



# KAB LITTER INDEX – WA 2019-2020

AUGUST 2020 | REF 11486

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# METHODOLOGY

This data collection for 2019-2020 was conducted by McGregor Tan in 2 waves:

Wave 1: November 2019, Wave 2: May 2020 .



The purpose of the research is to provide insight regarding the presence of litter items at sites within broadly comparable regions.

It is expected that the information derived from this research will be used by governments and community organisations to develop policies/ programs that will reduce litter and create increased pride in communities.



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 and major cities). Generalization of findings to regional locations must therefore be made with caution.

The total area surveyed across all NLI sites in NSW was 235,966m<sup>2</sup>. This area spanned a total of 151 sites.



All sites incorporated within the survey were categorised according to 8 different site types : residential, beach, industrial, car park, shopping centre, retail strip / shop, recreational park, highway

Uniform guidelines were conformed to during site selection



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We have achieved this through the vision of our researchers which is underpinned by a strong company ethos respecting tradition while driving innovation and new technologies.

# SITES & CATEGORIES REPRESENTATION

## Site type representation

The following table outlines the number of sites within each of the 8 distinct site types that were sampled within NSW:

Site type	No. of sites
Beach	16
Car Park	23
Highway	27
Industrial	17
Recreational Park	13
Residential	26
Retail	15
Shopping Centre	14
<b>Total</b>	<b>151</b>

The NLI is a data rich survey and as a result is complex to interpret. To simplify we have consolidated various litter items into broader categories as represented in the 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 CDS schemes.

## Category Consolidation

Consolidated Category	Historical Classification
<b>Butts &amp; Packaging</b>	Cigarette Butts Paper/Paperboard - Cigarette packets
<b>Beverage Containers</b>	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. 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+
<b>Take Away</b>	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
<b>Other Glass</b>	Glass - Other glass
<b>Other Paper</b>	Paper/Paperboard - Other paper
<b>Other Plastic</b>	Plastic - Other plastic
<b>Plastic Bags</b>	Plastic - Bags - heavier glossy typically branded carry bags Plastic - Bags - supermarket type light weight carry bags
<b>General Other</b>	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 - Flav. water/soft drink (carbonated) 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
<b>Illegal Dumping</b>	Illegal Dumping



# EXECUTIVE SUMMARY

# KEY INSIGHTS

## LITTER OVERVIEW

- WA recorded a **1.4% decrease in litter items** in 2019/20 compared to 2018/19, the litter count was also lower than all other previous counts.
- Cigarette related litter (32%) continued to be the key contributor to litter items followed by other general items (15%) and takeaway food packaging (14%).
- A **15.2% reduction in CDL beverage containers** was the main contributor to the decrease in litter, while moderate decreases were associated with takeaway packaging, cigarette related litter, other paper and plastic shopping bags.
- In terms of **volume, litter decreased by 9.4%**.
- **CDL beverage containers (41%)** was the key contributor to volume of litter followed by other general litter (24%) and illegal dumping (20%).
- Highways (42%), car parks (15%) and industrial sites (15%) were the largest contributors of litter items, while in terms of volume highways alone contributed two thirds (68%) of the litter volume followed by residential sites (17%).
- There were **decreases in litter at highways, car park, retail strips, shopping centres and recreational parks.**
- **Industrial sites recorded the highest number of litter items per 1,000m<sup>2</sup> and highways the highest litter volume per 1,000m<sup>2</sup>**

## KEY CATEGORIES BY SITE TYPES

- The overall number of **cigarette butts & packaging** litter items **decreased by 0.8%**.
- A fall in butts & packaging at car parks, retail strips, shopping centres, residential sites and recreational parks was offset by increases at highways, industrial sites and beaches.
- Industrial sites (38) also had the highest butts & packaging litter items per 1,000m<sup>2</sup> followed by retail sites (23) and car parks (22).
- **Takeaway packaging** litter items **decreased by 2.7%**, however, there was an increase in these litter items at highways, beaches and shopping centres.
- Plastic packaging items are the highest contributor to takeaway packaging litter and decreased by 3%.
- **CDL beverage containers** contributed 12% of litter items and **decreased by 15.2%**. In terms of volume CDL items contributed the highest volume (41%) by category, CDL volume decreased by 16.3%.
- The overall decrease in litter items was driven by the key contributing sites highways as well as industrial sites which also recorded the highest litter per 1,000m<sup>2</sup>.
- **Other general items** contributed 15% of litter and remained at a similar level as last year, while in terms of volume contributed 24% and decreased by 6.7% this year.

## OTHER CATEGORIES

- **Plastic shopping bags** contributed to 1% of litter and **decreased by 7.3%** driven by falls at highways, however, these litter items increased at several other site types.
- Coffee cups contributed 1% of litter items and decreased due to a drop in items at residential sites, car parks, retail precincts and beaches, however, there was an increase in coffee cups at highway sites which contribute 78% of coffee cup litter.
- Single use plastics contributed 7% of the overall litter and decreased by 8.2%, however, shopping centres and beaches which account for 11% of single use plastics recorded a sharp increase.
- Snack bags were the biggest contributor to single use plastic followed by straws and takeaway & cups, all recorded a decline.
- **Illegal dumping** recorded only 12 items this year, mostly from residential. Both volume as well as the litter items remained static when compared to last year.
- **Branded litter** accounts for **17% of the total litter** with **Coca Cola and McDonalds** contributing the most.
- Majority of the sites (83%) are without bins and they account for 86% of litter. **If all the sites were equipped with bins** then the **total litter items would potentially 16% less** than the current level.
- Takeaway packaging litter increased in May 2020 at beaches and highways possibly as more people opted for take away options due to COVID-19.

## PRIORITY ACTIONS

Priority order for addressing litter issues for key categories:

Category	Priority 1	Priority 2	Priority 3
Butts & packaging	Industrial	Highway	Beach
Takeaway packaging	Highway	Beach	Shopping centre
CDL beverage containers	Residential		
Plastic bags	Residential	Shopping centre	Beach
General others	Industrial	Residential	Shopping centre



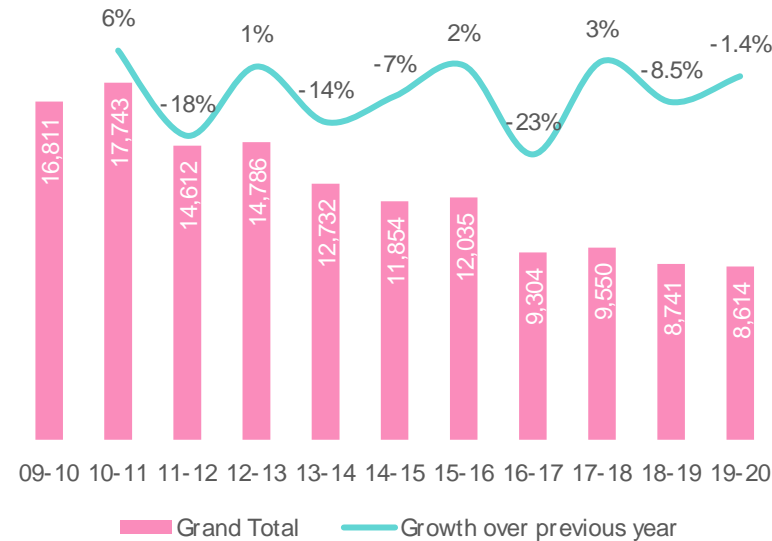
# OVERALL LITTER INDEX



## OVERVIEW OF LITTER INDEX IN WA

There was an overall 1.4% decrease in litter items counted in WA compared to the previous year. Butts and packaging continue to be the key contributor to the number of litter items followed takeaway packaging, CDL containers, other paper, plastic or general litter, which have similar contributions.

In terms of litter volumes there was a 9.4% decrease compared to the previous year which was attributed to a fall in volumes of litter for all categories except other plastic, other glass litter and illegal dumping. CDL containers is the key contributor to litter volumes followed by general other items and illegal dumping.



# 8,614

(-1.4% decrease)  
litter items in 2019-20

# 37

(-0.5 items)  
items per 1,000m<sup>2</sup>

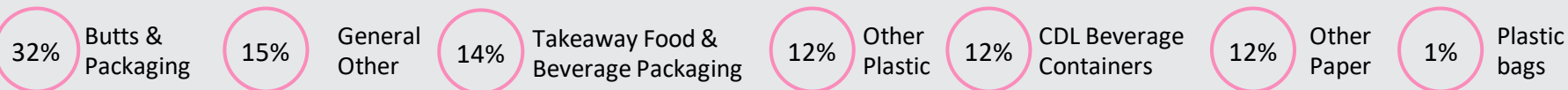
# 1,386 litre

(-9.4% decrease)  
Litter volume in 2019-20

# 5.9 litre

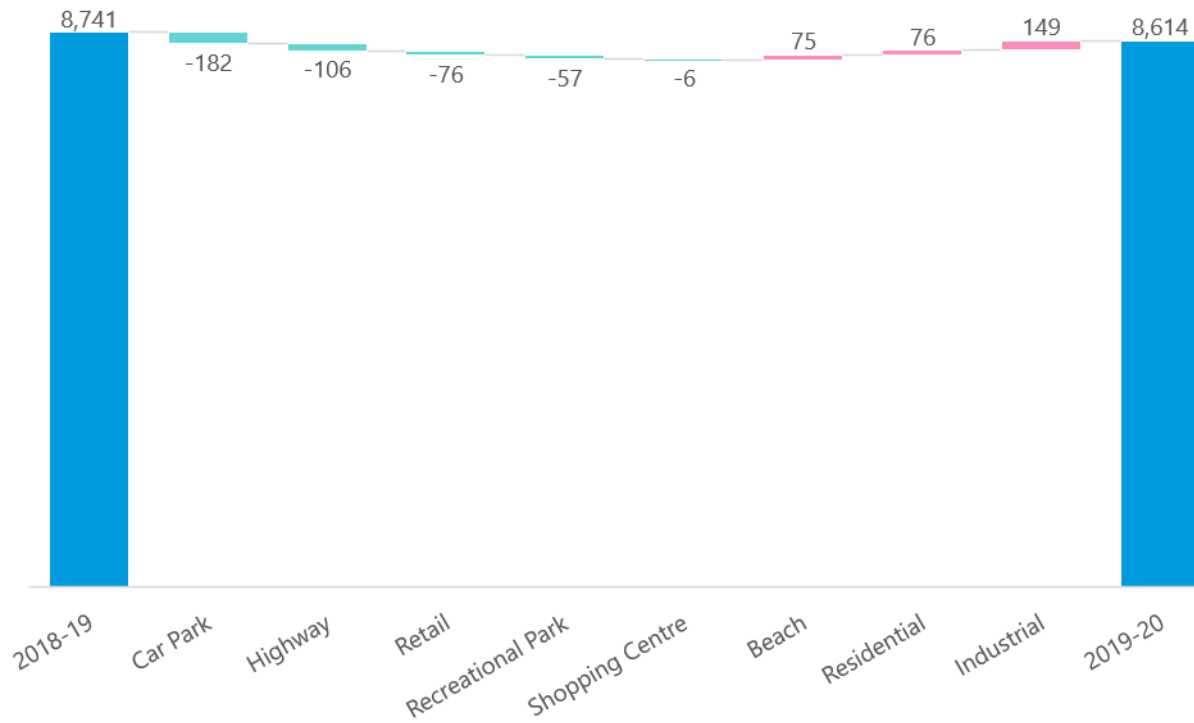
(-0.6 litre)  
Volume per 1,000m<sup>2</sup>

### Categories contribution (Litter items)

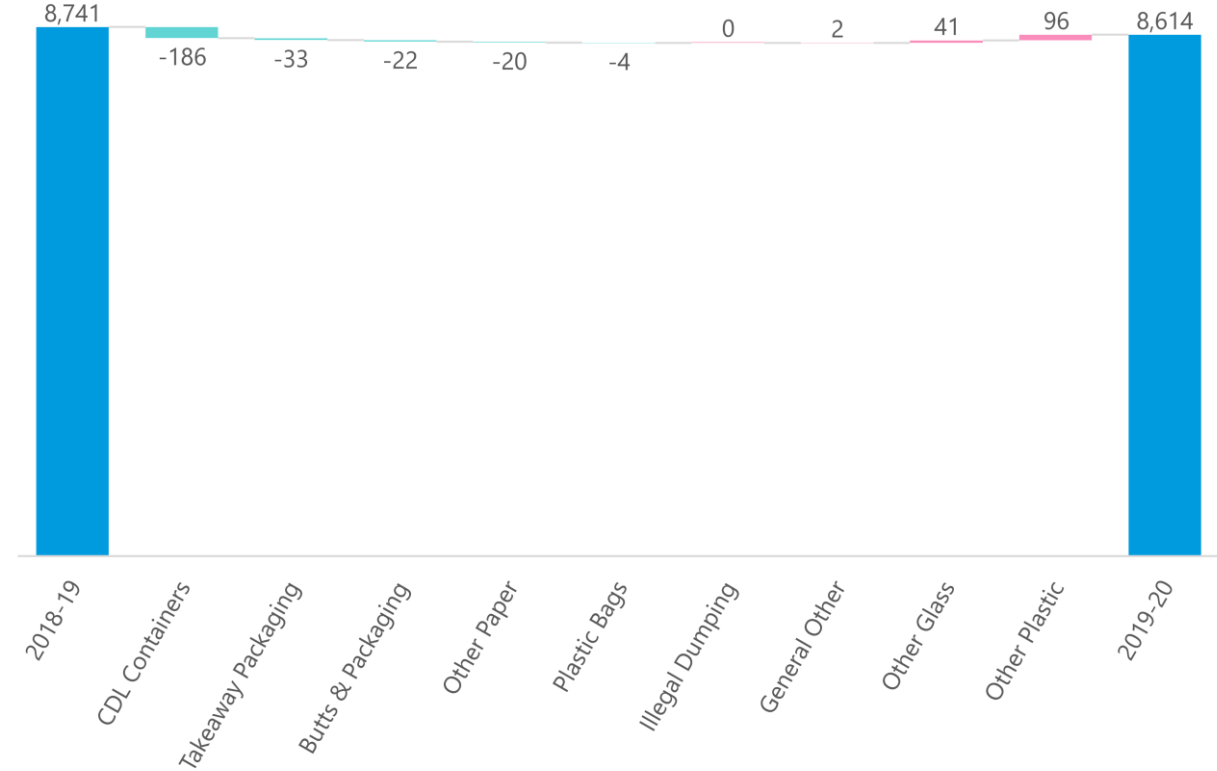


# CONTRIBUTION TO CHANGE (LITTER ITEMS)

Contribution to change by site type



Contribution to change by category





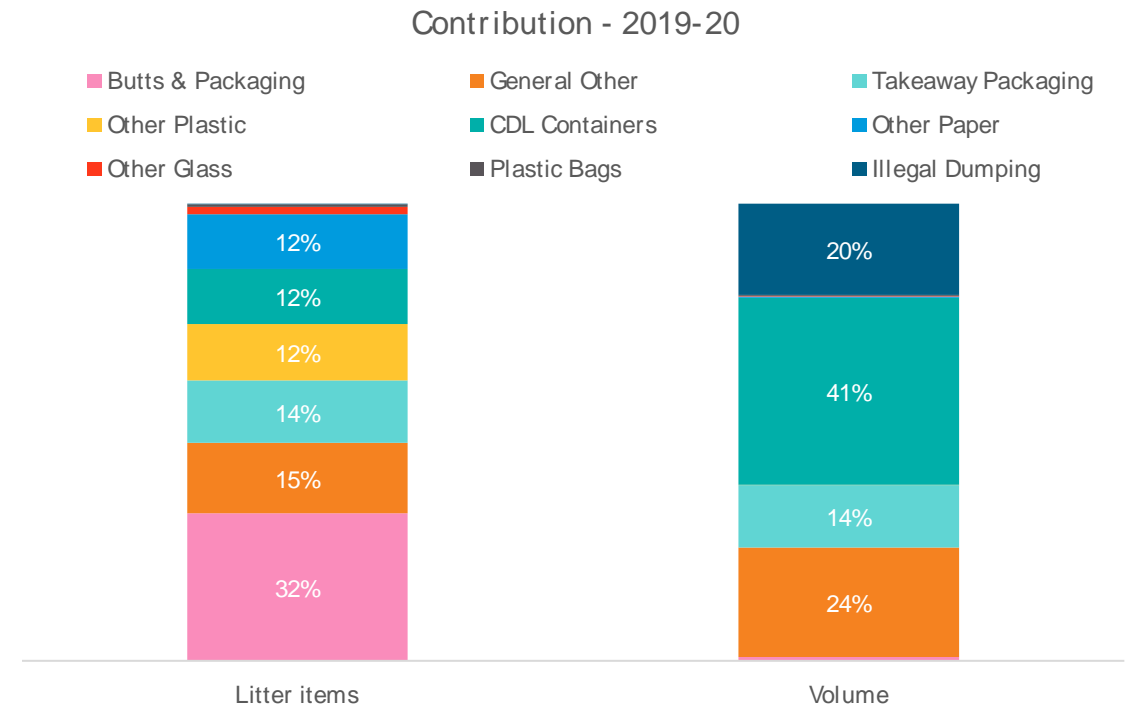
# CATEGORIES

## LITTER BY CATEGORIES

In terms of litter items, butts and packaging (32%) was the main contributor to litter items followed by other general items (15%), takeaway packaging (14%), CDL containers (12%) and other paper or plastic litter which have similar contributions (12%).

However, in terms of volume CDL containers (41%) was the main contributor followed by general other litter items (24%) and illegal dumping (20%).

Litter volume associated with illegal dumping increased over the last 2 years from 11% in 2017-18 to 20% in 2019-20.



12

Butts & packaging  
Items per 1,000m<sup>2</sup>

5

Takeaway packaging  
Items per 1,000m<sup>2</sup>

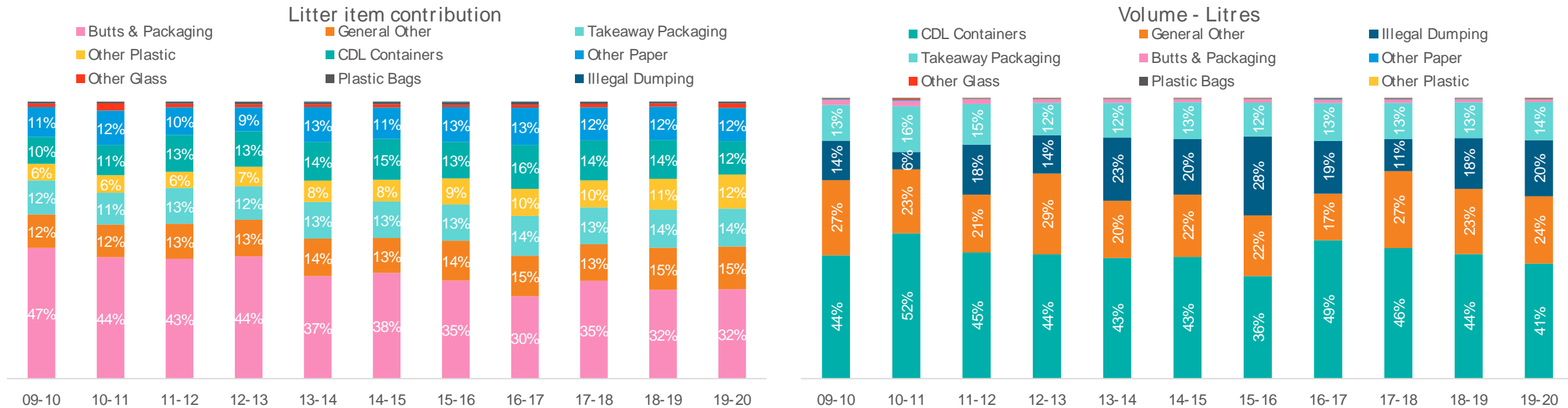
2.4 litre

CDL containers  
volume per 1,000m<sup>2</sup>

1.2 litre

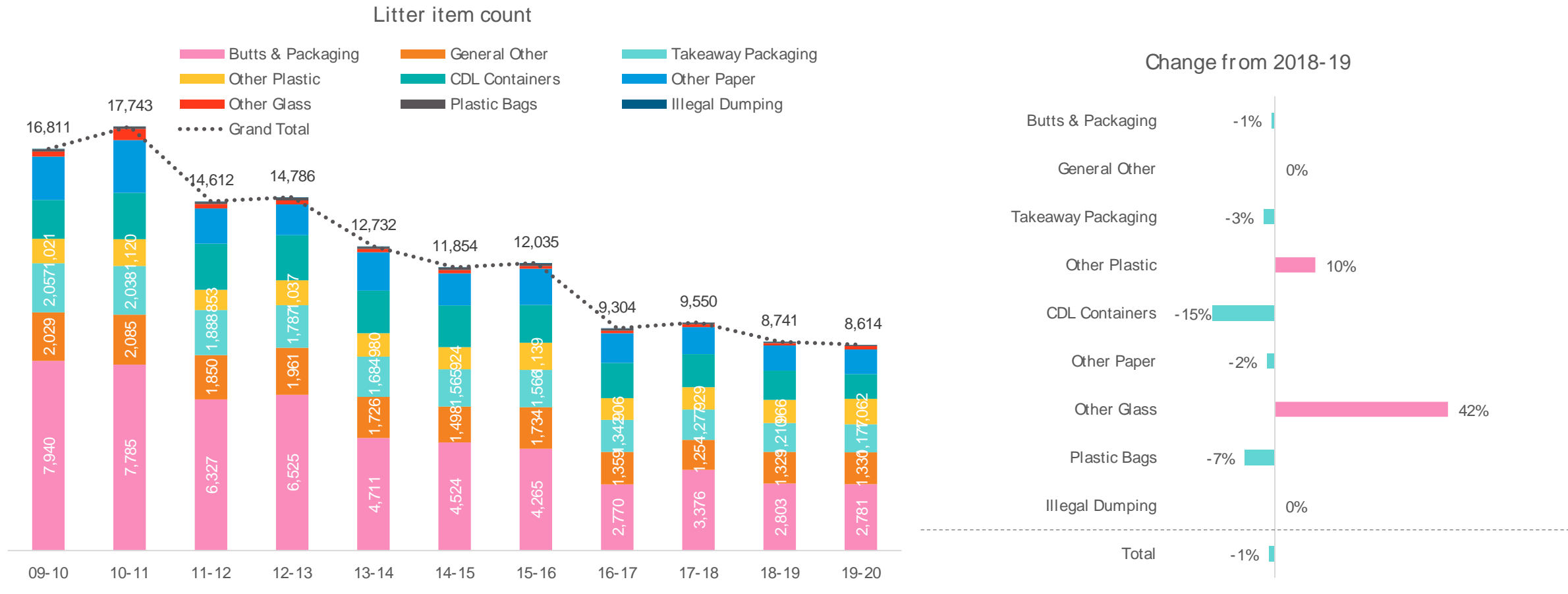
Illegal dumping  
volume per 1,000m<sup>2</sup>

# EVOLUTION OF CATEGORIES MIX

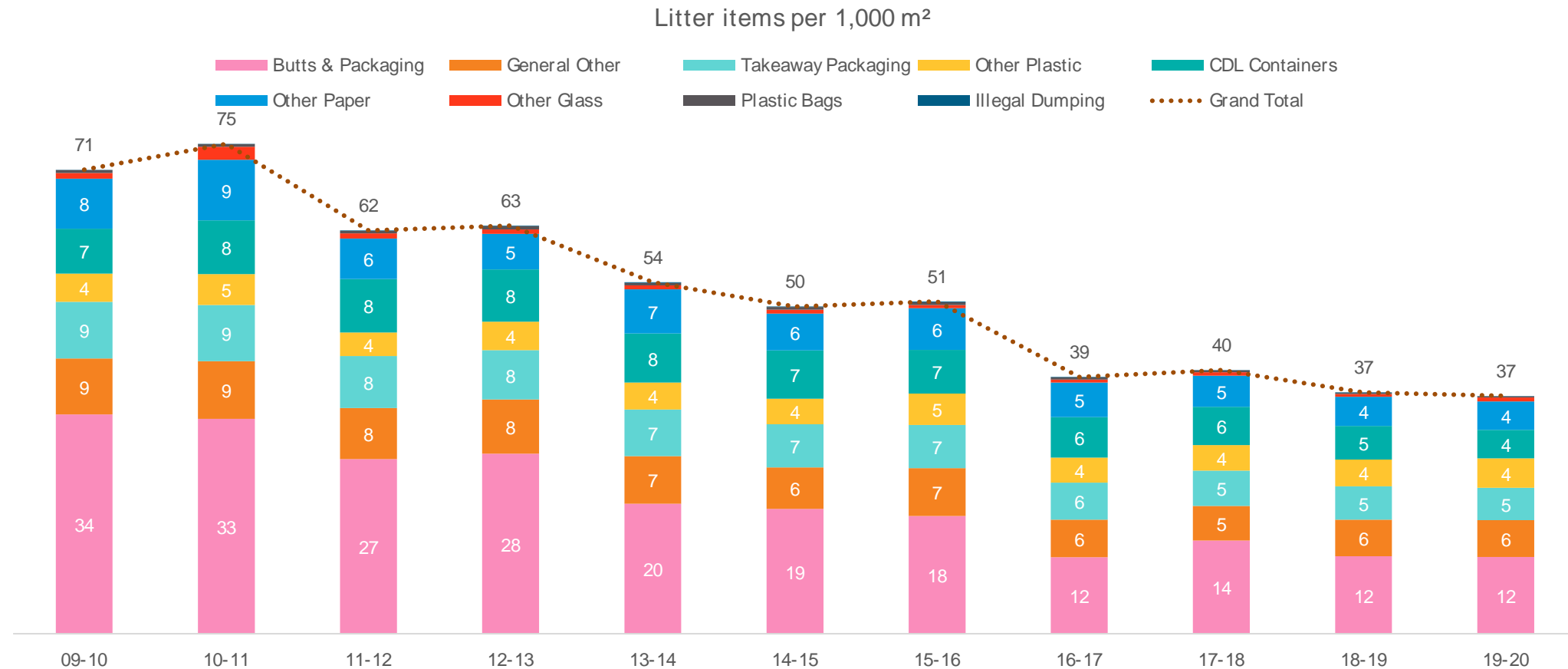


# LITTER ITEMS BY CATEGORIES

Overall litter items decreased by 1.4%, reducing from 8,741 in 2018-19 to 8,614 in 2019-20. The decrease was evident across key categories except other plastic which increased by 9.9% this year and other glass which increased by 42.3% this year (albeit low base).



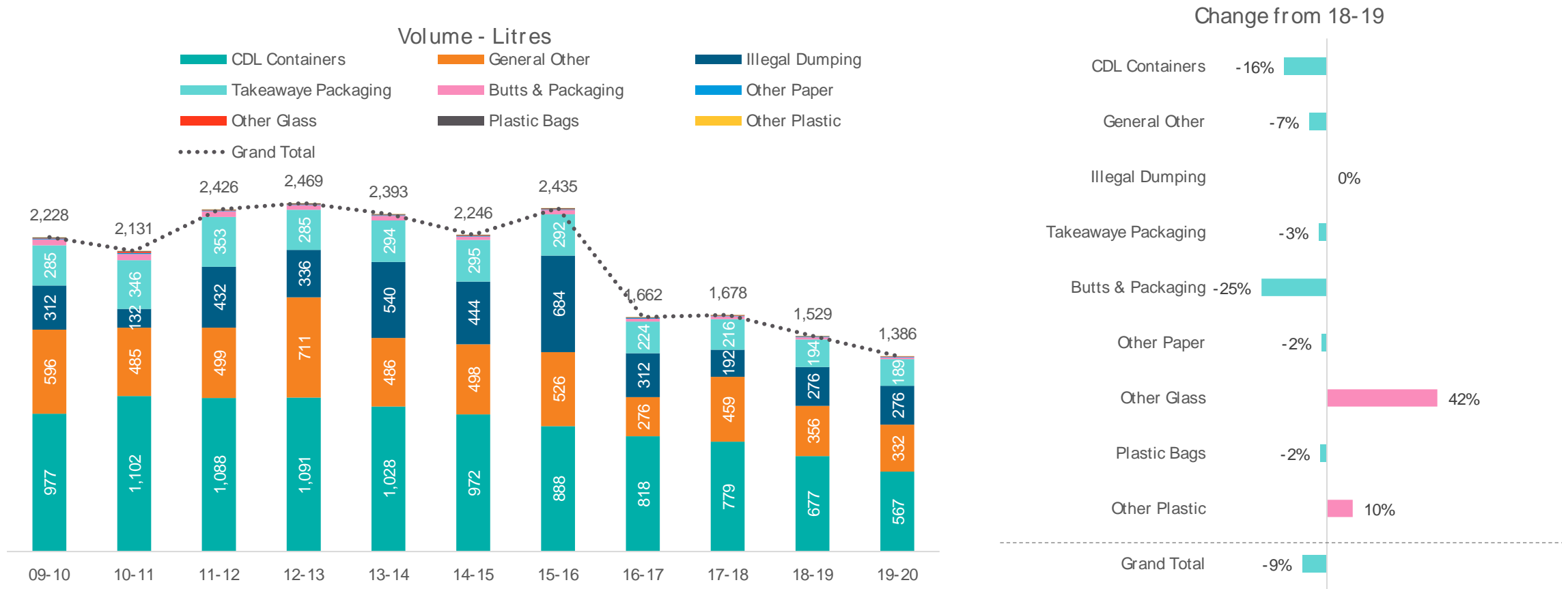
# LITTER ITEMS PER 1,000m<sup>2</sup> BY CATEGORIES



# LITTER VOLUME BY CATEGORIES

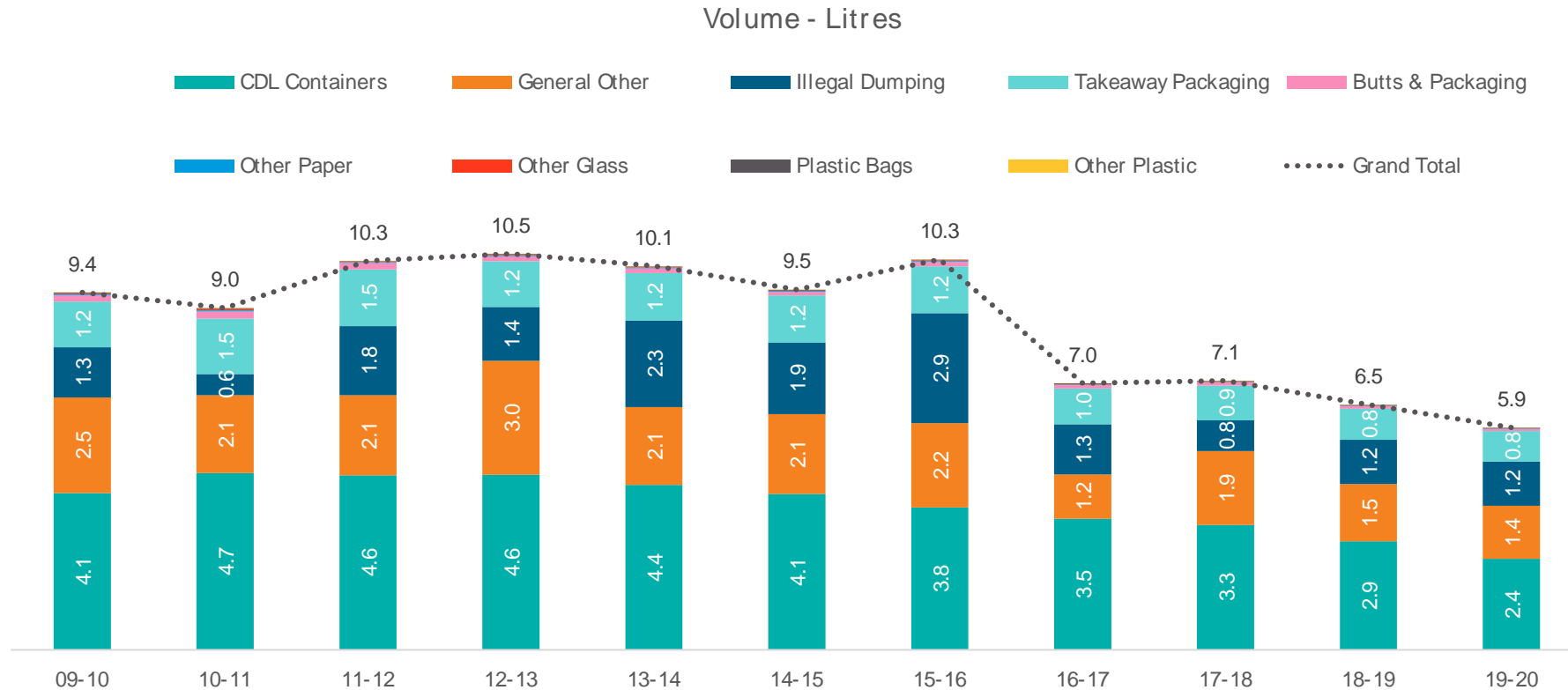
Similar to litter items, litter volume also decreased this year in WA by 9.4%. The decrease was evident across all categories except other plastic and glass litter.

Illegal dumping also remained static and did not decrease this year.





# LITTER VOLUME PER 1,000m<sup>2</sup> BY CATEGORIES





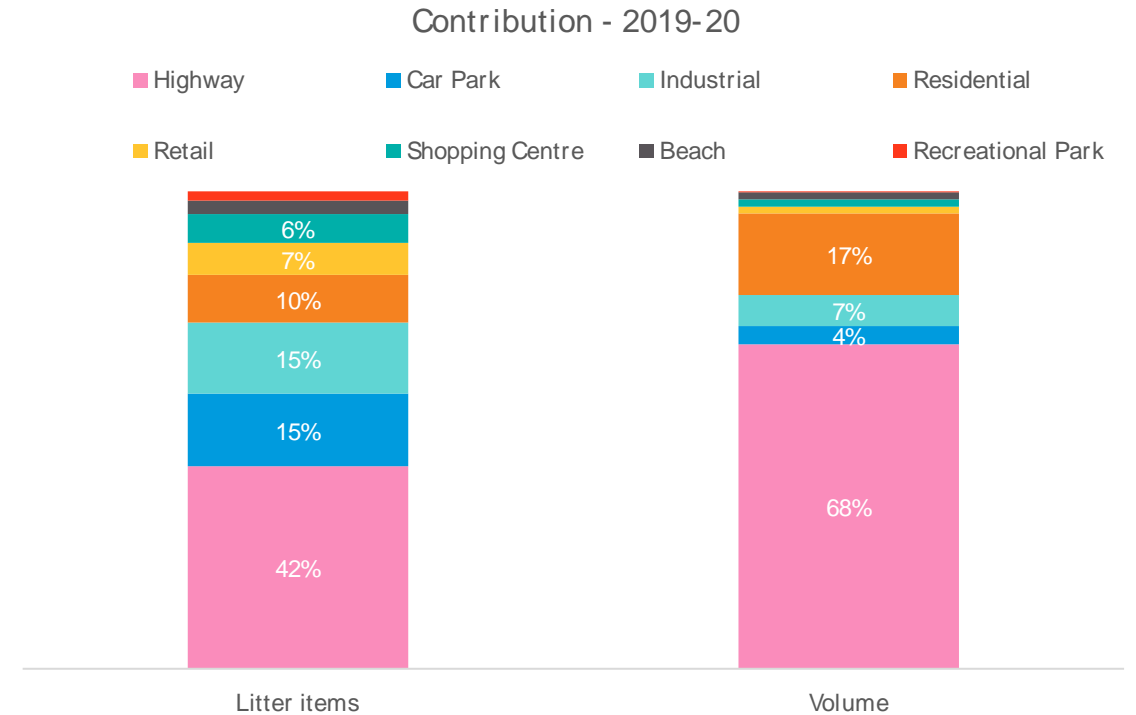
## SITE TYPES

## LITTER BY SITE TYPES

In terms of litter items counted the largest contributors were highways (42%), followed by car parks (15%) and industrial sites (15%) in 2019-20.

In terms of volume, highways alone contributed approximately two thirds (68%) of the litter volume. Residential sites also had a higher contribution to litter volume (17%) compared to litter items (10%).

In terms of litter and volume per 1,000m<sup>2</sup>, industrial sites were associated with the highest litter items, while highways were associated with the largest volume compared to the other sites.



ITEMS PER 1,000M<sup>2</sup>

37  
TOTAL

42  
Highways

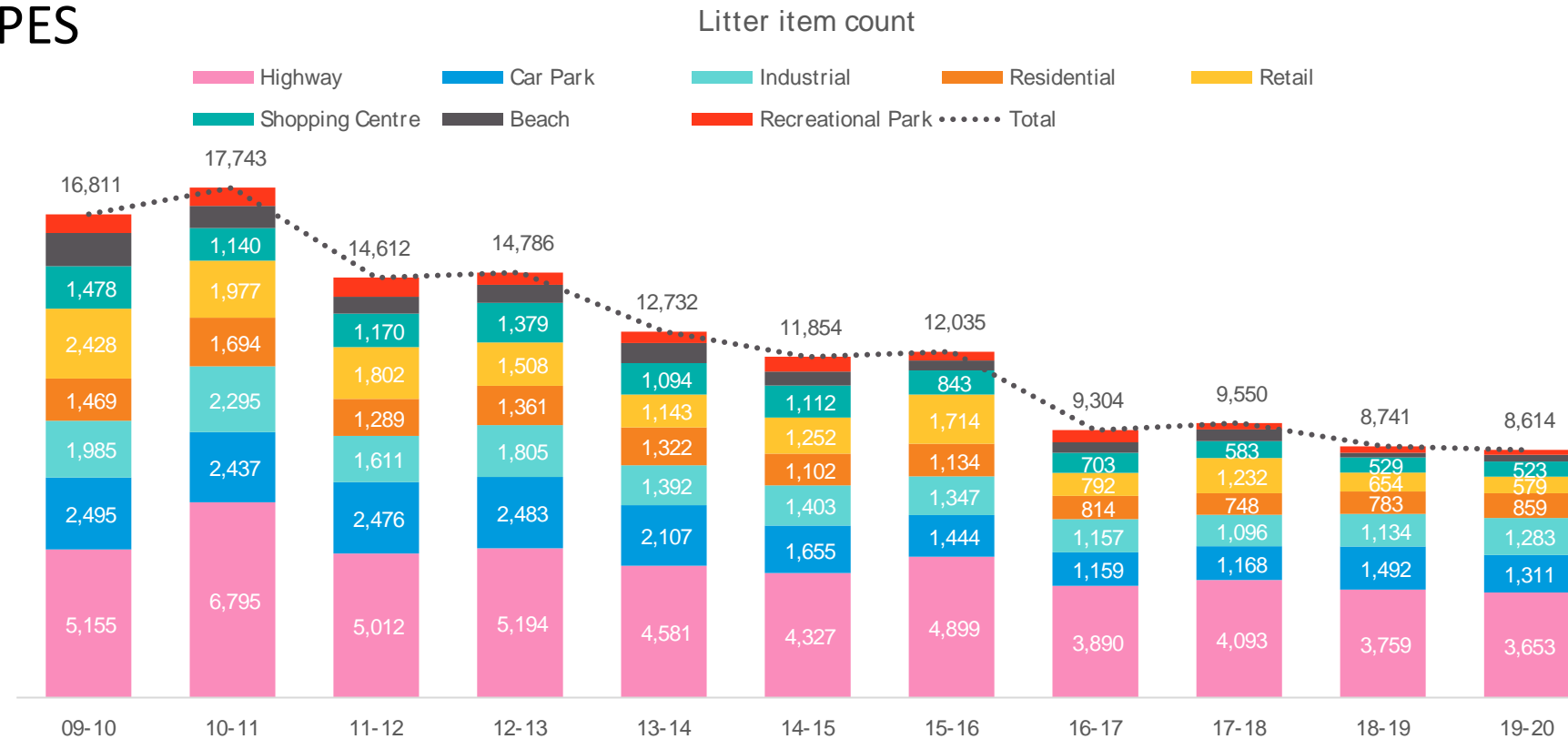
86  
Industrial

43  
Retail

38  
Car park

# LITTER ITEMS BY SITE TYPES

Litter items decreased overall by 1.4% in 2019-20 compared to the previous year with decreases observed mainly at highways, car parks retail and shopping centre. These were offset to some degree by increases at beaches, industrial sites and residential sites.



## CHANGE FROM 2018-19

**-3%**  
Highways

**-12%**  
Car park

**+13%**  
Industrial

**+10%**  
Residential

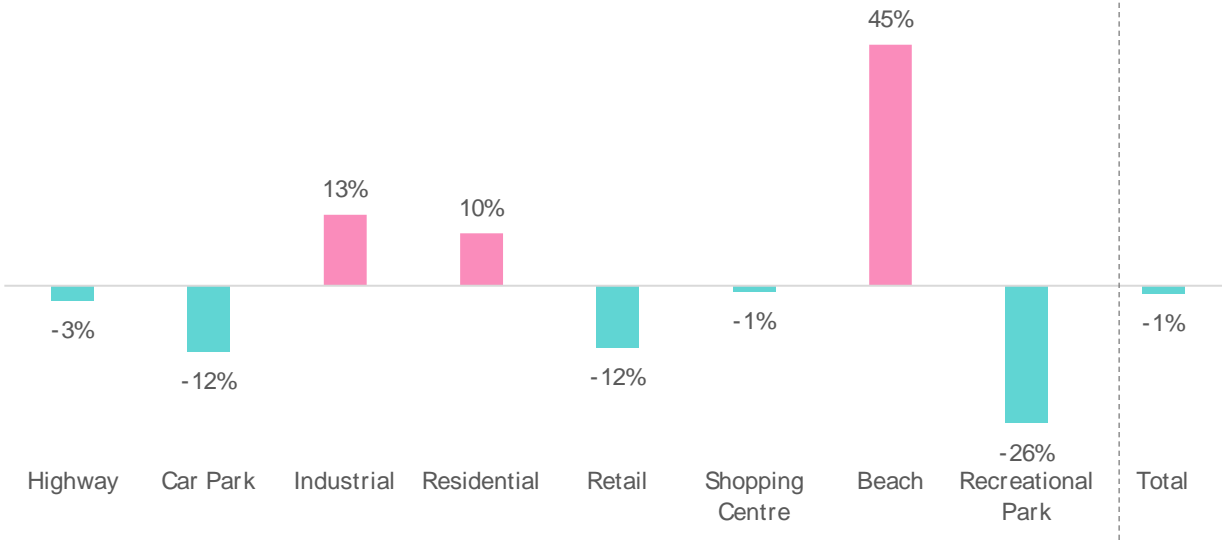
**-12%**  
Retail

**-1%**  
Shopping centre

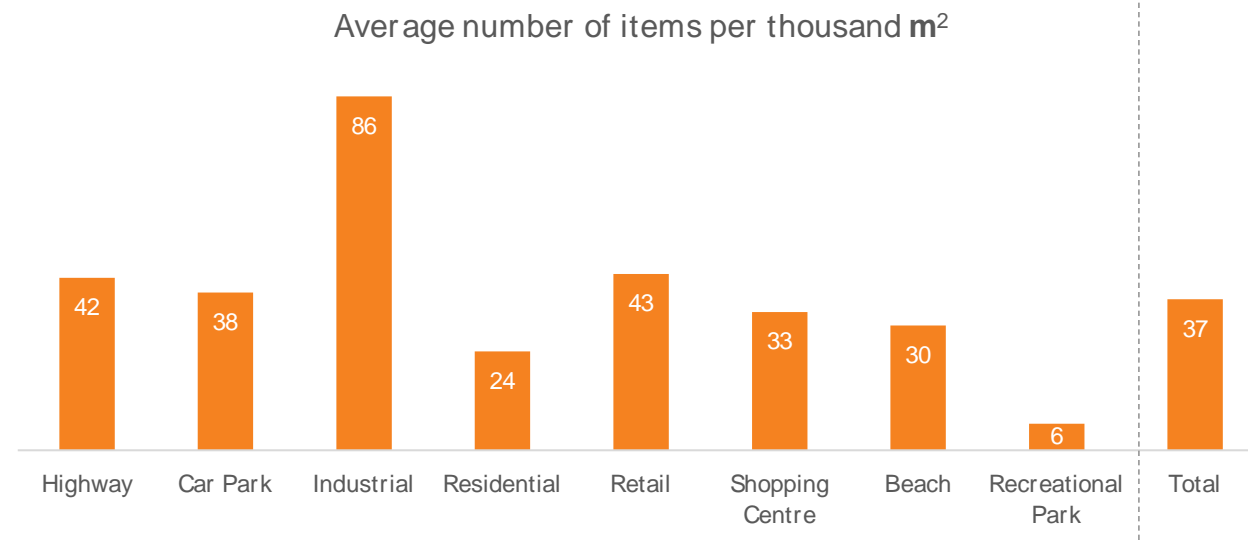
**+45%**  
Beach

# LITTER ITEMS BY SITE TYPE

Change from 18-19



Average number of items per thousand m<sup>2</sup>

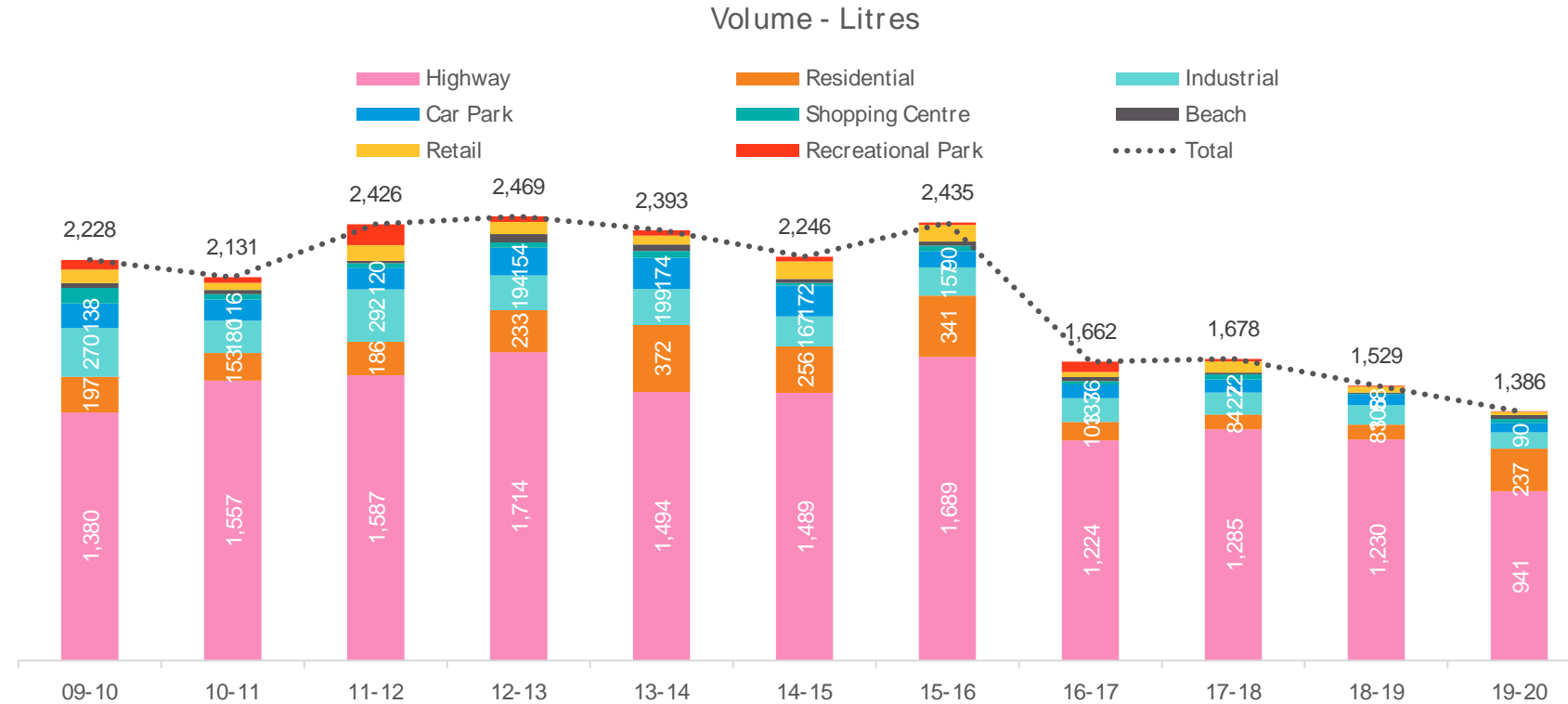


# LITTER VOLUME BY SITE TYPES

Litter volume in WA also decreased by 9.4% in 2019-20. Largest reductions were decreases in plastic industrial containers, plastic water & soft drink bottles <1 litre and soft drink cans.

Litter volume decreased across all site types except residential sites, shopping centres and beaches.

Volumes increased at residential sites mainly due to increases in illegal dumping; at shopping centres due to rises in other general litter and CDL containers and at beaches due to increases in illegal dumping and CDL containers.



## CHANGE FROM 2018-19

**-23%**  
Highways

**-16%**  
Industrial

**-9%**  
Car park

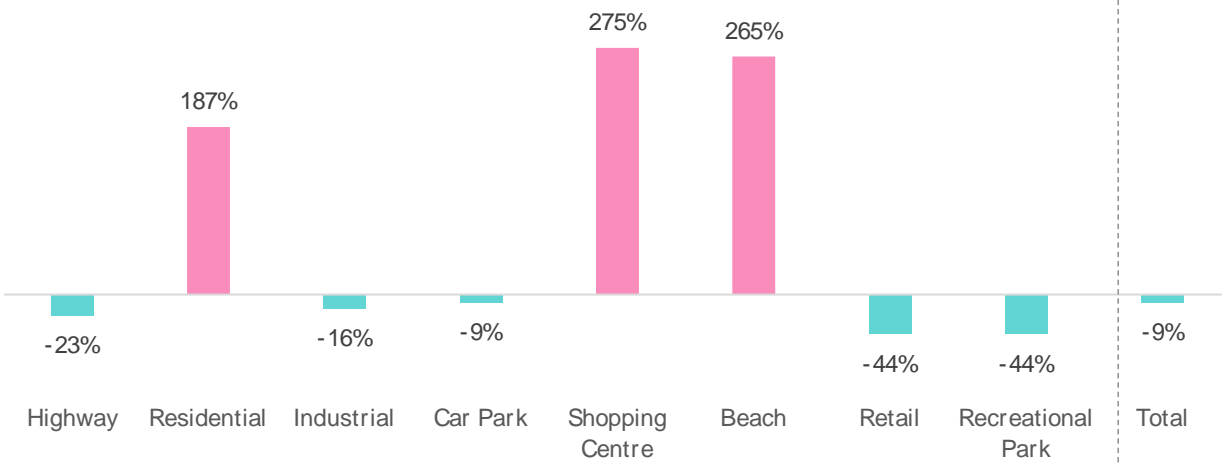
**100+%**  
Residential

**-44%**  
Retail

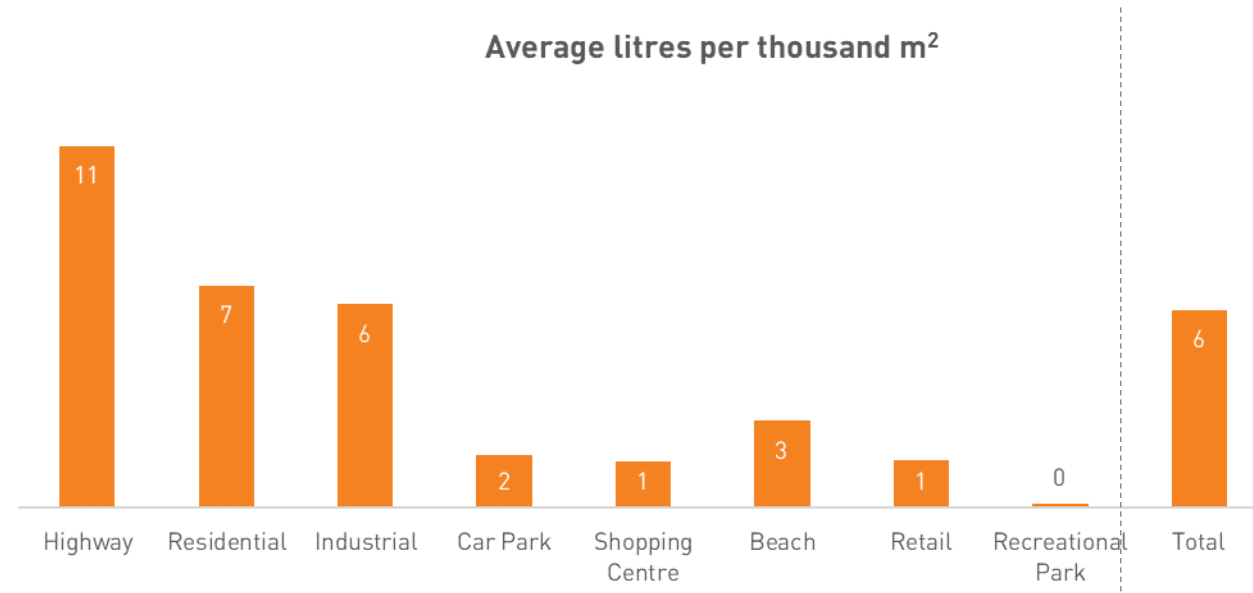
**100+%**  
Shopping centre

# LITTER VOLUME BY SITE TYPE

Change from 18-19



Average litres per thousand m<sup>2</sup>





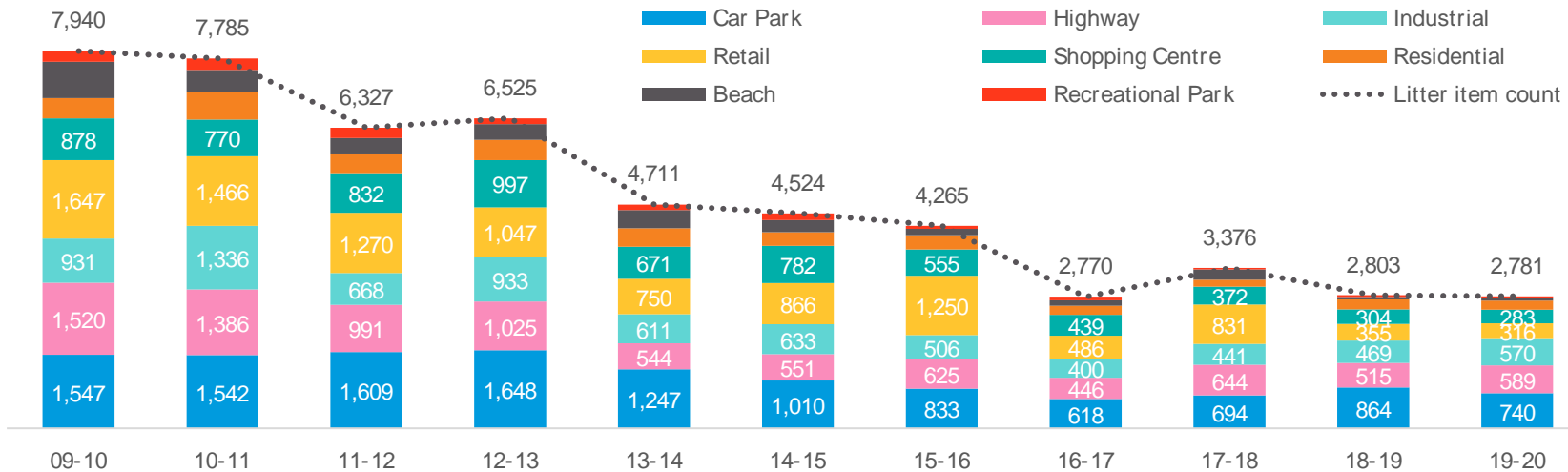
# EVALUATING KEY CATEGORIES



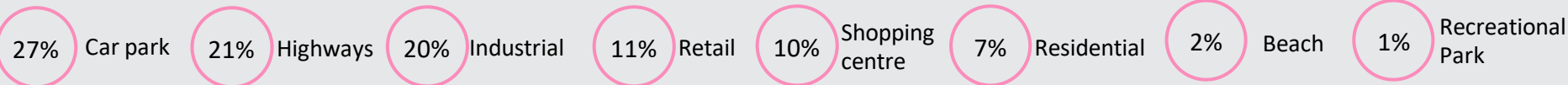
# BUTTS & PACKAGING

Butts & packaging had the highest contribution (32%) of litter items and dropped marginally by 0.8% in 2019-20. The contribution in terms of volumes is low at 1% due to the size of the cigarette butts.

Car parks (27%), highways (21%) and industrial sites (20%) were the highest contributors to litter items for butts and packaging. The contribution from car parks, industrial sites and shopping centres towards the litter for butts & packaging was higher than their contribution to over all litter in WA.



Sites contribution



2,781

(-0.8% decrease)

litter items in 2019-20

11.8

(-0.1 items)

items per 1,000m<sup>2</sup>

12 litre

(-25.0% decrease)

Litter volume in 2019-20

0.05 litre

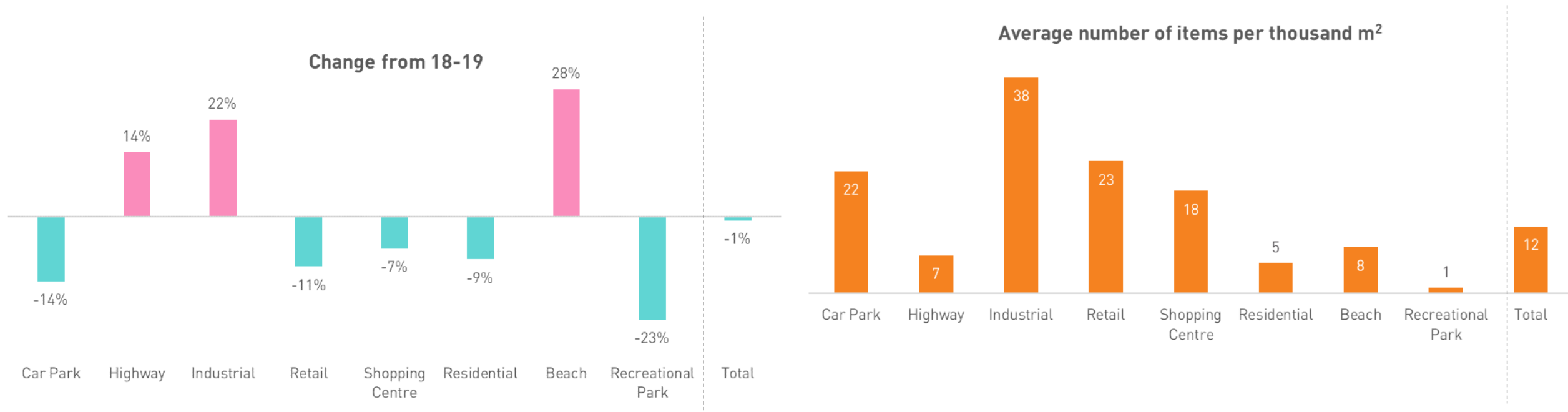
(-0.02 litre)

Volume per 1,000m<sup>2</sup>

## BUTTS & PACKAGING (LITTER ITEMS)

While the litter items for butts and packaging dropped at an overall level, there was an increase at highways, industrial sites and beaches.

Industrial sites also had the highest litter items per thousand metre square followed by retail strips and car parks.

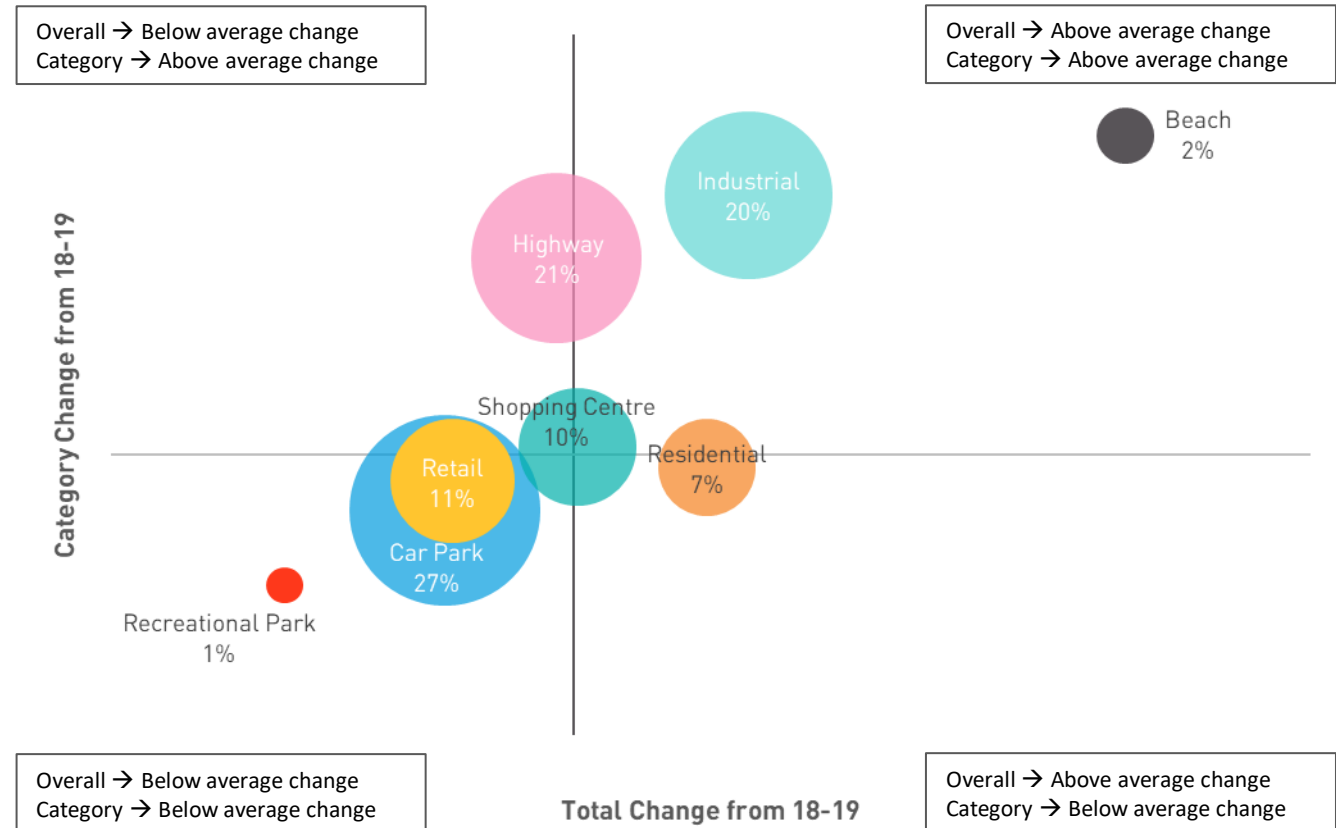
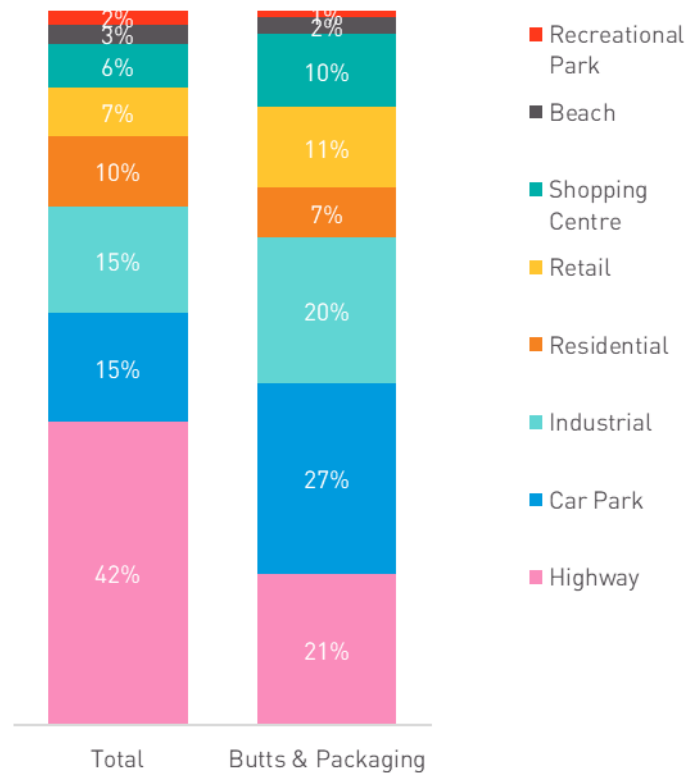


# BUTTS & PACKAGING (LITTER ITEMS)

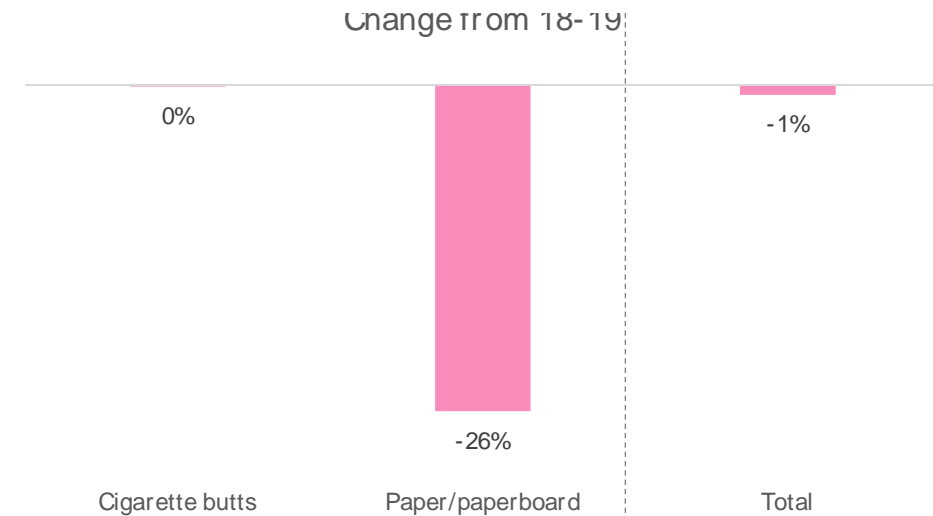
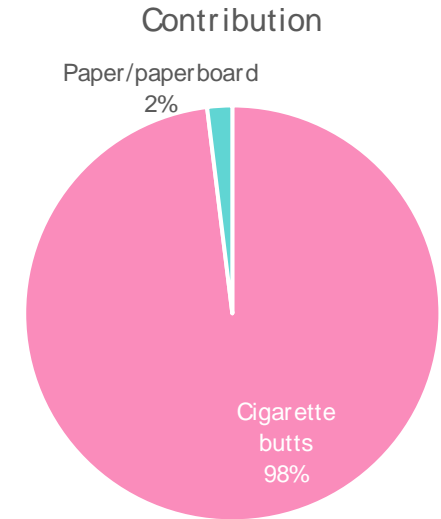
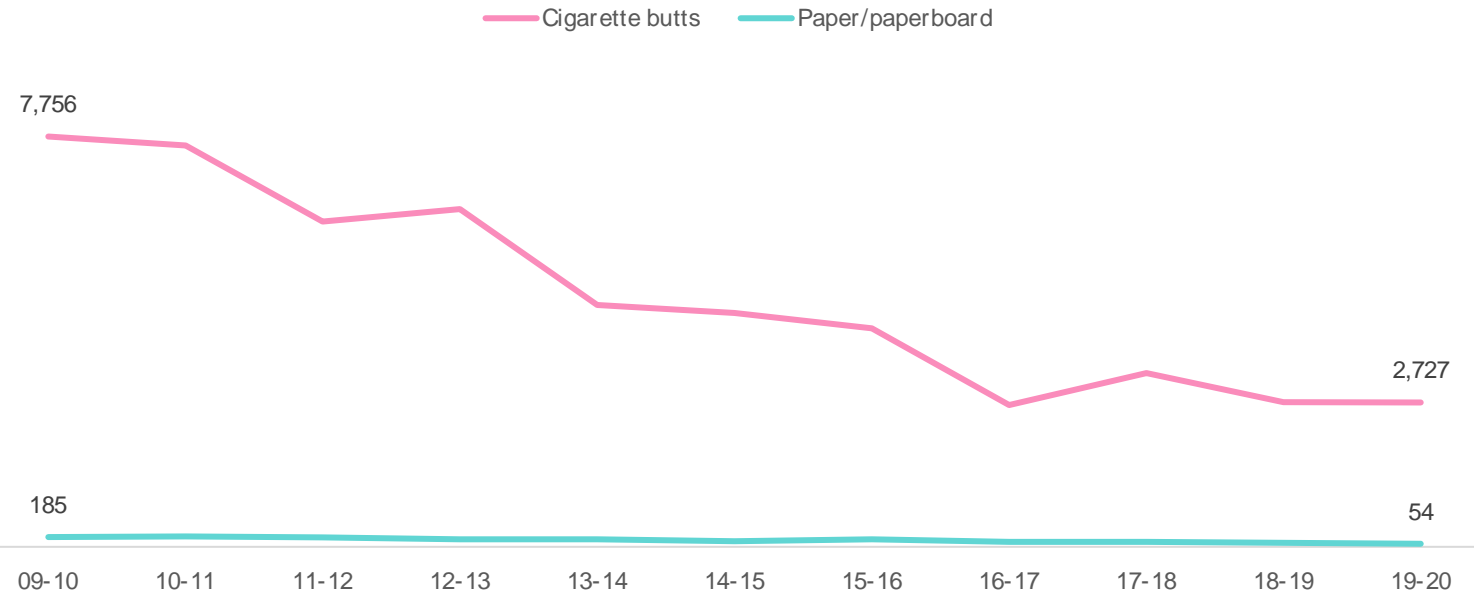
Priority order:

- Industrial sites – high contributing, fast growing site.
- Highways – high contributing, high increase for butts & packaging (14.5%) while overall litter items decreased (2.8%) at highways
- Beaches – largest increase

Litter item contribution



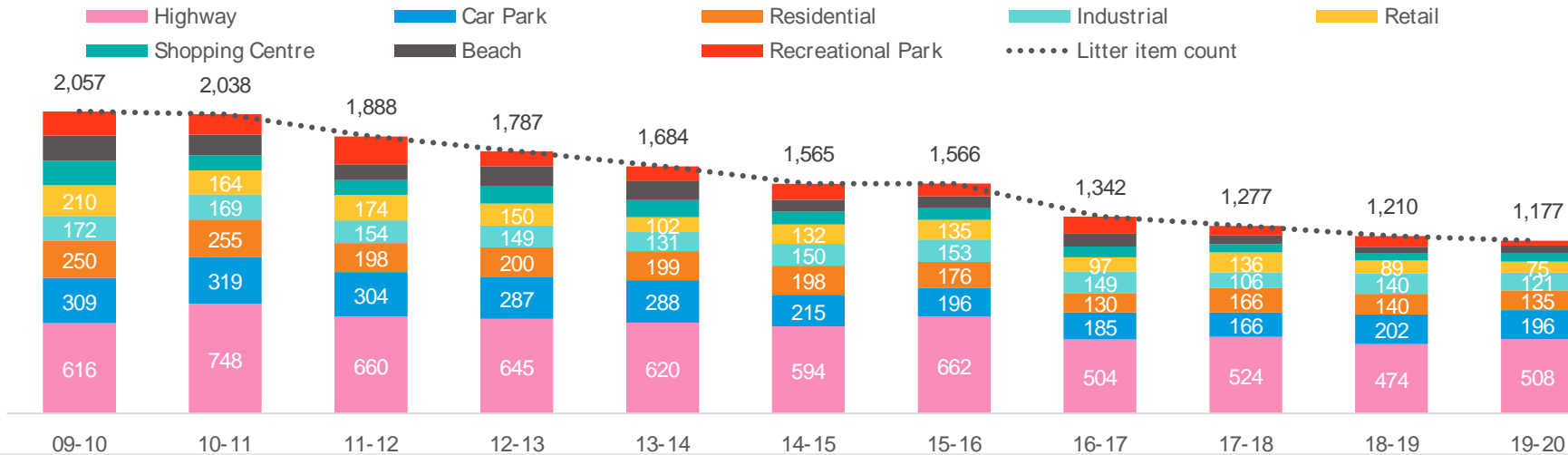
# BUTTS & PACKAGING – MATERIAL (LITTER ITEMS)



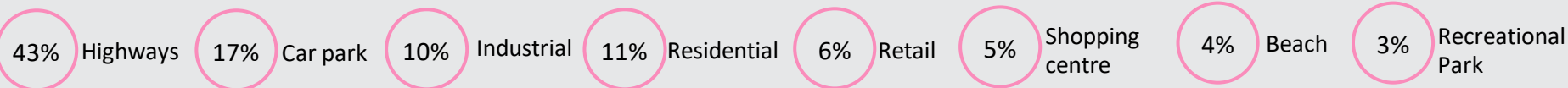
# TAKEAWAY PACKAGING

Takeaway packaging contribute 14% of litter and decreased by 2.7% this year (both in items and volume). There has been a continuous decrease over the last 10 years in takeaway packaging litter in WA.

Highways (42%), car parks (17%) and industrial sites (10%) were the main contributors to litter items for takeaway packaging.



## Sites contribution



1,177

(-3% decrease)

litter items in 2019-20

5

(-0.2 items)

items per 1,000m<sup>2</sup>

189 litre

(-3% decrease)

Litter volume in 2019-20

0.8 litre

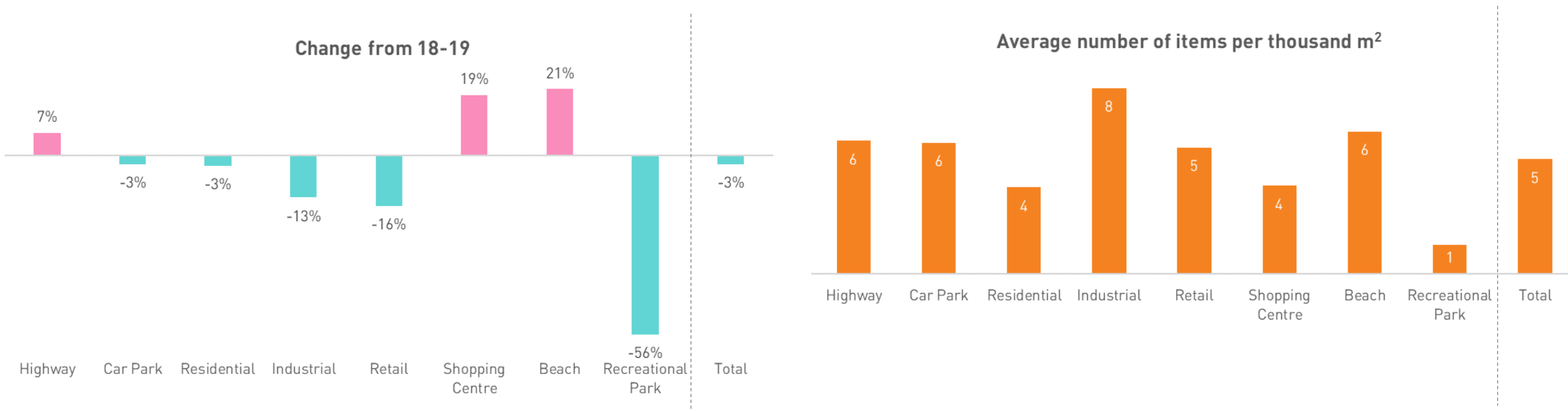
(-0.02 litre)

Volume per 1,000m<sup>2</sup>

## TAKEAWAY PACKAGING (LITTER ITEMS)

Overall litter items for takeaway packaging decreased by 2.7% in 2019–20, however, there were increases in litter items at highways, recreational parks and shopping centres recorded this year.

Industrial sites were associated with the highest number of litter items per thousand metre square followed by beaches, highways and car parks.

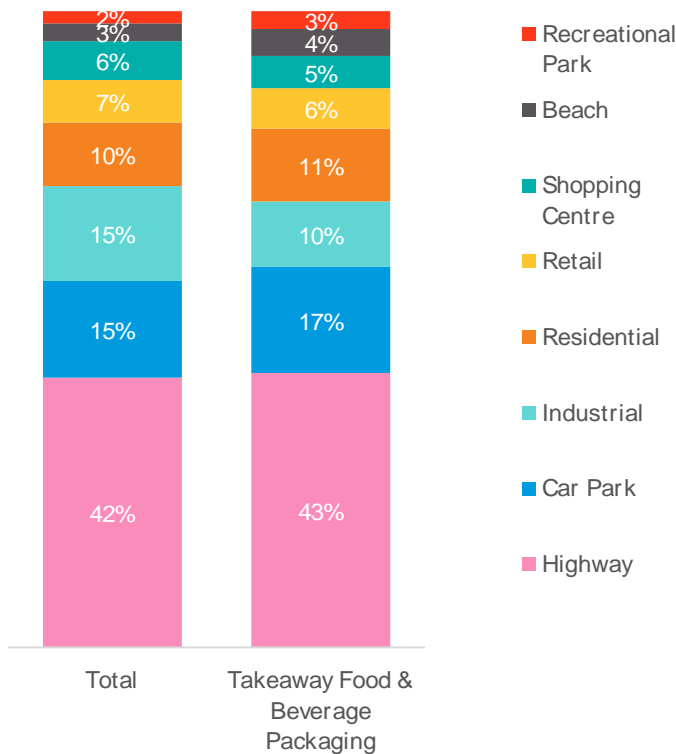


# TAKEAWAY PACKAGING (LITTER ITEMS)

Priority order

- Highways – highest contribution and litter for takeaway (7%) increasing faster than overall litter which decreased at highways (-2.8%)
- Beaches – highest increase
- Shopping centres – high increase (18.8%) while overall litter decreased (-1.1%).

Litter item contribution

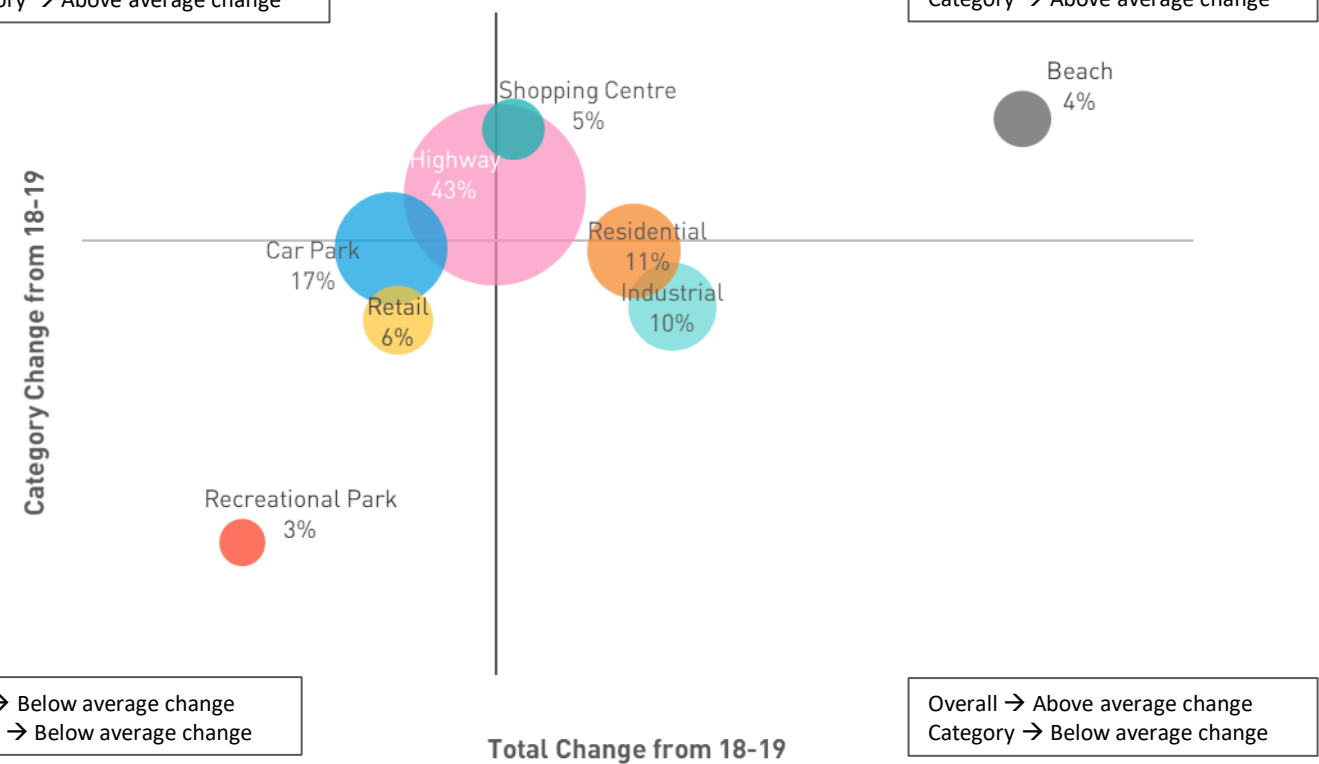


Overall → Below average change  
Category → Above average change

Overall → Above average change  
Category → Above average change

Overall → Below average change  
Category → Below average change

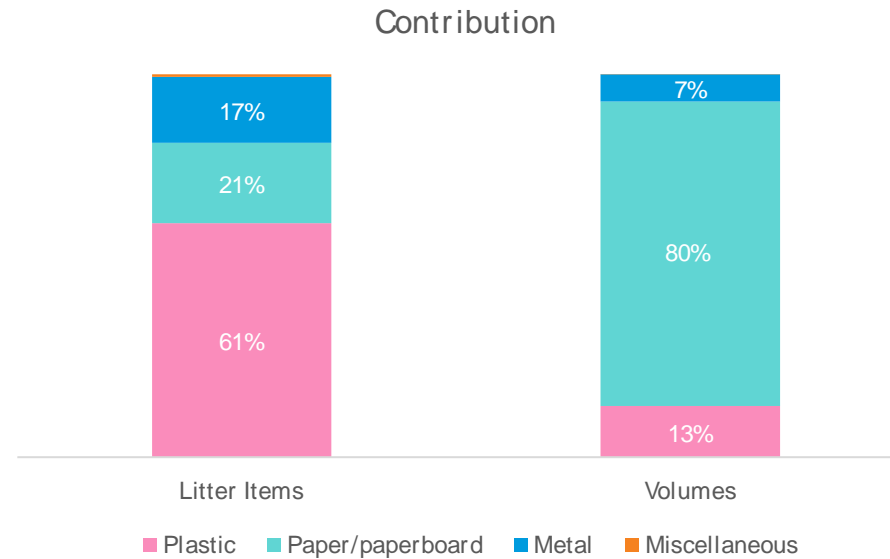
Overall → Above average change  
Category → Below average change



## TAKEAWAY PACKAGING MATERIAL

Plastic packaging items were the highest contributor to overall takeaway packaging litter items and decreased by 5.6% this year.

While in terms of volume, paper / paperboard contributed the most followed by plastic and metal items.



-6%

Item change for Plastic

-3%

Volume change for Plastic

+0.2%

Item growth for Paper / paperboard

-1%

Volume change Paper / paperboard

+3%

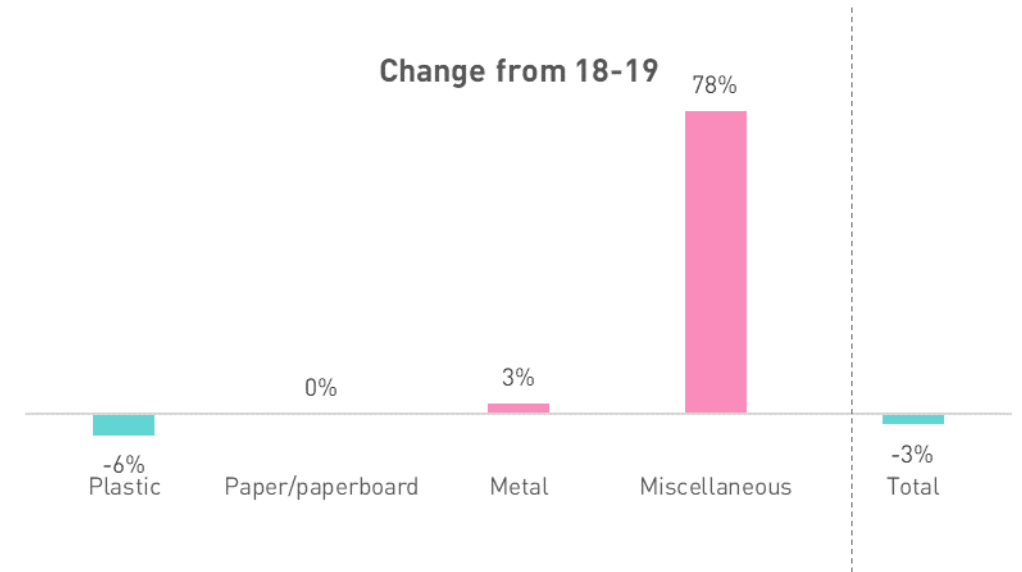
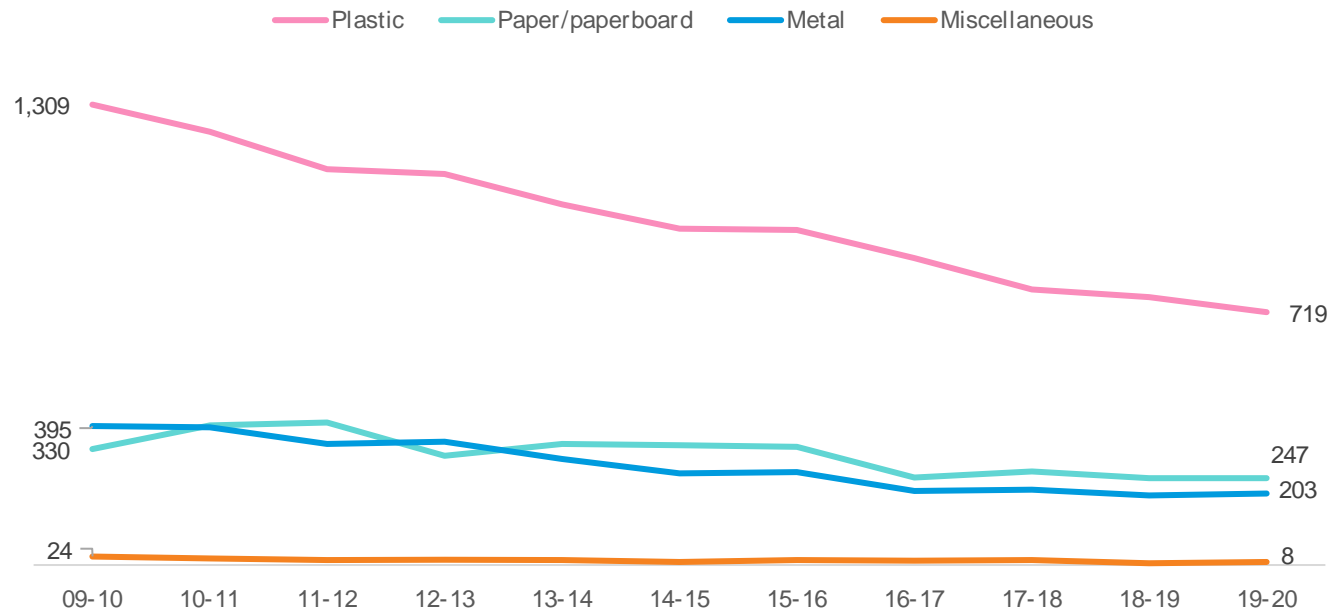
Item growth for Metal



# TAKEAWAY PACKAGING MATERIAL (LITTER ITEMS)

Plastic takeaway items have declined steadily over the last 10 years and driven the overall decline in the litter items for takeaway packaging.

However, there was an increase in paper / paperboard and metal items in this year.



## TAKEAWAY PACKAGING MATERIAL (LITTER ITEMS) – BY SITE TYPE

While plastic items decreased at an overall level, there was an increase for these items at highways, shopping centres and beaches.

The increase for paper / paperboard items was evident at highways, residential sites and shopping centres.

PLASTIC	Contribution in 19-20	Change from 18-19
Highway	39%	9%
Car Park	16%	-2%
Residential	13%	-12%
Industrial	10%	-20%
Retail	7%	-17%
Shopping Centre	6%	27%
Beach	5%	24%
Recreational Park	3%	-61%
<b>TOTAL</b>		<b>-6%</b>

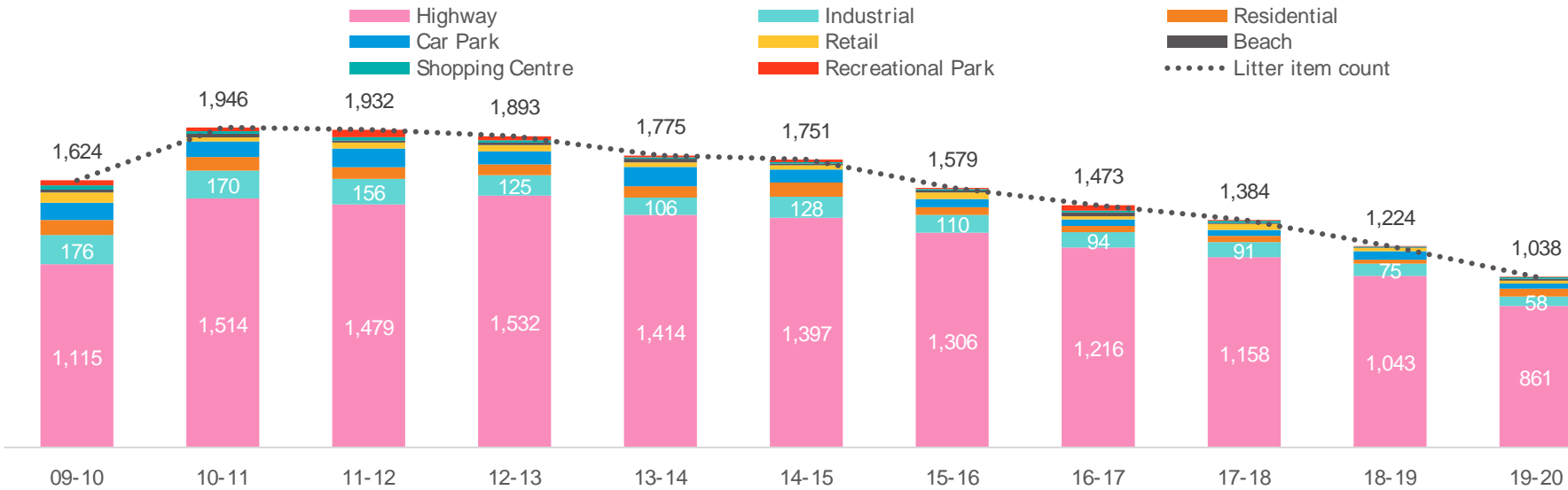
PAPER / PAPERBOARD	Contribution in 19-20	Change from 18-19
Highway	74%	10%
Industrial	9%	-21%
Residential	7%	22%
Car Park	6%	-39%
Retail	2%	-44%
Shopping Centre	2%	200%
Beach	1%	-63%
Recreational Park	0%	0%
<b>TOTAL</b>		<b>0.2%</b>

METAL	Contribution in 19-20	Change from 18-19
Car Park	30%	8%
Highway	22%	-10%
Industrial	13%	15%
Residential	11%	23%
Retail	9%	3%
Shopping Centre	6%	-13%
Beach	5%	40%
Recreational Park	3%	-32%
<b>TOTAL</b>		<b>3%</b>

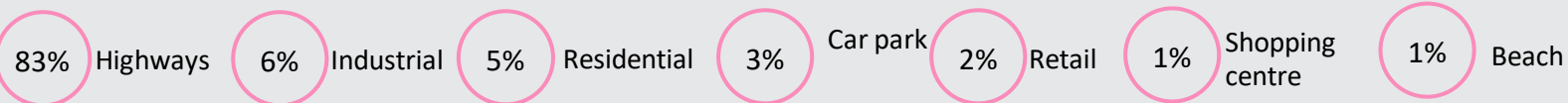
# CDL BEVERAGE CONTAINERS

CDL beverage containers contributed 12% of litter items and decreased by 15.2% this year while in terms of volumes CDL items contributed the most at 41% and has decreased by 16.3% this year driving the overall fall in litter in WA.

Highways contributed the majority of litter items counted for CDL beverage containers, the contribution was much higher for this category compared to overall litter contribution from highways.



## Sites contribution



**1,038**  
(-15.2% decrease)  
litter items in 2019-20

**4.4**  
(-0.8 items)  
items per 1,000m<sup>2</sup>

**567 litre**  
(-16.3% decrease)  
Litter volume in 2019-20

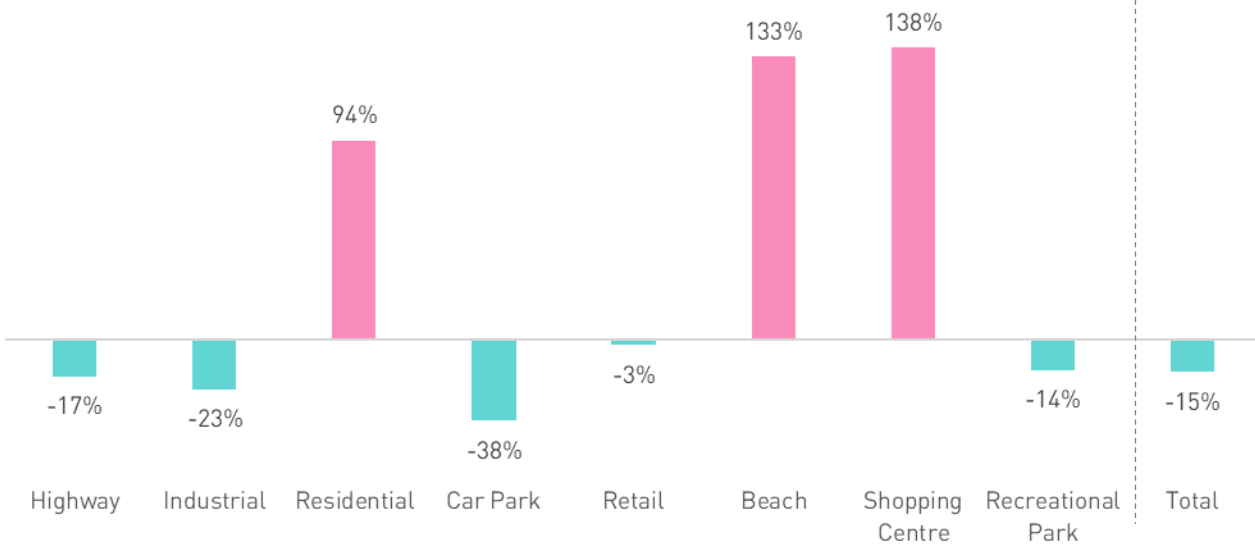
**2.4 litre**  
(-0.5 litre)  
Volume per 1,000m<sup>2</sup>

# CDL BEVERAGE CONTAINERS

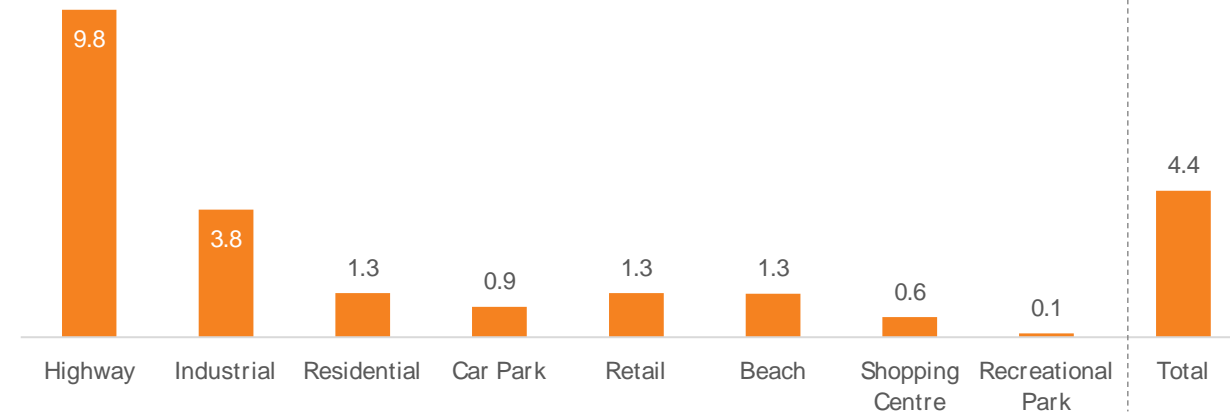
The overall decrease in litter items was driven by the key contributing sites highways and industrial sites.

Residential sites, beaches and shopping centres recorded an increase in litter items as well as volumes, albeit a low contribution.

Change from 18-19



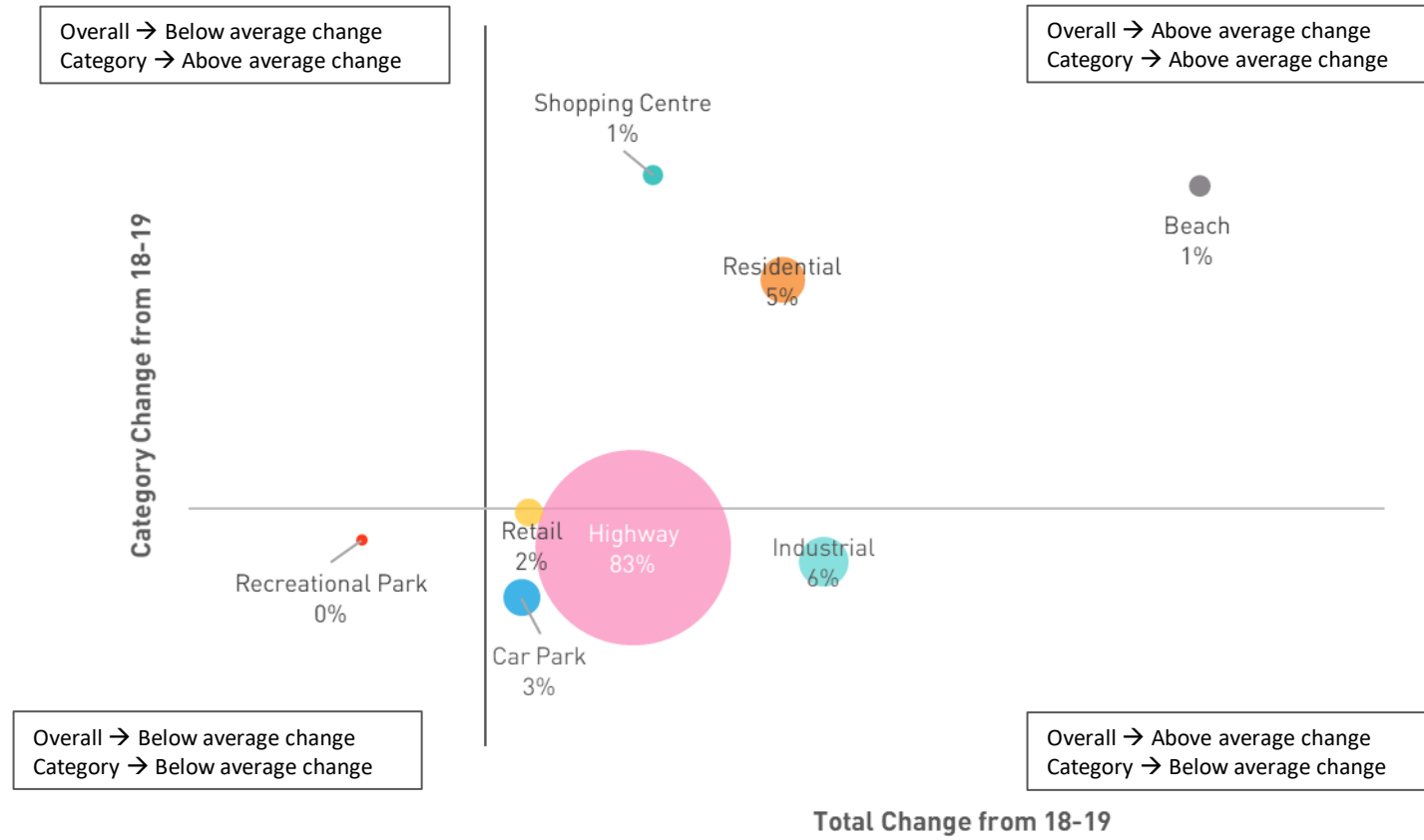
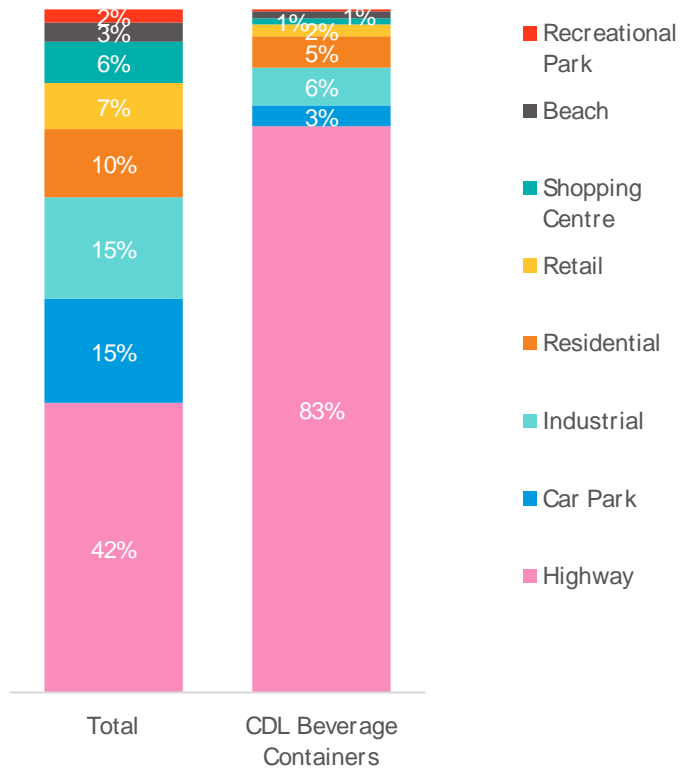
Average number of items per thousand m<sup>2</sup>



# CDL BEVERAGE CONTAINERS

Residential sites are the sites that could be used to reduce litter for CDL beverage containers.

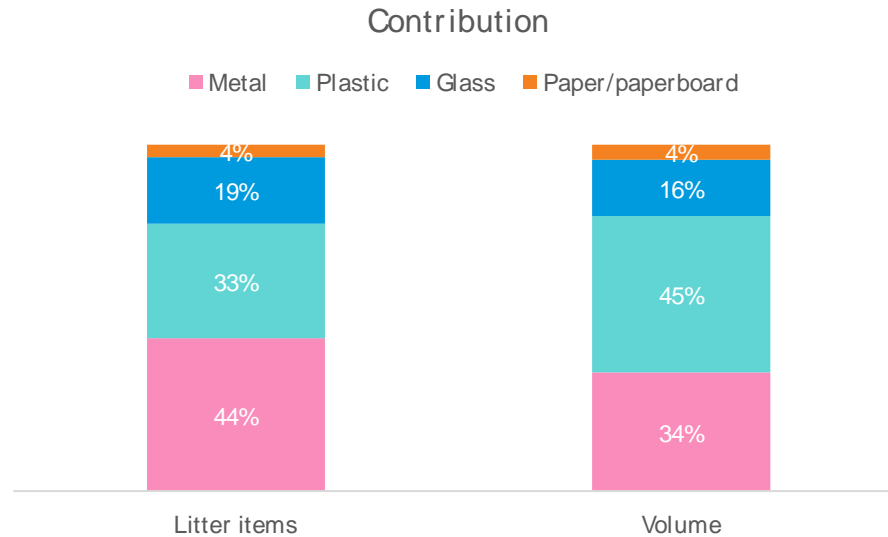
Litter item contribution



## CDL BEVERAGE CONTAINERS MATERIAL

Metal and plastic items contributed the most to CDL beverage container litter and recorded a decrease this year.

There were falls in litter recoded across all material types in WA.



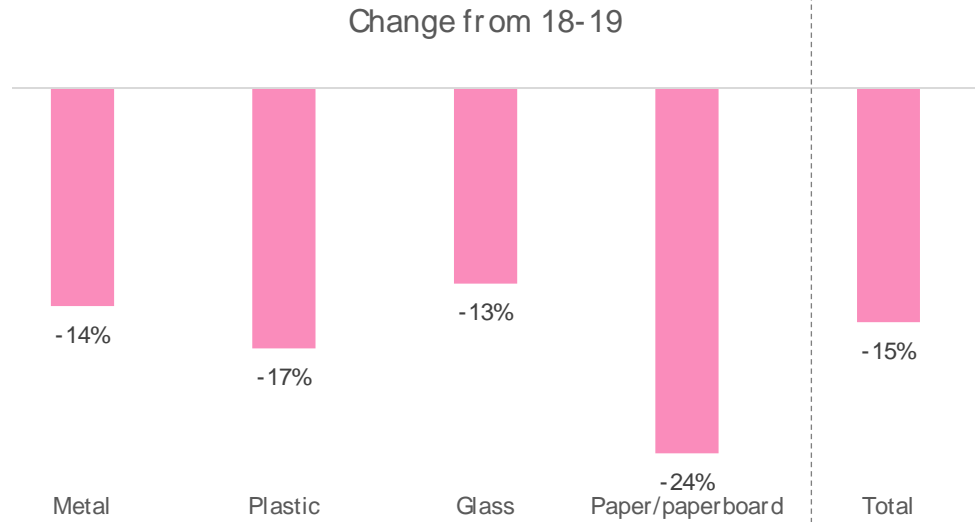
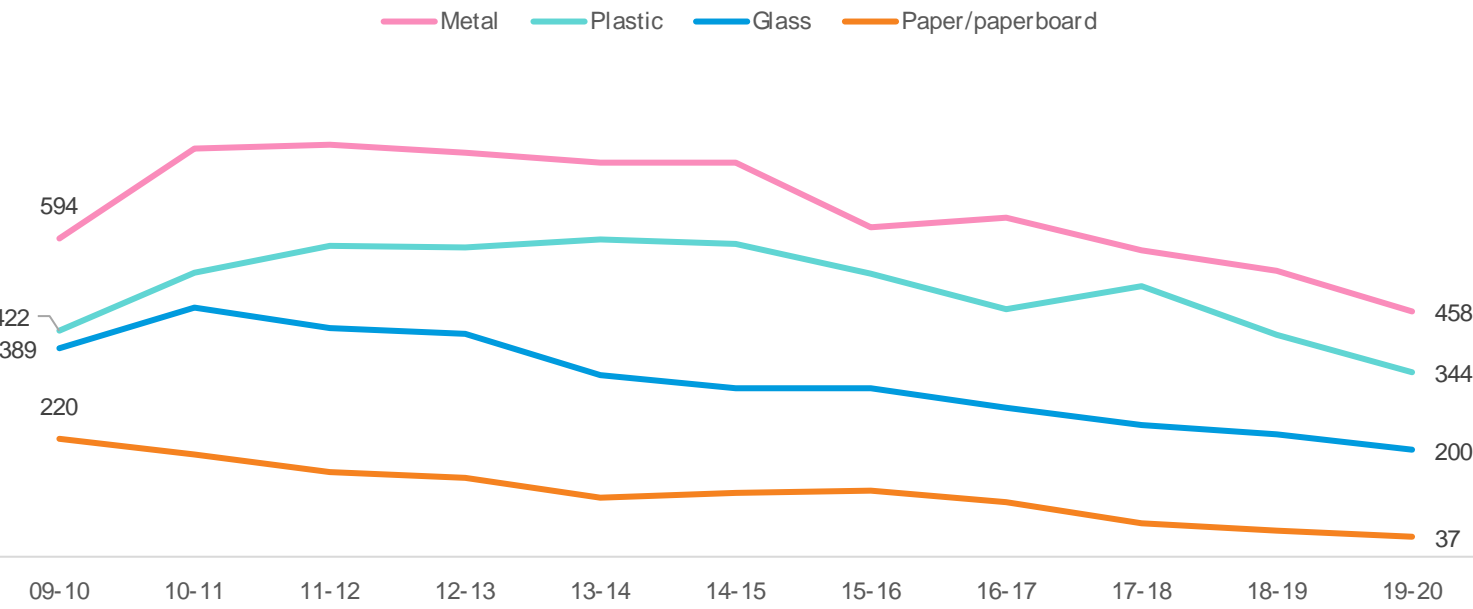
-14%  
Metal

-17%  
Plastic

-13%  
Glass

-24%  
Paper / paperboard

# CDL BEVERAGE CONTAINERS MATERIAL (LITTER ITEMS)



## CDL BEVERAGE CONTAINERS MATERIAL (LITTER ITEMS) BY SITE TYPE

Residential sites, shopping centres and beaches recorded increases across all material types.

Retail sites recorded an increase in glass items.

METAL	Contribution in 19-20	Change from 18-19
Highway	84%	-16%
Industrial	7%	-19%
Residential	3%	82%
Car Park	3%	-31%
Retail	1%	-29%
Shopping Centre	1%	75%
Beach	1%	133%
Recreational Park	0%	0%
<b>Total</b>		<b>-14%</b>

PLASTIC	Contribution in 19-20	Change from 18-19
Highway	83%	-20%
Residential	6%	81%
Industrial	5%	-19%
Car Park	3%	-37%
Shopping Centre	1%	233%
Retail	1%	-42%
Beach	1%	75%
Recreational Park	0%	50%
<b>TOTAL</b>		<b>-17%</b>

GLASS	Contribution in 19-20	Change from 18-19
Highway	78%	-18%
Residential	6%	243%
Car Park	5%	-39%
Retail	5%	80%
Industrial	4%	-33%
Beach	2%	250%
Shopping Centre	1%	100%
Recreational Park	0%	-67%
<b>TOTAL</b>		<b>43%</b>

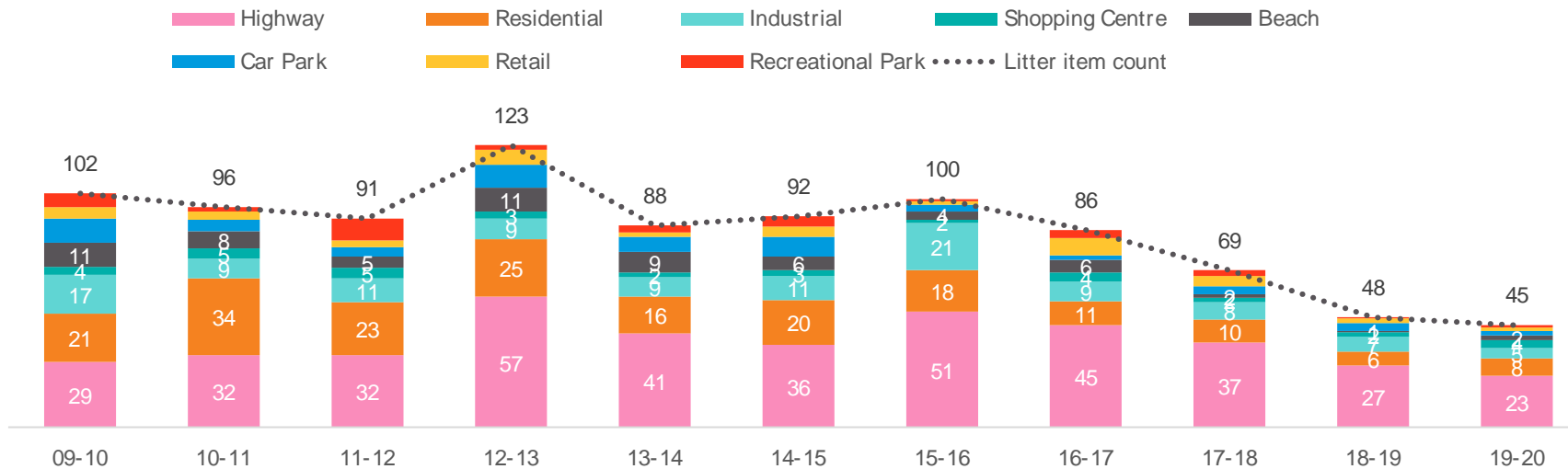


# PLASTIC SHOPPING BAGS

Plastic shopping bags contributed 1% of litter items and decreased by 7.3% this year. The contribution in terms of volume was even lower than items (0.2%).

Highways (51%) was the top contributor followed by residential sites (17%) and industrial sites (10%).

Highways, residential sites and shopping centres had higher contributions to plastic bags compared to overall litter.



Sites contribution



45

(-7.3% decrease)  
litter items in 2019-20

0.2

(-0.01 items)  
items per 1,000m<sup>2</sup>

3 litre

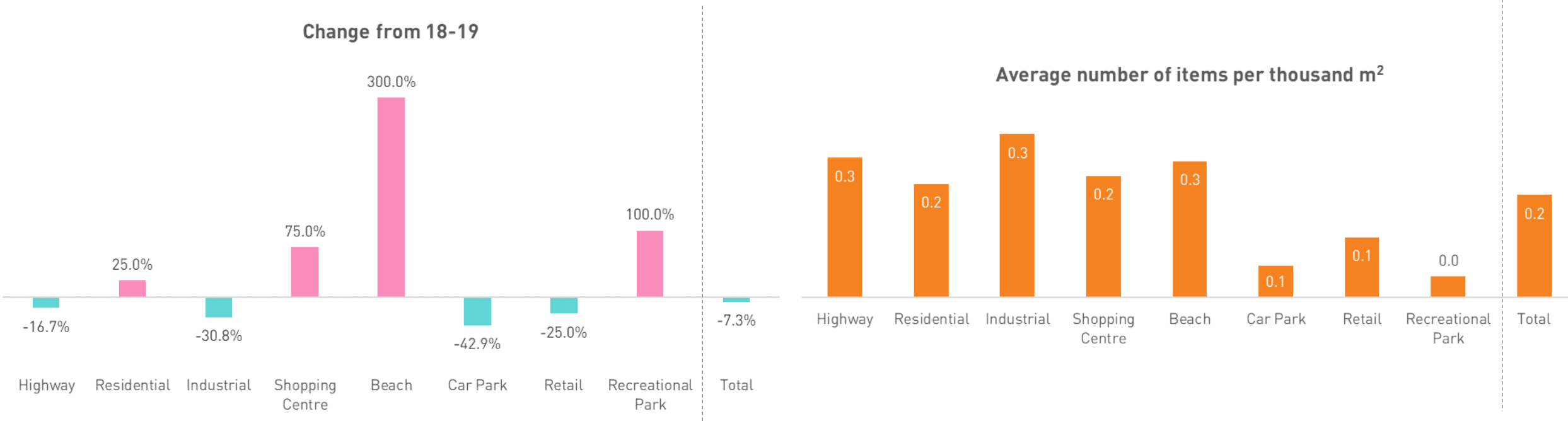
(-2.5% decrease)  
Litter volume in 2019-20

0.01 litre

Volume per 1,000m<sup>2</sup>

# PLASTIC SHOPPING BAGS (LITTER ITEMS)

The fall in the litter items for plastic shopping bags this year was attributed to decreases at highways, however, plastic shopping bags increased at residential sites, shopping centres, beaches and recreational parks.

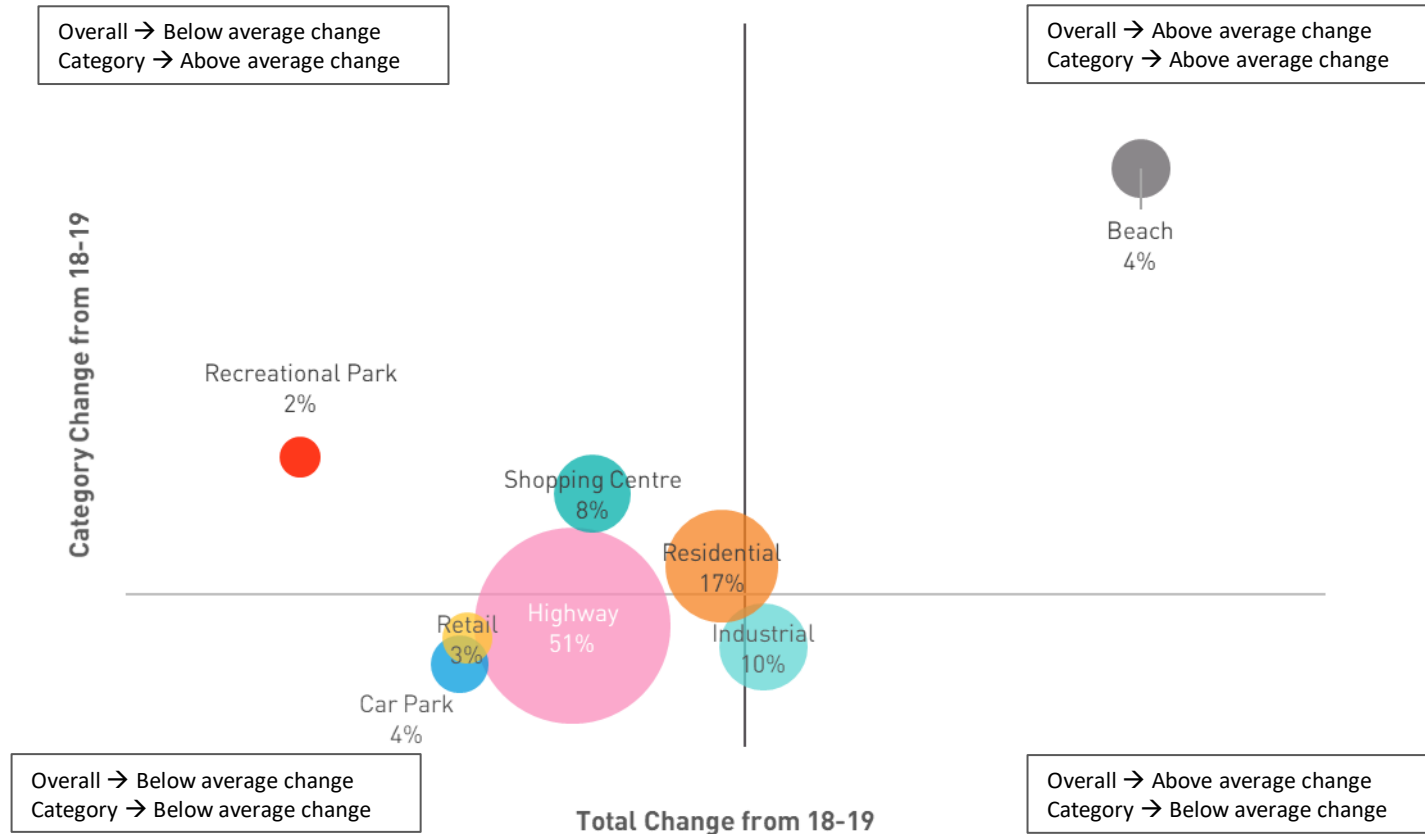
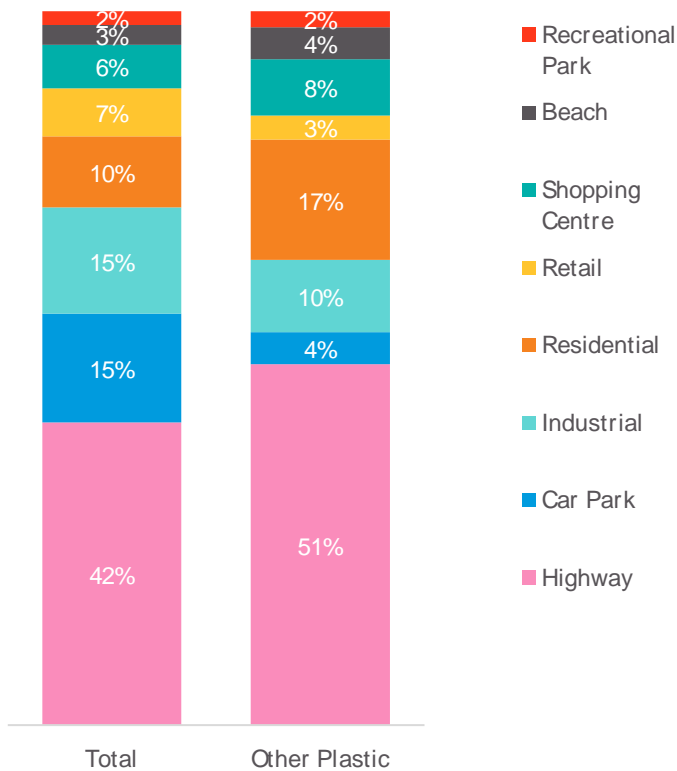


# PLASTIC SHOPPING BAGS (LITTER ITEMS)

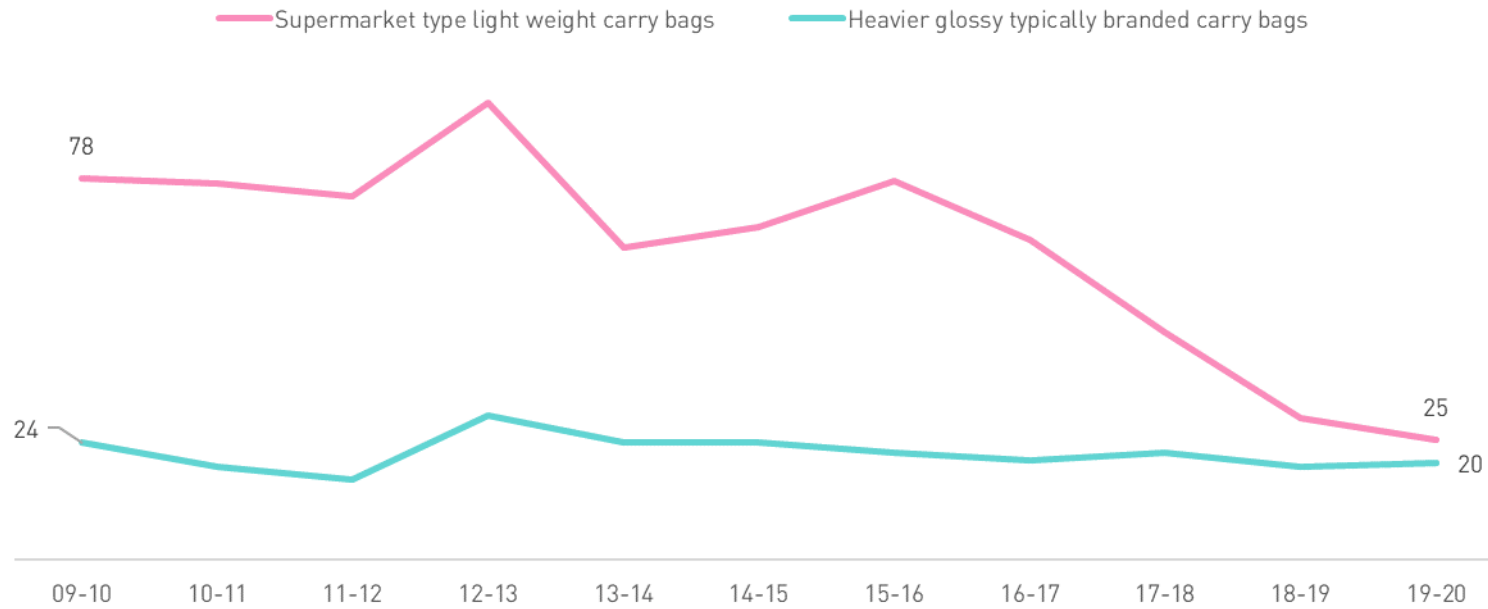
Priority order:

- Residential sites– high contributing, growing faster for the category (25%) compared to the overall litter increase (10%).
- Shopping centres – overall litter decreased (-1.1%) but litter for plastic shopping bags increasing sharply (75.0%).

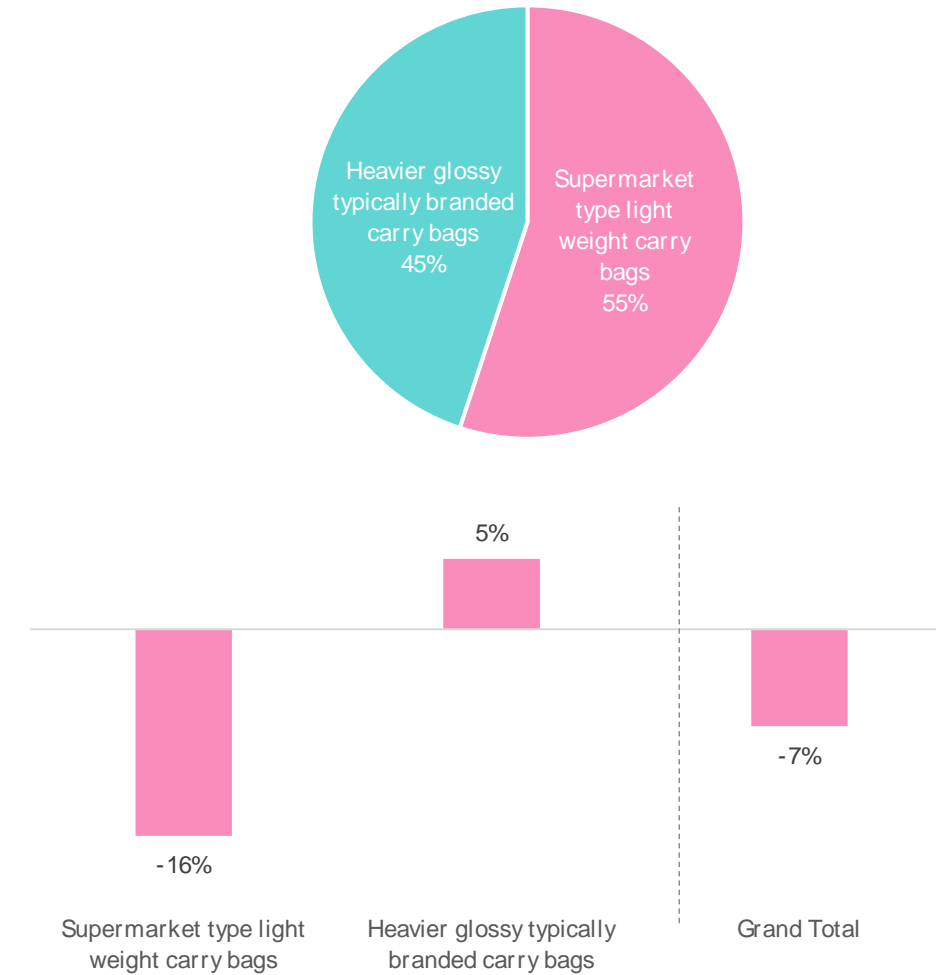
Litter item contribution



# PLASTIC SHOPPING BAGS TYPE (LITTER ITEMS)



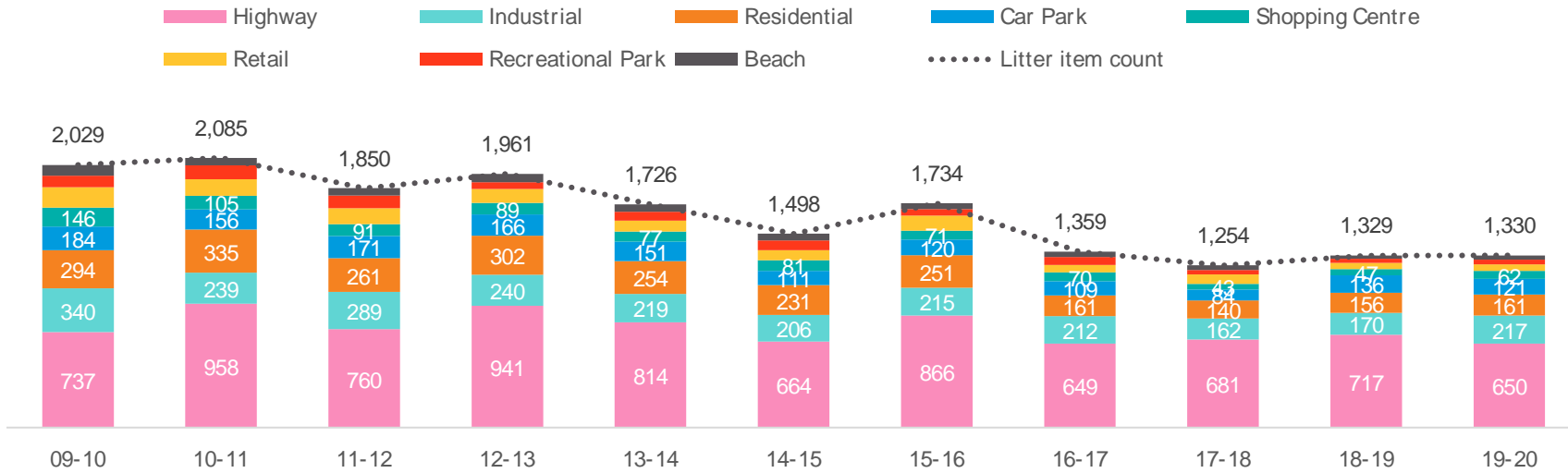
Contribution



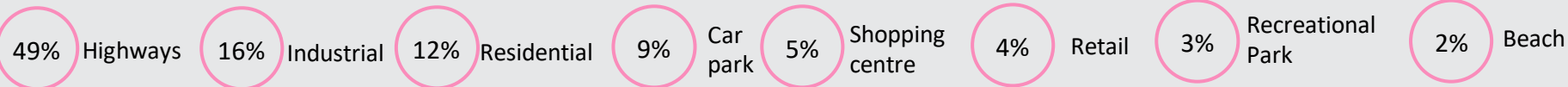
# GENERAL OTHER

Other general litter items contributed 15% of litter and remained at a similar level to last year. The contribution in terms of volume was slightly higher at 24% and decreased by 6.7% in 2019-20.

Highways (49%) alone contributed to half the litter items followed by industrial sites (16%) and residential sites (12%).



## Sites contribution



1,330

(+0.1% increase)  
litter items in 2019-20

5.6

(+0.01 items)  
items per 1,000m<sup>2</sup>

332 litre

(-6.7% decrease)  
Litter volume in 2019-20

1.4 litre

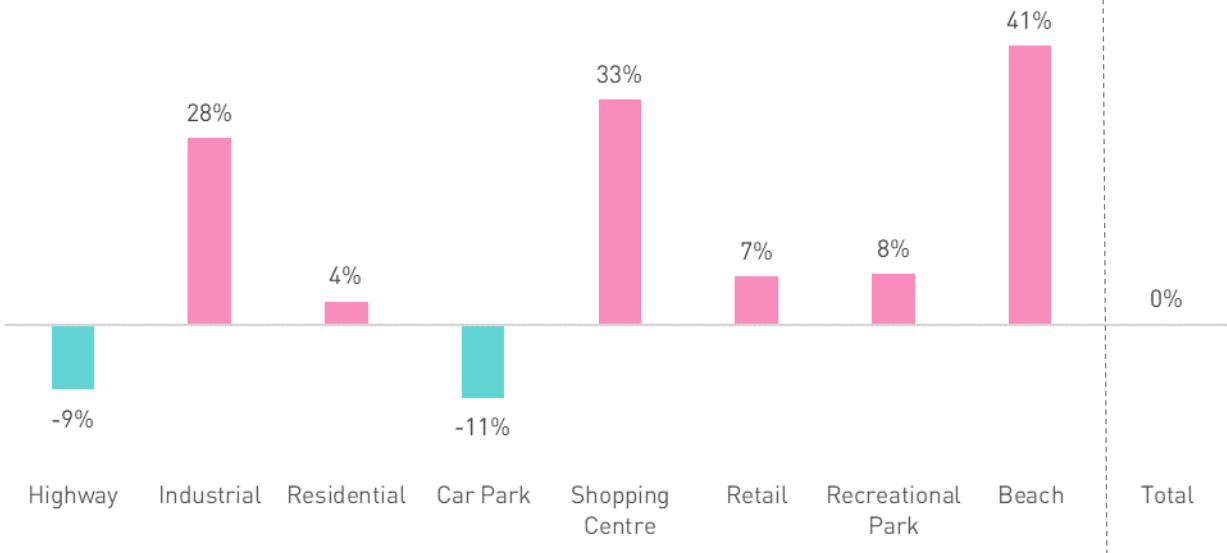
(-0.1 litre)  
Volume per 1,000m<sup>2</sup>

## GENERAL OTHER (LITTER ITEMS)

Highways and car parks are the only sites that experienced a decrease in other general litter items while increases were associated with all other site types.

Industrial sites recorded the highest number of litter items per thousand metre square.

Change from 18-19



Average number of items per thousand m<sup>2</sup>

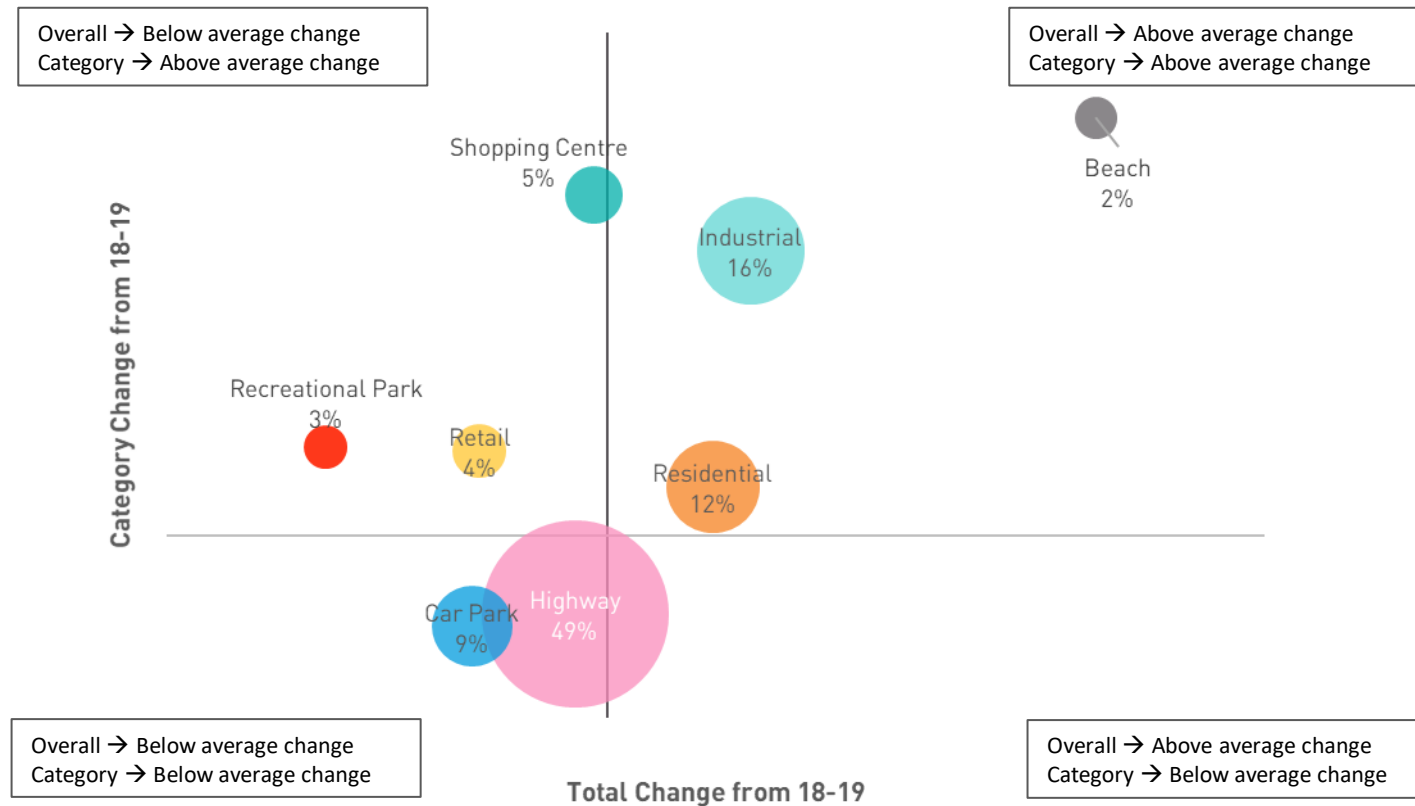
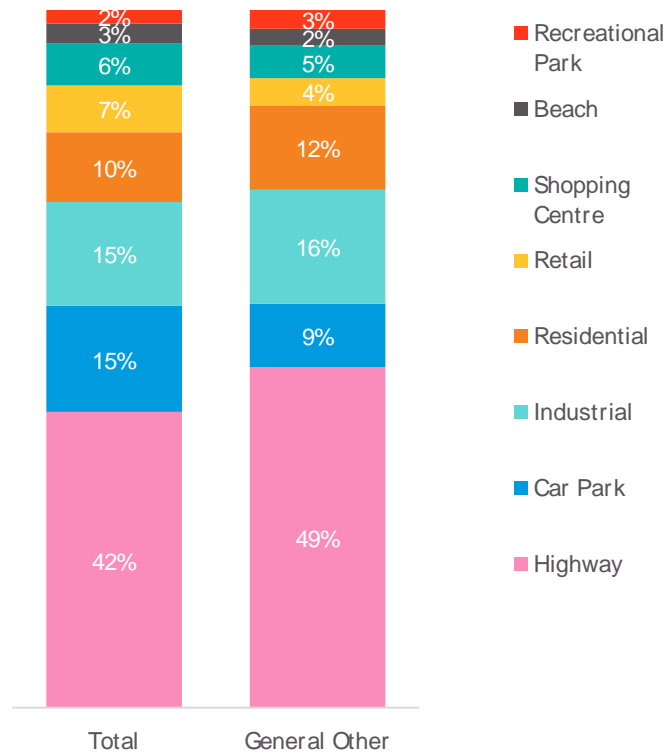


# GENERAL OTHER (LITTER ITEMS)

Priority order:

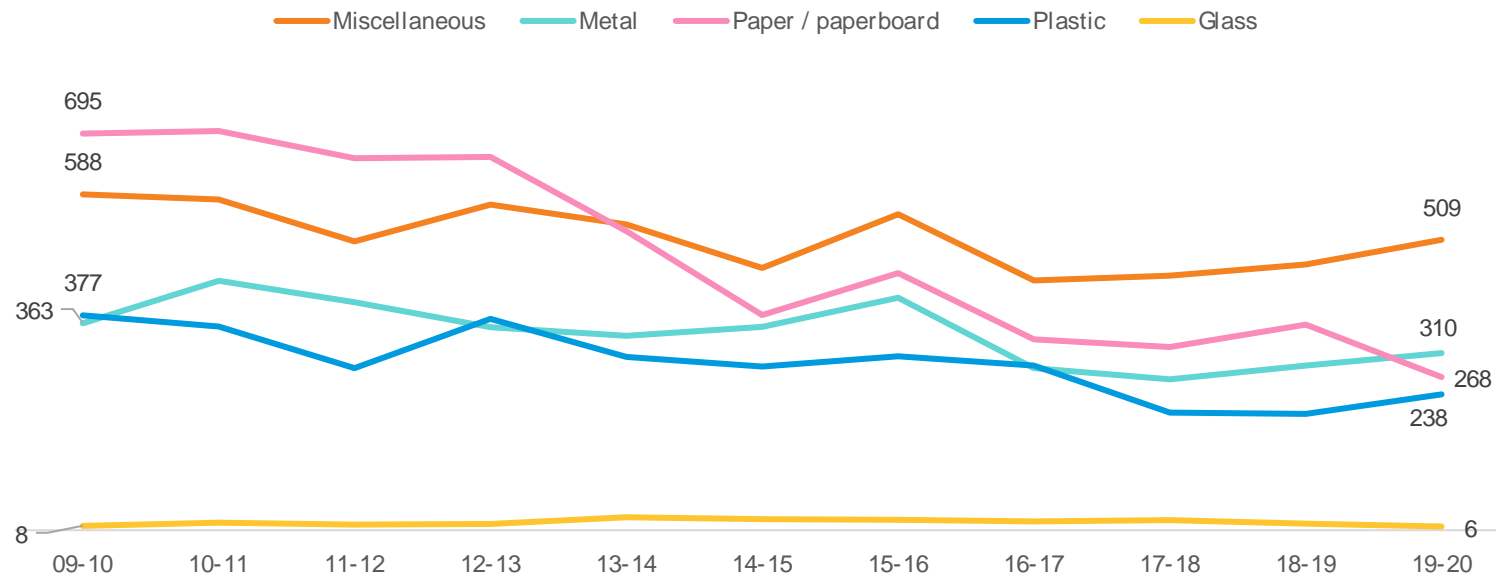
- Industrial sites – high contributing, growing faster for the category (27.7%) compared to overall litter increases at industrial sites (13.1%).
- Residential sites – high contribution, fast growth
- Shopping centres, recreational parks and retail strips – moderate contribution, growing fast while overall litter dropping

Litter item contribution

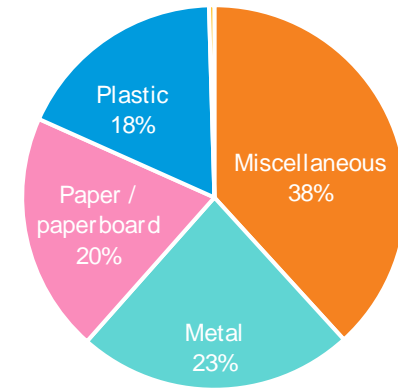


# GENERAL OTHER MATERIAL (LITTER ITEMS)

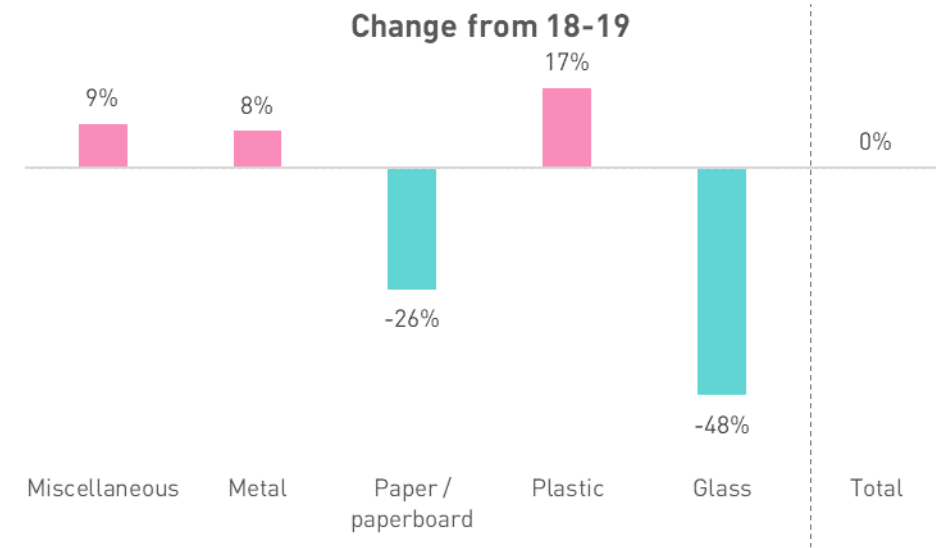
Litter items increased across material types except only paper / paperboard.



Contribution



Change from 18-19





## GENERAL OTHER MATERIAL - (LITTER ITEMS)

Metal and plastic items increase was attributed to the increase at highways and industrial sites.

While paper litter dropped at an overall level, there was an increase in the litter items at residential sites, shopping centres and industrial sites.

PAPER / PAPERBOARD	Contribution in 19-20	Change from 18-19
Highway	40%	-46%
Residential	17%	18%
Shopping Centre	12%	24%
Industrial	11%	49%
Car Park	10%	-53%
Retail	8%	33%
Beach	2%	200%
Recreational Park	1%	-44%
<b>TOTAL</b>		<b>-26%</b>

METAL	Contribution in 19-20	Change from 18-19
Highway	44%	6%
Industrial	22%	42%
Residential	12%	-11%
Car Park	11%	-3%
Recreational Park	4%	20%
Shopping Centre	3%	0%
Retail	3%	-21%
Beach	1%	0%
<b>TOTAL</b>		<b>8%</b>

PLASTIC	Contribution in 19-20	Change from 18-19
Highway	51%	16%
Industrial	23%	27%
Residential	10%	-14%
Car Park	6%	108%
Beach	3%	-18%
Recreational Park	3%	44%
Retail	3%	-8%
Shopping Centre	2%	120%
<b>TOTAL</b>		<b>17%</b>

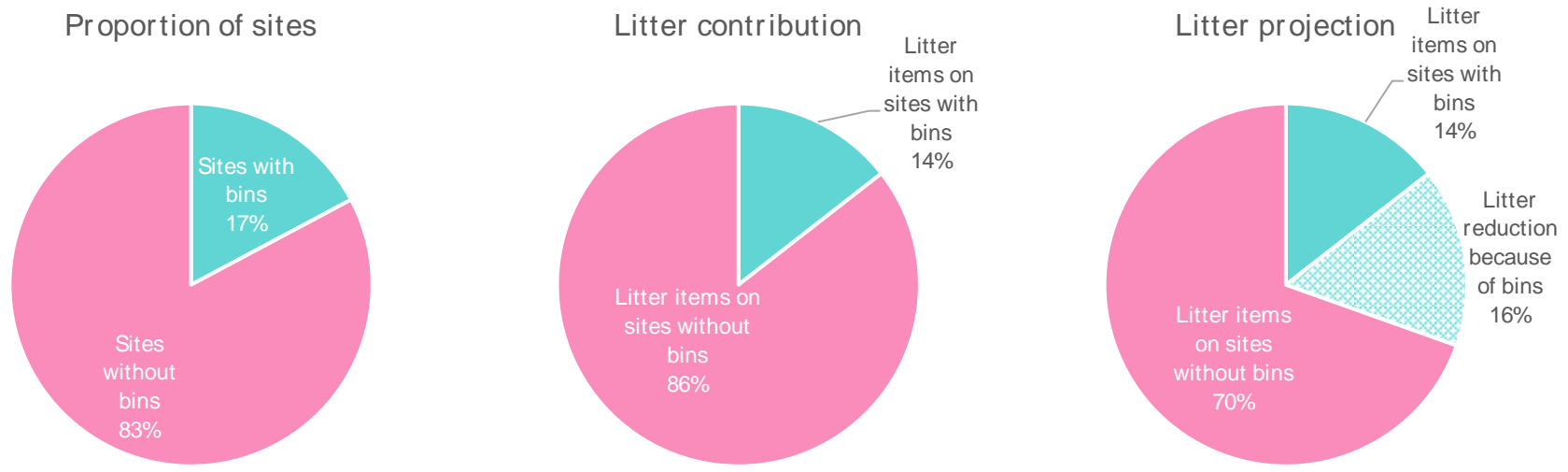


# ADDITIONAL ANALYSIS

# LITTER BINS

83% of the total sites audited were without bins and contributed 86% of litter items in 2019-20.

Assuming the same proportion of litter as on the sites with bins, potentially if all the sites were equipped with bins then total litter items would be 16% less than their current level.



17%

Sites with bins

14%

Contribution to litter from sites with bins

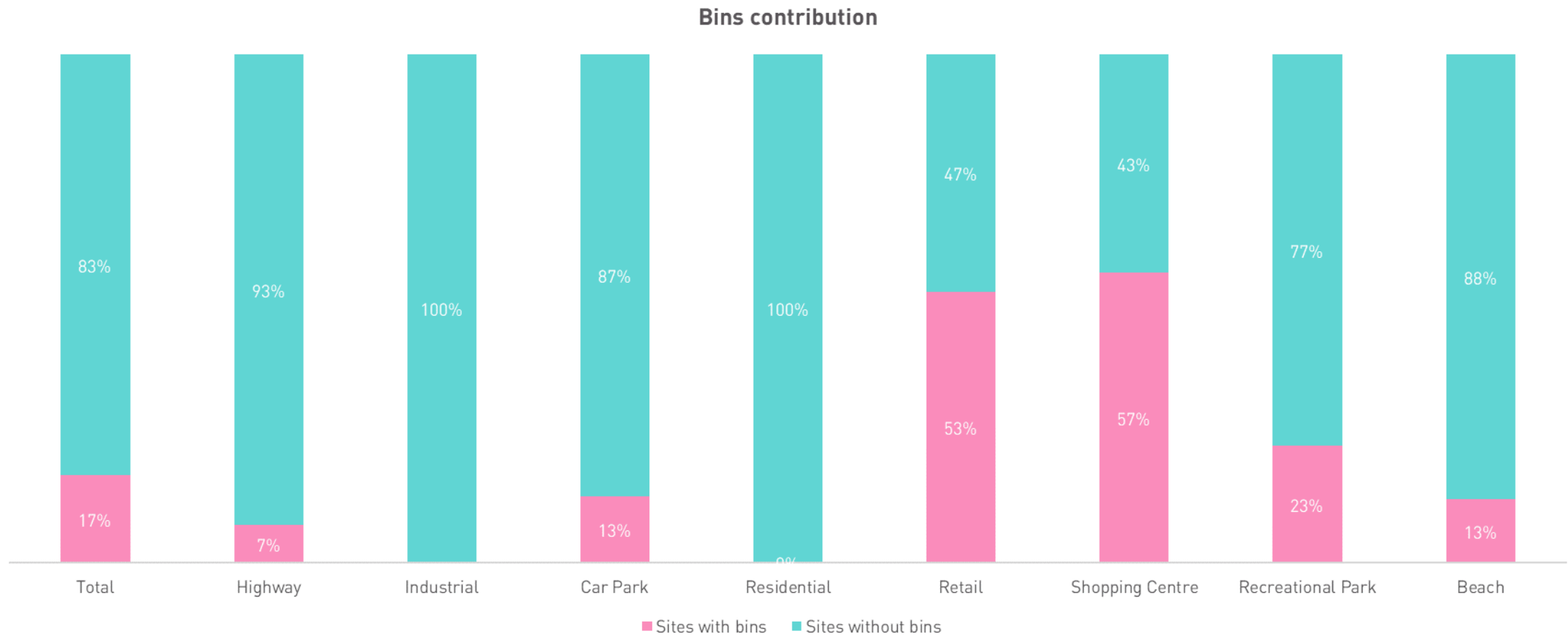
87%

Car parks without bins

88%

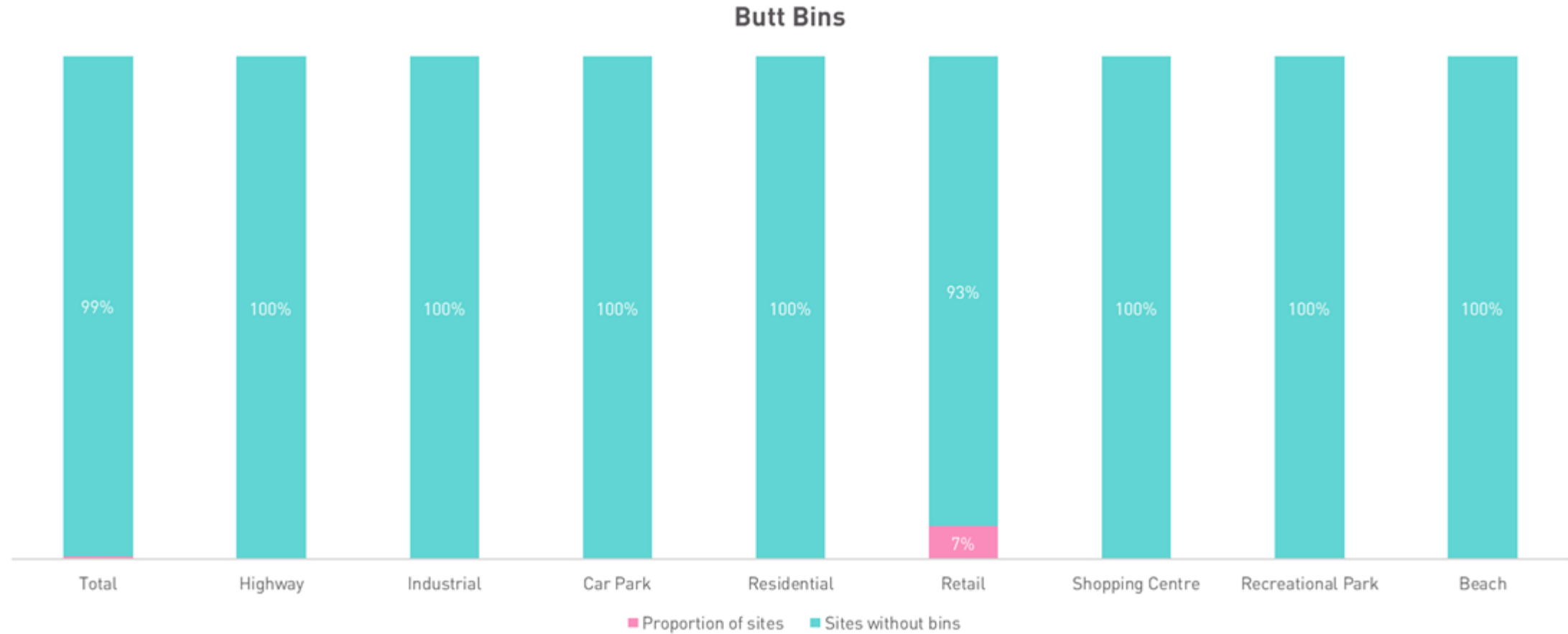
Beaches without bins

# LITTER BINS BY SITE TYPE



# CIGARETTES BUTT BINS

Only 1% of the sites recorded butt bins in WA – observed only at retail strips

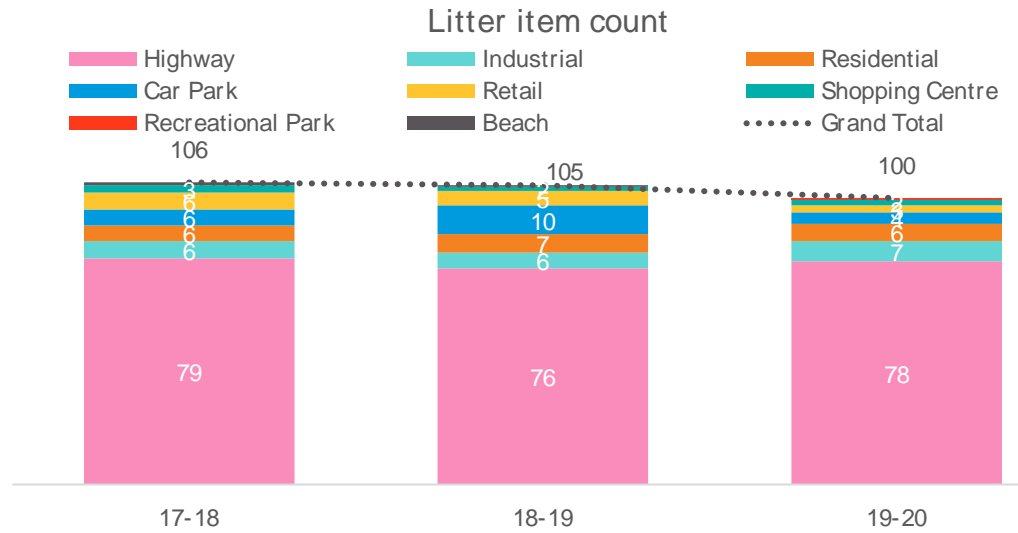


# COFFEE CUPS

The total litter for coffee cups contributed 1% of litter items and decreased in 2019-20 by 4.3%.

Highways contributed to most of the litter items for coffee cups and increased by 3.3% this year.

The decrease in litter items at an overall level was attributed to the decrease at residential sites, car parks and retail strips and beaches.



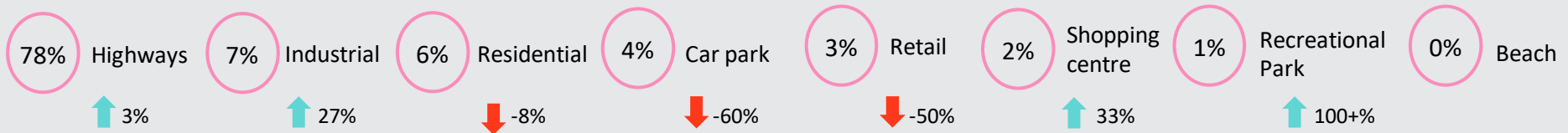
100  
litter items in 2019-20

-4%  
Decrease from 2018-19

49 litre  
Volume of litter in 2019-20

Highways  
Key contributor

Sites contribution & change from last year (2019-20 over 2018-19)



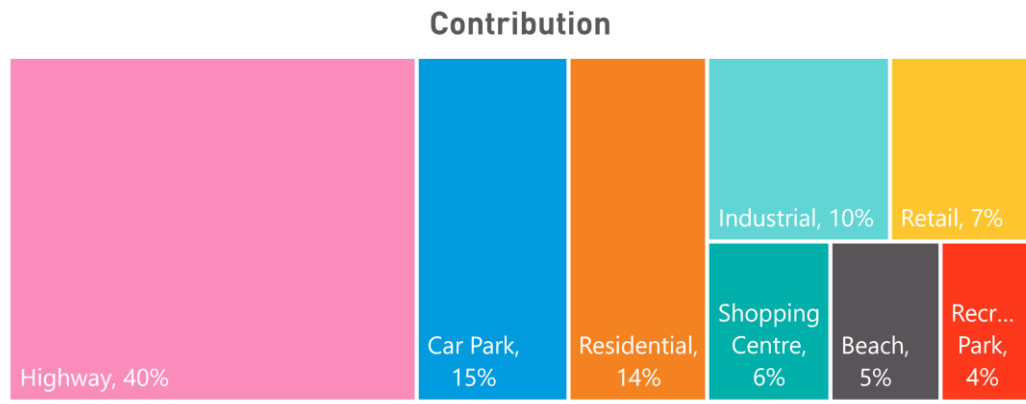
+3%  
Increase at highways

# SINGLE USE PLASTIC

Single use plastic contributed 7% of the overall litter and decreased by 8.2% in 2019-20. There has been a continuous decline in the single use plastic litter items over the last 10 years.

Highways (40%) had the highest contribution towards litter for single use plastics and recorded a decrease of only -0.8%.

While overall litter for single use plastics has decreased this year, it recorded high growth at shopping centres and beaches which together account for 11% of the single use plastic litter.



591

litter items in 2019-20

-8%

Decrease from 2018-19

-1%

Highways

-9%

Car park

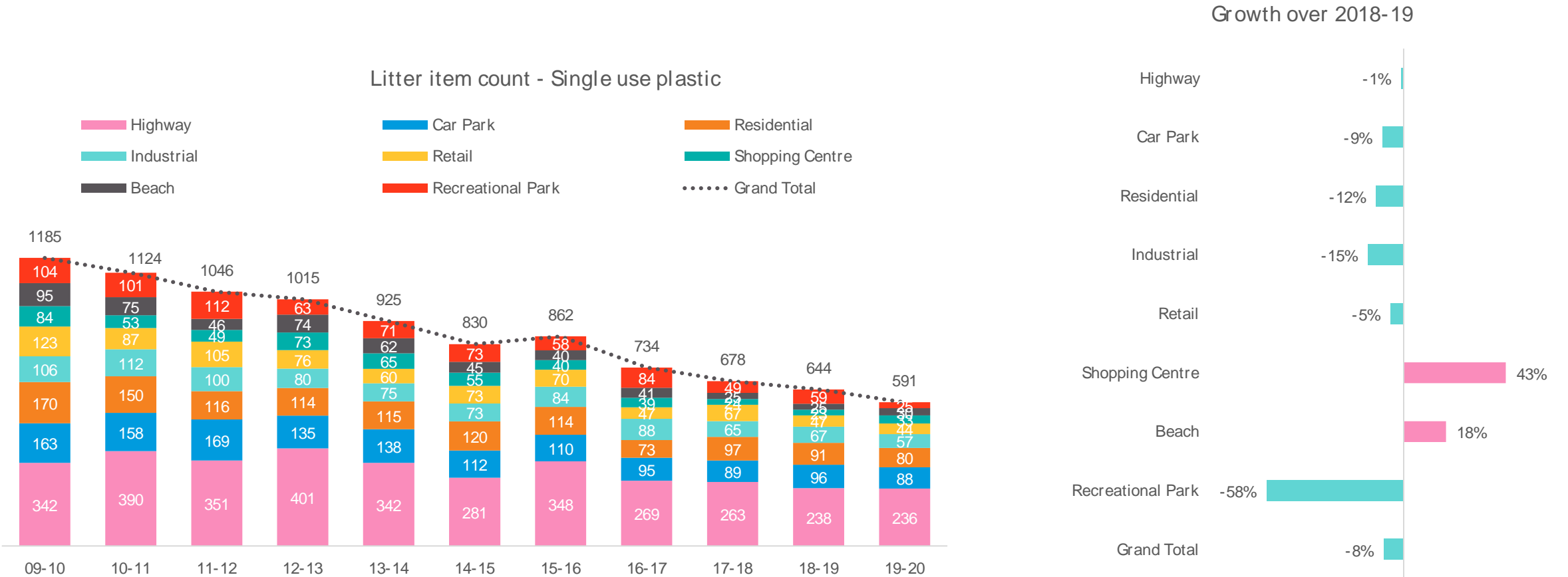
+43%

Shopping centre

+18%

Beach

# SINGLE USE PLASTIC BY SITE TYPE



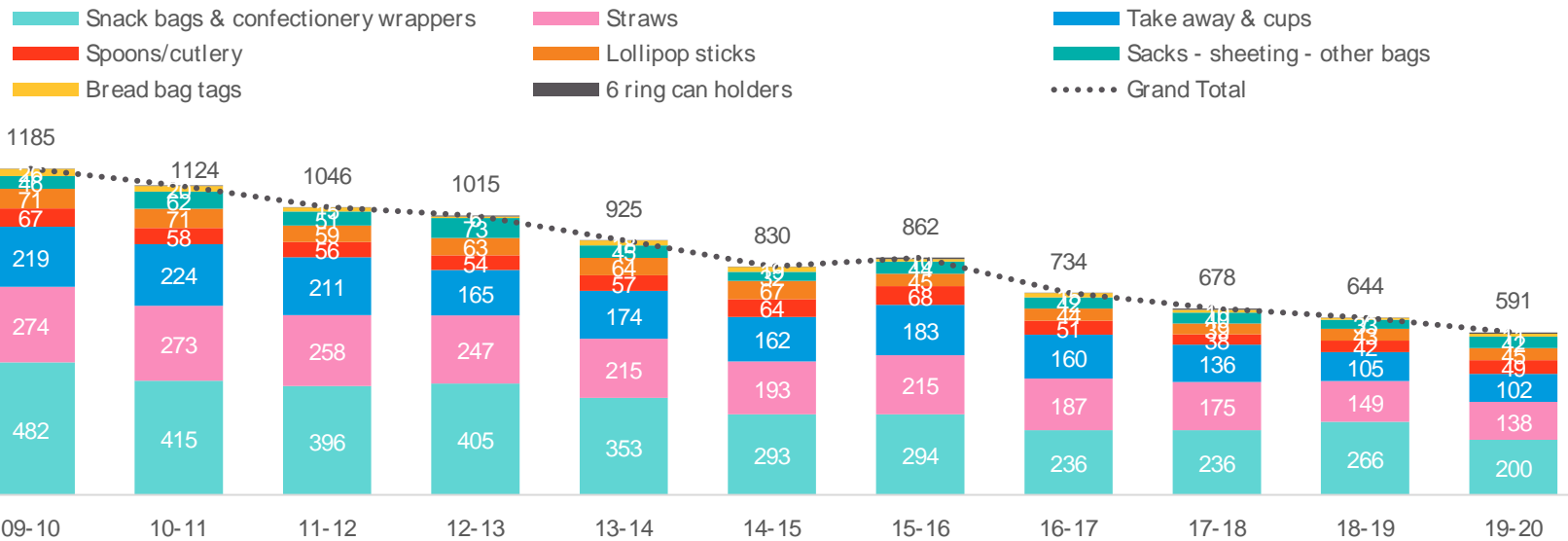


# SINGLE USE PLASTIC – ITEM TYPE

Snack bags and confectionery wrappers (34%) contributed to more than one third of the litter for single use plastics followed by straws (23%) and takeaway and cups (17%).

While there was a fall in the number of single use plastic litter items at an overall level for the key contributing item types, there was an increase recorded for spoons & cutlery and sacks – sheeting other bags, lollipop sticks and bread bag tags.

Litter item count - Single use plastic



-25%

Snack bags & confectionery wrappers

-7%

Straws

-3%

Takeaway & cups

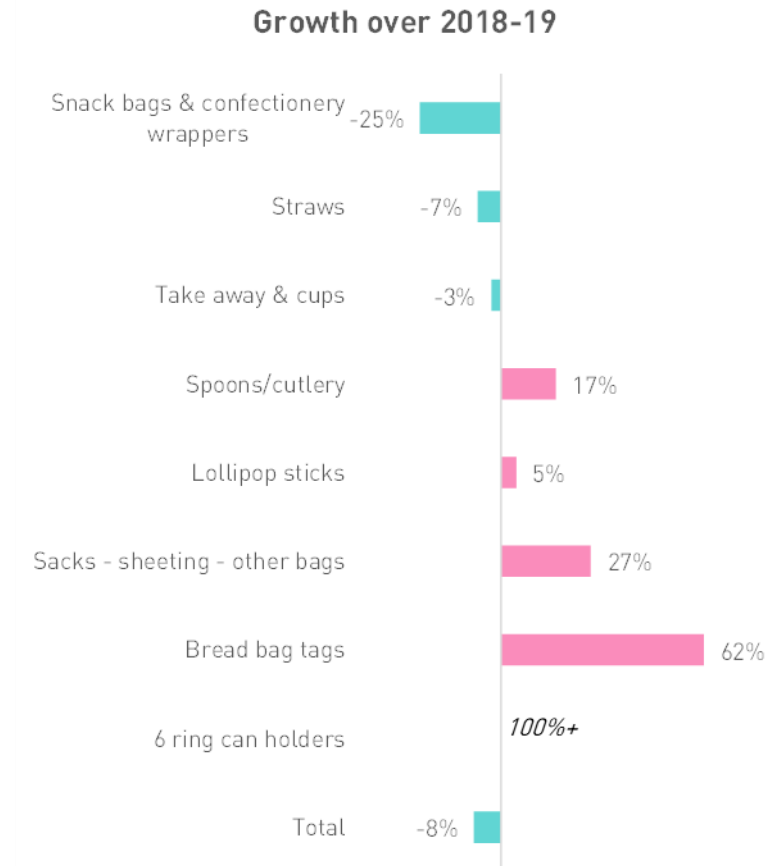
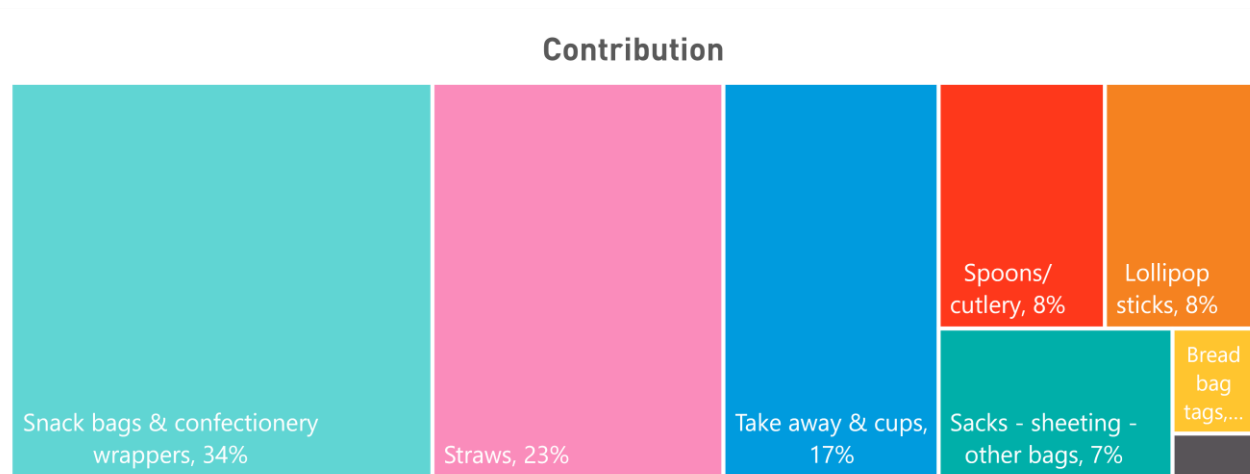
+17%

Spoons and cutlery

+27%

Sacks – sheeting and other bags

# SINGLE USE PLASTIC BY TYPE OF ITEM



# ILLEGAL DUMPING

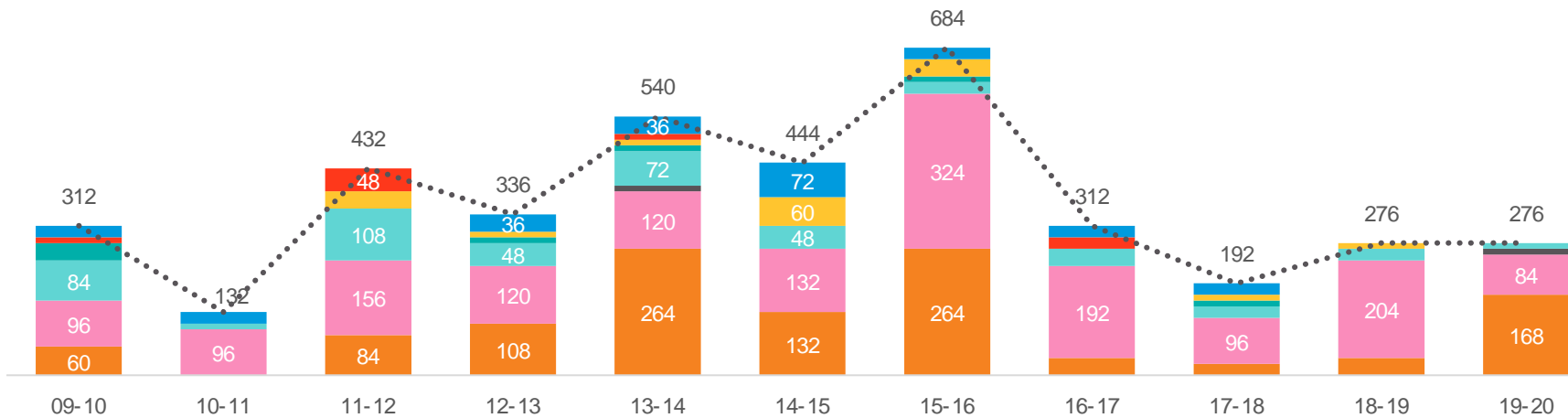
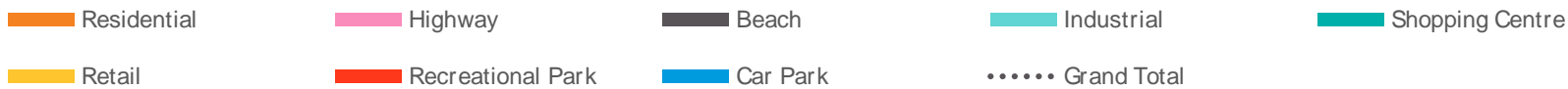
Illegal dumping remained static this year and recorded no change in terms of both litter items and volume.

However, the key sites recording illegal dumping changed from highways in 2018-19 to residential sites in 2019-20.

Contribution



Volume - Illegal dumping



12

litter items in 2019-20

276 litre

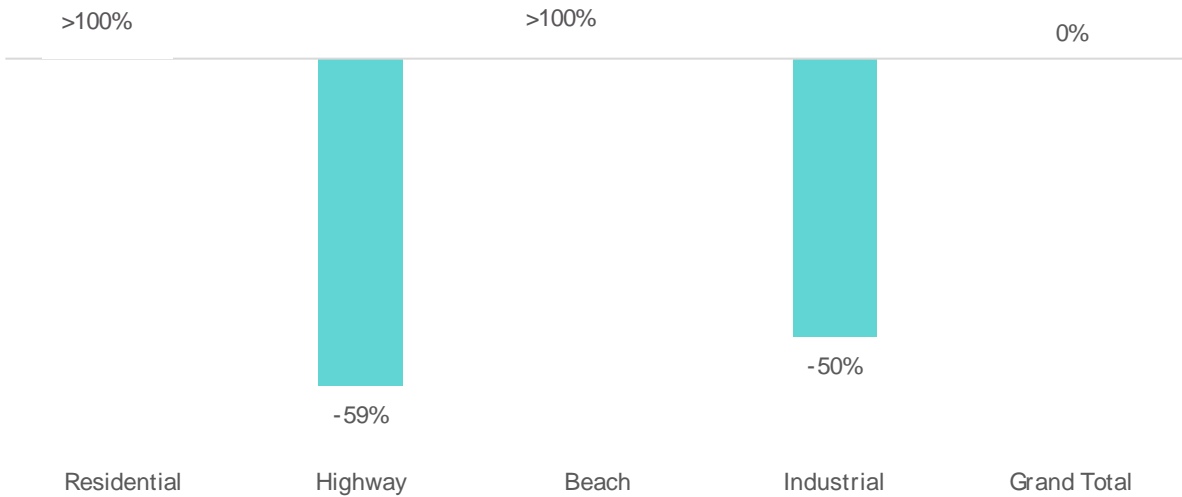
Litter volume in 2019-20

1.2 litre

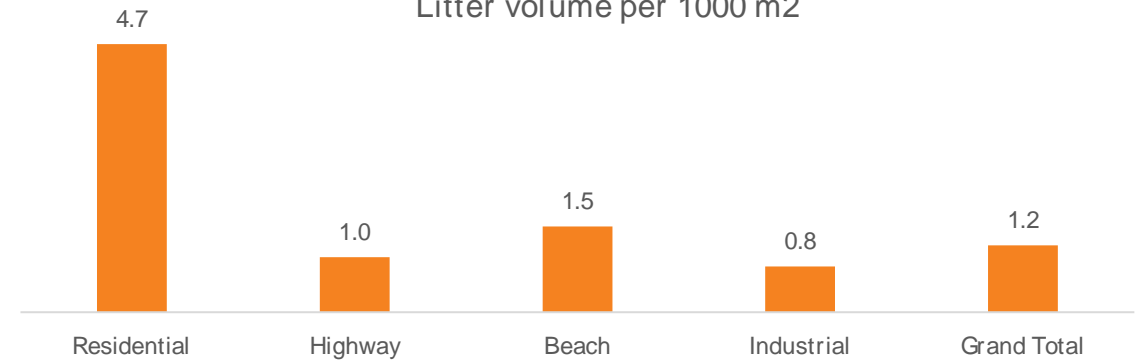
Volume per 1,000m<sup>2</sup>

# ILLEGAL DUMPING

Growth over 2018-19

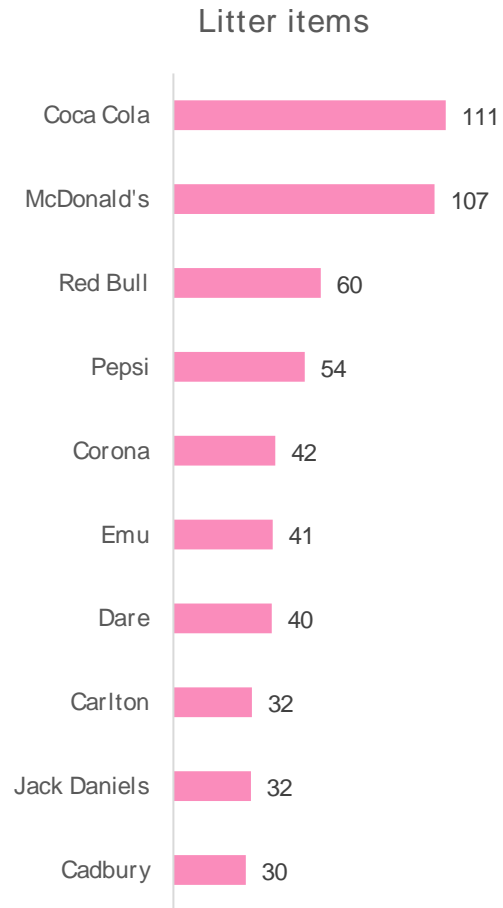
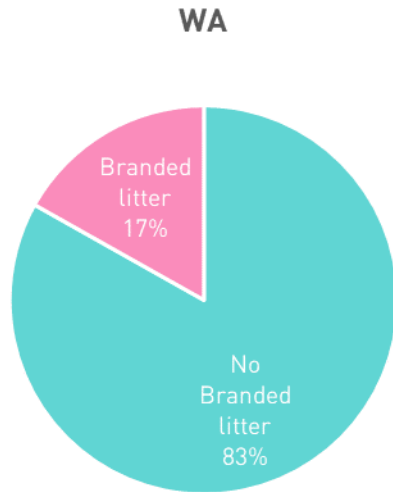


Litter volume per 1000 m2



## BRANDS RESPONSIBLE FOR LITTER

17% of litter is branded, with Coca Cola and McDonalds contributing the most to branded litter items in WA.



Coca Cola

McDonalds

Red bull

Pepsi

Corona

Emu

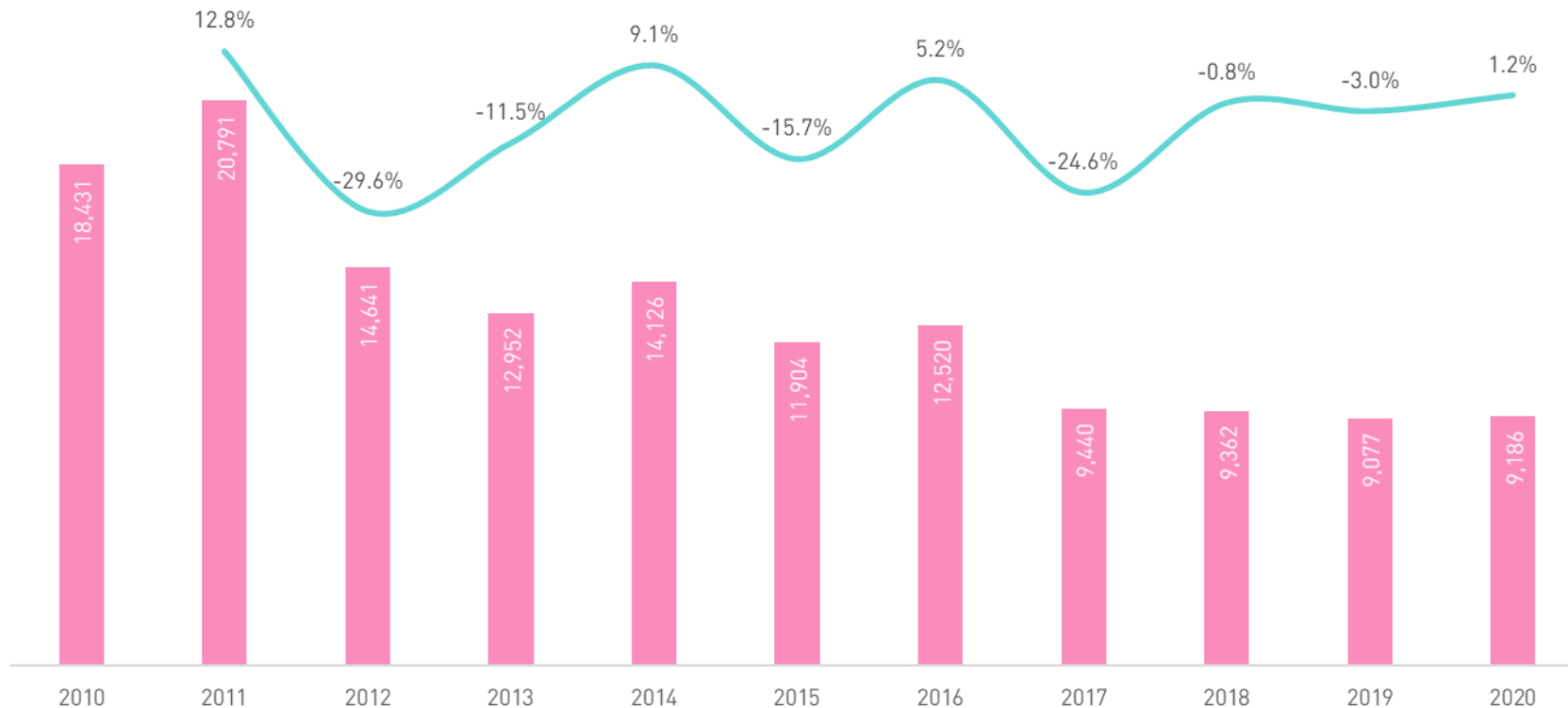


# IMPACT OF COVID (MAY DATA)

## LITTER ITEMS (MAY)

While overall litter items in WA increased during May 2020 compared to May 2019, there was a decrease in the items recorded at shopping centres, car parks and recreational parks.

All other sites recorded an increase in the litter items during May 2020.



KAB | NLI 2019-2020 - WA

6.4%

Highways

13.8%

Retail

7.2%

Residential

-27.3%

Shopping centre

2.7%

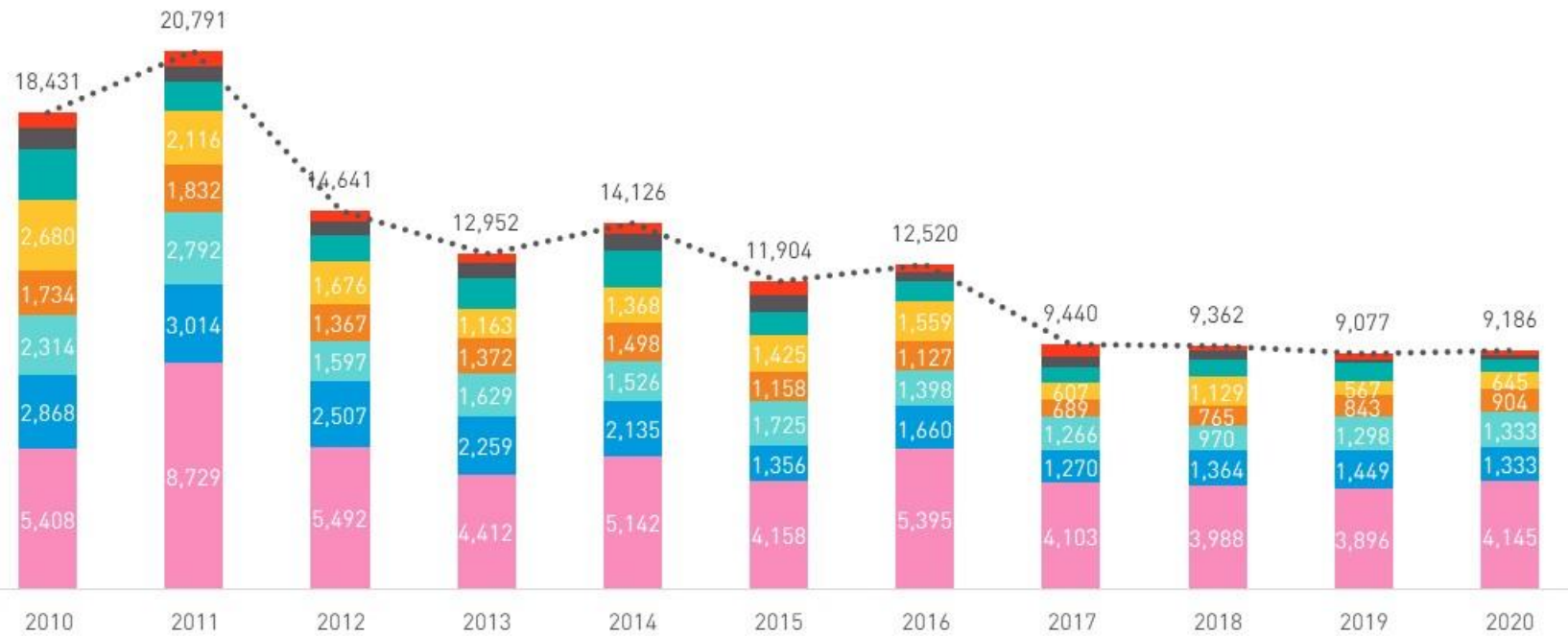
Industrial

-8.0%

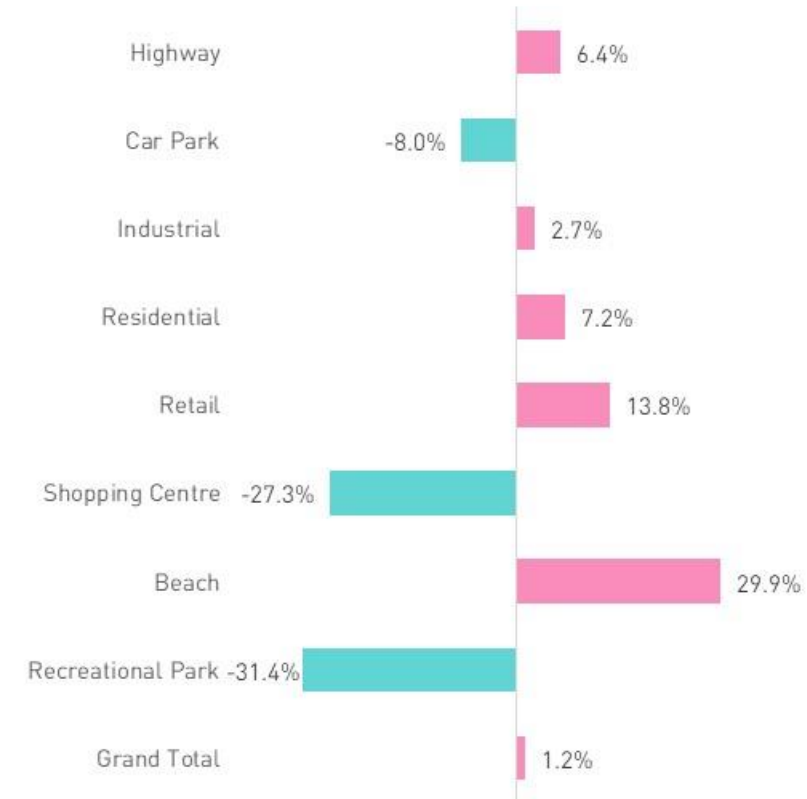
Car park

# LITTER ITEMS (MAY)

Litter items by site types



Change from May 2019

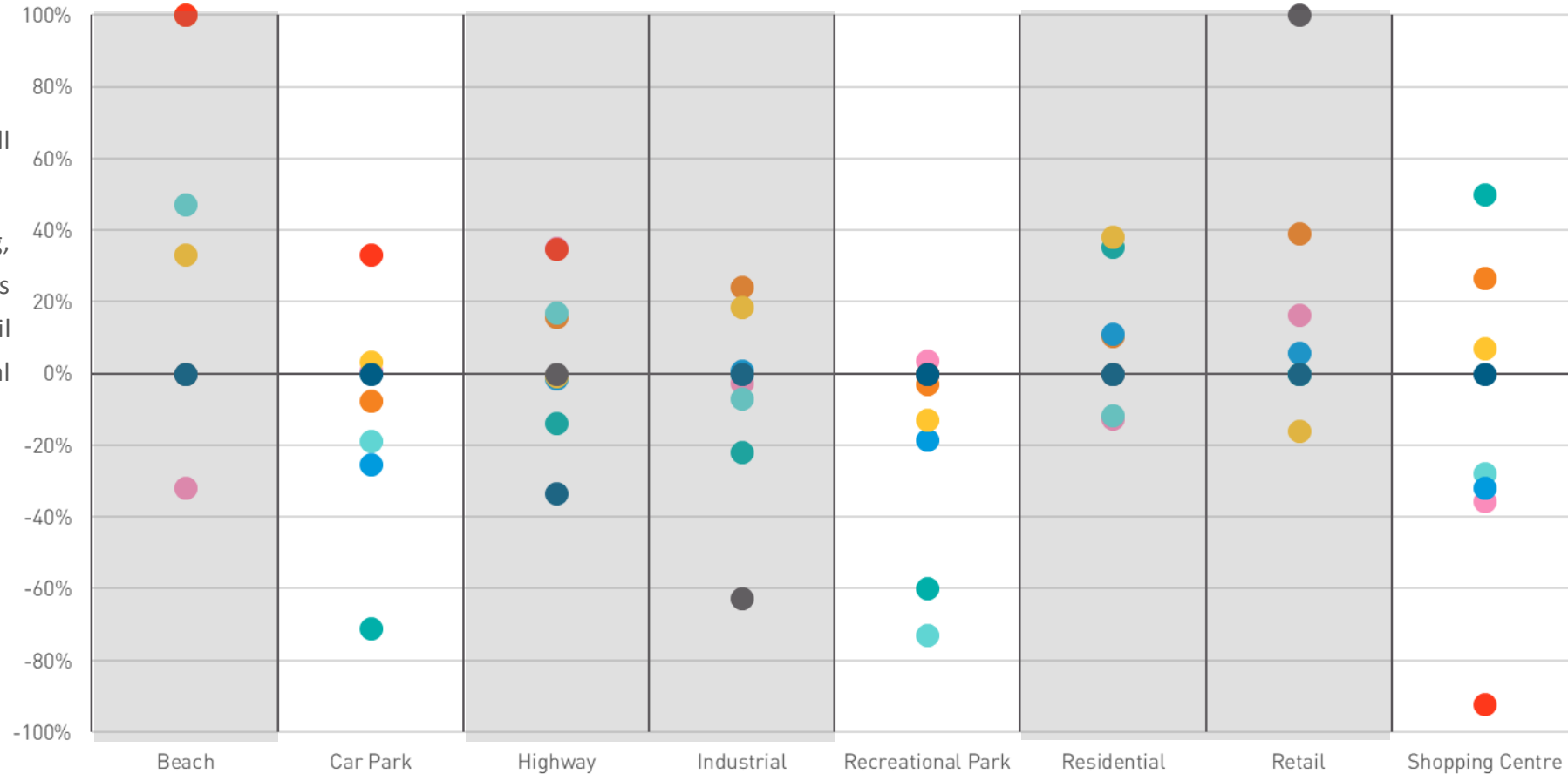




# LITTER ITEMS (MAY)

Change from May 2019

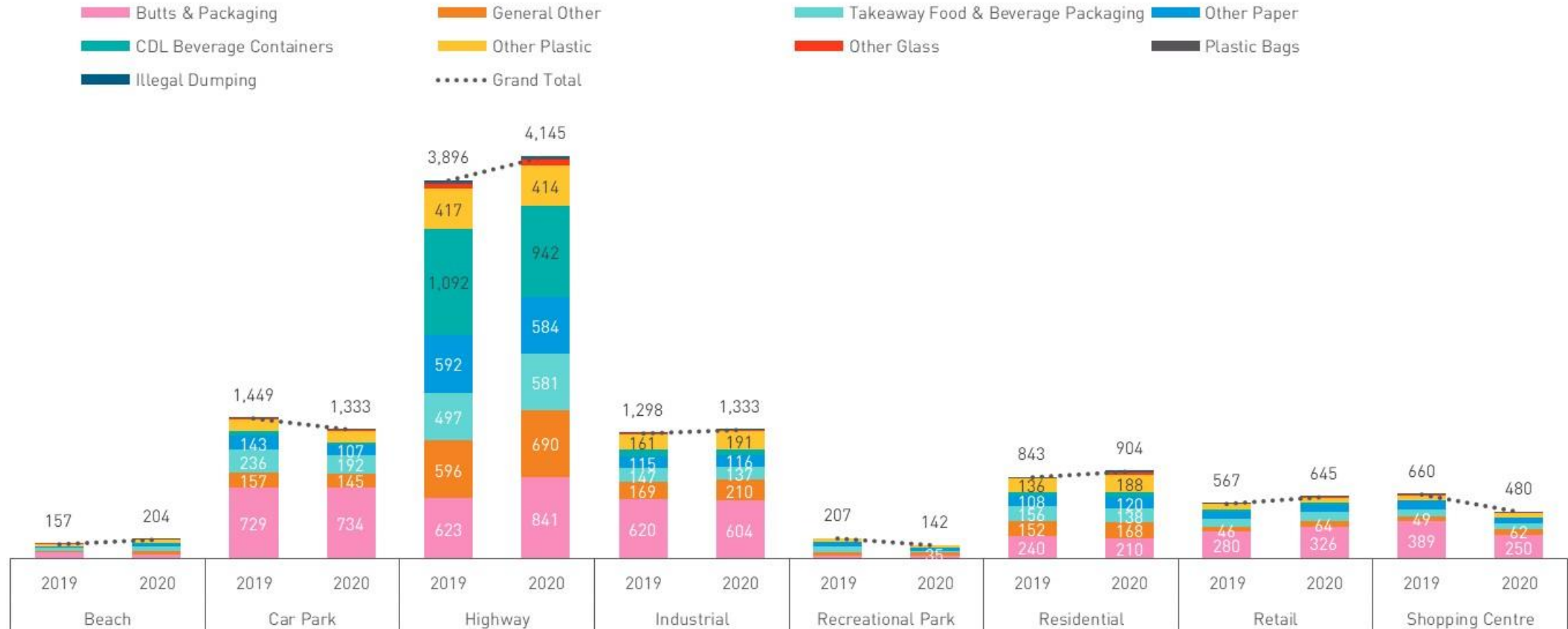
- Butts & Packaging
- Other Paper
- Other Glass
- General Other
- CDL Beverage Containers
- Plastic Bags
- Takeaway Food & Beverage Packaging
- Other Plastic
- Illegal Dumping



Beaches recorded an increase across all categories except butts & packaging.

Highways increased in butts & packaging, takeaway and general other litter items while increases at industrial sites, retail strips and residential sites were in general other litter and paper items.

# LITTER ITEMS (MAY)



MCGREGOR **TAN**  
RESEARCH. STRATEGY. SOLUTIONS.

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THANK YOU