 | 17.5 | 11 | 6 | **312** | y | 312 | | |
| | Flav. water/soft drink (carbonated) 1 litre+ | 1 | 1.5 | 32.5 | 3.5 | 1.5 | 4 | 1 | | **45** | y | 45 | | |
| | Fruit juice <1 litre | 1.5 | 4 | 27 | 3 | 2.5 | 2.5 | 1 | 2 | **44** | y | 44 | | |
| | Fruit juice, 1 litre+ | 0.5 | 1.5 | 11.5 | 2 | 0.5 | 2 | 0.5 | 0.5 | **19** | | | | |
| | Lollipop sticks | 49 | 87.5 | 50.5 | 13.5 | 100.5 | 77 | 64.5 | 59.5 | **502** | | | y | 502 |
| | Other plastic | 270 | 588.5 | 2214 | 747 | 260.5 | 540.5 | 285.5 | 263 | **5169** | | | | |
| | Packing tape & straps | 14.5 | 19.5 | 199 | 130 | 9.5 | 43.5 | 22.5 | 8.5 | **447** | | | | |
| | Plain water (carbonated or non-carb) <1 litre | 13.5 | 33.5 | 213.5 | 56 | 2.5 | 26 | 22.5 | 11.5 | **379** | y | 379 | | |
| | Plain water (carbonated or non-carb) 1 litre+ | 1.5 | 1 | 45 | 3.5 | 0.5 | 1 | 0.5 | | **53** | y | 53 | | |
| | Plastic bottle tops | 83.5 | 176.5 | 400.5 | 167.5 | 93 | 136 | 92.5 | 77 | **1227** | | | y | 1227 |
| | Sacks - sheeting - other bags | 9 | 7.5 | 164 | 63 | 5 | 11.5 | 15 | 13.5 | **289** | | | | |
| | Snack bags & confectionary wrappers | 107 | 195 | 635 | 189.5 | 211.5 | 301.5 | 183 | 148 | **1971** | | | y | 1971 |
| | Spoons/ cutlery | 20.5 | 52.5 | 96 | 34.5 | 30.5 | 30 | 27.5 | 23.5 | **315** | | | y | 315 |
| | Straws | 68.5 | 162.5 | 411 | 162 | 100 | 158 | 116 | 92 | **1270** | | | y | 1270 |
| | Styrene foam boxes, sheets, etc | 14.5 | 4 | 161.5 | 66 | 5.5 | 22 | 4.5 | 4.5 | **283** | | | | |
| | Take away & cups | 28.5 | 105 | 414.5 | 143 | 33 | 71.5 | 41 | 40 | **877** | | | y | 877 |
| | White milk, all sizes | 3.5 | 2 | 14 | 0.5 | 0.5 | | 0.5 | | **21** | | | | |
| | Wine cask bladders | 7.5 | 3 | 9.5 | 4 | | 2 | 4.5 | 1 | **32** | | | | |
| | **Total** | **744** | **1532** | **5743** | **1920** | **909** | **1539** | **947** | **790** | **14122** | | **1121** | | **6161** |
| | **GRAND TOTAL** | **2182** | **9190** | **18961** | **7139** | **2515** | **5666** | **6365** | **5873** | **57889** | | **3311** | | **9484** |

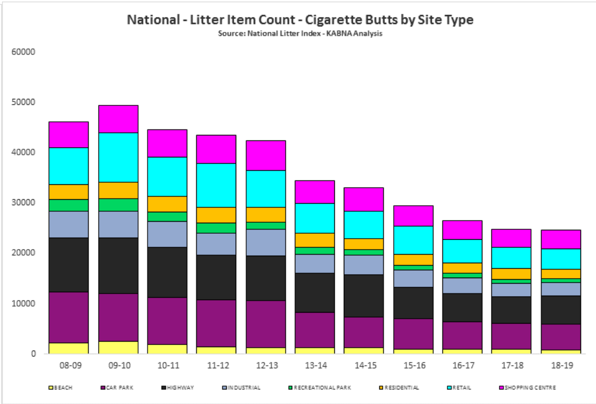
## ***Detailed Litter Volume Tables – National***

| NATIONAL - NOV 2018 & MAY 19 AVERAGE | | Volume - Litres | | | | | | | | | Beverage Containers | | Takeaway Food | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Beach | Car Park | Highway | Industrial | Recreational Park | Residential | Retail | Shopping Centre | Total | Beverage container | Items | Takeaway Food | Items |
| CIGARETTE BUTTS | | 0.085388 | 0.588685 | 0.619620 | 0.290548 | 0.084238 | 0.213498 | 0.452928 | 0.429928 | 2.764830 | | | | |
| GLASS | Alcoholic sodas / spirit-based mixers, all sizes | 1.122900 | 1.871500 | 14.410550 | 2.620100 | 0.187150 | 0.748600 | 0.561450 | 0.187150 | 21.709400 | y | 21.709 | | |
| | Beer, all colours of glass, <750ml | 6.943862 | 11.804566 | 110.870334 | 11.573104 | 3.009007 | 7.406786 | 4.166317 | 1.388772 | 157.162749 | y | 157.163 | | |
| | Beer, all colours of glass, 750ml+ | 0.907292 | 2.268230 | 34.477094 | 9.526566 | 0.453646 | 4.082814 | 2.268230 | | 53.983872 | y | 53.984 | | |
| | Cider/fruit based etc. | 0.686780 | 1.831412 | 3.891751 | 1.144633 | | 1.144633 | 0.457853 | 0.228927 | 9.385988 | y | 9.386 | | |
| | Flav.wtr/fruit j. dr/sprts dr, (non-carb), <1 litre | | | 0.554287 | 0.554287 | | 0.831430 | | | 1.940004 | y | 1.940 | | |
| | Flav.wtr/fruit j. dr/sprts dr, (non-carb), 1 litre+ | | 0.638623 | | 0.638623 | | 0.638623 | | | 1.915869 | y | 1.916 | | |
| | Flav. water/soft drink (carbonated) <1 litre | 0.197920 | 2.177124 | 5.541769 | 2.770885 | 0.197920 | 3.364646 | 1.781283 | 0.989602 | 17.021149 | y | 17.021 | | |
| | Flav. water/soft drink (carbonated) 1 litre+ | | | 3.193115 | 0.638623 | | | 0.638623 | | 4.470361 | y | 4.470 | | |
| | Fruit juice, < 1 litre | | 0.848230 | 0.848230 | 1.060288 | | 0.212058 | 0.212058 | | 3.180863 | y | 3.181 | | |
| | Fruit juice, 1 litre+ | | 0.555244 | 1.110488 | 0.555244 | | 0.555244 | | | 2.776219 | | | | |
| | Other glass | 0.510640 | 2.307700 | 4.222600 | 1.522100 | 0.628480 | 0.923080 | 0.520460 | 0.422260 | 11.057320 | | | | |
| | Plain water (carbonated or non-carb.), <1 litre | | 1.452672 | 4.067483 | 0.581069 | 0.290534 | | 0.581069 | 2.324276 | 9.297104 | y | 9.297 | | |
| | Plain water (carbonated or non-carb.), 1 litre+ | | | 3.707375 | | | | | 0.529625 | 4.237000 | y | 4.237 | | |
| | Wine & spirit, all sizes | 6.239800 | 6.239800 | 16.936600 | 5.348400 | | 3.565600 | 1.782800 | | 40.113000 | | | | |
| | Wine cooler, all sizes | 0.561450 | | 1.684350 | | | 0.187150 | 0.561450 | | 2.994400 | y | 2.994 | | |
| | **Total** | **17.170644** | **31.995101** | **205.516026** | **38.533920** | **4.766738** | **23.660663** | **13.531593** | **6.070612** | **341.245296** | | **287.299** | | |
| ILLEGAL DUMPING | | | 204.000000 | 432.000000 | 276.000000 | 24.000000 | 156.000000 | 24.000000 | | 1116.000000 | | | | |
| METAL | Aerosols - pressure packs | | 2.736960 | 8.553000 | 1.368480 | 0.342120 | 3.421200 | 1.368480 | 1.710600 | 19.500840 | | | | |
| | Alcoholic sodas & spirit-based mixers | 1.725600 | 6.686700 | 74.632200 | 14.236200 | 1.941300 | 4.961100 | 2.804100 | 0.862800 | 107.850000 | y | 107.850 | | |
| | Beer, aluminium, all types, all sizes | 3.019800 | 4.961100 | 60.827400 | 12.294900 | 1.509900 | 4.098300 | 2.157000 | 1.509900 | 90.378300 | y | 90.378 | | |
| | Cider/fruit based etc. | | 0.431400 | 3.451200 | | | | | | 3.882600 | y | 3.883 | | |
| | Flav. water/soft drink, (carbonated), all sizes | 4.468120 | 27.447025 | 262.980797 | 46.596112 | 8.510705 | 27.872560 | 20.212925 | 11.914988 | 410.003233 | y | 410.003 | | |
| | Flav. water/soft drink, (non-carb), all sizes | 0.572400 | 0.763200 | 4.579200 | 1.144800 | | 0.763200 | 0.190800 | 0.572400 | 8.586000 | y | 8.586 | | |
| | Foil take away | 5.317370 | 6.242130 | 34.216120 | 12.715450 | 2.774280 | 9.709980 | 5.317370 | 6.010940 | 82.303640 | | | y | 82.304 |
| | Food cans (including pet food) | 0.927600 | 3.710400 | 15.073500 | 6.957000 | | 3.014700 | 1.159500 | | 30.842700 | | | | |
| | Industrial cans - all types | | 2.285020 | 11.425100 | 9.140080 | | | | | 22.850200 | | | | |
| | Metal bottle tops and can pull rings | 0.296000 | 1.110000 | 1.378000 | 0.550000 | 0.418000 | 0.620000 | 0.762000 | 0.416000 | 5.550000 | | | y | 5.550 |
| | Metal pieces | 0.063600 | 0.535300 | 2.628800 | 1.171300 | 0.190800 | 0.588300 | 0.217300 | 0.143100 | 5.538500 | | | | |
| | Other foil | 0.090480 | 0.287040 | 0.638040 | 0.257400 | 0.161460 | 0.246480 | 0.152880 | 0.182520 | 2.016300 | | | | |
| | **Total** | **16.480970** | **57.196275** | **480.383357** | **106.431722** | **15.848565** | **55.295820** | **34.342355** | **23.323248** | **789.302313** | | **620.700** | | **87.854** |
| MISCELLANEOUS | Clothing & materials | 0.673200 | 1.139850 | 5.431500 | 1.507050 | 0.359550 | 0.711450 | 0.321300 | 0.191250 | 10.335150 | | | | |
| | Condoms | 0.000320 | 0.000320 | 0.000800 | 0.000160 | 0.000160 | 0.000480 | 0.000160 | | 0.002400 | | | | |
| | Construction materials | 0.360000 | 1.620000 | 13.680000 | 8.280000 | 1.800000 | 5.040000 | 3.780000 | | 34.560000 | | | | |
| | Disposable nappies | 2.250000 | 7.312500 | 6.187500 | 2.812500 | 1.125000 | 1.687500 | 1.687500 | | 23.062500 | | | | |
| | Ice cream sticks | 0.030820 | 0.025300 | 0.033580 | 0.010580 | 0.028980 | 0.040020 | 0.044620 | 0.021620 | 0.235520 | | | y | 0.236 |
| | Other miscellaneous | 0.074250 | 0.351000 | 0.904500 | 0.884250 | 0.101250 | 0.405000 | 0.249750 | 0.148500 | 3.118500 | | | | |
| | Rubber pieces (not tyres) | 0.003043 | 0.004853 | 0.031666 | 0.008801 | 0.003372 | 0.004442 | 0.002961 | 0.002468 | 0.061605 | | | | |
| | Syringes | | 0.003390 | 0.003390 | 0.005650 | | 0.001130 | | 0.001130 | 0.014690 | | | | |
| | Tyres & pieces | 0.112500 | 0.225000 | 26.775000 | 1.912500 | 0.900000 | 0.900000 | | 1.575000 | 32.400000 | | | | |
| | **Total** | **3.504133** | **10.682213** | **53.047936** | **15.421491** | **4.318312** | **8.790022** | **6.086291** | **1.939968** | **103.790365** | | | | **0.236** |
| PAPER/PAPERBOARD | Cartons, flavoured milk < 1 litre | 0.336240 | 7.733520 | 43.374960 | 13.785840 | 1.681200 | 7.397280 | 3.362400 | 3.026160 | 80.697600 | y | 80.698 | | |
| | Cartons, flavoured milk 1 litre+ | | 1.012660 | 3.037980 | | | 1.012660 | 1.012660 | | 6.075960 | | | | |
| | Cartons, fruit juice, < 1 litre | | 1.874250 | 7.184625 | 1.249500 | 1.874250 | 3.436125 | 1.249500 | 1.874250 | 18.742500 | y | 18.743 | | |
| | Cartons, fruit juice, 1 litre+ | | 1.035000 | 8.280000 | 1.035000 | | 2.070000 | 1.035000 | 1.035000 | 14.490000 | | | | |
| | Cartons, milk, plain (white) all sizes | | | 10.126600 | 4.050640 | 0.506330 | 2.531650 | 0.506330 | | 17.721550 | | | | |
| | Cigarette packets | 1.307220 | 17.865340 | 51.090515 | 24.837180 | 1.307220 | 14.161550 | 10.457760 | 6.971840 | 127.998625 | | | | |
| | Cups/take away containers | 10.450313 | 60.766128 | 286.742935 | 63.185814 | 15.672425 | 57.001916 | 21.151727 | 20.291138 | 535.262395 | | | y | 535.262 |
| | Coffee cups | 4.900256 | 37.241947 | 141.090954 | 53.657806 | 6.615346 | 30.381589 | 18.527161 | 17.395910 | 309.810968 | | | y | 309.811 |
| | Flav. water/fruit j. drink/sports drink, non-carb, <1 litre | 0.151200 | 0.756000 | 2.419200 | 0.302400 | | 1.058400 | 0.302400 | 0.302400 | 5.292000 | y | 5.292 | | |
| | Flav. water / fruit j. drink/ sports drink, (non-carb), 1 litre+ | | 3.105000 | 4.140000 | | | 1.035000 | | | 8.280000 | y | 8.280 | | |
| | Ice cream wrappers | 0.016800 | 0.021600 | 0.112800 | 0.014400 | 0.009600 | 0.056400 | 0.036000 | 0.013200 | 0.280800 | | | y | 0.281 |
| | Junk mail / free circulars | 0.696000 | 6.264000 | 13.311000 | 6.699000 | 2.175000 | 18.531000 | 3.567000 | 4.785000 | 56.028000 | | | | |
| | Newspapers & magazines | 6.490000 | 10.620000 | 51.920000 | 28.910000 | 3.540000 | 125.080000 | 10.620000 | 2.950000 | 240.130000 | | | | |
| | Other paper | 0.902460 | 3.150160 | 8.137350 | 3.400280 | 1.208350 | 2.815540 | 1.929980 | 1.706900 | 23.251020 | | | | |
| | Packages & boxes | 0.760000 | 4.080000 | 19.400000 | 8.080000 | 0.800000 | 3.200000 | 0.840000 | 1.400000 | 38.560000 | | | | |
| | Paper bags | 0.259210 | 0.529000 | 2.576230 | 0.666540 | 0.253920 | 0.523710 | 0.359720 | 0.402040 | 5.570370 | | | | |
| | Shopper dockets & related shopping paper (eg, lists) | 0.014210 | 0.302470 | 0.418180 | 0.090335 | 0.030450 | 0.172550 | 0.176610 | 0.413105 | 1.617910 | | | | |
| | Tickets, e.g. bus, ATM, vending machine etc. | 0.002640 | 0.047520 | 0.024200 | 0.015400 | 0.004400 | 0.037840 | 0.045760 | 0.047520 | 0.225280 | | | | |
| | **Total** | **26.286549** | **156.404595** | **653.387528** | **209.980135** | **35.678491** | **270.503209** | **75.180008** | **62.614462** | **1490.034978** | | **113.012** | | **845.354** |
| PLASTIC | 6 ring can holders | 0.015000 | 0.008250 | 0.013500 | 0.006000 | 0.006000 | 0.010500 | 0.006000 | 0.004500 | 0.069750 | | | | |
| | Bags - heavier glossy typically branded carry bags | 0.262800 | 0.657000 | 4.818000 | 1.620600 | 0.087600 | 0.613200 | 0.350400 | 0.438000 | 8.847600 | | | | |
| | Bags - supermarket type light weight carry bags | 0.254550 | 0.661830 | 3.360060 | 1.069110 | 0.118790 | 0.831530 | 0.475160 | 0.288490 | 7.059520 | | | | |
| | Bread bag tags | 0.003105 | 0.003450 | 0.004370 | 0.003105 | 0.006785 | 0.006670 | 0.004715 | 0.004140 | 0.036340 | | | | |
| | Containers, domestic type | 41.620000 | 20.810000 | 166.480000 | 41.620000 | 8.324000 | 49.944000 | | | 328.798000 | | | | |
| | Containers, industrial e.g. oil | | 11.229000 | 314.412000 | 44.916000 | | 33.687000 | | | 404.244000 | | | | |
| | Drink pouches | 0.043125 | 0.301875 | 0.603750 | 0.474375 | 0.043125 | 0.388125 | 0.043125 | 0.043125 | 1.940625 | y | 1.941 | | |
| | Flav. milk, <1 litre | 0.532700 | 5.060650 | 65.788450 | 7.457800 | 2.663500 | 4.261600 | 2.929850 | 1.331750 | 90.026300 | y | 90.026 | | |
| | Flav. milk, 1 litre+ | | 1.068345 | 21.366900 | 1.068345 | | | | | 23.503590 | | | | |
| | Flav.wtr/fruit j. dr, sprts dr etc.(non-carb) <1 litre | 1.106430 | 2.950479 | 37.987418 | 4.425719 | 2.950479 | 2.581669 | 2.212859 | 0.737620 | 54.952673 | y | 54.953 | | |
| | Flav. wtr/fruit j. dr, sprts dr etc.(non-carb) 1 litre+ | 1.801654 | 1.201103 | 18.617094 | 1.201103 | | 1.201103 | 1.801654 | 0.600551 | 26.424263 | y | 26.424 | | |
| | Flav. water/soft drink (carbonated) <1 litre | 4.043715 | 11.197980 | 136.864200 | 18.352245 | 2.177385 | 10.886925 | 6.843210 | 3.732660 | 194.098320 | y | 194.098 | | |
| | Flav. water/soft drink (carbonated) 1 litre+ | 1.654000 | 2.481000 | 53.755000 | 5.789000 | 2.481000 | 6.616000 | 1.654000 | | 74.430000 | y | 74.430 | | |
| | Fruit juice <1 litre | 0.600070 | 1.600186 | 10.801255 | 1.200139 | 1.000116 | 1.000116 | 0.400046 | 0.800093 | 17.402022 | y | 17.402 | | |
| | Fruit juice, 1 litre+ | 1.068345 | 3.205035 | 24.571935 | 4.273380 | 1.068345 | 4.273380 | 1.068345 | 1.068345 | 40.597110 | | | | |
| | Lollipop sticks | 0.025970 | 0.046375 | 0.026765 | 0.007155 | 0.053265 | 0.040810 | 0.034185 | 0.031535 | 0.266060 | | | y | 0.266 |
| | Other plastic | 0.337500 | 0.735625 | 2.767500 | 0.933750 | 0.325625 | 0.675625 | 0.356875 | 0.328750 | 6.461250 | | | | |
| | Packing tape & straps | 0.003915 | 0.005265 | 0.053730 | 0.035100 | 0.002565 | 0.011745 | 0.006075 | 0.002295 | 0.120690 | | | | |
| | Plain water (carbonated or non-carb) <1 litre | 10.636650 | 26.394650 | 168.216650 | 44.122400 | 1.969750 | 20.485400 | 17.727750 | 9.060850 | 298.614100 | y | 298.614 | | |
| | Plain water (carbonated or non-carb) 1 litre+ | 2.312355 | 1.541570 | 69.370650 | 5.395495 | 0.770785 | 1.541570 | 0.770785 | | 81.703210 | y | 81.703 | | |
| | Plastic bottle tops | 0.668418 | 1.412883 | 3.206003 | 1.340838 | 0.744465 | 1.088680 | 0.740463 | 0.616385 | 9.818133 | | | y | 9.818 |
| | Sacks - sheeting - other bags | 0.002835 | 0.002363 | 0.051660 | 0.019845 | 0.001575 | 0.003623 | 0.004725 | 0.004253 | 0.090878 | | | | |
| | Snack bags & confectionary wrappers | 0.837810 | 1.526850 | 4.972050 | 1.483785 | 1.656045 | 2.360745 | 1.432890 | 1.158840 | 15.429015 | | | y | 15.429 |
| | Spoons/ cutlery | 0.196800 | 0.504000 | 0.921600 | 0.331200 | 0.292800 | 0.288000 | 0.264000 | 0.225600 | 3.024000 | | | y | 3.024 |
| | Straws | 0.282563 | 0.670313 | 1.695375 | 0.668250 | 0.412500 | 0.651750 | 0.478500 | 0.379500 | 5.238750 | | | y | 5.239 |
| | Styrene foam boxes, sheets, etc | 0.543750 | 0.150000 | 6.056250 | 2.475000 | 0.206250 | 0.825000 | 0.168750 | 0.168750 | 10.593750 | | | | |
| | Take away & cups | 5.900070 | 21.737100 | 85.809790 | 29.603860 | 6.831660 | 14.801930 | 8.487820 | 8.280800 | 181.453030 | | | y | 181.453 |
| | White milk, all sizes | 7.478415 | 4.273380 | 29.913660 | 1.068345 | 1.068345 | | 1.068345 | | 44.870490 | | | | |
| | Wine cask bladders | 3.450000 | 1.380000 | 4.370000 | 1.840000 | | 0.920000 | 2.070000 | 0.460000 | 14.490000 | | | | |
| | **Total** | **85.682544** | **122.816555** | **1236.875615** | **222.801943** | **35.262755** | **159.996696** | **51.400528** | **29.766832** | **1944.603468** | | **839.592** | | **215.229** |
| | **GRAND TOTAL** | **149.210228** | **583.683424** | **3061.830083** | **869.459758** | **119.959099** | **674.459908** | **204.993702** | **124.145048** | **5787.741250** | | **1860.603** | | **1148.672** |

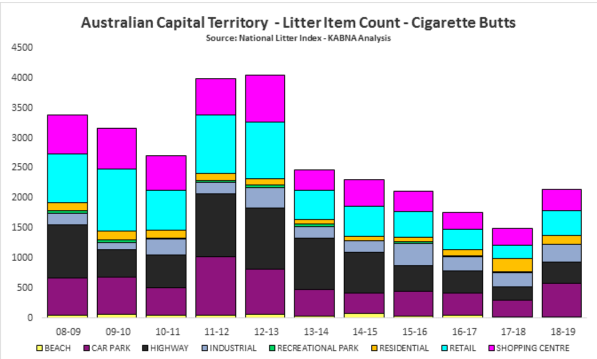
## *Cigarette Litter*

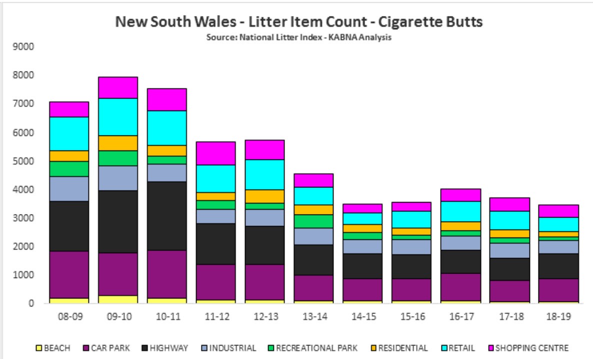
In terms of items counted, cigarette related litter continues to represent the dominant source of litter found across Australia.

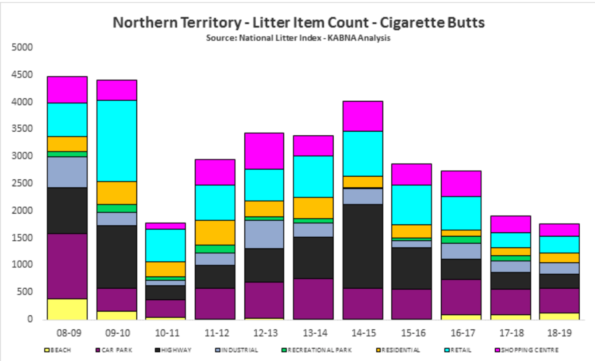


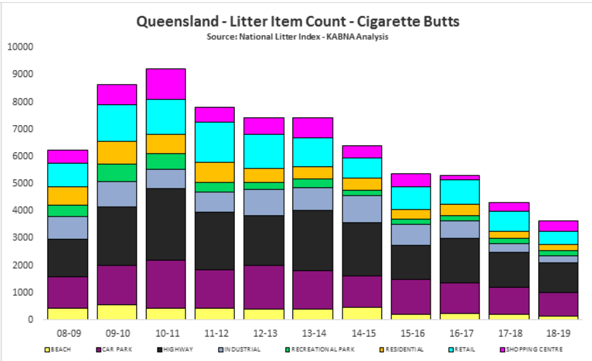



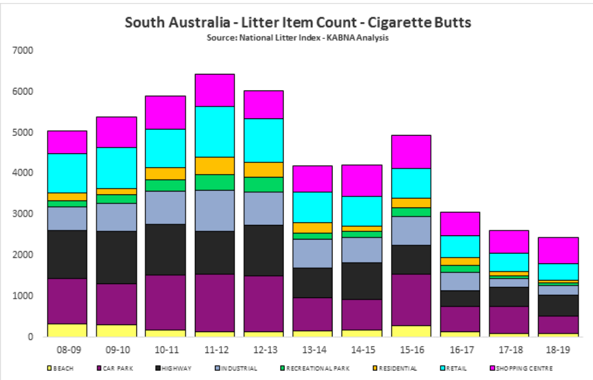

Each state and territory, other than the ACT and Tasmania, experienced a reduction in cigarette litter in the 2018/19 litter monitor although the magnitudes of the reductions varied.

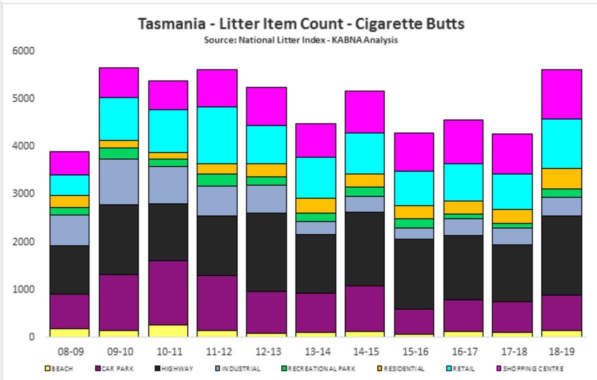


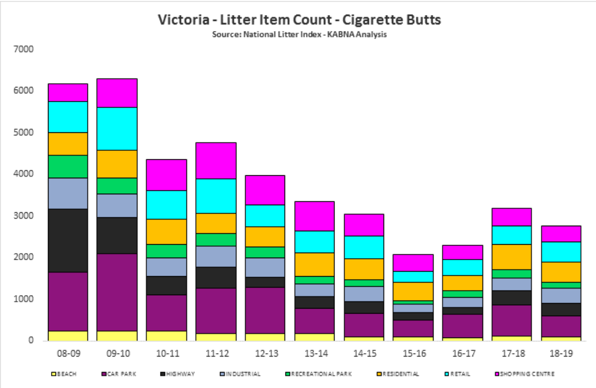



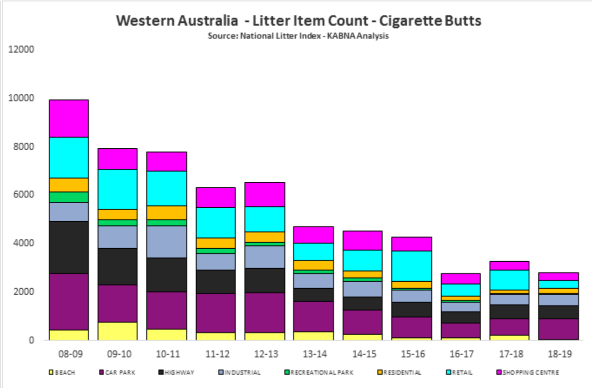





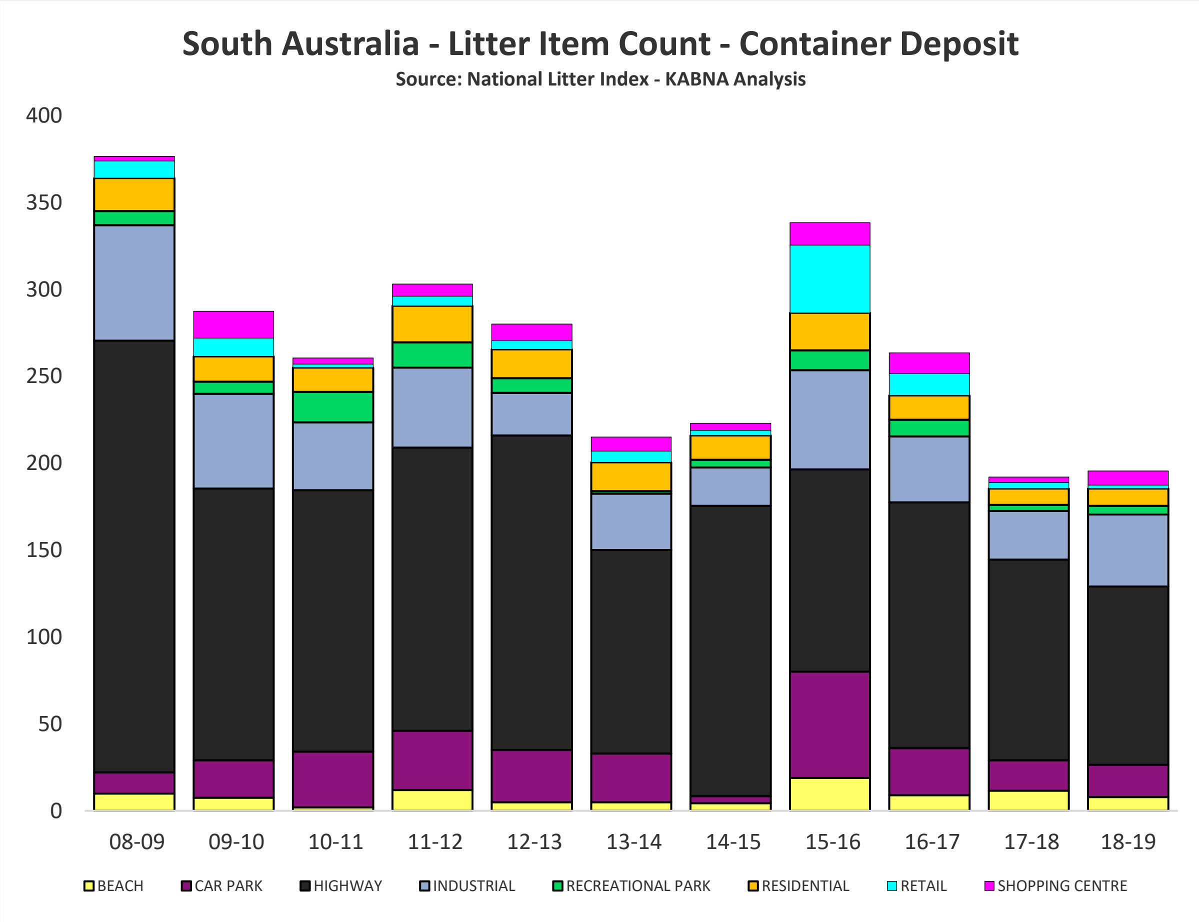

In the process of considering the longer-term trends in litter levels the question arose as to what might explain such a change.

Reductions in cigarette litter in the 2013/14 monitor coincided with legislation requiring all tobacco products to be sold in plain paper packaging. This new legislation took effect on December 1, 2012 along with significant yearly increases in excise and other changes that commenced from December 2013. Furthermore, there was a 25% increase in excise implemented in April 2010 which coincides with the change seen in the 2010/11 survey.

Therefore, there would appear to be a strong correlation with the aforementioned policy changes and the reductions in observed cigarette litter. Clearly policy changes such as these are focussed on tobacco consumption although the correlation between consumption and litter (less consumption = less litter) means an improved litter outcome is a potential side benefit. Encouragingly, the NLI KAB indicates this is the case.

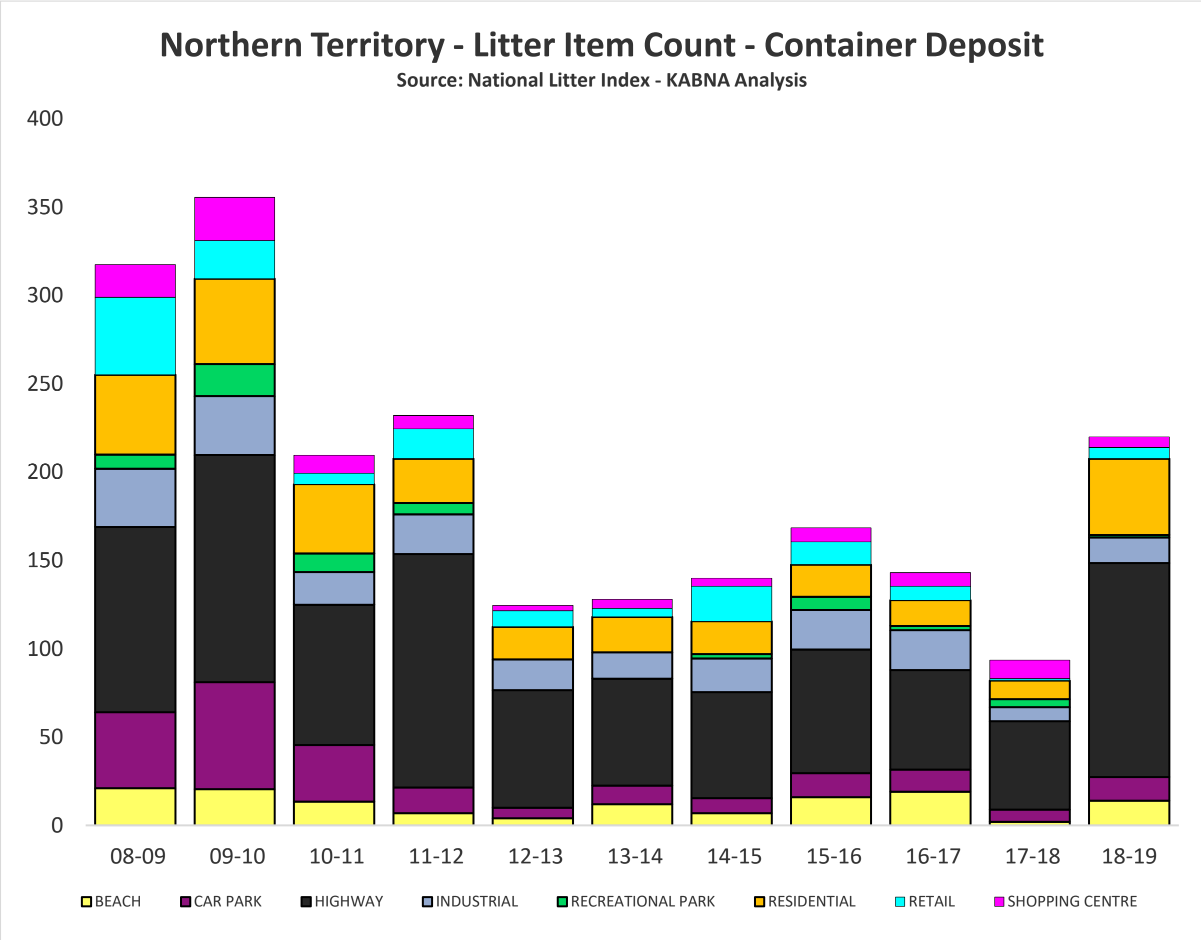
## *CDL Beverage Container Litter*

South Australia introduced a beverage container refund scheme in 1977, well before the development of the KAB NLI. However, there was a change to the scheme in September 2008 when the refund increased from 5 cents per container to 10 cents. As demonstrated in the following chart, this change did make a meaningful impact on beverage container litter in SA with counted litter falling by approximately almost one quarter (24%). Further reductions were recorded in the 2013/14 and 2014/15 monitors, while the 2015/16 monitor demonstrated an increase in beverage container litter there were reductions in CDL items in 2016/17 and 2017/18. However, there was a marginal 1.2% increase in CDL items in 2018/19.



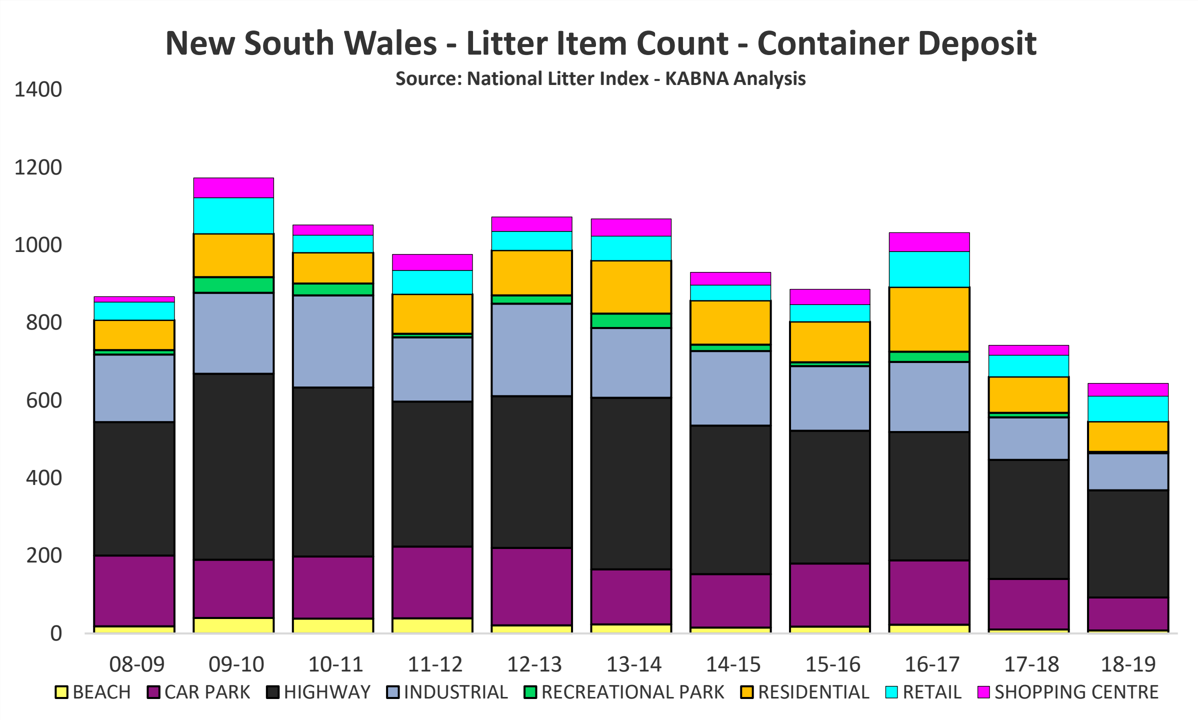

| SA CDL Items per 1,000m² | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEACH | 0.7 | 0.5 | 0.1 | 0.8 | 0.3 | 0.3 | 0.3 | 1.3 | 0.6 | 0.8 | 0.5 |
| CAR PARK | 0.4 | 0.7 | 1.0 | 1.1 | 0.9 | 0.9 | 0.1 | 1.9 | 0.9 | 0.6 | 0.6 |
| HIGHWAY | 2.4 | 1.5 | 1.4 | 1.6 | 1.7 | 1.1 | 1.6 | 1.1 | 1.3 | 1.1 | 1.0 |
| INDUSTRIAL | 2.9 | 2.4 | 1.7 | 2.0 | 1.1 | 1.4 | 1.0 | 2.5 | 1.7 | 1.2 | 1.8 |
| RECREATIONAL PARK | 0.4 | 0.3 | 0.9 | 0.7 | 0.4 | 0.1 | 0.2 | 0.6 | 0.5 | 0.2 | 0.2 |
| RESIDENTIAL | 0.6 | 0.5 | 0.4 | 0.7 | 0.5 | 0.5 | 0.4 | 0.7 | 0.4 | 0.3 | 0.3 |
| RETAIL | 1.0 | 1.1 | 0.2 | 0.6 | 0.5 | 0.7 | 0.3 | 3.9 | 1.3 | 0.4 | 0.2 |
| SHOPPING CENTRE | 0.2 | 1.5 | 0.3 | 0.7 | 0.9 | 0.8 | 0.4 | 1.2 | 1.1 | 0.3 | 0.8 |
| TOTAL | 1.5 | 1.2 | 1.1 | 1.2 | 1.1 | 0.9 | 0.9 | 1.4 | 1.1 | 0.8 | 0.8 |

Since the introduction of a container deposit scheme in the Northern Territory in January 2012 we have been able to analyse the beverage container litter data from NT which demonstrates a fall of almost half (46%) in CDL litter in the year after it was introduced and falls in subsequent litter monitors from 2012/13 to 2017/18, however, there was a substantial increase in CDL litter in NT in 2018/19 compared to the previous year.



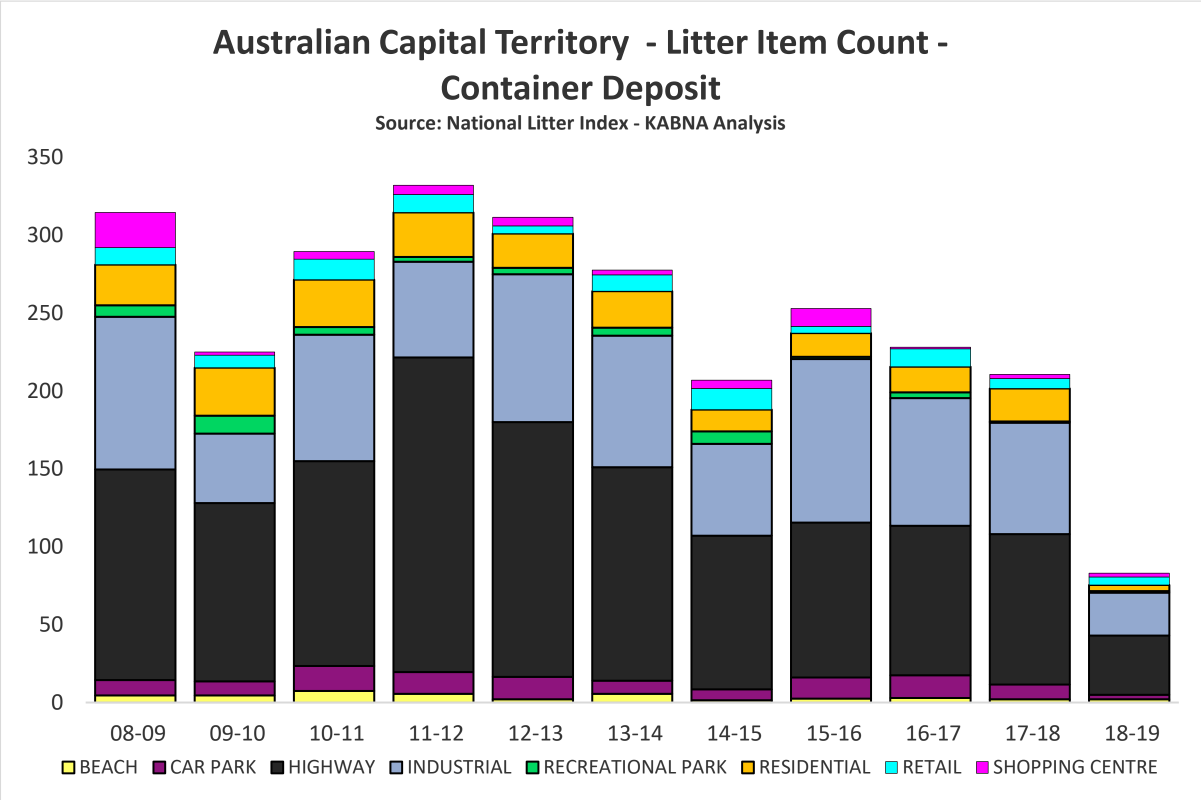

| NT CDL Items per 1,000m$^2$ | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEACH | 5.3 | 5.1 | 3.4 | 1.8 | 1.0 | 3.0 | 1.8 | 4.0 | 4.8 | 0.5 | 3.5 |
| CAR PARK | 2.9 | 4.1 | 2.2 | 1.0 | 0.4 | 0.7 | 0.6 | 0.9 | 0.9 | 0.5 | 0.9 |
| HIGHWAY | 2.4 | 2.9 | 1.8 | 3.0 | 1.5 | 1.4 | 1.4 | 1.6 | 1.3 | 1.1 | 2.8 |
| INDUSTRIAL | 3.1 | 3.1 | 1.7 | 2.1 | 1.6 | 1.4 | 1.8 | 2.1 | 2.1 | 0.7 | 1.3 |
| RECREATIONAL PARK | 0.8 | 1.7 | 1.0 | 0.6 | 0.0 | 0.0 | 0.2 | 0.7 | 0.2 | 0.4 | 0.1 |
| RESIDENTIAL | 2.5 | 2.7 | 2.1 | 1.4 | 1.0 | 1.1 | 1.0 | 1.0 | 0.8 | 0.6 | 2.4 |
| RETAIL | 7.6 | 3.7 | 1.1 | 2.9 | 1.6 | 0.9 | 3.5 | 2.2 | 1.4 | 0.2 | 1.1 |
| SHOPPING CENTRE | 2.2 | 2.9 | 1.2 | 0.9 | 0.4 | 0.6 | 0.5 | 0.9 | 0.9 | 1.2 | 0.7 |
| TOTAL | 2.7 | 3.1 | 1.8 | 2.0 | 1.1 | 1.1 | 1.2 | 1.5 | 1.2 | 0.8 | 1.9 |

NSW introduced a container deposit scheme in December 2017. An analysis of the CDL beverage containers counted in the KAB NLI reveal there was a fall of 28% in CDL litter recorded in the 2017/18 KAB NLI compared to the 2016/17 KAB NLI litter monitor, followed by a 13% decrease in 2018/19 compared to 2017/18.



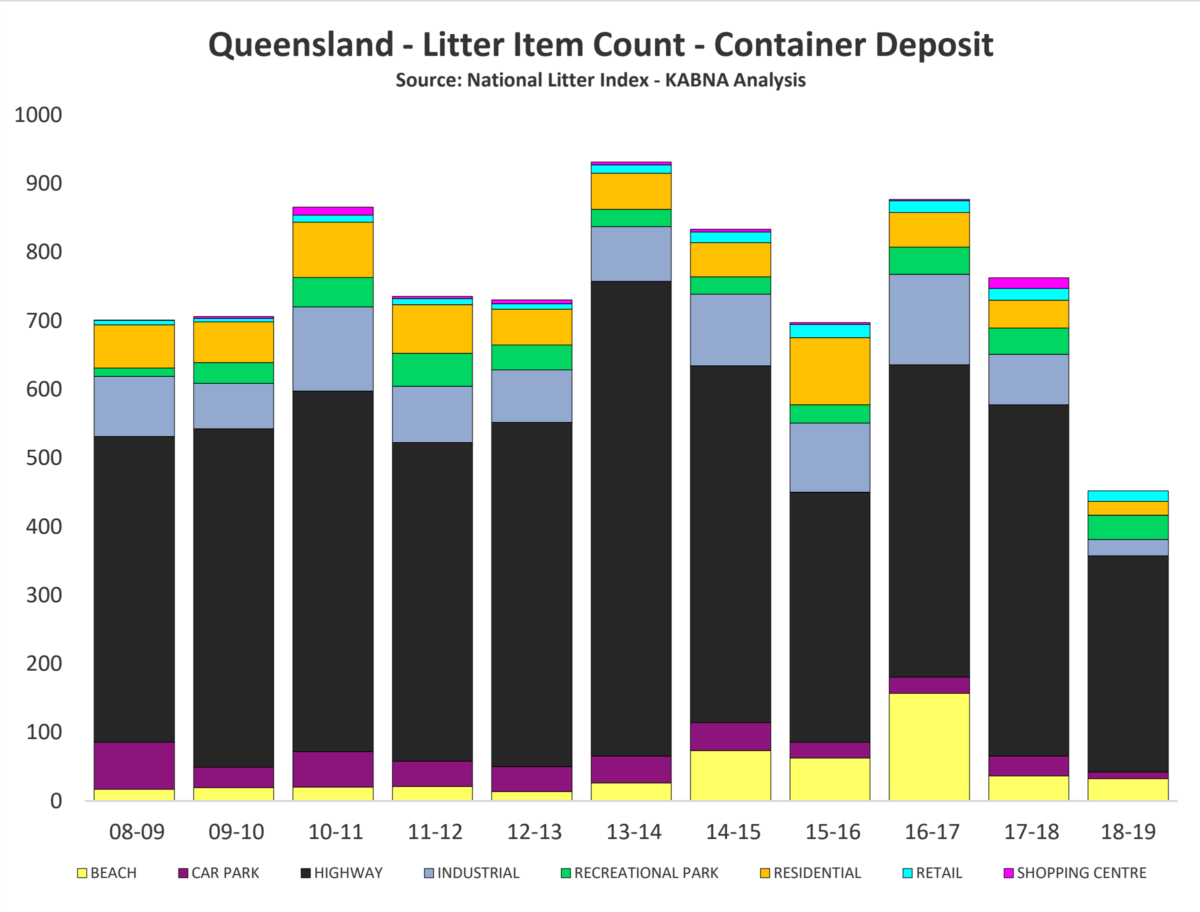

| NSW CDL Items per 1,000m² | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEACH | 2.0 | 4.4 | 4.3 | 4.3 | 2.3 | 2.6 | 1.7 | 1.9 | 2.5 | 1.2 | 0.8 |
| CAR PARK | 5.2 | 4.3 | 4.5 | 5.3 | 5.7 | 4.0 | 3.9 | 4.6 | 4.7 | 3.7 | 2.4 |
| HIGHWAY | 5.8 | 8.0 | 7.3 | 6.3 | 6.6 | 7.4 | 6.4 | 5.7 | 5.6 | 5.1 | 4.6 |
| INDUSTRIAL | 10.0 | 12.1 | 13.8 | 9.6 | 13.7 | 10.4 | 11.1 | 9.6 | 10.4 | 6.4 | 5.5 |
| RECREATIONAL PARK | 0.4 | 1.5 | 1.1 | 0.4 | 0.8 | 1.4 | 0.6 | 0.4 | 1.0 | 0.4 | 0.1 |
| RESIDENTIAL | 2.0 | 2.9 | 2.0 | 2.6 | 3.0 | 3.5 | 2.9 | 2.7 | 4.2 | 2.4 | 2.0 |
| RETAIL | 2.6 | 5.3 | 2.5 | 3.5 | 2.8 | 3.6 | 2.3 | 2.5 | 5.3 | 3.2 | 3.7 |
| SHOPPING CENTRE | 0.8 | 3.0 | 1.6 | 2.4 | 2.2 | 2.6 | 1.9 | 2.3 | 2.8 | 1.5 | 1.9 |
| TOTAL | 3.9 | 5.3 | 4.8 | 4.4 | 4.8 | 4.8 | 4.2 | 4.0 | 4.7 | 3.4 | 2.9 |
| ILLEGAL | | | | | | | | | 0.72 | | |
| TOTAL | 3.9 | 5.3 | 4.8 | 4.4 | 4.8 | 4.8 | 4.2 | 4.0 | 5.4 | 3.4 | 2.9 |

ACT also introduced a container deposit scheme in June 2018. An analysis of the CDL beverage containers counted in the KAB NLI reveal there was a fall of 61% in CDL litter recorded in the 2018/19 KAB NLI compared to the 2017/18 KAB NLI litter monitor.




| ACT CDL Items per 1,000m² | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEACH | 1.1 | 1.1 | 1.9 | 1.4 | 0.5 | 1.4 | 0.4 | 0.6 | 0.8 | 0.5 | 0.5 |
| CAR PARK | 0.6 | 0.5 | 1.0 | 0.8 | 0.9 | 0.5 | 0.4 | 0.8 | 0.9 | 0.6 | 0.2 |
| HIGHWAY | 3.4 | 2.9 | 3.3 | 5.1 | 4.1 | 3.5 | 2.5 | 2.5 | 2.4 | 2.4 | 1.0 |
| INDUSTRIAL | 9.8 | 4.4 | 8.1 | 6.1 | 9.5 | 8.4 | 5.9 | 10.4 | 8.2 | 7.1 | 2.7 |
| RECREATIONAL PARK | 0.5 | 0.8 | 0.4 | 0.2 | 0.3 | 0.4 | 0.6 | 0.1 | 0.3 | 0.1 | 0.1 |
| RESIDENTIAL | 1.6 | 1.9 | 1.9 | 1.8 | 1.4 | 1.5 | 0.9 | 0.9 | 1.0 | 1.3 | 0.2 |
| RETAIL | 1.6 | 1.1 | 1.9 | 1.6 | 0.7 | 1.5 | 1.9 | 0.6 | 1.6 | 0.9 | 0.7 |
| SHOPPING CENTRE | 2.6 | 0.2 | 0.6 | 0.7 | 0.6 | 0.3 | 0.6 | 1.3 | 0.1 | 0.3 | 0.3 |
| TOTAL | 2.7 | 1.9 | 2.5 | 2.9 | 2.7 | 2.4 | 1.8 | 2.2 | 2.0 | 1.8 | 0.7 |

Queensland also introduced a container deposit scheme in November 2018. An analysis of the CDL beverage containers counted in the KAB NLI reveal there was a fall of 41% in the number of CDL litter recorded in the 2018-19 KAB NLI compared to the 2017-18 KAB NLI litter monitor.




| QLD CDL Items per 1,000m² | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEACH | 1.3 | 1.4 | 1.5 | 1.6 | 1.0 | 2.0 | 5.5 | 4.7 | 11.7 | 2.7 | 2.4 |
| CAR PARK | 2.0 | 0.9 | 1.5 | 1.1 | 1.1 | 1.1 | 1.2 | 0.7 | 0.7 | 0.8 | 0.3 |
| HIGHWAY | 5.3 | 5.9 | 6.3 | 5.5 | 6.0 | 8.2 | 6.2 | 4.3 | 5.4 | 6.1 | 3.7 |
| INDUSTRIAL | 4.1 | 3.1 | 5.7 | 3.8 | 3.6 | 3.7 | 4.9 | 4.7 | 6.1 | 3.4 | 1.1 |
| RECREATIONAL PARK | 0.5 | 1.4 | 1.9 | 2.2 | 1.7 | 1.1 | 1.1 | 1.2 | 1.8 | 1.7 | 1.6 |
| RESIDENTIAL | 2.1 | 2.0 | 2.7 | 2.4 | 1.7 | 1.7 | 1.7 | 3.2 | 1.7 | 1.3 | 0.7 |
| RETAIL | 0.6 | 0.4 | 0.9 | 0.8 | 0.7 | 1.1 | 1.3 | 1.7 | 1.5 | 1.5 | 1.3 |
| SHOPPING CENTRE | 0.1 | 0.4 | 1.7 | 0.4 | 0.8 | 0.6 | 0.6 | 0.4 | 0.3 | 2.1 | 0.0 |
| TOTAL | 3.1 | 3.2 | 3.9 | 3.3 | 3.3 | 4.2 | 3.7 | 3.1 | 3.9 | 3.4 | 2.0 |

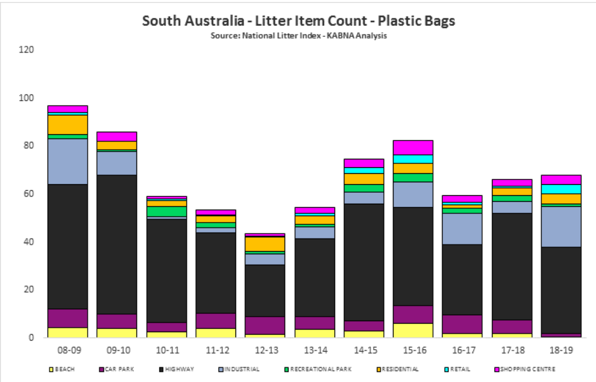
## *The Impact of Plastic Bag Bans*

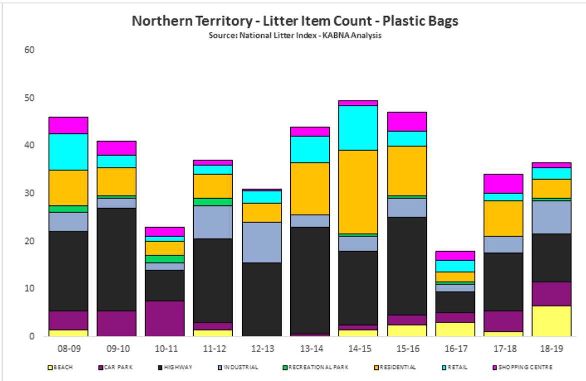
Over recent years there has been an increasing focus on the environmental impacts of plastic bags which has led to some jurisdictions implementing restrictions or bans on their use.

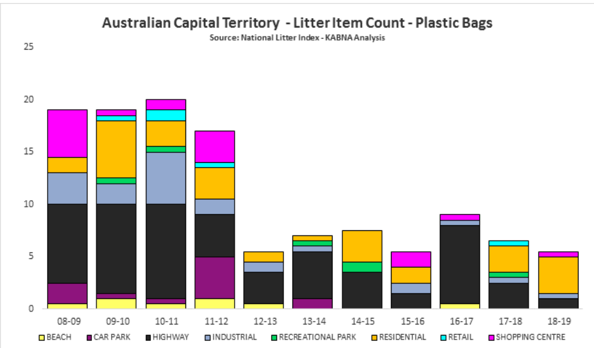
In May 2009, South Australia prevented all retailers from providing single-use lightweight polyethylene bags. The ban excluded lightweight barrier bags and the heavyweight bags typically used in department stores (but now increasingly sold in supermarkets). The Northern Territory implemented an identical ban on September 1, 2011 followed by ACT in November 2011, Tasmania in November 2013, Queensland in July 2018 and WA in July 2018. Victoria has announced a ban on light weight shopping bags from the beginning of November 2019.

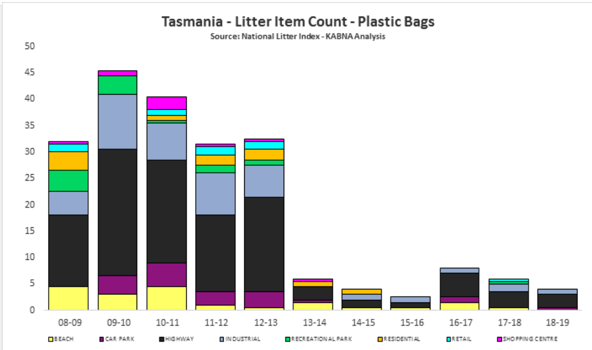
It is evident from the following charts that the KAB NLI does "detect" the change in policy settings, particularly evident in Tasmania and the ACT where lightweight plastic bag litter fell significantly and almost immediately after the bans came into effect. Since the ban the levels of bags in the litter stream has remained low. While bans in Queensland and WA are relatively new there has also been an initial drop in plastic shopping bags in the litter stream over the last 12 months in both jurisdictions.

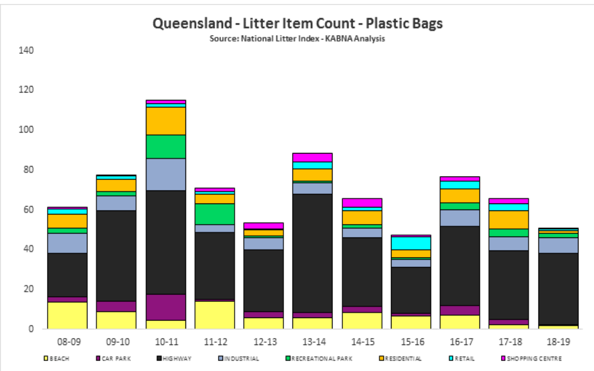
The following charts demonstrate overall lower levels of litter counts of lightweight plastic bags across the six jurisdictions that currently have bans in place.

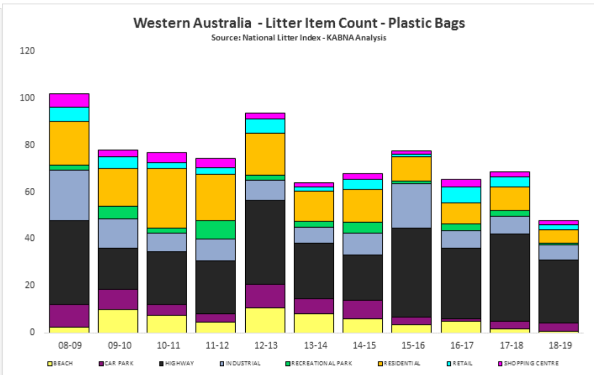


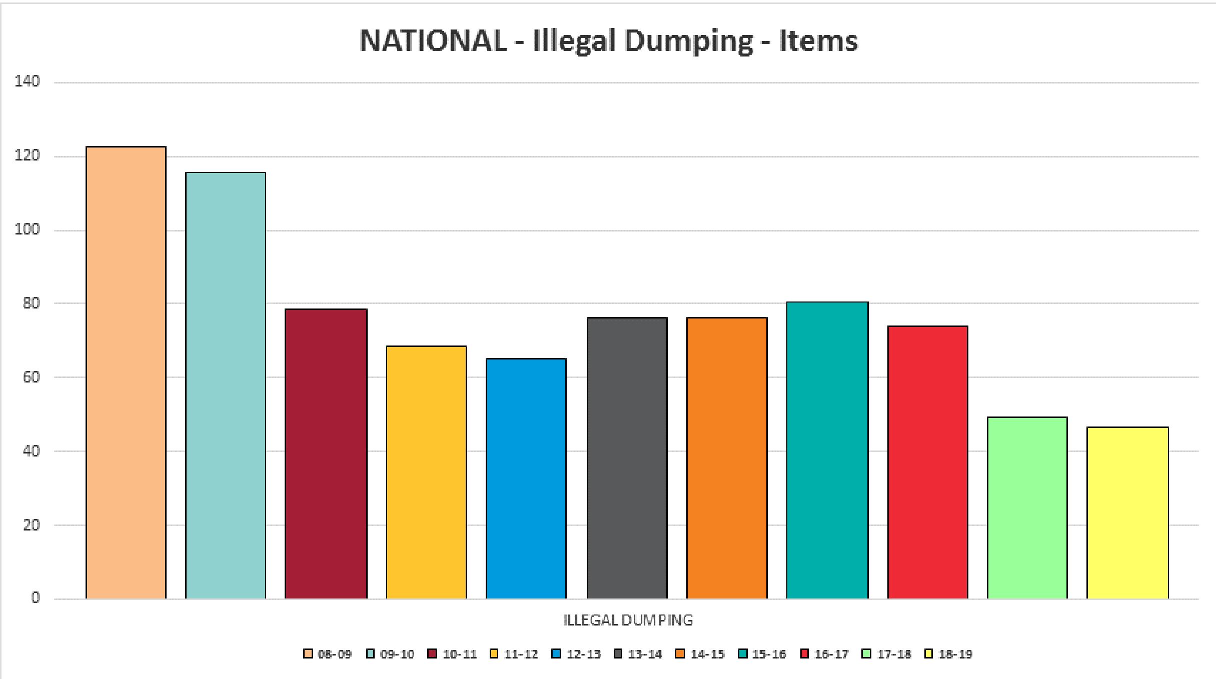



## *Illegal Dumping*

The National Litter Index defines illegal dumping as the unlawful deposit onto land of larger than litter waste. In other words, waste materials dumped, tipped or otherwise deposited onto private or public land where no license or approval exists to accept such waste. Illegal dumping varies from small bags of rubbish in an urban environment to large scale dumping of materials in isolated areas, such as bushland.

Prior to 2006/07, illegally dumped items were incorporated within the miscellaneous material category. However, the large volumes of these items necessitated the separation of such items into a specific material category. Examples of illegal dumping include household furniture and items including chairs, stools, desks, fish tanks, mattresses, heaters, televisions, VCRs, heaters, printers, carpet, computer monitors, doors, cupboards and BBQs. Other illegally dumped items include suitcases, scooters, pallets, milk crates, baby car seats, abandoned car parts and batteries, abandoned shopping trolleys and bags of rubbish/ clothes.

Nationwide, the 2018/19 survey found 47 instances of illegal dumping across its surveyed sites, down from 50 instances in 2017/18 representing a fall of 6% from the previous monitor, and also down from 74 instances in 2016/17 representing an overall fall of 37% over the last 2 years.




The KAB NLI found the most instances of illegal dumping at major road/highways (18 items, unchanged from 18 items in 2017/18), followed by industrial precincts (12 items, down from 14 items in 2017/18), car parks (9 items, unchanged from 9 items in 2017/18) and residential streets (7 items, up from 5 items in 2017/18). These four sites types represent almost all the instances of observed illegal dumping, with other site types observing much smaller counts of illegal dumping items.