

---

# LITTER COMPOSITION ANALYSIS

## Summary Report

---

March 2020

Defra research reference EQ0121



# CONTENTS

<b>1. Introduction</b>	<b>3</b>
<b>1.1 Research objectives</b>	<b>4</b>
<b>2. Methodology</b>	<b>4</b>
<b>2.1 Survey methodology</b>	<b>4</b>
<b>2.2 Sampling methodology</b>	<b>5</b>
<b>2.3 Sample profile</b>	<b>6</b>
<b>2.4 Considerations and limitations</b>	<b>7</b>
<b>3. Results</b>	<b>8</b>
<b>3.1 General Findings</b>	<b>8</b>
3.1.1 LEQSE grade	8
3.1.2 Counts of litter	10
3.1.3 Litter and other indicators of LEQ	14
<b>3.2 Objective 1: Types and brands of litter</b>	<b>16</b>
3.2.1 Litter Types	16
3.2.2 Brand specific litter	17
<b>3.3 Objective 2: Binned waste versus dropped litter</b>	<b>19</b>
3.3.1 Binned waste	19
3.3.2 Binned versus littered	21
3.3.3 The effect of bin presence on dropped litter	22
3.3.4 Bins present at survey sites	23
<b>3.4 Objective 3: The impact of public recycling bins in reducing litter</b>	<b>24</b>
<b>4. Conclusion</b>	<b>26</b>
<b>Appendix A – LEQSE Land Use Types</b>	<b>28</b>
<b>Appendix B – Litter and Waste Categories</b>	<b>32</b>
<b>Appendix C – Full results</b>	<b>38</b>
<b>LEQSE Grades - % of sites at each grade</b>	<b>38</b>
<b>Litter/binned waste item type – by count</b>	<b>38</b>
<b>Litter/ binned waste item type – by volume</b>	<b>39</b>
<b>Litter versus binned waste (at sites with bins present only)</b>	<b>41</b>
<b>Litter and binned waste counts by brand</b>	<b>43</b>
<b>Appendix D – Volume-per-item model</b>	<b>58</b>

## KEY FINDINGS

1. Cigarette butts make up the vast majority of litter items (66%) when examining litter in terms of their numbers, but only 0.2% of overall litter volume.<sup>1</sup> A very different picture emerges when looking at the volume of litter, where small plastic bottles and non-alcoholic cans together make up 43% of the volume of all litter, while only comprising 3% of the litter item count.
2. The brand items that make up the greatest proportion of litter in terms of total count are large household names, with McDonald's emerging most frequently, followed by Coca-Cola, and Wrigley's Extra chewing gum packaging.
3. Congruent with evidence from previous research, this survey identifies a correlation between deprivation and levels of litter. There were more than three times as many litter items found per site, on average, in the 10% most deprived areas as compared to the 10% most affluent areas (42.6 to 12.4), and the 20% most deprived areas contained seven times as many small non-alcoholic plastic bottles as compared to the 20% most affluent.
4. The overall environmental quality of a site was clearly interrelated with levels of litter – sites with higher levels of graffiti, staining, and flyposting also had more litter present. However, this doesn't extend to the natural local environmental quality (LEQ) factors such as recent leaf and blossom fall and detritus. Overall, there are lower levels of litter in areas with more green space and trees, which also tend to be more affluent areas.
5. A notable feature of the litter items that are most likely to be dropped as opposed to binned is, perhaps unsurprisingly, that they are smaller, more discrete items. These include cigarette stubs and chewing gum packaging, which as well as being consumed frequently on the go, have much less stigma attached to their being littered than more conspicuous items.

---

<sup>1</sup> In this report, 'volume' is measured in litres.

# 1. Introduction

This report outlines the findings of the national survey undertaken by Keep Britain Tidy, in partnership with Defra, to understand litter composition across the UK, including an examination of the composition of dropped versus binned litter and brands of litter items. Through doing this, the intention is to add to existing data on litter composition and provide a greater depth of insight specifically into litter types and brands. There is a current lack of empirical research that has examined, to this extent, the state of litter both on the ground and in public waste bins across the country, and this research aims to narrow this gap in our knowledge, therefore enabling strategies and policies to tackle litter nationally (particularly Extended Producer Responsibility) and, more generally, inform waste management.

Tackling litter is a priority for the public and for local government: in 2018 to 2019, local authorities spent £698,819,000 on street cleansing,<sup>2</sup> and while 95% of the public feel that their local environment being clean and litter free is important, only 58% of the public are currently satisfied in regards to this measure.<sup>3</sup> In improving our understanding of what is driving levels of litter nationally, there is both an opportunity for reducing the costs associated with cleaning up litter and for improving the lived experience of people in their local environment.

To this end, the various factors that can affect levels of litter and its composition were analysed against levels of litter to assess the influence that factors such as deprivation, location, cleanliness and bin provision can have on litter composition. Deprivation has received the most widespread attention of these factors, and there is an existing body of research suggesting that areas with lower levels of affluence are correlated with reduced environmental quality. Evidence from Keep Britain Tidy and the Joseph Rowntree Foundation has indicated that affluent neighbourhoods tend to have higher levels of street cleanliness compared to deprived neighbourhoods.<sup>4,5</sup> More affluent neighbourhoods tend to score above the acceptable threshold for litter (Grade B), while more deprived areas tend to score below it.<sup>6</sup> Previous research by Keep Britain Tidy suggests that residents from more affluent areas are more inclined to report local environmental quality issues using official channels, whereas residents from more deprived areas prefer to talk to each other about these issues.<sup>7</sup> These differences may stem from the varying ways in which local authorities are perceived across areas, and lead to further disparity in the way that issues are addressed by councils.

---

<sup>2</sup> Local authority revenue expenditure and financing: 2018 to 2019 outturn individual local authority data

<sup>3</sup> Keep Britain Tidy, *National Perceptions Survey*, 2019 (unpublished).

<sup>4</sup> Keep Britain Tidy, [How clean is England? The Local Environmental Quality Survey of England 2014/15](#), 2015.

<sup>5</sup> Joseph Rowntree Foundation, [Street Cleanliness in deprived and better-off neighbourhoods](#), 2009.

<sup>6</sup> The Local Environmental Quality (LEQ) grading system and methodology is described in Keep Britain Tidy's [How clean is England? The Local Environmental Quality Survey of England 2014/15](#), 2015.

<sup>7</sup> Keep Britain Tidy, [Whose Reality is it Anyway? Understanding the Impact of Deprivation on Perceptions of Place](#), 2012.

Research has also indicated that littering can be influenced by a range of other factors, including public awareness and attitudes, the presence of litter, perceived social norms and packaging design. While these factors are not explored in this research, the Government's *Litter Strategy for England* provides a useful summary of the research.<sup>8</sup>

## 1.1 Research objectives

The key objectives of this research were to:

- 1) Collect data on the most commonly dropped types of litter items and brands, alongside variables such as site cleanliness, location and deprivation;
- 2) Provide a better understanding of the difference between binned and dropped litter, for example when considering brands, location and deprivation; and
- 3) Give a better assessment of the impact of public recycling bins in reducing litter.

## 2. Methodology

### 2.1 Survey methodology

#### LEQ survey and litter count methodology

The LEQ survey took the same approach as that used in the Local Environmental Quality Survey of England (LEQSE), which has been carried out almost annually by Keep Britain Tidy on behalf of Defra since 2001. The survey measures the presence of litter alongside six other indicators of cleanliness (detritus, weed growth, staining, graffiti, fly-posting and recent leaf and blossom fall). Each indicator is assigned a qualitative grading based on the extent of its presence at a site. The grading system is based on the same principles used in Defra's *Code of Practice on Litter and Refuse*.<sup>9</sup> The grades are A, B, C and D. The LEQSE survey uses three additional intermediary grades to provide greater granularity to the data (B+, B- and C-). The standard LEQSE methodology was also used to assess and record the site land use type (descriptions are provided at Appendix A for reference) and the presence, type and condition of bins at the site.

At each site, litter counts were conducted for all litter types present. The full list of litter type categories is included at Appendix B. During the analysis phase, Keep Britain Tidy estimated the volume of litter items in each category using the volume-per-item model used by Keep Australia Beautiful in its *National Litter Index* surveys.<sup>10</sup> This model is described in Appendix D.

---

<sup>8</sup> HM Government, [Litter Strategy for England](#), 2017

<sup>9</sup> Defra (2006) Code of Practice on Litter and Refuse.

<sup>10</sup> NSW Environment Protection Authority, *2015-16 National Litter Index Results for New South Wales*, 2016; Keep Australia Beautiful, *2017-18 National Litter Index - National Report*, Jan 2019.

Census geography and statistical information about each site was identified at the sampling stage (see below) or added retrospectively for analysis purposes, and included:

- Lower Layer Super Output Area (LSOA)<sup>11</sup>
- Index of Multiple Deprivation (2015) rank and decile<sup>12</sup>
- Rural Urban classification<sup>13</sup>

### **Bin waste composition analysis**

The contents of bins present at the sites were analysed using a waste composition analysis approach. Each item in each bin bags was counted and recorded into the same litter item categories used in the litter count (see Appendix B).

## **2.2 Sampling methodology**

The sampling methodology used in the survey was based on that in the Keep Britain Tidy's National Litter Survey, which was developed in conjunction with Dr Rik Van de Kerckhove of Defra. This survey was adapted slightly to meet Defra's requirement in the research of sampling a minimum of 3,000 sites across 14 local authority areas. The sample comprises 3,360 sites (50m transects) across 14 local authorities in England,<sup>14</sup> which were selected to ensure a representative sample across the nine government regions of England and Indices of Multiple Deprivation (IMD) ranking.

Of the 3,360 sites, 746 (22%) were purposely selected because they had one or more litter and/or recycling bins present. Keep Britain Tidy and Defra had an agreed target of analysing 900 bins across the 14 local authority areas through the waste composition analysis. Due to a number of operational factors, the actual number of bins analysed fell slightly short of this target at 854 bins analysed in total (95% of the agreed target). Further details are provided in *Section 2.4: Considerations and limitations*. The remaining sites (2,614, or 78%) were randomly selected.

---

<sup>11</sup> *Lower Layer Super Output Area (LSOA) boundaries*, Office for National Statistics, <https://data.gov.uk/dataset/fa883558-22fb-4a1a-8529-cffdee47d500/lower-layer-super-output-area-lsoa-boundaries>

<sup>12</sup> *English Indices of Deprivation 2015 - LSOA Level*, Ministry of Housing, Communities and Local Government, <https://data.gov.uk/dataset/8f601edb-6974-417e-9c9d-85832dd2bbf2/english-indices-of-deprivation-2015-lsoa-level>

<sup>13</sup> *Rural Urban Classification*, Defra, <https://www.gov.uk/government/collections/rural-urban-classification>

<sup>14</sup> All transects are 50m in length, however the width of a transect depends on the land use type and natural boundaries present, such as rivers or hedgerows. For the purpose of analysis, we assume that transects are 4m wide on average across the different land use type, making the average area of each site 200m<sup>2</sup>.

## 2.3 Sample profile

The final sample is summarised below.

Table 1: Sites surveyed by government region

Region	%	n
East Midlands	7%	240
East of England	14%	480
London	14%	480
North East	7%	240
North West	14%	480
South East	14%	480
South West	7%	240
West Midlands	14%	480
Yorkshire and The Humber	7%	240

Table 2: Sites surveyed by local authority

Local Authority	%	n
Basildon	7%	240
Braintree	7%	240
Exeter	7%	240
Islington	7%	240
Liverpool	7%	240
Newcastle upon Tyne	7%	240
Newcastle-under-Lyme	7%	240
Newham	7%	240
North West Leicestershire	7%	240
Reigate and Banstead	7%	240
Stratford-on-Avon	7%	240
Trafford	7%	240
Wakefield	7%	240
Wealden	7%	240

Table 3: Sites surveyed by IMD decile

IMD Decile	%	n
1	10%	324
2	12%	394
3	9%	310
4	9%	299
5	11%	361
6	9%	291
7	10%	339
8	10%	334
9	11%	360
10	10%	348

**Table 4: Sites surveyed by LEQSE land use type**

LEQSE Land Use Type	%	n
Medium Obstruction Housing	23%	771
Low Obstruction Housing	19%	629
High Obstruction Housing	18%	620
Other Retail and Commercial	8%	280
Recreation Areas	8%	262
Main Retail and Commercial	7%	225
Rural Roads	6%	218
Main Roads	5%	158
Other Highways	4%	127
Industry and Warehousing	2%	70

**Table 5: Sites surveyed by Rural Urban Classification**

Rural Urban Classification <sup>15</sup>	%	n
Urban with Major Conurbation	36%	1200
Urban with City and Town	35%	1188
Mainly Rural (rural including hub towns >=80%)	14%	492
Largely Rural and Significant Rural	14%	480

## 2.4 Considerations and limitations

The considerations and limitations in this research are as follows:

- There were operational factors affecting the waste analysis across sites identified, such as being unable to open bins, finding no bin bag present and misidentification of bin types, meaning that not all bins that were identified in the litter survey were included in the waste analysis. In total, 854 bins (831 litter bins and 23 recycling bins) were analysed in the waste composition analysis, representing a 95% achievement of the target sample size as noted above. Overall, 952 litter bins and 85 recycling bins were found present at 746 sites, and these were graded according to condition and cleanliness as per the standard LEQSE grading system.
- The survey used the LEQSE methodology and therefore reflects a ‘snapshot’ in time when the surveyors happened to be present. The amount of litter at a site will depend on when the site was last cleansed and this is not taken into account in the LEQSE survey. Therefore all figures should be interpreted as a reflection of litter levels ‘at a given time’.
- Street cleanses (manual and/or mechanical) and bin collections at a site tend to occur at different times of day. As such, at the time of survey, litter on the ground and rubbish in bins will have been accumulating for different lengths of time.

<sup>15</sup> Defra, [Rural Urban Classification](#), 2016.



- This research is not intended to provide statistics on current litter/recycling bin provision across local authority areas. While 22% of sites were selected because there was a bin present, the remaining 78% of sites were randomly selected and it is likely that many areas with bins present were excluded from the sample through this process.
- The branded litter element of this research does not take into account a brand’s market share. Brands with a much larger share of their market may be expected to be more prevalent on the ground and in bins.<sup>16</sup>
- When selecting sites, proximity to retail outlets was not taken into account or controlled for. Sites located near specific types of retail outlets (e.g. those selling own-brand food and drinks on-the-go) can reasonably be expected to have a higher incidence of waste items from that outlet present, either on the ground as litter or in a bin.

## 3. Results

### 3.1 General Findings

#### 3.1.1 LEQSE grade

Overall the vast majority of sites fell within either B+ or B standard (86%) for litter, indicating areas were predominantly free of litter and refuse except for some small items. Any grade of B- or below would be considered below an acceptable standard according to Defra’s *Code of Practice on Litter and Refuse*.<sup>17</sup> A further 5% of sites were graded A for litter (no litter or refuse present), meaning that overall, 91% of sites fell within an acceptable standard, while 8% of site were below the acceptable standard for litter.

**Table 6: LEQSE grade for litter per site**

	%	n
<b>A</b>	5%	165
<b>B+</b>	42%	1427
<b>B</b>	44%	1490
<b>B-</b>	7%	233
<b>C</b>	1%	40
<b>C-</b>	0%	4
<b>D</b>	0%	1

<sup>16</sup> Brands were individually counted in 17 of the litter type categories: Chewing gum packaging; Chocolate wrappers; Crisp packets; Drinks: Cans – non-alcoholic; Drinks: Coffee cups; Drinks: Glass bottle – small, non-alcoholic; Drinks: Glass bottles – large, non-alcoholic; Drinks: Multipack cans – non-alcoholic; Drinks: Multipack glass bottle – small, non-alcoholic; Drinks: Multipack plastic bottle – small, non-alcoholic; Drinks: Multipack plastic bottles – large, non-alcoholic; Drinks: Plastic bottle – large, non-alcoholic; Drinks: Plastic bottles – small, non-alcoholic; Fast food – inner packaging; Fast food – outer packaging; Sandwich packaging; Sweet and mint packaging.

<sup>17</sup> Defra, [Code of Practice on Litter and Refuse](#), 2006 (modified in 2019).

In terms of the corresponding amount of litter at each location, at sites rated as being of grade A, there were an average of 2 litter items present, at grade B an average of 30, and at grades C and below, an average of 118 litter items per 50m transect (or approximately 200m<sup>2</sup>).<sup>18</sup>

The litter grading of a site appears to be related to deprivation, which is shown to have a substantial influence on the findings throughout this report. The proportion of sites at an acceptable standard in the 10% most deprived areas (IMD Decile 1) drops to 75% compared to the 91% of sites overall, while 99% of sites in the 10% most affluent areas (IMD Decile 10) were graded at an acceptable standard.

A small number of outliers were identified, whereby five sites in more affluent areas (in IMD deciles 8-10) recorded higher litter counts (more than 100 items per site). At four of these sites, the vast majority of this litter was cigarette stubs (89%, 97%, 98%, and 99%). At the fifth site, there was a very high count of ‘other general litter’ (250 of 313 items of litter at the site) due to a large amount of sanitary waste littered around recycling bins. At the other end of the scale, there were 10 high deprivation sites (IMD decile 1 or 2) with no litter present, and 99 sites with five or fewer items of litter. This research did not seek to identify why these specific sites had lower litter counts (this could be due to a range of factors, including when the site was last cleansed, local policies and activities to discourage littering, and social and environmental factors), however, recreation areas were overrepresented within these sites (7 of the 10 high deprivation sites with no litter present, and 38% of the 99 sites with five or fewer items; compared to just 8% of the overall sample). As shown in Table 10, this land use type had lower litter counts generally compared to other land use types.

**Table 7: Proportion of sites at an acceptable LEQSE grading standard by IMD ranking decile (where 1 is most deprived 10% of LSOAs across England)**

Grade	% of all sites	1	2	3	4	5	6	7	8	9	10
<b>B and above</b>	91%	75%	88%	86%	88%	92%	97%	96%	97%	98%	99%
<b>B- and Below</b>	8%	25%	12%	14%	12%	8%	3%	4%	3%	2%	1%

<sup>18</sup> For comparison purposes, according to the Zero Waste Scotland’s methodological guidance on litter monitoring, zero items would be expected at sites graded A, fewer than five large items or 30 small items at sites graded B, and 5-15 large items or 30-90 items at sites graded C. It should be noted that in the Zero Waste Scotland methodology, surveyors are asked to select the ‘most littered’ 100m<sup>2</sup> from a broader 1,000m<sup>2</sup> survey area for the litter count and grading. These guidance counts therefore refer to a 100m<sup>2</sup> ‘most littered’ transect. Zero Waste Scotland, *Litter Monitoring Methodology – Guidance for practitioners*, April 2018, <https://www.zerowastescotland.org.uk/sites/default/files/Litter%20Monitoring%20Methodology%20-%20Data%20Capture%20Guidance%20Apr%202018.pdf>.

### 3.1.2 Counts of litter

In total, 75,551 items of litter were counted across the 3,360 sites surveyed. On average, 22.5 items of litter were counted per site, ranging from a minimum of 0, to a maximum amount of 542 litter items. Overall, just 4% of the surveyed sites had no litter present.

**Table 8: Litter counts per site and overall**

Count per site	
Mean	22.5
Minimum	0
Maximum	542
Total	75,551

Base: 3,360 sites

Counts of litter per land use type are shown in Table 10.<sup>19</sup> Retail and commercial locations had the greatest levels of litter on average. Of the residential land use types, those classified as high obstruction housing areas contained the greatest litter levels, as has been demonstrated in previous LEQSE surveys. This land use type also had the greatest amount of litter recorded at one site.

**Table 9: Litter counts by LEQSE land use type**

LEQSE Land Use Type	Mean	Minimum	Maximum
<b>Other Retail and Commercial</b>	44.1	1	298
<b>Main Retail and Commercial</b>	38.8	0	313
<b>Industry and Warehousing</b>	34.0	1	191
<b>Main Roads (A roads only)</b>	33.4	1	355
<b>High Obstruction Housing</b>	33.0	0	542
<b>Other Highways</b>	21.0	0	352
<b>Medium Obstruction Housing</b>	15.3	0	147
<b>Rural Roads</b>	12.9	0	228
<b>Recreation Areas</b>	12.8	0	336
<b>Low Obstruction Housing</b>	9.1	0	95

Base: 3,360 sites

Similarly to LEQSE grade, an area's level of deprivation appears to have a substantial influence on its litter levels. Table 10 shows that the average count of litter found at sites tends to decrease as areas become more affluent (although the maximum count of litter found at a site does not consistently decrease in the same way).

**Table 10: Litter counts by IMD decile (where 1 is most deprived 10% of LSOAs across England)**

IMD Decile	Mean	Minimum	Maximum
<b>1</b>	42.7	0	542
<b>2</b>	27.6	0	228
<b>3</b>	32.5	0	271

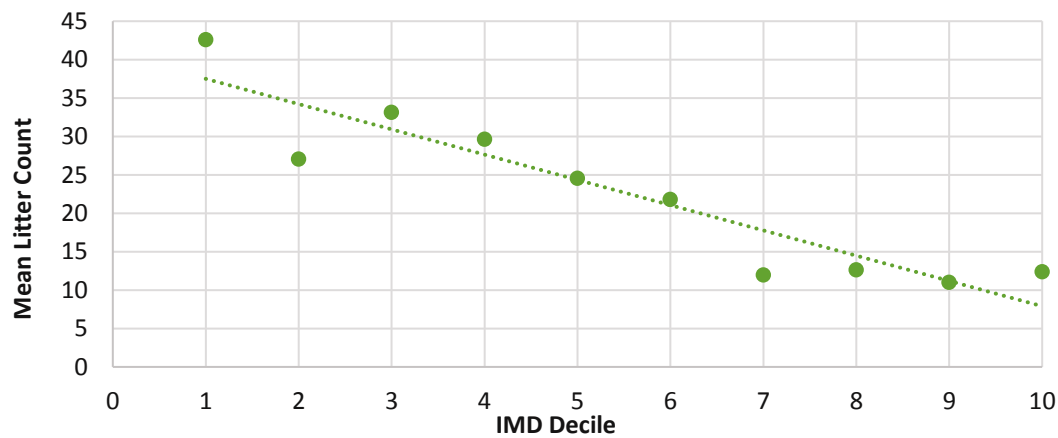
<sup>19</sup> A description of each land use type category is included at Appendix A.

IMD Decile	Mean	Minimum	Maximum
4	30.0	0	181
5	24.6	0	298
6	21.8	0	284
7	12.0	0	352
8	12.7	0	92
9	11.0	0	313
10	12.4	0	303

Base: 3,360 sites

Figure 1 indicates a correlation between the deprivation of an area and amount of dropped litter, with the number of litter items present tending to increase as IMD decile decreases. A Spearman’s correlation was run to determine the strength of the relationship between IMD decile and the number of litter items per site. This showed there was a moderate negative correlation between the two variables (-0.41, n=10, p<.001), indicating that there is a relationship between the two factors whereby levels of litter increase with increasing deprivation, and that this relationship is statistically significant.

**Figure 1: Mean litter counts by IMD decile (where 1 is most deprived 10% of LSOAs across England)**



There is additionally an association apparent between an area’s rural/urban classification and its levels of litter, with levels of litter appearing to increase in more urban areas, as shown in table 12.

**Table 11: Litter counts by Rural Urban classification**

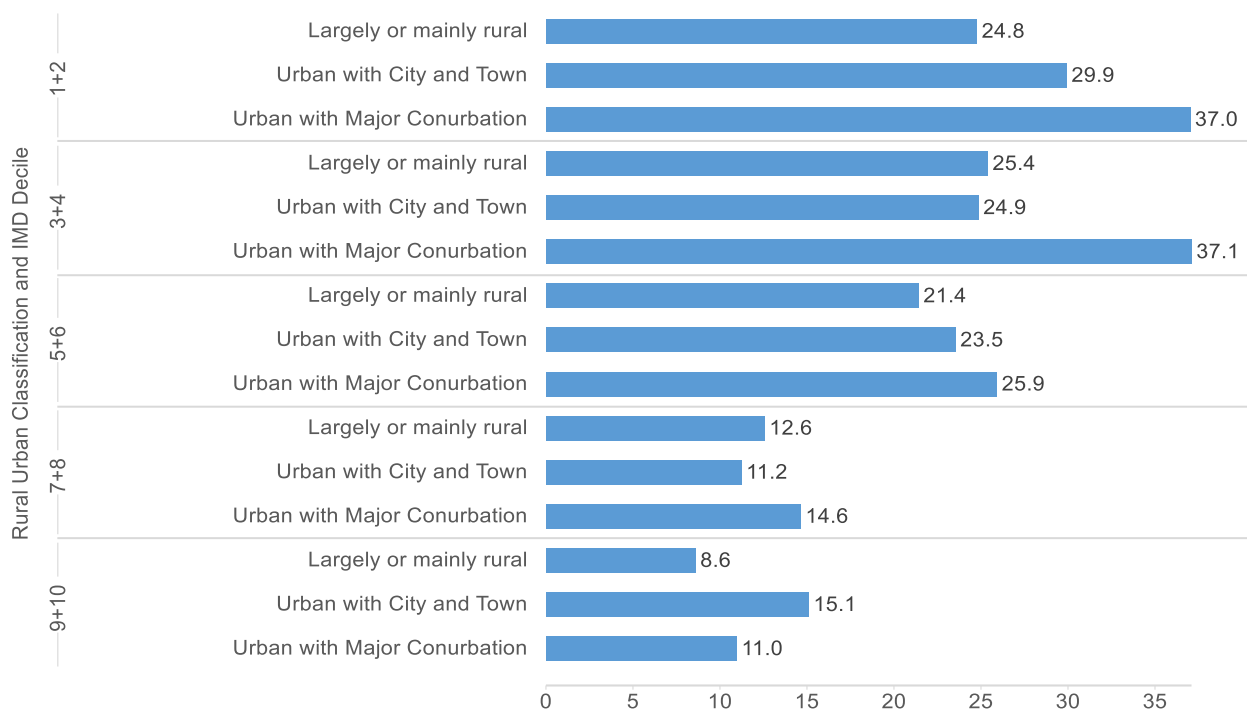
Rural Urban classification	Mean	Minimum	Maximum
<b>Urban with Major Conurbation</b>	30.7	0	542
<b>Urban with City and Town</b>	20.2	0	313
<b>Largely rural/urban with significant rural</b>	18.7	0	352
<b>Mainly Rural (rural including hub towns)</b>	11.7	0	228

Base: 3,360 sites

Looking at the combined impact of how rural or urban an area is, and its level of deprivation, shows an interlinking effect of these two variables (see Figure 2). As may be expected, the areas that are most likely to have the highest levels of litter are those which are both highly deprived, and urban.

However, when areas with similar levels of deprivation are compared, the strength of the correlation between rurality and litter levels is weaker in less deprived areas. There is a greater level of variation in litter levels between rural and urban areas when there are lower levels of deprivation in an area. Therefore, litter appears to increase more in urban areas when there are high levels of deprivation, and to a lesser extent when there are low levels of deprivation.

**Figure 2: Mean litter counts by Rural Urban classification IMD decile (where 1 is most deprived 10% of LSOAs across England)**



Bases: 34, 207, 477, 73, 221, 315, 255, 220, 177, 334, 252, 87, 276, 288, 144 sites.

It is clear that population density has some impact on this variation between rural and urban areas.<sup>20</sup> Table 12 shows that more densely populated areas tended to have higher levels of litter per site, but this does not fully explain the impact of a location’s rurality on the levels of litter.

**Table 12: Litter counts by population density decile (1 = least densely populated, 10 = most densely populated)**

Population density decile	Mean	Minimum	Maximum
<b>1</b>	16.6	0	352
<b>2</b>	10.4	0	198
<b>3</b>	18.9	0	202
<b>4</b>	16.4	0	255
<b>5</b>	18.6	0	180
<b>6</b>	23.4	0	284
<b>7</b>	24.9	0	298
<b>8</b>	21.2	0	139
<b>9</b>	38.6	0	542
<b>10</b>	35.6	0	271

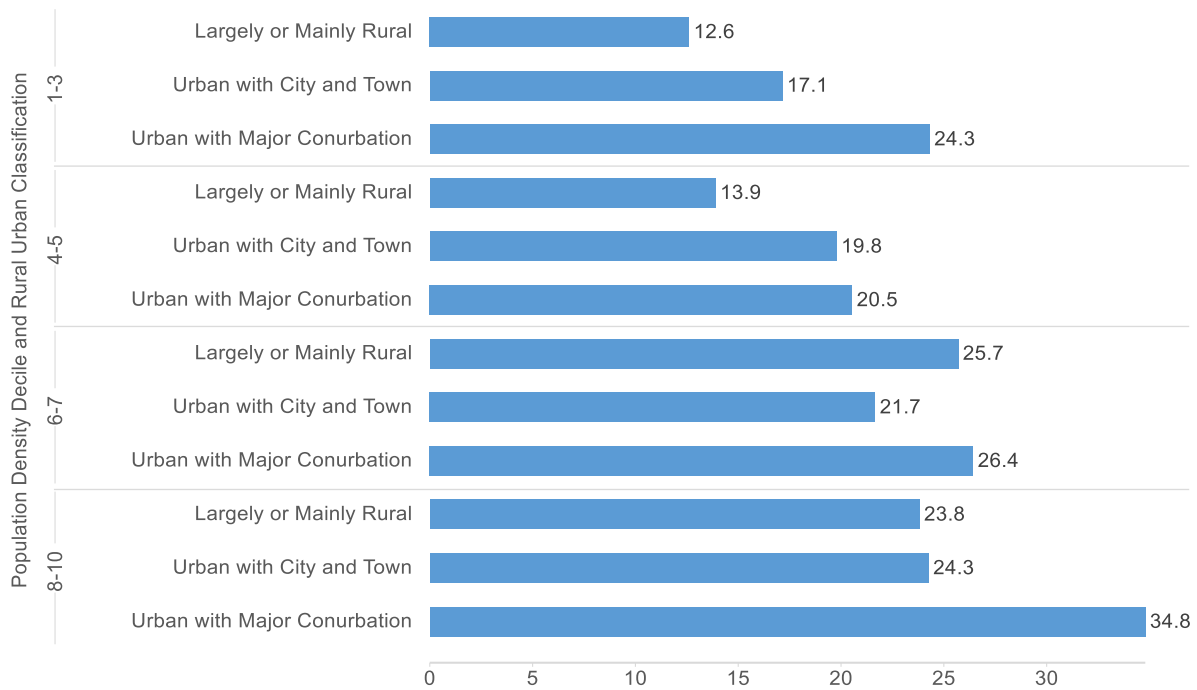
Base: 3,360 sites

As can be seen in Figure 3, urban areas that are less densely populated still tend to have higher levels of litter than rural areas that are more closely populated. It seems likely that a site’s population density, its rurality, and its affluence, are all interacting factors that exert some influence on the level of litter present.

---

<sup>20</sup> Number of people per square kilometer

**Figure 3: Mean litter counts by Rural Urban Classification and population density decile (1 = least densely populated, 10 = most densely populated)**

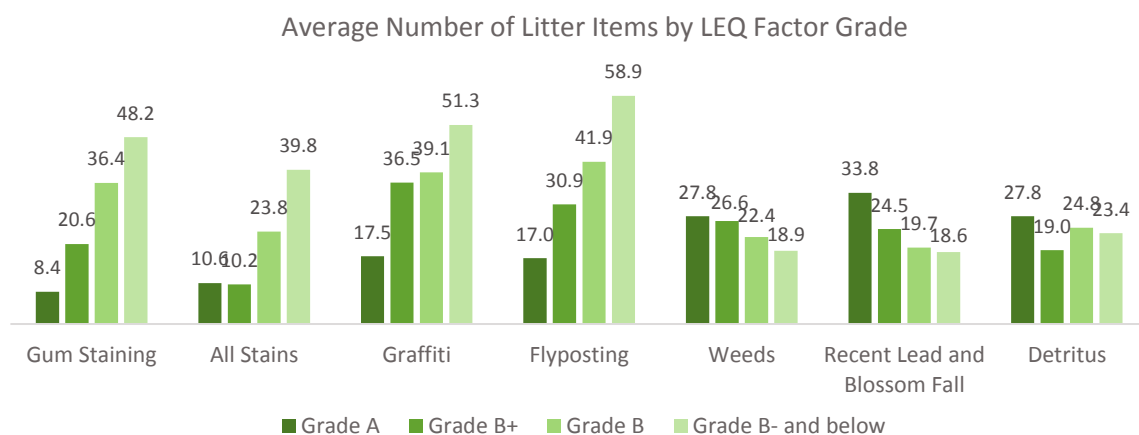


Bases: 527, 403, 84, 277, 248, 141, 120, 309, 249, 48, 228, 726 sites.

### 3.1.3 Litter and other indicators of LEQ

In addition to location context of the site, the effect of overall LEQ on litter levels was examined. Interestingly, Figure 4 shows that there is a clearly a relationship between the level of litter occurring and the ‘cleanliness’ indicators of staining, flyposting and graffiti. Higher levels of litter tend to occur in sites where there are higher levels of these LEQ issues. However, the same relationship is not evident when looking at grading for ‘natural’ LEQ indicators; weeds, leaf and blossom fall, and detritus.

**Figure 4: Average count of litter per site by other LEQ gradings**



We posit that the reason for this is twofold. Firstly, people may not perceive these natural factors as being as detrimental to the overall quality and atmosphere of an area, as opposed to the cleanliness factors. Kelling and Wilson’s well-known *Broken Windows Theory* suggested that signs of public disinterest or disorder, such as graffiti, encourage anti-social behaviours further through providing cues that these are the social norm.<sup>21</sup> This study is congruent with that theory, with the results indicating that a general run-down appearance or uncleanliness of an area (the presence of graffiti, staining and fly-posting) appears to be linked to the prevalence of litter, although causality cannot be proved. However, it would appear that “natural” items such as weeds, recent leaf and blossom fall, and detritus do not affect littering behaviour in the same way.

Secondly, having established that there may be a link between deprivation and overall LEQSE grade, we may be simply seeing that there is less litter arising in areas with poorer grades for the natural factors, because these areas are also likely to be more affluent. Table 13 illustrates this and shows that the LEQSE grade for leaf and blossom fall is particularly associated with IMD decile. We know that affluent areas are more likely to have natural features such as parks, trees, and shrubbery from which fallen leaves and blossom arise. According to the Urban Forestry and Woodland Advisory Committee Network, urban tree canopy cover is generally greater in more affluent areas and ‘only less-deprived areas have high (>30%) canopy cover’.<sup>22</sup> Similarly, Public Health England has found that the most affluent 20% of wards in England have five times the amount of green space compared with the most deprived 10% of wards.<sup>23</sup> Further research is recommended to understand these effects. It would be particularly interesting to robustly test whether planting trees could help to reduce rates of littering at a site.

**Table 13: LEQ Grade for recent leaf and blossom fall in areas in IMD Decile 1 (most deprived) and 10 (least deprived)**

	Grade A	Grade B+	Grade B	Grade B- and below
<b>IMD Decile 1</b>	12%	40%	44%	4%
<b>IMD Decile 10</b>	5%	33%	50%	11%

Base: 3,360 sites

<sup>21</sup> Kelling, G. L., & Wilson, J. Q. (1982). Broken windows. *Atlantic monthly*, 249(3), 29-38;

<sup>22</sup> Urban Forestry and Woodland Advisory Committee Network, England’s Urban Forests: Using tree canopy cover data to secure the benefits of the urban forest, date unknown, p. 3.

<sup>23</sup> Local action on health inequalities: improving access to green spaces. Public Health England, 2014



## 3.2 Objective 1: Types and brands of litter

### 3.2.1 Litter Types

Overall litter counts show that in number, cigarette stubs were the most frequently collected type of litter; accounting for 66% of the total number of litter items collected (Table 14: Litter types by count (top 15 by count only) Table 14). This was followed by ‘general litter’,<sup>24</sup> other paper, and smoking-related litter (excluding stubs).

Table 14: Litter types by count (top 15 by count only)

Item	Count	% of dropped litter count	% of dropped litter count (without cigarette stubs) <sup>25</sup>
Cigarette stubs	50,088	66.3%	N/A
General litter – other	11,652	15.4%	45.8%
Paper – other	2,350	3.1%	9.2%
Smoking litter (not stubs)	1,511	2.0%	5.9%
Drinks: Cans – non-alcoholic	1,188	1.6%	4.7%
Sweets and mints packaging	1,177	1.6%	4.6%
Drinks: Plastic bottles – small, non-alcoholic	1,049	1.4%	4.1%
Chocolate wrappers	916	1.2%	3.6%
Unsure (litter type cannot be determined)	801	1.1%	3.1%
Fast food – inner packaging	613	0.8%	2.4%
Straws	537	0.7%	2.1%
Drinks: Cans – alcoholic	417	0.6%	1.6%
Gum packaging	379	0.5%	1.5%
Fast food drink container (not coffee)	307	0.4%	1.2%
Plastic cutlery	300	0.4%	1.2%

However, a very different pattern is evident when looking at litter volumes, where despite their large numbers, cigarette butts do not feature in the top 15 litter types (Table 15). Combined, the top 15 litter types by volume account accounted for 95% of the total volume of litter, with small plastic bottles under 750ml solely contributing to a quarter of all volume, and cans for a further 19%.

<sup>24</sup> ‘General litter’ items are those that don’t fall within the other litter type categories and include items such as pens/pen lids, batteries, elastic bands.

<sup>25</sup> These results are included to align with a 2013/14 survey conducted by Keep Britain Tidy on behalf of the Industry Council for research on Packaging & the Environment (INCPEN), which is the most recent national survey in England involving full litter counts and which presented results with and without cigarette stubs included. (*Litter Composition Survey of England*, INCPEN and Keep Britain Tidy, March 2014, [https://www.incpen.org/litter-composition-survey-of-england-2014/.](https://www.incpen.org/litter-composition-survey-of-england-2014/))

Table 15: Litter types by volume (top 15 by total volume only)

Item type	Count	% of dropped litter volume
Non-alcoholic small plastic bottle	1,049	24.4%
Non-alcoholic can	1,188	18.6%
Smoking litter not stubs	1,511	12.4%
Coffee cups	285	7.8%
Alcoholic can	417	6.8%
Fast food drink container (not coffee)	307	5.0%
Non-alcoholic large plastic bottle	71	4.4%
Other general litter	11,652	3.3%
Cold drink containers (not bottle)	98	3.0%
Small alcoholic glass bottles	146	2.4%
Newspaper	50	2.3%
Sandwich packaging	67	1.8%
Fast food inner	613	1.3%
Large alcoholic glass bottles	32	0.9%
Snack pack	264	0.7%

As would be expected based on the patterns shown in overall litter counts (Section 0), deprivation appears to have an impact on litter types, however some are more unevenly distributed than others. The most deprived 10% of sites contained nearly 12 times as many fast food drink containers (excluding coffee) as the 10% most affluent areas (59 to 5 respectively), 9 times as many non-alcoholic small plastic bottles (331 to 37), and nearly 8 times as many alcoholic cans (100 to 13).

### 3.2.2 Brand specific litter

As previously noted, brands of litter were individually counted in 17 of the litter type categories.<sup>26</sup> When looking at dropped litter counts, the most frequently noted brand items span across a number of industries, but are all household name brands that are widely consumed on the go.<sup>27</sup> These top 15 brands make up 41% of total counts of litter types included in the branded litter count.<sup>28</sup> Overall, branded litter items account for 8% of the overall total litter count (i.e. 6,098 of 75,551), and 25% of the total litter count excluding cigarette stubs (base=25,463). The top 15 brands make up 3% of the total litter count, and 10% of the total litter count when cigarette stubs are removed.

<sup>26</sup> Chewing gum packaging; Chocolate wrappers; Crisp packets; Drinks: Cans – non-alcoholic; Drinks: Coffee cups; Drinks: Glass bottle – small, non-alcoholic; Drinks: Glass bottles – large, non-alcoholic; Drinks: Multipack cans – non-alcoholic; Drinks: Multipack glass bottle – small, non-alcoholic; Drinks: Multipack plastic bottle – small, non-alcoholic; Drinks: Multipack plastic bottles – large, non-alcoholic; Drinks: Plastic bottle – large, non-alcoholic; Drinks: Plastic bottles – small, non-alcoholic; Fast food – inner packaging; Fast food – outer packaging; Sandwich packaging; Sweet and mint packaging.

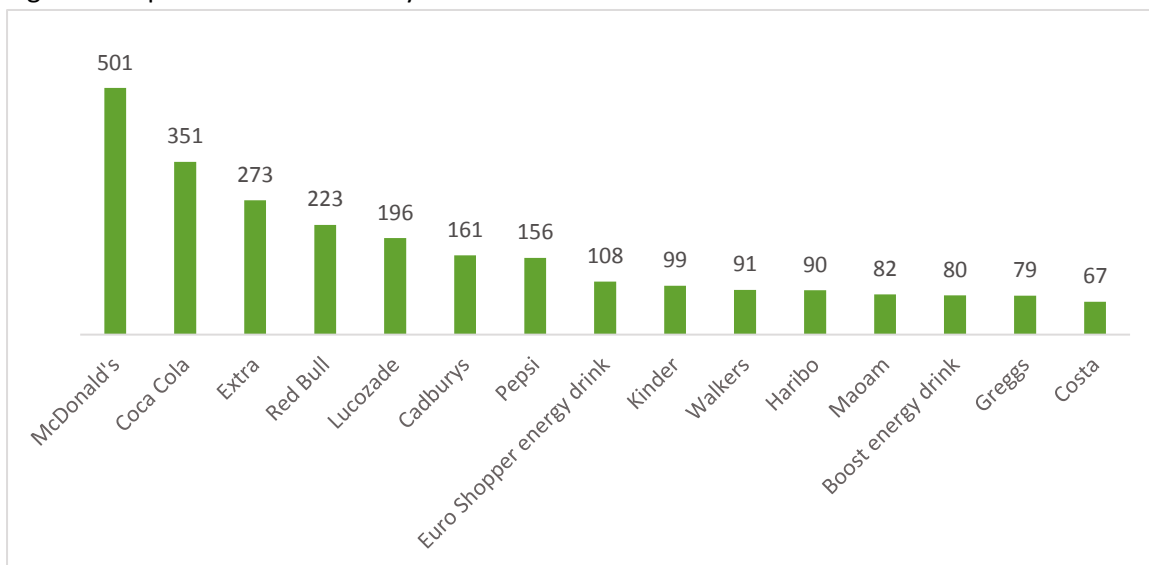
<sup>27</sup> In this report, we refer to the brand that is identifiable on packaging (e.g. Walkers) rather than the parent organisation that owns the brand (e.g. PepsiCo).

<sup>28</sup> Base = 6,277. The litter types included in the branded litter count are listed in Section 2.4 – Considerations and limitations.

The branded litter share of total litter counts may appear low but aligns with Keep Britain Tidy’s previous research, which has found that people can perceive certain types of litter to be more prevalent than the reality on the ground. For example, in our *Soft drinks littering* research, when asked ‘what is littered’, participants were more likely to recall larger, brighter, branded litter items, often referring to littering types by certain brand names.<sup>29</sup> Our *Beacons of litter* research built on this and found that the presence of larger, brighter, branded litter at a site was more likely to attract further littering compared to small, unbranded items (recorded via behavioural observations).<sup>30</sup> It would be interesting to test these findings via further analysis to understand whether sites with a higher prevalence of ‘beacons’ litter have greater litter counts overall.

We can additionally see patterns in on-the-ground branded litter broadly reflecting market shares (where this data is available), with brands that hold greater market shares tending to represent greater proportions of litter counts. With the exception of a low number of outliers, for the markets of crisps, chocolate confectionery and soft drinks, proportions of branded litter tend to correspond with their representation within the consumer market. For example, 87% of chewing gum packaging found to be littered is produced by subsidiaries of Mars Wrigley Confectionery, and correspondingly, Mars Wrigley Confectionery has a 91% market share of the gum confectionery market.<sup>31</sup>

Figure 5: Top 15 littered brands by count



When looking at volumes, the disproportionate contribution of soft drinks beverages to litter volumes is again evident in the brands contributing most significantly to dropped litter volumes, and over a quarter of the volume of all dropped litter comes from 10 soft drinks producers. With Coca-Cola representing the greatest proportion of litter, as well as the greatest market share, these again

<sup>29</sup> Keep Britain Tidy, *Soft drinks littering: Understanding and influencing young adult litterers*, 2016, [https://www.keepbritaintidy.org/sites/default/files/resources/KBT\\_Soft\\_Drinks\\_Littering\\_2016.pdf](https://www.keepbritaintidy.org/sites/default/files/resources/KBT_Soft_Drinks_Littering_2016.pdf).

<sup>30</sup> Tehan et al. 2017, ‘Beacons of litter: A social experiment to understand how the presence of certain type of littered items influence rates of littering’, *Journal of Litter and Environmental Quality*, vol. 1, no. 1, pp. 5-15, available at: [https://www.keepbritaintidy.org/sites/default/files/resource/KBT\\_Journal\\_of\\_Litter\\_and\\_Environmental\\_Quality\\_June2017.PDF](https://www.keepbritaintidy.org/sites/default/files/resource/KBT_Journal_of_Litter_and_Environmental_Quality_June2017.PDF).

<sup>31</sup> Mintel 2018, Sugar and Gum Confectionery Report

broadly reflect their placement in consumer markets.<sup>32</sup> When looking within soft drinks beverages category, carbonated drinks contributed the most to the overall litter volume (13%), followed by the energy drink market, which contributed 9%.

**Table 16: Top 10 littered beverage brands by volume**

Item	Total Volume	% of total litter volume
Coca-Cola	175.1	7%
Lucozade	135.6	5%
Red Bull	91.6	3%
Pepsi	72.7	3%
Euro Shopper	44.4	2%
Volvic	39.4	2%
Fanta	31.5	1%
Boost	29.9	1%
Evian	31.3	1%
Nestlé Pure Life	26.6	1%
<b>TOTAL</b>	<b>678.2</b>	<b>26%</b>

### 3.3 Objective 2: Binned waste versus dropped litter

#### 3.3.1 Binned waste

There is a slightly variant pattern evident in the composition of waste placed in bins compared to that collected from dropped litter. Perhaps most strikingly, cigarette stubs fall from 66% of litter item count to only 7% of waste. Examining overall numbers of cigarette stubs, we can see that only 13% of stubs were binned as opposed to dropped, which appears to link with this finding.

**Table 17: Top 15 binned waste items by count**

Item	Count	% of binned waste count
General litter – other	7,569	18%
Paper – other	5,066	12%
Fast food – inner packaging	3,873	9%
Cigarette stubs	2,838	7%
Napkins	2,724	7%
Drinks: Plastic bottles – small, non-alcoholic	2,193	5%
Drinks: Cans – non-alcoholic	1,944	5%
Snack pack	1,846	4%
Coffee cup	1,515	4%
Chocolate wrapper	1,255	3%
Crisp packet	1,131	3%

<sup>32</sup> Mintel 2019, Soft Drinks Review. This reflects trends in the soft drinks market, with the exception of energy drinks. Comparisons between litter counts and market shares therefore do not include commentary on energy drinks.

Item	Count	% of binned waste count
<b>Drinks: Cans – alcoholic</b>	1,075	3%
<b>Sweets and mints packaging</b>	970	2%
<b>Smoking litter (not stubs)</b>	773	2%
<b>Straws</b>	727	2%

When looking at volumes of binned waste, small plastic bottles again contribute the most of any item type (20%). Cans and bottles are likely to be captured for recycling to an extent via a Deposit Return Scheme, which is due to be implemented in England in 2023 (subject to further evidence gathering and a cost-benefit analysis). The design and extent of return infrastructure under a DRS is likely to influence capture rates in on-street litter and recycling bins, and indeed the provision and placement of these bins. Once a DRS has been implemented, further litter and waste composition research is recommended to assess the effectiveness of return infrastructure in relation to litter and recycling bins provided alongside the scheme.

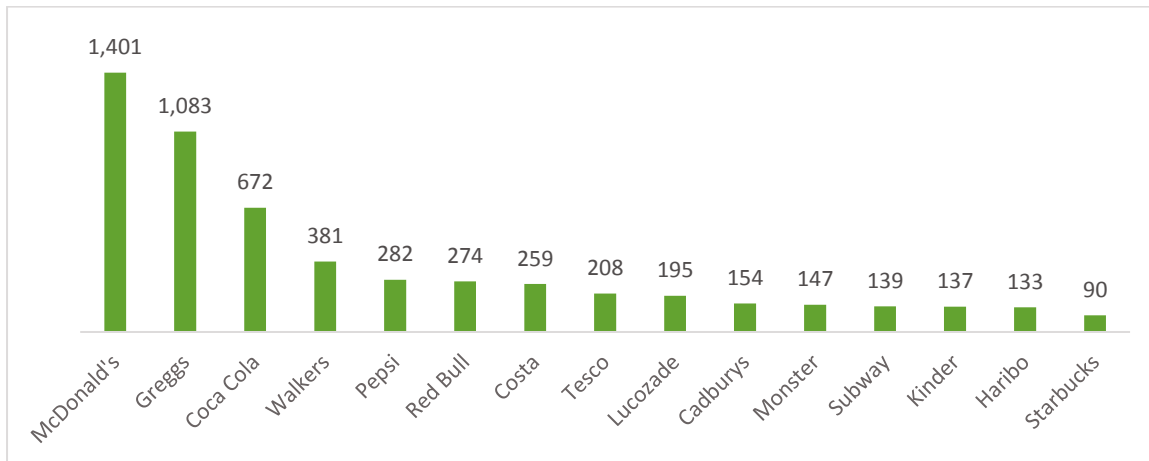
The second greatest waste type in bins by total volume was coffee cups (17%) and indeed results discussed further below show that this waste item was more likely to be binned than littered. This suggests that more widely available recycling-on-the-go facilities for single-use coffee cups could be worthwhile, though further behavioural insights and experimental research is recommended to ensure that these are designed to maximise usage and minimise contamination (noting also that efforts to reduce consumption of single-use coffee cups (e.g. via reusable cups) are the most effective way to reduce litter and waste, and should be prioritised).

**Table 18: Top 15 binned waste items by volume**

Item	Count	% of binned waste volume
<b>Drinks: Plastic bottles – small, non-alcoholic</b>	2,193	20%
<b>Coffee cup</b>	1,515	17%
<b>Drinks: Cans – non-alcoholic</b>	1,944	12%
<b>Sandwich packaging</b>	694	8%
<b>Drinks: Cans – alcoholic</b>	1,075	7%
<b>Newspaper</b>	316	6%
<b>Drinks: Plastic bottle – large, non-alcoholic</b>	204	5%
<b>Fast food drink container (not coffee)</b>	671	4%
<b>Drinks: Other cold drink containers (not bottle)</b>	346	4%
<b>Fast food – inner packaging</b>	3,873	3%
<b>Magazines</b>	167	3%
<b>Drinks: Glass bottles – small, alcoholic</b>	413	3%
<b>Smoking litter (not stubs)</b>	773	3%
<b>Drinks: Glass bottles – large, alcoholic</b>	184	2%
<b>Snack pack</b>	1,846	2%

The greater representation of fast food items and coffee cups in binned waste, as compared to on-the-ground litter, is also evident in the brands that occur most frequently. Greggs in particular, of whose waste items fall within these categories, while only accounting for only 79 littered items, jumps to over 1,000 items placed in bins when looking at binned data.

**Figure 6: Brands of the top binned waste items by count**

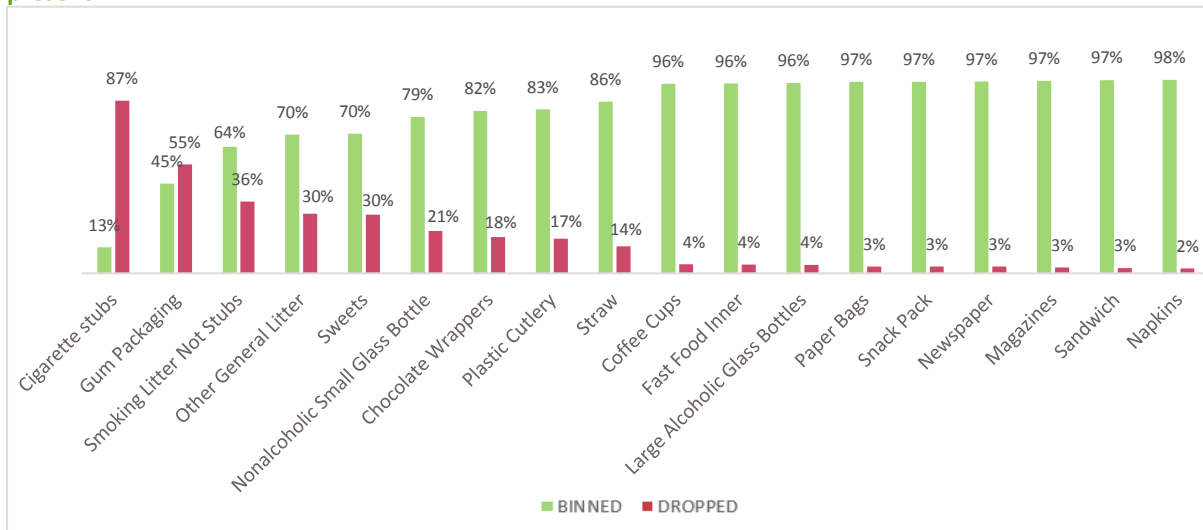


### 3.3.2 Binned versus littered

The data indicates that there are some items that are much more likely to be littered than placed in a bin, and these tend to be smaller and less conspicuous items (Figure 6). Cigarette stubs and chewing gum packaging in particular have a very high likelihood of being littered rather than placed in a bin. This aligns with previous Keep Britain Tidy research,<sup>33</sup> which has found that littering these items is considered more socially acceptable than other litter types because they are smaller and perceived by many as 'biodegradable'. Additionally, they can be messy/smelly and have an 'ick' factor which discourages people from holding onto the item until they find a bin.

<sup>33</sup> Keep Britain Tidy, *The Little Book of Litter: An essential guide*, 2012, [https://www.keepbritaintidy.org/sites/default/files/resources/KBT\\_Little\\_Book\\_of\\_Litter\\_2012.pdf](https://www.keepbritaintidy.org/sites/default/files/resources/KBT_Little_Book_of_Litter_2012.pdf).

**Figure 7: Proportion of total item count littered versus total item count binned at sites where litter bins are present**



Base: 733 sites where litter bins are present | 854 bins analysed within the waste composition analysis  
 NB: Not all bins present at each transect were included within the waste composition analysis.

### 3.3.3 The effect of bin presence on dropped litter

Overall, 22% of sites contained at least one litter bin (733 sites of the 3,360 sites surveyed), noting that sites were not sampled to provide a statistical representation of current bin provision across local authority areas (see *Considerations and limitations*). This section discusses trends regarding litter levels at sites where at least one bin was present.

For the majority of litter types, there is no substantial impact on overall litter levels evident from the presence of litter bins. A key exception to this was cigarette butts, whereby the presence of litter bins appears to have a negative effect. In sites where there were litter bins present, there were 26 cigarette stubs discarded on average, compared to 12 where no bins were present. This effect may be attributable to people congregating around bins to smoke, putting cigarettes out on litter bins, or leaving cigarette butts on top of bins to be subsequently blown off. In some cases, land managers may also be more likely to provide bins in areas where people are likely to smoke.

There was also significantly more confectionary wrappers and sweets/mints packaging litter at sites with litter bins present (0.6 to 0.3 mean for sweet/mint packaging, 0.4 to 0.2 mean for chocolate wrappers). For all other litter types, the presence of a litter bin does not appear to influence rates of litter at a site. Further research could investigate the way in which this is influenced by land-use type, bin provision/servicing and the behaviours that may surround this. The present research seems to indicate that there is some effect of land use type when bins are present, for example, sweet wrappers are more likely to be present in high obstruction housing areas and recreation areas. Additional investigation could provide more in-depth information on these patterns.

### 3.3.4 Bins present at survey sites

Overall, the majority of bins found at the sites surveyed were litter bins (89%), with only 9% of bins being recycling bins.

**Table 19: Bin types present at the survey sites**

	n	%
<b>Litter</b>	952	89%
<b>Recycling</b>	85	9%
<b>Dog</b>	30	2%
<b>Smoking</b>	2	0%

The bins were most likely to be between 100 and 150 litres in capacity.

**Table 20: Capacity of bins surveyed**

	n	%
<b>Under 50 litres</b>	102	5%
<b>50-99 litres</b>	374	25%
<b>100-150 litres</b>	546	62%
<b>151 litres</b>	47	8%

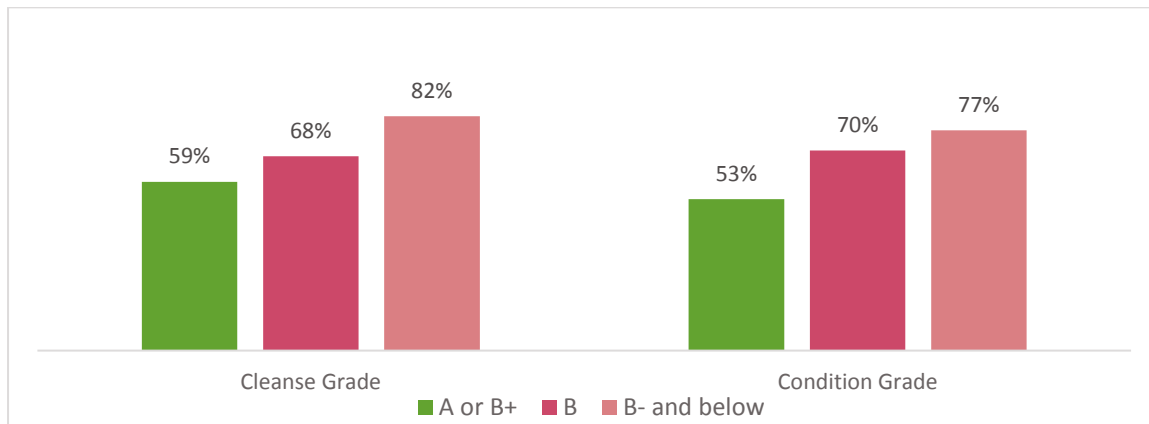
Bins present at survey sites were graded for bin condition and cleanliness using the standard LEQSE bin grading methodology. A bin ‘condition grade’ refers to evidence of damage or tampering, such as a broken access door. A bin ‘cleanse grade’ is based on its cleanliness at the time of survey.

Overall, the vast majority of bins surveyed were at an acceptable cleanse grade, with 15% at B+ or A, and 76% at B. The remaining 9% were of cleanse grade of B- or below. The condition grade of the bins shows a similar distribution, but with gradings slightly higher overall than those for the cleanse condition, with 25% at Grade A or B+, 64% at grade B, and 11% at Grade B- (0% at C or C-). Of all bins surveyed, 49% of bins had burn marks on them, which again is supporting the notion that people may be putting out cigarettes onto bins (noting that this survey did not differentiate between litter bins with and without cigarette stubbing plates). In terms of fill, nearly three quarters of bins (72%) were under 50% full.

In 52% of cases, there was litter present around the bins, and the results appear to demonstrate that the overall condition of the bins is related to the presence of litter around the bin, with bins that score more lowly for their condition or grade being more likely to have litter surrounding them.



**Figure 8: Proportion of litter bins with litter around them by cleanse and condition grade**



Perhaps unsurprisingly, bins that were more than 75% full were more likely to have litter items around them (79% of bins that were 76%-100% full had litter items around them, compared to 87% of bins that were more than 100% full, i.e. overflowing).

Additionally, 81% of bins with burn marks on them had litter around them, compared to 55% of bins without burn marks.

Interestingly, larger litter bins were more likely to have litter around them (73% of bins 100l and over compared to 64% of bins 99l and under). We are unable to speculate as to why this might be the case, and further research is recommended. This should take into account bin aperture size and design, alongside bin size (and accessibility).

### **3.4 Objective 3: The impact of public recycling bins in reducing litter**

There were 85 recycling bins noted in the survey, spread over 66 different sites. These low numbers of recycling bins mean that we are unable to draw robust conclusions regarding the impact of public recycling bins in reducing litter.

53 of the 66 sites (80%) with a recycling bin present also had a litter bin present. Across all sites with a recycling bin present, the average count of litter was significantly higher than in sites with no bin present (39.8 items on average and 22.1 items on average, respectively). However, it seems that this difference is largely attributable to land use type and the co-presence of litter bins. Certain land use types make up a substantially greater proportion of sites with recycling bins present; for example, 42% of sites with recycling bins are in a main retail and commercial environment, compared to just 6% of sites without a recycling bin. Looking at litter types, it is evident that the only litter type that increases significantly where a recycling bin is present is cigarette butts (14.6 average and 30.0 average). This is not likely to be due to the presence of the recycling bin itself, but the fact that they are generally provided alongside litter bins – counts of cigarette butts were higher at sites with litter bins present, as noted above (Section 3.3.3).

The present data does indicate that there is no substantial difference in the presence of litter around litter bins compared to recycling bins (litter was present at 69% and 68% of these bin types respectively), and again the litter item that increases with the presence of recycling bins is cigarette butts (15 when none are present to 30 when recycling bins are present) rather than other types of litter.

The fact that only 2% of sites surveyed had recycling bins present in and of itself may suggest that there is room for improvement in the arena of public recycling facilities (though as previously noted, this research does not intend to provide an assessment of bin provision by local authorities and sites were not selected on this basis - a report from RECOUP from 2017 indicated that 42% of local authorities provide recycling on the go facilities).<sup>34</sup> Recycling bins tend to be provided alongside litter bins in high footfall areas such as ‘main retail and commercial area’ (this survey found that 72% of these sites had a litter bin present, while just 12% of sites had a recycling bin present). Keep Britain Tidy has heard anecdotal evidence that contamination rates can make on-the-go recycling provision unviable for local authorities. Further research is recommended to establish current provision and impacts on both recycling and litter. Coupled with the recent finding that under half (49%) of adults in the UK are satisfied with the provision of recycling services while they are out indicates that there is a level of public interest in increasing their availability,<sup>35</sup> but the relationship between their presence and levels of litter requires further research.

Looking at the composition of the recycling bins examined within the waste composition analysis, the majority of waste recycled is again formed of beverage containers (cans, plastic, and glass bottles); making up 37% of recycled waste.

**Table 23: Top 15 items comprising the greatest proportion of recycled item count**

	General Waste %	Recycling %	Percentage point difference
<b>Other general litter</b>	18%	15%	-2.7
<b>Small plastic bottle</b>	5%	15%	10.0
<b>Non-alcoholic cans</b>	5%	11%	6.0
<b>Other paper</b>	12%	8%	-4.6
<b>Snack pack</b>	4%	7%	2.7
<b>Alcoholic can</b>	2%	6%	3.8
<b>Fast food inner</b>	9%	5%	-4.1
<b>Napkins</b>	7%	5%	-1.4
<b>Coffee cup</b>	4%	4%	0.0
<b>Cigarette stubs</b>	7%	3%	-4.1
<b>Crisp packet</b>	3%	2%	-0.8
<b>Chocolate wrapper</b>	3%	2%	-1.2
<b>Small alcoholic glass bottles</b>	1%	2%	0.7

<sup>34</sup> RECOUP Local Authority Disposal ‘On the Go’ Survey 2017

<sup>35</sup> Keep Britain Tidy National Perceptions Survey 2019

	General Waste %	Recycling %	Percentage point difference
<b>Straw</b>	2%	2%	-0.2
<b>Smoking litter count not stubs</b>	2%	2%	-0.3

Base: 831 general waste bins | 23 recycling bins

*NB: Due to the small sample size (23 recycling bins were analysed as part of the waste composition analysis), these figures should be used as indicative only.*

There is some contamination of cigarette stubs within recycling waste, but these only comprise 3% of the overall count of recycled items. The items that have the biggest difference in the proportion of recycled items they make up as compared to general waste, are non-alcoholic small plastic bottles and non-alcoholic cans; which is in line with items that would be expected to be most frequently recycled. Additionally, ‘fast food inner’ items, crisp packets, and confectionery wrappers, together accounting for 9% of recycling items, are not widely recycled, indicating some additional contamination on this front.

## 4. Conclusion

The results of this composition analysis demonstrate that there are a number of factors evident that impact the extent to which a location is littered, as well as the types of litter dropped. The intention of this research was to examine these levels in relation to deprivation, location, LEQ cleanliness factors (graffiti, staining, and fly-posting) of sites and the provision of litter/recycling bins. The results indicate that all these factors, to varying degrees, are connected to levels of litter.

It is clear from this research that levels of deprivation are a key factor in impacting levels of litter; with levels substantially higher at sites in areas with lower levels of affluence. Particularly notable is the disproportionate increase in more conspicuous items of litter in deprived areas, with items such as small plastic bottles occurring seven times as frequently in the 20% most deprived locations as compared to the 20% most affluent locations. Furthermore, deprivation appears to act in combination with other variables; rural urban classification and other LEQ factors such as graffiti, flyposting, and staining, which additionally appear to be related to litter.

As levels of graffiti, flyposting, and staining worsen, average levels of litter found per site simultaneously increase. These issues are interconnected with deprivation, and link with previous research identifying worsening environmental quality as deprivation increases. The exception to this link with cleanliness is natural factors affecting local environment quality. In fact, as levels of detritus, recent leaf and blossom fall, and weeds worsen, there is no observable impact on levels of litter found per site. This seems to be due to affluence, with more green space present in more affluent areas, and potentially because these natural factors do not provide cues for disorderly behaviours in the same way. Graffiti and flyposting are behaviours exhibited by other members of the community, setting evidence for a social norm, and thereby implicitly condoning the further behaviours of graffiti, and littering. These findings are, to some extent, congruent with aspects of

'broken windows theory'<sup>36</sup>, which is a widely noted phenomenon and previous literature additionally demonstrates the interconnection between various markers of cleanliness and disorder.

In terms of item types, unsurprisingly, the most common litter items are cigarette stubs, accounting for 66% of the count of all litter items. One key tenet of items that are most likely to be dropped as opposed to binned, such as cigarette stubs, is that they are small and discrete. There is a greater perceived level of acceptance of the littering of such items, so people may feel less concerned about littering them. A very different picture is evident when looking at litter volumes (the amount of space that each item occupies), with packaging for soft drinks contributing to overall volumes much more significantly. In fact, across various soft drinks containers, nearly half of all litter volumes is accounted for.

This research has provided an update to previous evidence looking at the factors that can influence levels of litter, and builds an in depth picture of the composition of dropped and binned litter down to the level of individual brands. The 15 most frequently littered brands made up 10% of the total litter count excluding cigarettes; and while this represents a substantial proportion of litter, is lower than is generally perceived by the public for top branded items. There is scope for future research to understand the behaviours underlying the variation in litter composition that is evident in these findings, and to examine the exact interrelationship between various influencing factors. Furthermore, there is a lack of empirical evidence surrounding the impact of public recycling bins on litter, and the low numbers of recycling bins across the sites surveyed within the remit of this study means that we are unable to draw solid conclusion about their impact. However, previous Keep Britain Tidy research has indicated that there is a public demand for such services, so it would be of interest to further discern the role that they can play.

---

<sup>36</sup> Kelling, G. L., & Wilson, J. Q. (1982). Broken windows. *Atlantic monthly*, 249(3), 29-38.

## Appendix A – LEQSE Land Use Types

### **Main retail and commercial areas**

This land use includes the main town and city retail and commercial centres. Main Retail and Commercial Areas contain a choice of outlets in a range of different retail and commercial sectors<sup>37</sup> (such as fashion clothing, financial services, restaurants, bars and entertainment's), and will include national and international brand names. These areas can contain office and other commercial uses (e.g. leisure), as well as retail activity. Normally, there is also a range of public facilities, including libraries, museums, law courts, and places of worship. There may be more than one 'Main Retail and Commercial Area' in an authority.

Town squares and plazas located within Main Retail and Commercial areas which are predominantly hard surfaced are included in this land use. In cases where these are predominantly 'open space' – i.e. contain grass, tree and/or shrub areas – they are surveyed as Recreation Areas, depending on the survey type.

Rear access roads, service roads, car parks and the first 50 metres of side streets in the Main Retail and Commercial Areas should also be included in this land use. This is because this land is directly affected by the activities taking place in this land use.

### **Other retail and commercial areas**

This land use class covers retail and commercial areas located outside<sup>38</sup> main city and town retail and commercial centres (but excludes out-of-town or edge-of-town 'retail park/retail shed' developments, which are included with industry, warehousing and science parks). Other Retail and Commercial Areas usually contain a range of facilities that mainly meet the needs of local residents. Most premises contain individual private businesses, sometimes branches of regional chains (such as bakers), and occasionally national brand names. Other Retail and Commercial Areas may also contain civic facilities, areas of office and hotel development, and areas of mixed retail, office, hotel and entertainment uses.

Sometimes, 'Main' and 'Other' Retail and Commercial Areas dovetail into each other, for example a "high street" may be 'Main' at the Town Centre, but tail off into 'Other' towards the margins. It is acceptable for the land use class to change at points along the road. In such cases, assign the land use class that predominates at the point where the site is located.

Rear access roads, service roads, car parks and the first 50 metres of side streets in Other Retail and Commercial Areas should also be included in this land use. This is because this land is directly affected by the activities taking place in this land use.

### **Housing (high, medium and low obstruction)**

Housing land uses are split into three sections. The distinguishing characteristic is the obstruction to cleansing operations based on the design of the housing area. The majority of organisations employ a form of mechanical sweeping technique to cleanse their highways. When this operation takes place in and around housing areas, a key consideration will be the number of parked cars which present an obstruction to the cleansing operation. With this in mind, three separate housing land uses are used. Within all housing land uses, Off-Street Parking and Incidental Parking can occur. These are described below:

---

<sup>37</sup> When determining whether an area is classified as Main Retail and Commercial, consideration is given to footfall, consumer spend, value of commercial properties and commercial competition.

### **Off-Street Parking**

Parking which is either not on the carriageway, or has been installed and sanctioned by the Local Authority in such a way that the carriageway channel is unobstructed for cleansing operations. This includes:

- parking within the property boundaries (curtilage)
  - a. garages
  - b. driveways
  - c. converted front gardens (providing that the kerb has been fully dropped)
  - d. underground parking, etc.
- garage courts
- parking bays created adjacent to the carriageway (but not including areas simply defined on the carriageway with paint markings)

### **Incidental Parking**

Parking which can be one-off or related to specific instance, e.g.

- Larger commercial vehicles making deliveries
- Tradesmen's vehicles working on new or existing premises
- Overflow parking from premises holding a social gathering, such as a wedding, birthday party or charity fund-raising event

(Note: Incidental parking will not determine the housing land use and can occur across all land uses.)

### **High obstruction housing areas**

Housing areas should be classified as 'High Obstruction Housing' if the proportion of dwellings with purpose-made off-street parking facilities is less than or equal to 50%. A description of off-street parking can be found in the housing land use introduction.

In areas where houses have been subdivided into flats, or houses in multiple occupation, the calculation should be based on the number of dwellings present, not the number of buildings. In these areas, there is a high risk of obstruction to mechanical channel sweeping operations. High Obstruction Housing Areas can also include occasional small retail premises, offices, manufacturing, and warehousing sites.

This land use class includes housing of varying types, for example it may include:

- Terraced housing (whether it occurs in urban or rural areas)
- Alleyways behind and between housing areas where there is a direct access to properties
- Flats and maisonettes with only limited off-street parking
- Semi-detached and short terraced dwellings<sup>39</sup> with limited or no purpose-made off-street vehicle parking, or parking provision which is not large enough for use by modern vehicles

---

<sup>39</sup> A single place of residence

### **Medium obstruction housing areas**

Housing areas should be classified as 'Medium Obstruction Housing' if more than 50% of dwellings have purpose-made off-street parking/garaging facilities for up to 2 modern day family cars. A description of off-street parking can be found in the housing land use introduction.

In areas where houses have been subdivided into flats, or houses in multiple occupation, the calculation should be based on the number of dwellings present, *not* the number of buildings.

The following are some examples of the wide variety of housing types that can comprise Medium Obstruction Housing:

- private housing with small curtilages, often where passageways at the side of houses are too narrow for most current-day cars
- council housing originally built with no off-street parking provision within the curtilage, where limited off-street parking has been provided since for some of the properties
- modern developments with limited off-street parking
- modern developments of flats with parking underneath
- terraced housing with garage facilities or rear access parking for up to 2 modern day family cars

### **Low obstruction housing areas**

This land use includes all types of housing where more than 50% of properties have purpose-made off-road garaging/parking within the property boundary for three or more modern day family cars. In these areas, there is generally a low risk of obstruction to mechanical channel sweeping operations. A description of off-street parking can be found in the housing land use introduction.

The parking should be capable of accommodating all the parking requirements of residents (including, where applicable, boats and caravans etc.) and most of the demand from visitors to the premises.

This definition includes maisonettes and flats, regardless of tenure, if the parking is contained within the property curtilage. In Low Obstruction Housing Areas, it is likely that there will be few or no vehicles parked on-street, and significant on-street parking is the exception rather than the rule.

### **Industry, warehousing, retail sheds and science parks**

This class includes industrial and warehousing developments; out-of-town retail parks (including food and non-food developments); and science parks (containing offices, laboratories and manufacturing processes).

### **Main roads**

Main Roads are all 'A' roads. However, if a Main Road is situated within any of the following land uses then that site should be recorded as that land use and not as a Main Road, due to potential obstruction:

- Main Retail and Commercial
- Other Retail and Commercial
- High Obstruction Housing

### **Rural roads**

This land use comprises all adopted highways that are located outside built up areas and which are not otherwise included in the Main Roads or Other Highways land use classes. With these exceptions, this land use covers all roads outside built up areas, whether 'rural' in character or not.

Some authorities, because they are heavily built up, may appear not contain 'rural roads'. In fact, there are very few authorities that have no roads at all that fit into this category.

Some roads on the edge of built up areas have agricultural land on one side, and development on the other. Where the development has no access to the road e.g. there is continuous fencing or hedging, treat this as a rural road. Where the development does have access, allocate the road to the same category as the adjacent land use.

The selection of survey sites on Rural Roads should pay careful regard to safety and should be limited to sites where there is a foot-way or a wide, easily walked verge.

### **Other highways**

Other highways can be found in areas that are predominately of another land use. This land use class includes:

- Formal Laybys - which have been created by the local authority
- Informal Laybys - which have developed over time due to vehicles pulling in at the same location, these do not include field entrances
- Stub Roads etc. – redundant highway infrastructure still accessible to the public, including stub access roads to future development sites
- Underpasses - pedestrian underpasses
- Footbridges – pedestrian footbridges
- Un-metalled Bridleways etc. - the first 50 metres of bridleways, By-ways Open to all Traffic (BOATS) and Roads Used as Public Paths (RUPPS) which have an un-metalled carriageway surface (gravel, aggregate, soil etc.) leading from metalled public highways
- Metalled Bridleways etc. - the first 50 metres of bridleways, By-ways Open to all Traffic (BOATS) and Roads Used as Public Paths (RUPPS) which have a metalled carriageway surface (tarmac, concrete, cobbles etc.) leading from metalled public highways
- Narrow routes - normally this type of pathway is adopted and is usually closely bounded by walls and/or other boundary structures, for example an alleyway. A narrow route is used as a route from point A to point B. However, if the route provides direct access to a number of properties then this should be classified as the appropriate land use. Such routes need to be at least 25m in length to constitute a survey site.
- Cycleways – including redways – dual purpose cycle/footpaths – Dedicated cycleways in both rural and urban areas, which are separated (by distance or a physical barrier) from highways that are trafficked by motor vehicles and other adjacent LEQS land uses.
- Other - this includes any other highway which is not listed above. When using the 'other' option please ensure you make use of the notes section on the survey form

### **Recreation areas**

Recreation areas are public open spaces including parks, recreation areas, grassed areas, picnic sites, and paved areas (which are not main or other retail or commercial). They also include all publicly



accessible areas adjacent to ponds, lakes, reservoirs, canals, rivers, and estuaries. Sites should be at least 1250m<sup>2</sup> (50m by 25m) - ideally 1500m<sup>2</sup> (50m by 50m) - or bounded by some form of barrier delimiting them as distinctly separate from the surrounding land use. Officially signed and/or marked public footpaths and deconsecrated cemeteries should also be included in the land use category.

Types of areas that can be surveyed within this category are entrances to recreation areas, a play area, a large public square, sports pitches, dog walking areas, car parks at recreation areas, catering areas within recreation areas, picnic areas, plazas, towpaths, promenades, locks and structures, Other Public Rights of Way Besides Water Bodies (OPROW) and boat facilities.

## Appendix B – Litter and Waste Categories

Litter counts
<b>Alcoholic drink containers</b>
Alcoholic cans
Small Alcoholic Glass Bottles
Large Alcoholic Glass Bottles
Small Alcoholic Plastic Bottles
Large Alcoholic Plastic Bottles
<b>Non-alcoholic drink containers</b>
<b>Cans</b>
Non-alcoholic cans – Coca-Cola
Non-alcoholic cans – Pepsi (All)
Non-alcoholic cans – Red Bull
Non-alcoholic cans – Monster
Non-alcoholic cans – Tango
Non-alcoholic cans – Other Brand (record brand name)
Non-alcoholic cans – Other Brand 2 (record brand name)
Non-alcoholic cans – Any Other Brand Count
<b>Cans – multipack</b>
Non-alcoholic cans – Coca-Cola (All) – MULTIPACK
Non-alcoholic cans – Pepsi (All) – MULTIPACK
Non-alcoholic cans – Red Bull – MULTIPACK
Non-alcoholic cans – Monster – MULTIPACK
Non-alcoholic cans – Tango – MULTIPACK
Non-alcoholic cans – Other Brand Name MULTIPACK (record brand name)
Non-alcoholic cans – Other Brand Name 2 MULTIPACK (record brand name)
Non-alcoholic – Any Other Brand Count MULTIPACK
<b>Plastic bottle – small (&lt;750ml)</b>
Plastic Small Bottle (<750ml) – Coca-Cola
Plastic Small Bottle (<750ml) – Pepsi
Plastic Small Bottle (<750ml) – Innocent
Plastic Small Bottle (<750ml) – Lucozade
Plastic Small Bottle (<750ml) – Robinsons
Plastic Small Bottle (<750ml) – Fanta

Litter counts
Plastic Small Bottle (<750ml) – Evian
Plastic Small Bottle (<750ml) – Nestlé Pure Life
Plastic Small Bottle (<750ml) – Volvic
Plastic Small Bottle (<750ml) – Buxton
Plastic Small Bottle (<750ml) – Highland Spring
Plastic Small Bottle (<750ml) – Other Brand (record brand name)
Plastic Small Bottle (<750ml) – Other Brand 2 (record brand name)
Plastic Small Bottle (<750ml) – Any Other Brand Count
<b>Plastic bottle – small (&lt;750ml), multipack</b>
Plastic Small Bottle (<750ml) – Coca-Cola – MULTIPACK
Plastic Small Bottle (<750ml) – Pepsi – MULTIPACK
Plastic Small Bottle (<750ml) – Lucozade – MULTIPACK
Plastic Small Bottle (<750ml) – Innocent – MULTIPACK
Plastic Small Bottle (<750ml) – Robinsons – MULTIPACK
Plastic Small Bottle (<750ml) – Fanta – MULTIPACK
Plastic Small Bottle (<750ml) – Evian – MULTIPACK
Plastic Small Bottle (<750ml) – Nestlé Pure Life – MULTIPACK
Plastic Small Bottle (<750ml) – Buxton – MULTIPACK
Plastic Small Bottle (<750ml) – Volvic – MULTIPACK
Plastic Small Bottle (<750ml) – Highland Spring – MULTIPACK
Plastic Small Bottle (<750ml) – Other Brand MULTIPACK (record brand name)
Plastic Small Bottle (<750ml) – Other Brand 2 MULTIPACK (record brand name)
Plastic Small Bottle (<750ml) – Any Other Brand Count
<b>Plastic bottle – large (750ml+)</b>
Plastic Large Bottle (750ml+) – Coca-Cola
Plastic Large Bottle (750ml+) – Pepsi
Plastic Large Bottle (750ml+) – Innocent
Plastic Large Bottle (750ml+) – Lucozade
Plastic Large Bottle (750ml+) – Robinsons
Plastic Large Bottle (750ml+) – Fanta
Plastic Large Bottle (750ml+) – Evian
Plastic Large Bottle (750ml+) – Nestlé Pure Life
Plastic Large Bottle (750ml+) – Volvic
Plastic Large Bottle (750ml+) – Buxton
Plastic Large Bottle (750ml+) – Highland Spring
Plastic Large Bottle (750ml+) – Other Brand (record brand name)
Plastic Large Bottle (750ml+) – Other Brand 2 (record brand name)
Plastic Large Bottle (750ml+) – Any Other Brand Count
<b>Plastic bottle – large (750ml+), multipack</b>
Plastic Large Bottle (750ml+) – Coca-Cola – MULTIPACK
Plastic Large Bottle (750ml+) – Pepsi – MULTIPACK
Plastic Large Bottle (750ml+) – Innocent – MULTIPACK
Plastic Large Bottle (750ml+) – Lucozade – MULTIPACK
Plastic Large Bottle (750ml+) – Robinsons – MULTIPACK
Plastic Large Bottle (750ml+) – Fanta – MULTIPACK
Plastic Large Bottle (750ml+) – Evian – MULTIPACK
Plastic Large Bottle (750ml+) – Nestlé Pure Life – MULTIPACK

Litter counts
Plastic Large Bottle (750ml+) – Volvic – MULTIPACK
Plastic Large Bottle (750ml+) – Buxton – MULTIPACK
Plastic Large Bottle (750ml+) – Highland spring – MULTIPACK
Plastic Large Bottle (750ml+) – Other Brand MULTIPACK (record brand name)
Plastic Large Bottle (750ml+) – Other Brand 2 MULTIPACK (record brand name)
Plastic Large Bottle (750ml+) – Any Other Brand Count MULTIPACK
<b>Glass bottle – small (&lt;750ml)</b>
Glass Bottle Small Non-Alcoholic (<750ml) – Coca-Cola
Glass Bottle Small Non-Alcoholic (<750ml) – J20
Glass Bottle Small Non-Alcoholic (<750ml) – Perrier Water
Glass Bottle Small Non-Alcoholic (<750ml) – Bundaberg
Glass Bottle Small Non-Alcoholic (<750ml) – Fever Tree
Glass Bottle Small Non-Alcoholic (<750ml) – Other Brand (record brand name)
Glass Bottle Small Non-Alcoholic (<750ml) – Other Brand 2 (record brand name)
Glass Bottle Small Non-Alcoholic (<750ml) – Any Other Brand Count
<b>Glass bottle – small (&lt;750ml), multipack</b>
Glass Bottle Small Non-Alcoholic (<750ml) – Coca-Cola – MULTIPACK
Glass Bottle Small Non-Alcoholic (<750ml) – J20 – MULTIPACK
Glass Bottle Small Non-Alcoholic (<750ml) – Perrier Water – MULTIPACK
Glass Bottle Small Non-Alcoholic (<750ml) – Bundaberg – MULTIPACK
Glass Bottle Small Non-Alcoholic (<750ml) – Fever-Tree – MULTIPACK
Glass Bottle Small Non-Alcoholic (<750ml) – Other Brand MULTIPACK (record brand name)
Glass Bottle Small Non-Alcoholic (<750ml) – Other Brand 2 MULTIPACK (record brand name)
Glass Bottle Small Non-Alcoholic (<750ml) – Any Other Brand Count – MULTIPACK
Glass Bottle Large Non-Alcoholic (above 750ml) – Brand Name(67A7E) – Text Count Glass Bottle Large Non-Alcoholic Above 750ml – Brand 1 (record brand name)
<b>Glass Bottle Large Non-Alcoholic (750ml+)</b>
Glass Bottle Large Non-Alcoholic Above 750ml – Brand 2 (record brand name)
Glass Bottle Large Non-Alcoholic Above 750ml – Any Other Band Name Count
<b>Coffee cups</b>
Coffee Cup – Costa
Coffee Cup – Starbucks
Coffee Cup – Pret
Coffee Cup – Caffè Nero
Coffee Cup – McDonald’s
Coffee Cup – Non Brand coffee cup
Coffee Cup – Other Brand Name (record brand name)
Coffee Cup – Other Brand Name 2 (record brand name)
Coffee Cup – Any other brand count
Other Containers for hot drinks
<b>Other drink containers</b>
Fast Food Drink Container (Not Coffee)
Cold drink Containers (not Bottle)
<b>Food on-the-go</b>
<b>Fast Food – inner packaging</b>
Fast Food Inner packaging – McDonald’s
Fast Food Inner packaging – KFC

<b>Litter counts</b>
Fast Food Inner packaging – Subway
Fast Food Inner packaging – Burger King
Fast Food Inner packaging – Greggs
Fast Food Inner packaging – Starbucks
Fast Food Inner packaging – Pret
Fast Food Inner packaging – Costa
Fast Food Inner packaging – Nando's
Fast Food Inner packaging – Domino's Pizza
Fast Food Inner packaging – Unbranded Count
Fast Food Inner packaging – Other Brand (record brand name)
Fast Food Inner packaging – Other Brand 2 (record brand name)
Fast Food Inner packaging – Any Other Brand Count
<b><i>Fast food – outer packaging</i></b>
Fast Food Outer packaging – McDonald's
Fast Food Outer packaging – KFC
Fast Food Outer packaging – Subway
Fast Food Outer packaging – Burger King
Fast Food Outer packaging – Greggs
Fast Food Outer packaging – Starbucks
Fast Food Outer packaging – Pret
Fast Food Outer packaging – Costa
Fast Food Outer packaging – Nando's
Fast Food Outer packaging – Domino's Pizza
Fast Food Outer packaging – Unbranded Count
Fast Food Outer packaging – Other Brand (record brand name)
Fast Food Outer packaging – Other Brand 2 (record brand name)
Fast Food Outer packaging – Other Brand (record brand name) – Any Other Brand Count
<b><i>Sandwich packaging</i></b>
Sandwich packaging – Pret
Sandwich packaging – Costa
Sandwich packaging – Starbucks
Sandwich packaging – Caffè Nero
Sandwich packaging – Greggs
Sandwich packaging – Sainsbury's
Sandwich packaging – Marks & Spencer
Sandwich packaging – Tesco
Sandwich packaging – ASDA
Sandwich packaging – Morrisons
Sandwich packaging – Unbranded
Sandwich packaging – Other Brand (record brand name)
Sandwich packaging – Other Brand 2 (record brand name)
Sandwich packaging – Any Other Brand Count
<b>Utensils</b>
Straw
Plastic Cutlery
Napkins
<b>Confectionary packaging and snack packs</b>

Litter counts
Snack Pack
<b>Crisp packets</b>
Crisp packets – Walkers
Crisp packets – Pringles
Crisp packets – Doritos
Crisp packets – McCoy’s
Crisp packets – Golden Wonder
Crisp packets – Tyrrells
Crisp packets – Hula Hoops
Crisp packets – Quavers
Crisp packets – Wotsits
Crisp packets – Monster Munch
Crisp packets – Other Brand (record brand name)
Crisp packets – Other Brand 2 (record brand name)
Crisp packets – Any other brand count
<b>Chocolate wrappers</b>
Chocolate wrapper – Aero
Chocolate wrapper – Cadburys Dairy Milk
Chocolate wrapper – Galaxy
Chocolate wrapper – Kinder
Chocolate wrapper – Kit Kat
Chocolate wrapper – Mars Bar
Chocolate wrapper – Maltesers
Chocolate wrapper – Snickers
Chocolate wrapper – Twirl
Chocolate wrapper – Wispa
Chocolate wrapper – Other Brand (record brand name)
Chocolate wrapper – Other Brand 2 (record brand name)
Chocolate wrapper – Any other brand count
<b>Sweets and mints packaging</b>
Sweets – Extra Mints
Sweets – Haribo
Sweets – Maynards Bassetts
Sweets – Rowntree’s
Sweets – Trebor
Sweets – Drumsticks
Sweets – Skittles
Sweets – Airwaves Mints
Sweets – Mentos
Sweets – Polo
Sweets – Other Brand (record brand name)
Sweets – Other Brand 2 (record brand name)
Sweets – Any Other Brand Count
<b>Chewing gum packaging</b>
Gum packaging – Doublemint
Gum packaging – Extra
Gum packaging – Orbit

<b>Litter counts</b>
Gum packaging – Juicy Fruit
Gum packaging – Dentyne
Gum packaging – Trident
Gum packaging – Spearmint
Gum packaging – Hubba Bubba
Gum packaging – Other Brand (record brand name)
Gum packaging – Other Brand 2 (record brand name)
Gum packaging – Any Other Brand Name Count
<b>Carry bags</b>
Plastic bags
Paper Bags
Plastic Bag – 5p
Plastic Bag – Exempt SUCB
Plastic Bag – Bag For Life
<b>Paper related</b>
Newspaper
Magazines
Other Paper
<b>Balloons</b>
Balloon – Latex
Balloon – Mylar/Foil
Balloon Related
Balloon Fragments
<b>Smoking related</b>
Cigarette litter – Cigarette stubs
Cigarette litter – Smoking related (not stubs)
<b>Other</b>
Cardboard Box
Unsure
Other General Litter

<b>Bins on transect</b>
Bins – Litter bins on transect – Yes/No/N/A
Bins – Bin reference number
Bins – Litter sacks on transect – Yes/No/N/A
Bins – Bin Notes
Bin type
Bin size
Bin fill
Bin condition grade
Bin cleanliness grade
Litter around bin – Yes/No/N/A
Burn marks on bin – Yes/No/N/A

## Appendix C – Full results

### LEQSE Grades - % of sites at each grade

Grade	A	B	B-	B+	C	C-	D
Detritus	2%	56%	13%	21%	2%	0%	0%
Graffiti	76%	11%	2%	11%	0%	0%	0%
Flyposting	69%	10%	1%	20%	0%	0%	0%
Weeds	5%	55%	10%	24%	1%	0%	0%
Gum Staining	15%	20%	3%	62%	0%	0%	0%
All Stains	5%	71%	9%	15%	1%	0%	0%
Recent Lead and Blossom Fall	8%	46%	6%	40%	0%	0%	0%

### Litter/binned waste item type – by count

Item type	LITTER		BIN	
	Count	% of total litter	Count	% of total binned
Cigarette stubs	50,088	66.3%	2,838	6.9%
General litter – other	11,652	15.4%	7,569	18.4%
Paper – other	2,350	3.1%	5,066	12.3%
Smoking litter (not stubs)	1,511	2.0%	773	1.9%
Drinks: Cans – non-alcoholic	1,188	1.6%	1,944	4.7%
Sweet and mint packaging	1,177	1.6%	970	2.4%
Drinks: Plastic bottles – small, non-alcoholic	1,049	1.4%	2,193	5.3%
Chocolate wrappers	916	1.2%	1,255	3.1%
Unsure (litter type cannot be determined)	801	1.1%	6	<0.1%
Fast food – inner packaging	613	0.8%	3,873	9.4%
Straws	537	0.7%	727	1.8%
Drinks: Cans – alcoholic	417	0.6%	1,075	2.6%
Chewing gum packaging	379	0.5%	84	0.2%
Fast food drink container (not coffee)	307	0.4%	671	1.6%
Plastic cutlery	300	0.4%	437	1.1%
Drinks: Coffee cups	285	0.4%	1,515	3.7%
Crisp packets	273	0.4%	1,131	2.7%
Napkins	272	0.4%	2,724	6.6%
Snack pack	264	0.3%	1,846	4.5%
Fast food – outer packaging	208	0.3%	697	1.7%
Drinks: Glass bottles – small, alcoholic	146	0.2%	413	1.0%
Cardboard box	111	0.1%	391	1.0%
Drinks: Other cold drink containers (not bottle)	98	0.1%	346	0.8%

Item type	LITTER		BIN	
	Count	%	Count	%
Plastic bags	72	0.1%	-	0.0%
Drinks: Plastic bottle – large, non-alcoholic	71	0.1%	204	0.5%
Sandwich packaging	67	0.1%	694	1.7%
Exempt SUCB Plastic Bag	66	0.1%	290	0.7%
Balloon - latex	55	0.1%	5	<0.1%
Newspaper	50	0.1%	316	0.8%
Paper bags	38	0.1%	139	0.3%
Drinks: Glass bottles – large, alcoholic	32	<0.1%	184	0.4%
5p SUCB plastic bag	29	<0.1%	368	0.9%
Drinks: Glass bottle – small, non-alcoholic	25	<0.1%	37	0.1%
Balloon fragments	24	<0.1%	4	<0.1%
Drinks: Multipack cans – non-alcoholic	19	<0.1%	28	0.1%
Magazines	12	<0.1%	167	0.4%
Bag for Life plastic bag	11	<0.1%	44	0.1%
Drinks: Other containers for hot drinks	10	<0.1%	37	0.1%
Drinks: Plastic bottles – large, alcoholic	7	<0.1%	28	0.1%
Balloon related	6	<0.1%	2	<0.1%
Balloon – mylar/foil	5	<0.1%	3	<0.1%
Drinks: Multipack plastic bottle – small, non-alcoholic	5	<0.1%	25	0.1%
Drinks: Plastic Bottles – small, alcoholic	3	<0.1%	22	0.1%
Drinks: Glass bottles – large, non-alcoholic	2	<0.1%	1	<0.1%
Drinks: Multipack plastic bottles – large, non-alcoholic	-	0.0%	2	<0.1%
Drinks: Multipack glass bottle – small, non-alcoholic	-	0.0%	-	0.0%
<b>TOTAL</b>	<b>75,551</b>	<b>100%</b>	<b>41,144</b>	<b>100%</b>

### Litter/ binned waste item type – by volume<sup>40</sup>

	Average volume per item (litres)	Total volume - litter	% total litter volume	Total volume - bin	% total bin waste
Drinks: Plastic bottles – small, non-alcoholic	0.60898	638.8	24.4%	1335.5	19.7%
Drinks: Cans – non-alcoholic	0.41088	488.1	18.6%	798.8	11.8%
Smoking litter (not stubs)	0.21582	326.1	12.4%	166.8	2.5%
Drinks: Coffee cups	0.71996	205.2	7.8%	1090.7	16.1%
Drinks: Cans – alcoholic	0.42984	179.2	6.8%	462.1	6.8%
Fast food drink container (not coffee)	0.43098	132.3	5.0%	289.2	4.3%

<sup>40</sup> All values for volume are recorded in litres



	Average volume per item (litres)	Total volume - litter	% total litter volume	Total volume - bin	% total bin waste
Drinks: Plastic bottle – large, non-alcoholic	1.63438	116.0	4.4%	333.4	4.9%
General litter – other	0.00748	87.2	3.3%	56.6	0.8%
Drinks: Other cold drink containers (not Bottle)	0.80431	78.8	3.0%	278.3	4.1%
Drinks: Glass bottles – small, alcoholic	0.42701	62.3	2.4%	176.4	2.6%
Newspaper	1.18766	59.4	2.3%	375.3	5.5%
Sandwich packaging	0.71996	48.2	1.8%	499.7	7.4%
Fast food – inner packaging	0.05499	33.7	1.3%	213.0	3.1%
Drinks: Glass bottles – large, alcoholic	0.73869	23.6	0.9%	135.9	2.0%
Snack pack	0.07184	19.0	0.7%	132.6	2.0%
Magazines	1.18766	14.3	0.5%	198.3	2.9%
Drinks: Glass bottle – small, non-alcoholic	0.47685	11.9	0.5%	17.6	0.3%
Drinks: Plastic bottles – large, alcoholic	1.63438	11.4	0.4%	45.8	0.7%
Unsure	0.01322	10.6	0.4%	0.1	<0.1%
Sweet and mint packaging	0.00783	9.2	0.4%	7.6	0.1%
Cardboard box	0.08011	8.9	0.3%	31.3	0.5%
Drinks: Multipack cans – non-alcoholic	0.41088	7.8	0.3%	11.5	0.2%
Chocolate wrappers	0.00783	7.2	0.3%	9.8	0.1%
Cigarette stubs	0.00011	5.7	0.2%	0.3	0.0%
Other paper	0.00210	4.9	0.2%	10.6	0.2%
Drinks: Other containers for hot drinks	0.46320	4.6	0.2%	17.1	0.3%
Plastic bags	0.06036	4.3	0.2%	0.0	0.0%
Drinks: Multipack plastic bottle – small, non-alcoholic	0.60898	3.0	0.1%	15.2	0.2%
Plastic cutlery	0.00950	2.9	0.1%	4.2	0.1%
Paper bags	0.06036	2.3	0.1%	8.4	0.1%
Exempt SUCB plastic bag	0.03412	2.3	0.1%	9.9	0.1%
Drinks: Glass bottles – large, non-alcoholic	1.10754	2.2	0.1%	1.1	<0.1%
Fast food – outer packaging	0.01057	2.2	0.1%	7.4	0.1%
Straws	0.00409	2.2	0.1%	3.0	0.0%
Crisp packets	0.00783	2.1	0.1%	8.9	0.1%
Drinks: Plastic Bottles – small, alcoholic	0.60898	1.8	0.1%	13.4	0.2%
5p SUCB plastic bag	0.03412	1.0	<0.1%	12.6	0.2%
Bag For Life	0.08660	1.0	<0.1%	3.8	0.1%
Napkins	0.00338	0.9	0.0%	9.2	0.1%
Chewing gum packaging	0.00011	0.0	0.0%	0.0	0.0%
Balloon - latex	0.00016	0.0	0.0%	0.0	0.0%
Balloon - mylar/Foil	0.00156	0.0	0.0%	0.0	0.0%
Balloon fragments	0.00016	0.0	0.0%	0.0	0.0%
Balloon related	0.00016	0.0	0.0%	0.0	0.0%

	Average volume per item (litres)	Total volume - litter	% total litter volume	Total volume - bin	% total bin waste
Drinks: Multipack plastic bottles – large, non-alcoholic	1.10754	0.0	0.0%	2.2	<0.1%
Drinks: Multipack glass bottle – small, non-alcoholic	0.47685	0.0	0.0%	0.0	0.0%
<b>TOTAL</b>		<b>2,623.0</b>		<b>6,793.6</b>	

### Litter versus binned waste (at sites with bins present only)

ITEM	LITTER		BIN		% of item littered versus binned		
	Count	% of total litter	Count	% of total binned waste	Total Number	% littered	% binned
Cigarette stubs	18,953	73%	2,838	7%	21,791	87%	13%
General litter – other	3,258	13%	7,569	18%	10,827	30%	70%
Paper – other	745	3%	5,066	12%	5,811	13%	87%
Smoking litter (not stubs)	438	2%	773	2%	1,211	36%	64%
Sweet and mint packaging	407	2%	970	2%	1,377	30%	70%
Chocolate wrappers	279	1%	1,255	3%	1,534	18%	82%
Unsure	243	1%	6	<1%	249	98%	2%
Drinks: Cans – non-alcoholic	218	1%	1,944	5%	2,162	10%	90%
Drinks: Plastic bottles – small, non-alcoholic	203	1%	2,193	5%	2,396	8%	92%
Fast food – inner packaging	176	1%	3,873	9%	4,049	4%	96%
Straws	114	1%	727	2%	841	14%	86%
Chewing gum packaging	102	<1%	84	<1%	186	55%	45%
Plastic cutlery	92	<1%	437	1%	529	17%	83%
Drinks: Cans – alcoholic	77	<1%	1,075	3%	1,152	7%	93%
Drinks: Coffee cups	71	<1%	1,515	4%	1,586	4%	96%
Napkins	69	<1%	2,724	7%	2,793	2%	98%
Crisp packets	68	<1%	1,131	3%	1,199	6%	94%
Snack pack	66	<1%	1,846	4%	1,912	3%	97%
Fast food drink container (not coffee)	58	<1%	671	2%	729	8%	92%
Fast food – outer packaging	58	<1%	697	2%	755	8%	92%
Drinks: Glass bottle – small, non-alcoholic	41	<1%	413	1%	454	9%	91%
Drinks: Other cold drink containers (not Bottle)	23	<1%	346	1%	369	6%	94%
Cardboard box	22	<1%	391	1%	413	5%	95%
Plastic bags	19	<1%	-	<1%	19	100%	0%

	LITTER			BIN		% of item littered versus binned	
Sandwich packaging	19	<1%	694	2%	713	3%	97%
Exempt SUCB plastic bag	15	<1%	290	1%	305	5%	95%
Drinks: Plastic bottle – large, non-alcoholic	13	<1%	204	<1%	217	6%	94%
Balloon - latex	11	<1%	5	<1%	16	69%	31%
Newspaper	11	<1%	316	1%	327	3%	97%
Drinks: Glass bottle – small, non-alcoholic	10	<1%	37	<1%	47	21%	79%
5p SUCB plastic bag	8	<1%	368	1%	376	2%	98%
Drinks: Glass bottles – large, alcoholic	8	<1%	184	<1%	192	4%	96%
Drinks: Plastic bottles – large, alcoholic	5	<1%	28	<1%	33	15%	85%
Magazines	5	<1%	167	<1%	172	3%	97%
Paper bags	5	<1%	139	<1%	144	3%	97%
Bag For Life	4	<1%	44	<1%	48	8%	92%
Balloon related	3	<1%	2	<1%	5	60%	40%
Drinks: Multipack plastic bottle – small, non-alcoholic	2	<1%	25	<1%	27	7%	93%
Drinks: Plastic Bottles – small, alcoholic	2	<1%	22	<1%	24	8%	92%
Balloon - mylar/foil	0	0%	3	<1%	3	0%	100%
Balloon fragments	0	0%	4	<1%	4	0%	100%
Drinks: Multipack cans – non-alcoholic	0	0%	28	<1%	28	0%	100%
Drinks: Glass bottles – large, non-alcoholic	0	0%	1	<1%	1	0%	100%
Drinks: Multipack plastic bottles – large, non-alcoholic	0	0%	2	<1%	2	0%	100%
Drinks: Multipack glass bottle – small, non-alcoholic	0	0%	0	0%	0	-	-
Drinks: Other containers for hot drinks	0	0%	37	<1%	37	0%	100%
<b>TOTAL</b>	<b>25,921</b>		<b>41,144</b>		<b>67,065</b>	<b>39%</b>	<b>61%</b>

## Litter and binned waste counts by brand

### Coffee cups – litter

Coffee Cup brand	Count	% of total count
McDonald's	79	28%
Non-branded coffee cup	75	26%
Costa	67	24%
Greggs	22	8%
Starbucks	9	3%
Wild Bean	9	3%
Pret	7	2%
Other (named) <sup>41</sup>	6	2%
Other (unnamed)	6	2%
Coffee Republic	2	1%
Emmi	2	1%
Caffè Nero	1	0%
<b>Total</b>	<b>285</b>	<b>100%</b>

### Coffee cups – binned waste

Coffee Cup brand	Count	% of total count
Non Branded	436	29%
Greggs	299	20%
Costa	259	17%
McDonald's	177	12%
Starbucks	90	6%
Caffè Nero	86	6%
Pret	40	3%
Subway	9	1%
Cornish Pasty Co	9	1%
Monty Bojangles	8	1%
Lavazza	7	0%
Compostable	6	0%
Other (named) <sup>42</sup>	78	5%
Other (unnamed)	21	1%
<b>Total</b>	<b>1515</b>	<b>100%</b>

<sup>41</sup> Sprinkles Gelato, Brodericks, EAT, KFC, Morvend, Nero, Percy Ingle

<sup>42</sup> Wrights, Caffè Latte, Carluccio's, Chuggs, Coffee satation, Cornish Bakery, Douwe Egberts, Eat, Frankie & Bennies, Galaxy, Jack's Beans, Krispy Kreme, Leon, Marks & Spencer, Miofino, Nescafe, Next, Paul, Pound Bakery, Press, Rijo, Sainsbury's, Subway, Warrens Bakery, Wetherspoon, Wild Bean Café

### Crisp packets - litter

Crisp Packets brand	Count	% of total count
Walkers	91	33%
Hula Hoops	14	5%
Quavers	12	4%
Pringles	12	4%
Wotsits	11	4%
Mini Cheddars	11	4%
Doritos	10	4%
McCoy's	10	4%
Supermarket Own	10	4%
Monster Munch	8	3%
Snackrite	8	3%
Golden Wonder	6	2%
Space Raiders	5	2%
Tyrrells	4	1%
Other (named) <sup>43</sup>	54	20%
Other (unnamed)	7	3%
<b>Total</b>	<b>273</b>	<b>100%</b>

### Crisp packets – binned waste

Crisp Brands	Count	% of total count
Walkers	381	34%
Hula Hoop	63	6%
Supermarket Own	61	5%
Snackrite	58	5%
Doritos	54	5%
McCoy's	47	4%
Pom Bears	37	3%
Golden Wonder	34	3%
Mini Cheddars	28	2%
Skips	26	2%
Quavers	26	2%
Wotsits	22	2%
Monster Munch	22	2%
Pringles	20	2%

<sup>43</sup> Asda, Bacon rashers, Bear, Braingans, Burtons, Cheetos, Chipsticks, Co-op, Fish n chips, Frazzles, French Fries, Golden wonder, Jacks, Kerpi, Kettle chips, Lentil Curls, Maryland cookies, Monster Claws, Morrisons crisps, Nefis, Nik Naks, Nobby, Ringos, Roysters, Scampi Fries

Crisp Brands	Count	% of total count
Seabrook	18	2%
Cheetos	17	2%
Snacktastic	16	1%
Jacob's	13	1%
Tyrrells	7	1%
Other (named) <sup>44</sup>	155	14%
Other (unnamed)	26	2%
<b>Total</b>	<b>1131</b>	<b>100%</b>

### Chocolate wrappers - litter

Chocolate wrapper brand	Count	% of total count
Kinder	101	11%
Cadbury Dairy Milk	93	10%
Kit Kat	63	7%
Snickers	39	4%
Twirl	35	4%
Maltesers	30	3%
Other Cadbury	30	3%
Galaxy	26	3%
Wispa	25	3%
Mars Bar	20	2%
Creme Egg	19	2%
Bounty	16	2%
Twix	14	2%
Tunnock's	12	1%
Milky Bar	11	1%
Double Decker	11	1%
Milky Way	9	1%
Aero	8	1%
Toffee Crisp	8	1%
Lindt	8	1%
Crunchie	8	1%
Boost	7	1%
Penguin	6	1%

<sup>44</sup> Bobby's, Boots, Burtons, Disco, DISCOS, Eat Real, Frazzles, French Fries, Frisps, Ginni's, Greggs, Gusto, Happy Shopper, Hippeas, Jacobs, Kettle Chips, Kiddylicious, KP, Lakeland, Mr Porky, Nik Naks, Organix, Originals, Pipers, Pop Chips, Popchips, Popper Corn, Pop-tastic, Quavers, Ridged, Roysters, Sensations, Shapers, Smiths, Snack a Jacks, Snaps, Space Invaders, Space Raiders, Squares, Sunbites, Twiglets, Ufit, Wheat Crunchies

Chocolate wrapper brand	Count	% of total count
Picnic	6	1%
Other (named) <sup>45</sup>	168	18%
Other (unnamed)	143	16%
<b>Total</b>	<b>916</b>	<b>100%</b>

### Chocolate wrappers – binned waste

Chocolate wrapper brand	Count	% of total count
Cadburys Dairy Milk	154	12%
Kinder	137	11%
Kit Kat	73	6%
Twix	61	5%
Galaxy	52	4%
Snickers	49	4%
Wispa	42	3%
Mars Bar	40	3%
Maltesers	37	3%
Milky Way	27	2%
Twirl	26	2%
Aero	25	2%
Crunchie	23	2%
Yorkie	22	2%
Celebrations	22	2%
Bounty	22	2%
M&Ms	15	1%
Mini Rolls	14	1%
Toffee Crisp	13	1%
Daim Bar	12	1%
Lion Bar	12	1%
Boost	12	1%

<sup>45</sup> Aldi racer , Alpen , Amigo, Animal bar, Asda, Asda Chocolate Raisins , Belmont Biscuits, Blue Riband, Breakaway, Brunch bar, Caramac, Chimp, Chocolate éclair , Chocolate orange , Classic, Club, Coco Pops, Cornetto, Creme egg, Crunchie, Daim, Doreen, Drifter, éclair, Euro shopper, Ferrero Roche , Flake, Foxes, Freddie, Fudge, Girlie, Go ahead, Gold, Happy Shopper Chocolate buttons, Harry Potter Chocolate Frog, Hershey's, Holly Lane, Ice gems , Knoppers, M&Ms, Magnum, Make, Mcvities , Me freeeze , Midi, Mikdo , milka, Milky buttons, Mini Maryland cookies , Minstrels, MnS giant buttons , Munchies , Nature valley, Nkd, Nutella, Nuti grain , Oreo, Reece, Reeses , Rice crispy square, Riki, Ripple, Roll, Romeo, Sainsbury's , Sesame snaps , Slim Fast, Smarties , Snickers , Soreen , Squares, Star, Star bar , Terry chocolate orange, Terrys, Terrys Chocolate Orange, Tesco, Timeout, Toblerone, Tool, Tracker, Trebles, Trek, Twice, Twin, Unknown , Wacko, Wagon wheel, Walls, Werthers Original, Yorkie

Chocolate wrapper brand	Count	% of total count
Lindt	12	1%
Nestlé	11	1%
Double Decker	11	1%
Supermarket Own	4	0%
Other (named) <sup>46</sup>	242	20%
Other (unnamed)	85	7%
<b>Total</b>	<b>1255</b>	<b>100%</b>

### Sweet and mint packaging - litter

Sweets / mints brand	Count	% of total count
Haribo	92	8%
Maoam	80	7%
Chewits	43	4%
Starburst	38	3%
Mentos	30	3%
Fruittella	28	2%
Rowntree's	19	2%
Drumsticks	19	2%
Trebor	18	2%
Chupa Chups	17	1%
Fox's	16	1%
Skittles	11	1%
Werther's Originals	10	1%
Maynards Bassetts	8	1%
Polo	6	1%
Refreshers	6	1%
Extra Mints	5	0%
Airwaves Mints	3	0%
Other (named) <sup>47</sup>	113	10%

<sup>46</sup> Belmont, Blue Ribbon, Bourneville, Brooklea, Brunch Bar, Cadbury Buttons, Cadbury Freddo, Cadbury Fudge, Cadbury Fudge, Candy Sticks, Caramel, Chewy, Chomp, Classic, Club, Cornetto, Creme Egg, Curly Wurly, Éclair, Eclairs, Ferrero Rocher, Flake, Flips, Freddo, Fry's, Fudge, Gold, Green & Blacks, Happy Shopper, Hello Panda, Hershey, Hobnobs, iChoc, Jaffa Cakes, Magnum, Mars, McVities, Mikado, Milka, Minstrels, Miss Molly's, Munchies, NATURE VALLEY, Nesquik, Nutella, Oreo, Paweeek, Penguin, Pick-Up, Picnic, Poppets, Quality Street, Reeses, Revels, Ripple, Rocky, Rolos, Roses, Rowan Hill, SlimFast, Smarties, Squares, Star Bar, Stinger, Terrys, Thorntons, Timeout, Titan, Toblerone, Topic, Tracker Bar, Tunnocks, Turkish Delight, Wagon Wheel

<sup>47</sup> 2002 Bombay, Asda, Barrett, Belts, Blackjacks, Bonds filled strawberries, Bonds of London, Butter fudge, buzz, Calippo, Calypso, Chooos, Chubb Chubb, Cola bottles, Cola Lolly, Co-op, Co-op fizzy lances, Dip dab, Drumstick, Eclairs, Fizz Belt, Fizzers, Freeze pops, Frubes, Fruit Salad, Fruit winder, Glacier Ice, Go Isotonic, Grenade, Halls, Hating, Hi-chew, Ice pops, Ice snapper, Iced gems, Imperial Mints, Jakemans, Jelly Beans,



Sweets / mints brand	Count	% of total count
Other (unnamed)	615	52%
<b>Total</b>	<b>1,177</b>	<b>100%</b>

### Sweet and mint packaging – binned waste

Sweets / mints brand	Count	% of total count
Maoam	110	11%
Jakemans	39	4%
Fruittella	83	9%
Werther's Originals	69	7%
Starburst	30	3%
Vimto	27	3%
Chupa Chups	24	2%
Fox's	20	2%
Supermarket Own	23	2%
Extra Mints	1	0%
Haribo	133	14%
Maynards Bassetts	30	3%
Rowntree's	14	1%
Trebor	10	1%
Drumsticks	27	3%
Skittles	10	1%
Airwaves Mints	2	0%
Mentos	10	1%
Polo	4	0%
Other (named) <sup>48</sup>	173	18%
Other (unnamed)	131	14%
<b>Total</b>	<b>970</b>	<b>100%</b>

Juicy drop pop, Keene, Locketts, Lotus biscoff biscuits, Love hearts , Millions, Mr Chew, Mr Freeze, Nobbly Bobby, parma violets, Percy and Penny, Rainbow Drops, Rainbow Dust, refresher, Reisan, sainsbury s, Smarties , Smint, Soothers , Sour Patch, Squeeze pop , Strawberry laces, Sweets Brands, Tango face, tesco brand , Tic tacs, Toy story, Tubes, Tuisi, Turkish delight, Unsure , Vimto , Vimto millions, Walls, Wham

<sup>48</sup> Big-track, Black Jack, Bobbies, Bobby's, Brain Licker, Buzz, Candy, Carapella, Chewits, Chupa Chups, Dip-Dab, Eclairs, Fizzers, Fizzums, Flump, Fox's, Fruit Pastels, Fruit Salad, Fruitbowl, Fruittella, Gumtrees, Haifische, Hi-Chew, Hubba Bubba, Ice, Jelly Beans, Jelly Tots, Jolly Rancher, Kasugai, Kiddylicious, Legendary, Lions, Listerine, Locketts, Love Hearts, Love heatrs, Marlo's, Millions, Mojos, Morrisons, Nerdz, Party Rings, Percy Pigs, Pez, Pick n Mix cup, Push-Pop, Raffaello, Rainbow dust, RealFruit, Refreshers, Ring Pop, RowntreesRowntree's, Slush Puppy, Soothers, Squares, Squeeze-ums , Taverners, Teeth & lips, Tic Tacs, Tofflairs, Turkish Delight, Welch's, WELCH'S, Wham, Winders, Xtra Strong Mints, Zero

### Chewing gum packaging – litter

Chewing gum brand	Count	% of total count
Extra	273	72%
Airwaves	24	6%
Double Mint	11	3%
Hubba Bubba	10	3%
Orbit	8	2%
Spearmint	4	1%
Trident	2	1%
Juicy Fruit	1	0%
JET Gum	1	0%
Other (unnamed) <sup>49</sup>	45	12%
<b>Total</b>	<b>379</b>	<b>100%</b>

### Chewing gum packaging – binned waste

Chewing gum brand	Count	% of total count
Extra	60	71%
Airwaves	7	0%
Double Mint	0	0%
Hubba Bubba	0	0%
Orbit	0	0%
Spearmint	0	0%
Trident	0	0%
Juicy Fruit	0	0%
Other (named) <sup>50</sup>	6	29%
Other (unnamed)	11	
<b>Total</b>	<b>84</b>	<b>100%</b>

<sup>49</sup> Other brand names not recorded.

<sup>50</sup> Trebor, Mentos, Get More

### Fast food: inner packaging – litter

Fast Food - Inner packaging brand	Count	% of total count
McDonald's	321	52%
Unbranded	132	22%
Greggs	40	7%
KFC	32	5%
Subway	8	1%
Costa	7	1%
Domino's	6	1%
Heinz	6	1%
Burger King	5	1%
Supermarket own	4	1%
Dixy	3	0%
Pret	2	0%
Starbucks	2	0%
Nando's	0	0%
Other (named) <sup>51</sup>	10	2%
Other (unnamed)	35	6%
<b>Total</b>	<b>613</b>	<b>100%</b>

### Fast food: inner packaging – binned waste

Fast Food - Inner packaging brand	Count	% of total count
Greggs	1006	26%
McDonald's	846	22%
Pound Bakery	126	3%
Subway	104	3%
Tesco	95	2%
KFC	73	2%
Marks & Spencer	37	1%
Pret	36	1%
Co-op	30	1%
Wrights	30	1%
Real Cornish Pasty Co	23	1%
Asda	22	1%
Warrens Bakery	20	1%
Costa	17	0%
Burger King	12	0%
Domino's	5	0%

<sup>51</sup> Chaiwala, Chicken ,Ginsters, Jaruzelski, Subway, Tim Hortons, Wild Bean

Fast Food - Inner packaging brand	Count	% of total count
Starbucks	4	0%
Nando's	2	0%
Other (named) <sup>52</sup>	111	3%
Other (unnamed)	5	0%
Unbranded	1269	33%
<b>Total</b>	<b>3873</b>	<b>100%</b>

### Fast food: outer packaging – litter

Fast Food - Outer packaging brand	Count	% of total count
McDonald's	101	49%
Unbranded	42	20%
KFC	23	11%
Greggs	11	5%
Pret	4	2%
Subway	3	1%
Domino's	2	1%
Starbucks	1	0%
Burger King	1	0%
Costa	0	0%
Nando's	0	0%
Other (named) <sup>53</sup>	12	6%
Other (unnamed)	8	4%
<b>Total</b>	<b>208</b>	<b>100%</b>

### Fast food: outer packaging – binned waste

Fast Food - Outer packaging brand	Count	% of total count
McDonald's	296	42%
Greggs	51	7%
Subway	35	5%
KFC	30	4%
Pret	17	2%
Costa	10	1%
Starbucks	8	1%

<sup>52</sup> ALDI, Ben & Jerry's, Birds, Boots, Café Nero, Co-op, Cornish Bakery, Coughlands, Delicatessen, Dixys, Eat, Favorite, Food Hub, Ginsters, HEINZ, Krispy Kremes, Leon, Magic, Meadow Fresh, Morrisons, Oggy Oggy, One Stop, Out To Lunch, Papa John's, Patisserie Valerie, Pizza Hut, Pure, Rachel's, Sainsbury's, Shapers, Shauls Bakery, Subway, Sushi Daily, Taco Bell, Walls, Wicked, Wild Bean, Wrights

<sup>53</sup> Dixy, Fish n Chicken, Itsu, M & S, pizza hut, Pot Noodle, Sainsbury's , Tesco , Upper Crust, Walls, Wild Bean Café

Fast Food - Outer packaging brand	Count	% of total count
Supermarket Own	6	1%
Caffè Nero	4	1%
Burger King	2	0%
Nando's	1	0%
Domino's	0	0%
Other (named) <sup>54</sup>	18	3%
Other (unnamed)	2	0%
Unbranded	217	31%
<b>Total</b>	<b>697</b>	<b>100%</b>

### Sandwich packaging – litter

Sandwich Packaging Brand	Count	% of total count
Tesco	32	48%
Co-op	7	10%
ASDA	5	7%
Unbranded	4	6%
Greggs	3	4%
Sainsbury	3	4%
Marks & Spencer	2	3%
Pret	1	1%
Morrisons	1	1%
Costa	0	0%
Starbucks	0	0%
Caffè Nero	0	0%
Other (named) <sup>55</sup>	4	6%
Other (unnamed)	5	7%
<b>Total</b>	<b>67</b>	<b>100%</b>

### Sandwich packaging – binned waste

Sandwich Packaging Brand	Count	% of total count
Tesco	208	30%
Co-op	78	11%
Marks & Spencer	60	9%
Sainsbury's	55	8%
Greggs	40	6%

<sup>54</sup> Birds, Café Nero, Co-op, Cornish Bakery, Dixy's, Favorite, Krispy Kreme, Out To Lunch, Patisserie Valerie, Pizza Hut, Pound Bakery, Sainsbury's, Taco Bell, Tesco, Waitrose, Wild Bean Café, Wrights

<sup>55</sup> Love Lunch, Spar, Subway, Waitrose

Sandwich Packaging Brand	Count	% of total count
Boots	24	3%
Urban Eats	18	3%
Ginsters	17	2%
Pret	15	2%
ASDA	14	2%
Morrisons	14	2%
One Stop	12	2%
Costa	1	0%
Starbucks	0	0%
Caffè Nero	0	0%
Other (named) <sup>56</sup>	33	5%
Unbranded	105	15%
<b>Total</b>	<b>694</b>	<b>100%</b>

### Can: non-alcoholic (single and multipack) – litter

Can – non-alcoholic	Count	% of total count
Coca-Cola	268	22%
Red bull	223	18%
Pepsi	117	10%
Euro Shopper Energy	80	7%
Monster	66	6%
Boost Energy	61	5%
Fanta	40	3%
Tango	25	2%
Dr Pepper	17	1%
Happy Shopper	16	1%
Emerge Energy	16	1%
Rubicon	15	1%
Rockstar	15	1%
Barr's	12	1%
Original Energy	9	1%
Rio	9	1%
Sprite	9	1%
Irn Bru	7	1%
KA	7	1%

<sup>56</sup> ALDI, Chop Chop, Country Choice, Fresh Bite, Ginsters, Lidl, Munch, Pret, Spar, Waitrose, Wicked Kitchen, Wilko, Wrights

Can – non-alcoholic	Count	% of total count
Lilt	7	1%
LSV	7	1%
Other (named) <sup>57</sup>	95	8%
Other (unnamed)	86	7%
<b>Total</b>	<b>1,207</b>	<b>100%</b>

### Can: non-alcoholic (single and multipack) – binned waste

Fast Food - Outer packaging brand	Count	% of total count
Coca-Cola	477	24%
Red bull	274	14%
Pepsi	174	9%
Monster	147	8%
Boost Energy	84	4%
Fanta	82	4%
Emerge Energy	66	3%
Original Energy	74	3%
Rockstar	54	3%
Dr Pepper	40	2%
Tango	40	2%
Relentless	33	2%
Vimto	31	2%
Rio	27	1%
Irn Bru	26	1%
Barr's	25	1%
Rubicon	24	1%
Sprite	20	1%
Mirinda	17	1%
Euro Shopper	16	1%
7up	15	1%
Supermarket Own	15	1%
Other (named) <sup>58</sup>	124	6%
Other (unnamed)	87	4%

<sup>57</sup> Abbeywell, Aqua Libra, Asda, Barr's, Ben shaws, Best one energy drink , Blue Spark, Bulldog Power, Carabao, Chocomel, Cola, Coop, Diet blue charge , DnB, Dragon, Energise, Energy, Faints, Fevertree, Helena orangeade, Hello, Innocent, j20, Lucozade, Marks and Spencer, Millions , Mirinda , Mountain Dew, Naked, Nourishment , Old Jamaica ginger beer, Powwer, Purdeys, Pussy, Relentless , Revolt , Rico, Rubicon , RWhites, San Pellegrino, St Helleir, Star, Starbucks, Sun Exotic, Sunkist, Tesco, Too, V Energy, Victor, Vimto , Whites

<sup>58</sup> Alaska, Appletiser, Aqua Libra, Asda, Barr, Ben Shaws, Ben Sherman's, Best One, Black, Blue, Bulldog, Burn, Carabao, Coco, Colossus, Costa, Dalstons, Dark Thunder, Evolve, Happy Shopper, Innocent, J20, KA, Kofola, Korev, Lilt, LSV, Lucozade, Mirinda , MTV, Nescafe, Oasis, Perrier, Powwer, Pussy, Red Thunder, San Pellegrino, Schweppes, Spike, Sprite, St.Helier, Starbucks, Tesco, Tiger, Tizer, Ugly, VIVE, Warrior, Whole Earth

Fast Food - Outer packaging brand	Count	% of total count
<b>Total</b>	<b>1972</b>	<b>100%</b>

### Small plastic bottle (single and multipack) – litter

Small plastic bottle	Count	% of total count
Lucozade	181	17%
Coca-Cola	73	7%
Volvic	54	5%
Nestlé Pure Life	41	4%
Evian	38	4%
Pepsi	35	3%
Robinsons	30	3%
LSV	24	2%
Highland Spring	23	2%
Fanta	22	2%
Supermarket Own	20	2%
Euro Shopper Energy	19	2%
Oasis	17	2%
Kirkland	15	1%
Buxton	14	1%
Ribena	14	1%
Tropicana	10	1%
Yazoo	9	1%
Boost Energy	8	1%
Innocent	7	1%
Mountain Dew	7	1%
Dr Pepper	7	1%
Fruit Shoot	7	1%
Other (named) <sup>59</sup>	149	14%
Other (unnamed)	228	22%
<b>Total</b>	<b>1,054</b>	<b>100%</b>

<sup>59</sup> 7up, Abbey well , Actimel , Aloe, Aloe king , Aqua Pura, Aquarius , auqalife, Azeri, Ballygowan , Barr, Batak, Berry burst, Best one sport , Beylik, Bigga, Blue Chang, Carrick Glen, Drench, elm, Elm Spring, Emerge, Erikili, Fiji, For goodness shake, For goodness shakes, Frijj , Glaceau Smart Water, Grenade, H2gO, Harrogate water, Hayat, Ice Valley, Irn Bru , Isotonic sport , Itsu, Juice burst, Just juice, KA, Kafir, Lemon lime , Lipton Ice Tea, Lucozade , m&s fixzy, Mars, Miau, Milk it , Milkshake , Munch bunch, Naked, NestleNestlé water , Orangina, Pelegrín, Perfectly clear , Pinar, Piñata, Powerade , Princess Gate, Radnor, Radnor Fruits, Rubicon , Saka , Shaken udder , Shaken up, Smart Water, Sport, Springbourne, Sprite, St Pelegrino, Strathmore, SuperValu, Too, Unknown, Vinyl, Water, White Rock, Wow hydrate , Xplosade , Yahoo



### Small plastic bottle (single and multipack) – binned waste

Small Plastic Bottle	Count	% of total count
Lucozade	200	11%
Coca-Cola	172	9%
Supermarket Own	103	6%
Pepsi	105	6%
Robinsons	80	4%
Buxton	76	4%
Evian	82	4%
Volvic	70	4%
Fanta	65	4%
Highland Spring	61	3%
Oasis	57	3%
Innocent	56	3%
Nestlé Pure Life	44	2%
Yazoo	42	2%
Tropicana	41	2%
Dr Pepper	29	2%
Greggs	29	2%
Ribena	28	2%
Vimto	27	1%
Naked	25	1%
Smart Water	22	1%
Ice Valley	18	1%
7up	16	1%
Kirkland	16	1%
Nestlé	15	1%
Boost Energy	14	1%
Saka	14	1%
Other (named) <sup>60</sup>	346	19%
Other (unnamed)	365	20%
<b>Total</b>	<b>2218</b>	<b>100%</b>

<sup>60</sup> Abbey Well , Actimel, Acti-Shake, Aloe, Anti-Shake, Aqua Pura, Aqueo, Ben Sherman's, Berrington, Boomers, Boots, Bounty, Bullygowan, Carb Killa, Celtic, Coco, Costa, Cristalline, Decante, Drench, Elm Spring, Emerge, Emmi, Essence, Euro Shopper, Freshmans, Fresubin, Fridge, Friij, Fruit Shoot, Galaxy, Gatorade, Glucose, GOODNESS SHAKE, Greggs, Grenade, Harrogate, Hydro, ICE , Ice Valley, Iceland, Irn Bru, J2O, Jucee, Juice Burst, Juicy Water, Just Bee, KA, Kirkland, Lakeland, Levi Roots, Liptons, LSV, Make, Mars, Milk It, Monster, Mountain dew, Muller, Nutrition, Orangina, Overhang, Pinar, Powerade, Pran, Pret, Princess Gate, Protein XL, Radnor, Radnor Splash, Red Bull, Rubicon, San Pellegrino, Satino, Saxa, Sci Mix, Shapers, Sirma, Skyr, South Downs, Spar, Sprite, Strathmore, Sunny D, Tango, Thirsty, Trinketts, Ufit, Urban Active, Vita, Vivat, Weetabix, West Country, Wilko, Wow, Xplosade, Yakult, Yeo, Yo!, Yorkshire Vale, Yulu Zazay , Zodiac, Zwieck

### Large plastic bottle (single and multipack) – litter

Large plastic bottle	Count	% of total count
Lucozade	15	21%
Coca-Cola	12	17%
Evian	5	7%
Volvic	4	6%
Highland Spring	3	4%
Pepsi	2	3%
Buxton	2	3%
Fanta	1	1%
Nestlé Pure Life	1	1%
Innocent	0	0%
Robinsons	0	0%
Other (named) <sup>61</sup>	17	37%
Other (unnamed)	9	37%
<b>Total</b>	<b>71</b>	<b>100%</b>

### Large plastic bottle (single and multipack) – binned waste

Small Plastic Bottle	Count	% of total count
Supermarket Own	47	23%
Volvic	24	12%
Coca-Cola	17	8%
Evian	10	5%
Lucozade	9	4%
Pepsi	7	3%
Buxton	8	3%
Robinsons	6	3%
Highland Spring	5	2%
Nestlé	4	2%
Innocent	1	0%
Fanta	1	0%
Nestlé Pure Life	1	0%
Other (named) <sup>62</sup>	40	20%
Other (unnamed)	28	14%
<b>Total</b>	<b>206</b>	<b>100%</b>

<sup>61</sup> 7Up, Asda, Coco Fuzion 100, Dr Witt, Emerge, Fruit shoot, Giusto, Milk, Rubicon, Saka, Schweppes, Spar apple and black currant, Unknown, Yazoo

<sup>62</sup> Yorkshire Valley, YAZOO, Vimto, Tizer, Smart, Schweppes, Saskla, SASKIA, San Pellegrino, Pinar, Oshee, Old Jamaca, Naturis, Naked, Lipton, Lindhouse, Jack's, Ice Valley, Greggs, Freeway, Farmfoods, Cowbelle, Chase Spring, Boost, Arla, Aqua Carpatica, 7up,

## Appendix D – Volume-per-item model

### Data source: Volume-per-item model by Keep Australia Beautiful

Keep Australia Beautiful's *National Litter Index* uses a volume-per-item model to estimate the total volume of different litter types. The table below outlines the total count and total volume of litter recorded by Keep Australia Beautiful in its 2015-16 National Litter Index<sup>63</sup> survey, in which 66,838 items of litter were counted. Keep Britain Tidy has calculated the average volume of each litter type based on these results (see last column on right).

Keep Australia Beautiful 2015-16 National Litter Index results	Total count	Total volume	Ave. volume per item (litres)
<b>Cigarette butts</b>	<b>28,761</b>	<b>3.288</b>	<b>0.0001143</b>
<b>Glass</b>			
Alcoholic sodas / spirit-based mixers, all sizes	82	30.318	0.3697317
Beer, all colours of glass, <750ml	489	226.601	0.4633967
Beer, all colours of glass, 750ml+	82	74.852	0.9128293
Cider/fruit based etc.	23	10.302	0.4479130
Flav.wtr/fruit j. dr/sprts dr, (non-carb), <1 litre	24	11.837	0.4932083
Flav.wtr/fruit j. dr/sprts dr, (non-carb), 1 litre+	5	5.748	1.1496000
Flav. water/soft drink (carbonated) <1 litre	30	12.271	0.4090333
Flav. water/soft drink (carbonated) 1 litre+	23	28.738	1.2494783
Fruit juice, < 1 litre	9	3.817	0.4241111
Fruit juice, 1 litre+	4	3.887	0.9717500
Other glass	546	10.763	0.0197125
Plain water (carbonated or non-carb.), <1 litre	18	10.459	0.5810556
Plain water (carbonated or non-carb.), 1 litre+	3	3.178	1.0593333
Wine & spirit, all sizes	48	41.896	0.8728333
Wine cooler, all sizes	10	4.304	0.4304000
<b>Total</b>	<b>1,392</b>	<b>478.971</b>	
<b>Illegal dumping</b>	<b>81</b>	<b>1,980.000</b>	<b>24.4444444</b>
<b>Metal</b>			
Aerosols - pressure packs	34	22.580	0.6641176
Alcoholic sodas & spirit-based mixers	328	143.656	0.4379756
Beer, aluminium, all types, all sizes	261	112.380	0.4305747
Cider/fruit based etc	72	30.310	0.4209722
Flav. water/soft drink, (carbonated), all sizes	1,117	472.763	0.4232435
Flav. water/soft drink, (non-carb), all sizes	105	41.845	0.3985238
Foil take away	290	128.321	0.4424862
Food cans (including pet food)	78	44.853	0.5750385
Industrial cans - all types	109	43.811	0.4019358
Metal bottle tops and can pull rings	1,331	5.728	0.0043035
Metal pieces	740	6.882	0.0093000
Other foil	1,283	2.001	0.0015596
<b>Total</b>	<b>5,745</b>	<b>1,055.129</b>	
<b>Miscellaneous</b>			
Clothing & materials	745	11.337	0.0152174
Condoms	9	0.003	0.0003333
Construction materials	104	37.440	0.3600000

63

Keep Australia Beautiful 2015-16 National Litter Index results	Total count	Total volume	Ave. volume per item (litres)
Disposable nappies	14	15.750	1.1250000
Ice cream sticks	310	0.286	0.0009226
Other miscellaneous	312	4.124	0.0132179
Rubber pieces (not tyres)	458	0.074	0.0001616
Syringes	14	0.033	0.0023571
Tyres & pieces	165	37.688	0.2284121
<b>Total</b>	<b>2,128</b>	<b>106.735</b>	
<b>Paper / paperboard</b>			
Cartons, flavoured milk < 1 litre	214	142.230	0.6646262
Cartons, flavoured milk 1 litre+	10	10.127	1.0127000
Cartons, fruit juice, < 1 litre	44	25.615	0.5821591
Cartons, fruit juice, 1 litre+	8	16.560	2.0700000
Cartons, milk, plain (white) all sizes	36	35.949	0.9985833
Cigarette packets	690	148.914	0.2158174
Cups/take away containers	1,582	1,138.984	0.7199646
Flav. water/fruit j. drink/sports drink, non-carb, <1 litre	33	12.096	0.3665455
Flav. water / fruit j. drink/ sports drink, (non-carb), 1 litre+	4	8.280	2.0700000
Ice cream wrappers	284	0.678	0.0023873
Junk mail / free circulars	279	48.459	0.1736882
Newspapers & magazines	231	274.350	1.1876623
Other paper	7,539	25.445	0.0033751
Packages & boxes	740	59.280	0.0801081
Paper bags	652	6.893	0.0105721
Shopper docket & related shopping paper (eg, lists)	716	1.468	0.0020503
Tickets, e.g. bus, ATM, vending machine etc.	390	0.341	0.0008744
<b>Total</b>	<b>13,448</b>	<b>1,955.668</b>	
<b>Plastic</b>			
6 ring can holders	30	0.050	0.0016667
Bags - heavier glossy typically branded carry bags	87	7.534	0.0865977
Bags - supermarket type light weight carry bags	377	12.863	0.0341194
Bread bag tags	213	0.053	0.0002488
Containers, domestic type	68	535.641	7.8770735
Containers, industrial e.g. oil	20	437.931	21.8965500
Drink pouches	22	1.898	0.0862727
Flav. milk, <1 litre	274	144.894	0.5288102
Flav. milk, 1 litre+	30	63.032	2.1010667
Flav.wtr/fruit j. dr, sprts dr etc.(non-carb) <1 litre	114	82.982	0.7279123
Flav. wtr/fruit j. dr, sprts dr etc.(non-carb) 1 litre+	47	58.253	1.2394255
Flav. water/soft drink (carbonated) <1 litre	412	256.620	0.6228641
Flav. water/soft drink (carbonated) 1 litre+	84	142.244	1.6933810
Fruit juice <1 litre 0.600	64	24.603	0.3844219
Fruit juice, 1 litre+	11	20.299	1.8453636
Lollipop sticks	522	0.284	0.0005441
Other plastic	4,840	6.041	0.0012481
Packing tape & straps	546	0.146	0.0002674
Plain water (carbonated or non-carb) <1 litre	505	394.344	0.7808792
Plain water (carbonated or non-carb) 1 litre+	61	91.723	1.5036557
Plastic bottle tops	1,308	10.419	0.0079656
Sacks - sheeting - other bags	349	0.109	0.0003123
Snack bags & confectionary wrappers	2,146	16.799	0.0078281

Keep Australia Beautiful 2015-16 National Litter Index results	Total count	Total volume	Ave. volume per item (litres)
Spoons/ cutlery	386	3.667	0.0095000
Straws	1,389	5.684	0.0040922
Styrene foam boxes, sheets, etc	299	11.119	0.0371873
Take away & cups	1,063	219.441	0.2064356
White milk, all sizes	19	39.529	2.0804737
Wine cask bladders	8	3.450	0.4312500
<b>Total</b>	<b>15,284</b>	<b>2,591.653</b>	
<b>GRAND TOTAL</b>	<b>66,838</b>	<b>8,171.445</b>	

Note: Some subtotals do not add up due to rounding – these figures are taken directly from the Keep Australia Beautiful report.

### Volumes applied in the current research

By matching the ‘best fit’ litter categories from the Keep Australia Beautiful *National Litter Index* to those used in the current research, Keep Britain Tidy was able to estimate the average volume per item recorded in the survey, as shown below.

Litter categories	Ave. volume per item (litres)
<b>Alcoholic drink containers</b>	
Alcoholic cans	0.4298
Small Alcoholic Glass Bottles	0.4270
Large Alcoholic Glass Bottles	0.7387
Small Alcoholic Plastic Bottles*	0.2750
Large Alcoholic Plastic Bottles*	1.8333
<b>Non-alcoholic drink containers</b>	
Cans	0.4109
Cans – multipack	0.4109
Plastic bottle – small (<750ml)	0.6090
Plastic bottle – small (<750ml), multipack	0.6090
Plastic bottle – large (750ml+)	1.6344
Plastic bottle – large (750ml +), multipack	1.1075
Glass bottle – small (<750ml)	0.4769
Glass bottle – small (<750ml), multipack	0.4769
<b>Hot drink containers</b>	
Coffee cups	0.7200
Other containers for hot drinks	0.4632
<b>Other drink containers</b>	
Fast Food Drink Container (Not Coffee)	0.4632
Cold drink Containers (not Bottle)	0.8043
<b>Food on-the-go</b>	
Fast Food – inner packaging	0.4563
Fast food – outer packaging	0.0106
Sandwich packaging	0.7200
<b>Utensils</b>	
Straw	0.0041
Plastic Cutlery	0.0095
Napkins	0.0034
<b>Confectionary packaging and snack packs</b>	

Litter categories	Ave. volume per item (litres)
Snack Pack	0.0718
Crisp packets	0.0078
Chocolate wrappers	0.0078
Sweets packaging	0.0078
Gum packaging	0.0001
<b>Carry bags</b>	
Plastic bags	0.0604
Paper Bags	0.0604
Plastic Bag – 5p	0.0341
Plastic Bag – Exempt SUCB	0.0341
Plastic Bag – Bag For Life	0.0866
<b>Paper related</b>	
Newspaper	1.1877
Magazines	1.1877
Other Paper	0.0021
<b>Balloons</b>	
Balloon – Latex	0.0002
Balloon – Mylar/Foil	0.0016
Balloon Related	0.0018
Balloon Fragments	0.0002
<b>Smoking related</b>	
Cigarette litter – Cigarette stubs	0.0001
Cigarette litter – Smoking related (not stubs)	0.2158
<b>Other</b>	
Cardboard Box	0.0801
Unsure	0.0132
Other General Litter	0.0132

*\*Note: Small and large alcoholic plastic bottles are not included as litter categories in the Keep Australia Beautiful National Litter Index. As such, we have estimated the volume based on container sizes currently on sale in the UK. In the ‘Small Alcoholic Plastic Bottles’ category, this includes miniature spirits (50ml) and occasionally beer bottles (500ml), giving an average volume of 275ml. The ‘Large Alcoholic Plastic Bottles’ category generally comprises cider, which comes in 1, 2 and 2.5 litre sizes. As such, we have used the average of these sizes – 1.8333 litres.*

# KEEP BRITAIN TIDY.

Printed on 100% recycled material.

This document was first published in 2020 by Keep Britain Tidy

**Copyright © 2020 Keep Britain Tidy**

No part of this report may be reproduced in any form whatsoever without prior permission in writing from the publisher. Permission will normally be given free of charge to charitable and other non-profit making organisations.

Keep Britain Tidy is a registered charity. No. 1071737.