

# Litter Composition Analysis Report 2022/23

KEEP  
NORTHERN  
IRELAND  
BEAUTIFUL





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Front cover and bottom right: collected drinks litter after it has been categorised

Top right: Dr Stephen McGirr, Litter Composition Analysis Manager, records litter results at the Environmental Services Depot in Antrim in February 2023

Photographs by eightyfive90





# Foreword

**As the UK stands on the cusp of a long-awaited Deposit Return Scheme and Extended Producer Responsibility legislation, our second Litter Composition Analysis Report is a timely reminder of why these policy instruments are desperately needed.**

According to our estimations, there are 11,983,664 items of litter carelessly discarded on our streets, beaches and parks at any one time. That astronomical number includes everything from dog fouling to scratch cards and crisps packets, and it is a clear sign that the litter problem is out of control at home. To help visualise that more clearly, we recorded an average of 20 instances of litter across every 50 metres surveyed of our natural environment. That frightening figure covers 25,770 kilometres of public roads in Northern Ireland.

If there is a theme running through our survey findings and extrapolations, it is that litter is resoundingly an issue concentrated in the hands of the few. Looked at through the lens of producers, we are able to show that it is just a small number of industries creating the products that eventually become litter. And if we zoom in on the

companies profiting within these markets, we again find that it is a correspondingly low figure for the individual enterprises most responsible for the entire litter mass.

This minority pattern becomes more singular when we hone in on the types of litter that pervade Northern Ireland's landscape. Fundamentally, we are able to show that litter is predominantly packaging and cigarette butts and that it comes from items that we use on an everyday basis, including drinks, snacks and cigarettes. Overwhelmingly, this packaging is made of plastic, with the obvious conclusion that our litter malaise is symptomatic of our wider plastic plight.

But while it would be easy to craft a narrative of 'same old story', there are important changes going on within the litter picture that warrant closer inspection. On the negative side, a new challenge has arrived in the shape of vaping devices, whose popularity boom now means that they rival more established litter culprits. On a more positive note, there are sustainable innovations gathering pace in the packaging world, with technologies such as Notpla offering the potential to solve many areas of the perennial litter blight.

For our own part, we have also made some improvements since publishing our first litter-focused report in 2019. The most significant of these are changes in our methodology for estimating total levels of litter in NI at any one time. The introduction of a weighting system, to reflect the split between urban and rural land uses; the analysis of three

times as much litter in our data collection; and use of the most up to date transport statistics have produced the most accurate litter estimates to date.

While these differences between our reports limit the opportunity for comparison, it does come with the tradeoff that we have produced a more robust and representative study that we believe will benefit producers, policymakers, local councils and concerned groups and citizens alike.

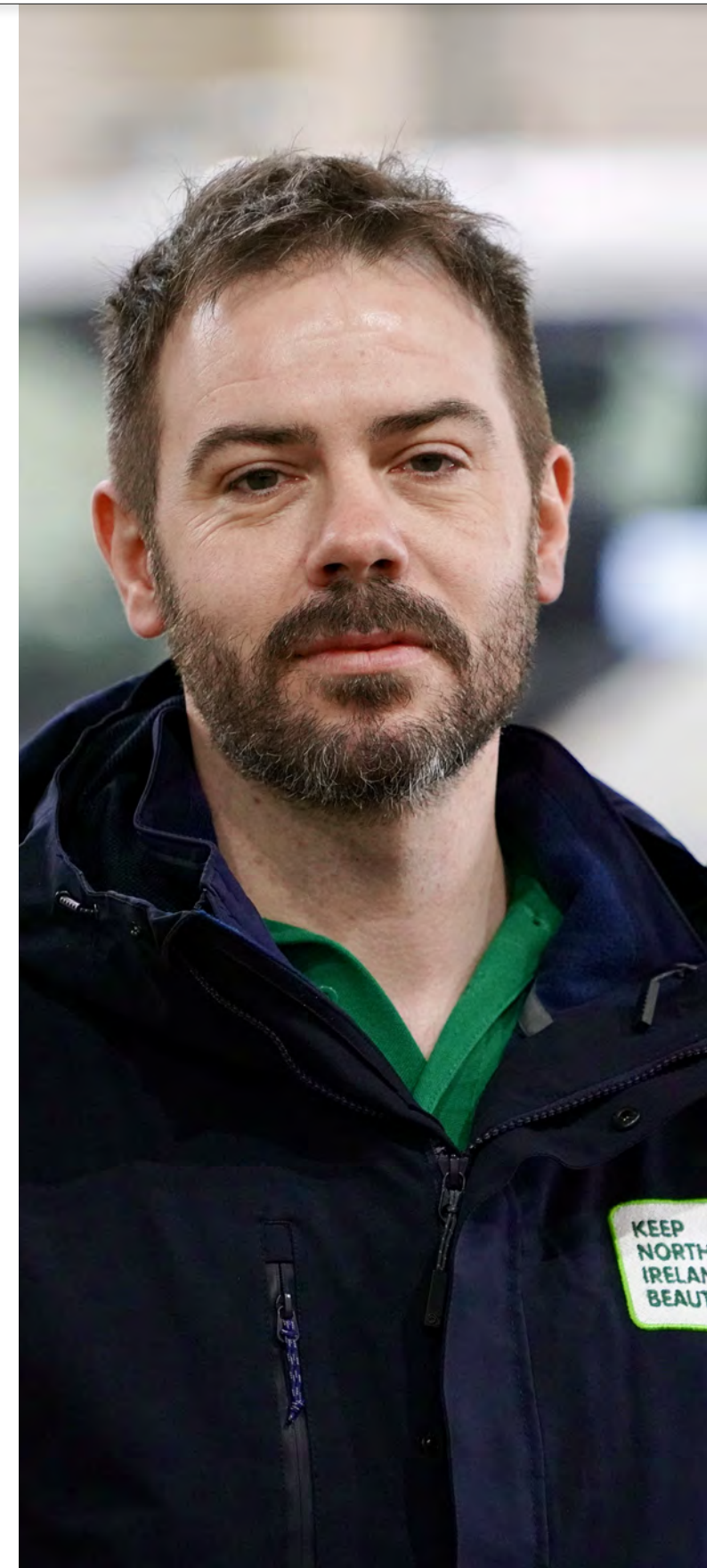
An undertaking of this size demands, of course, a colossal amount of work behind the scenes and on the ground. From our team, we extend a special thank you to our Project Manager, Stephen McGirr, and his team of surveyors for their diligence and dedication during the many months of litter gathering and categorisation.

We also take the opportunity to acknowledge the support of the Department of Agriculture, Environment and Rural Affairs (DAERA) that allowed the report to be realised in the way that we intended. We thank the Department for its ongoing support.

Not all litter is created equally. We hope that this report illuminates (a) the severity of the litter problem and (b) the necessity of incoming legislation for creating a more circular economy in Northern Ireland.

## Chris Gourley

WASTE AND POLLUTION SOLUTIONS STRATEGIC LEAD  
KEEP NORTHERN IRELAND BEAUTIFUL





# Aims and Methodology

**This detailed litter composition analysis took place between 1st November 2022 and the 10th February 2023.**

It was designed by Keep Northern Ireland Beautiful, with the aim to provide robust data on the composition of litter and waste in bins across Northern Ireland, and to estimate total numbers of littered items in Northern Ireland at any one time.

This is the second analysis of this type in Northern Ireland, the first being delivered in 2019.

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From our litter analysis we estimate that there are nearly **12 million items** of litter on our streets at any one time.

This report is part of a wider project funded by the Department of Agriculture, Environment and Rural Affairs (DAERA) to encourage waste prevention, including within the production, consumption and littering of single-use plastic in Northern Ireland.

## Surveys

1,100 sample transects were identified across Northern Ireland, encompassing all local authorities. Any litter found within each 50m transect was recorded.

Transects were selected to ensure coverage of a broad spatial distribution of demographics throughout Northern Ireland and by land use classification requirements.

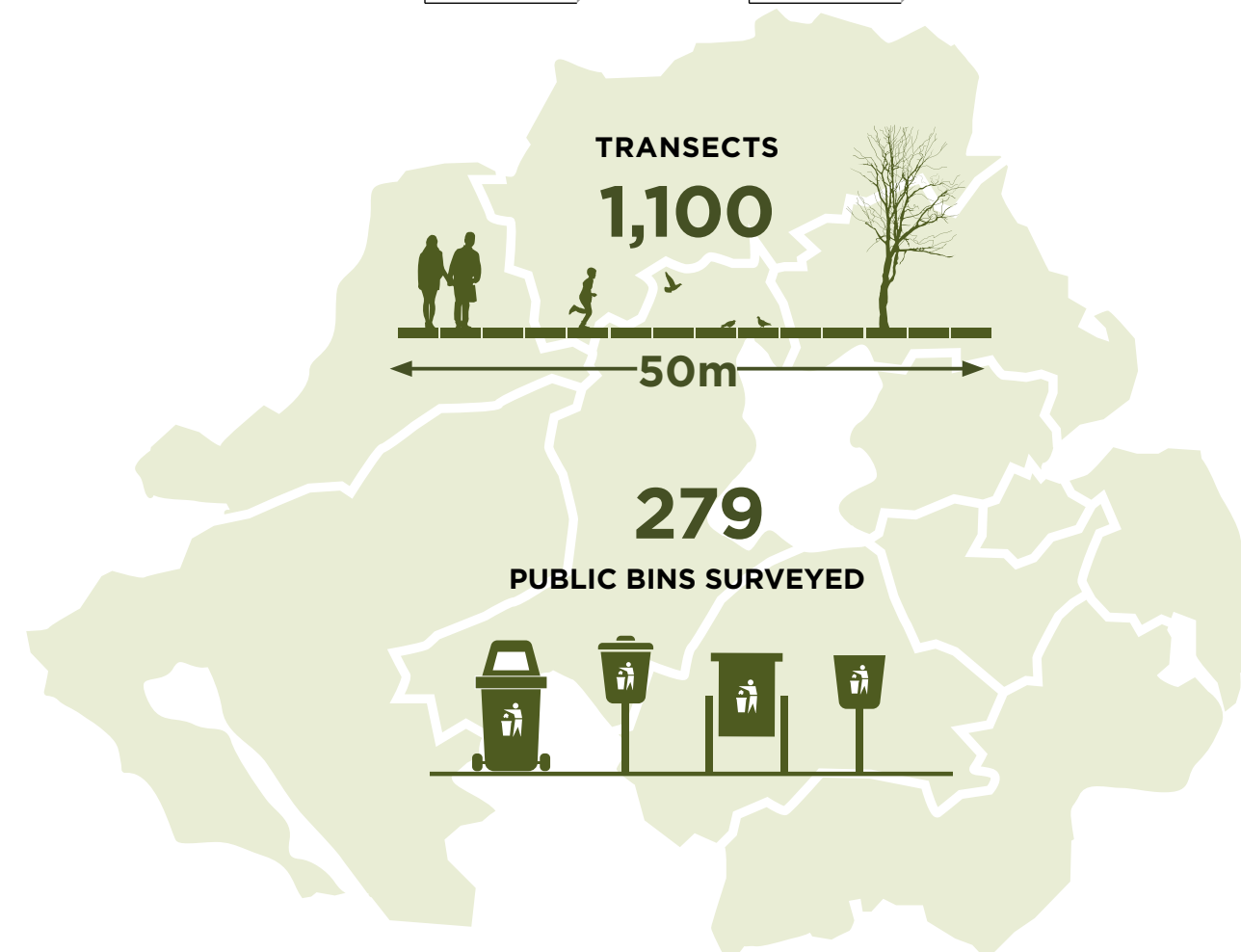
279 bins were identified for analysis which were situated on primary retail, secondary retail, and recreational areas (these land use categories typically would have the highest footfall).

## Estimates

It's important to highlight that many of the figures relating to litter in this report are estimates. They will be clearly labelled when used.

Estimates have not been used for waste in bins.

## SURVEY TIMES 2022 - 2023





Litter estimates were arrived at using a multiplier. This multiplier was based on 25,770 kilometres of public road in Northern Ireland (Northern Ireland Transport Statistics 2019-2020), and was weighted to reflect the urban/rural split of road use (23% urban road / 77% rural road). The rationale for the division of surveyed transects into urban/rural categories, for the purpose of estimations, was reached when considering that fast-food franchise litter and cigarette butts were recorded in greater numbers on urban transects than on rural transects. Therefore, using these types of litter as an example, a total kilometre multiplier would not have been a reasonable reflection of the estimates, and so this method of estimation was applied to all litter types for consistency of reporting.

### Evolution of the Litter Composition Analysis

The Litter Composition Producer Report 2019/20 was the first report of its kind in Northern Ireland. It highlighted the extent of the litter problem in Northern Ireland and provided unprecedented insight into the most frequently branded litter items.

This year's report has built on this success – improving the methodology to provide the most accurate and detailed litter estimates to date.

Key changes to the methodology include:

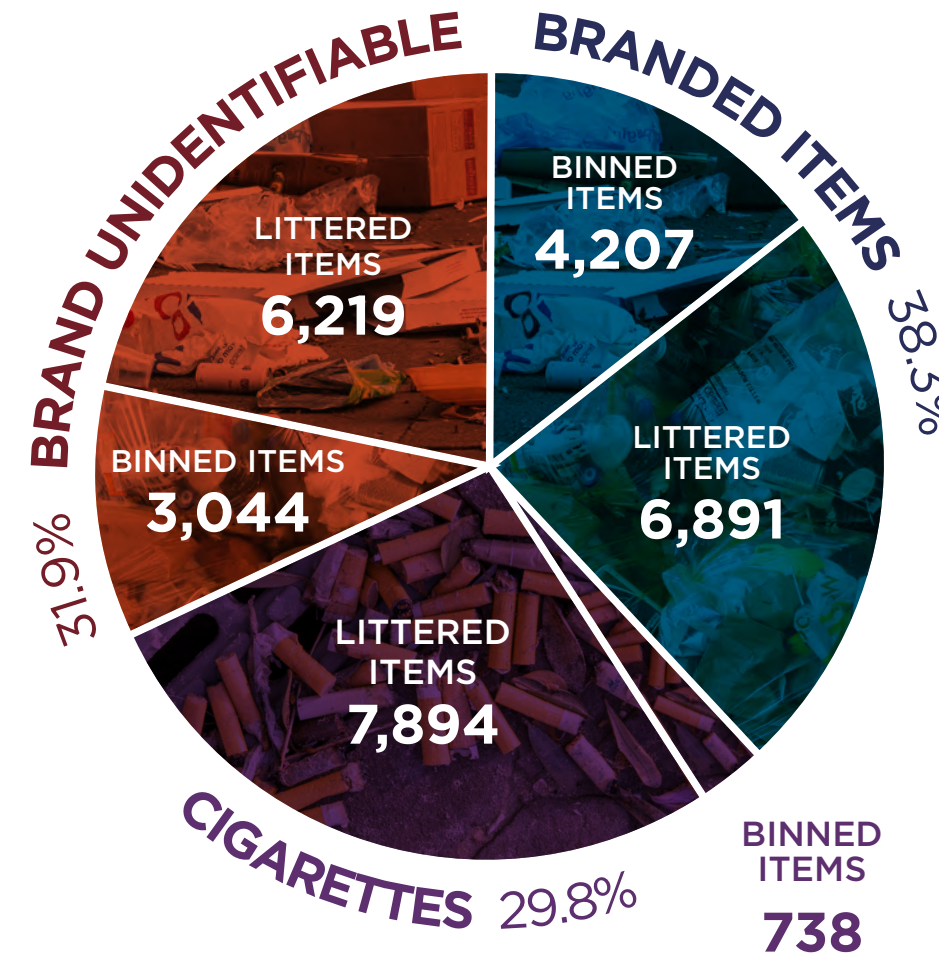
- Introduction of a rural/urban weighting to the estimates multiplier, as detailed above.
- Use of the most up to date road transport statistics.

These refinements account for some, but not all, of the increase in litter estimates, making it difficult to draw direct comparisons between the 2019/20 and 2022/23 estimate figures.

It is possible, however, to compare the total numbers of items recorded. Despite both surveys covering a sample size of approximately 1,100 transects, the number of littered items recorded increased dramatically from 7,992 items in 2019/20 to 21,004 in 2022/23. This staggering threefold increase in litter counted is serious cause for concern.

What's clear, from both reports, is that there is simply far too much litter on our streets. The scale of the plastic litter problem is of particular concern, highlighting the need for urgent action on this issue.

A TOTAL OF **28,993** LITTERED AND BINNED ITEMS

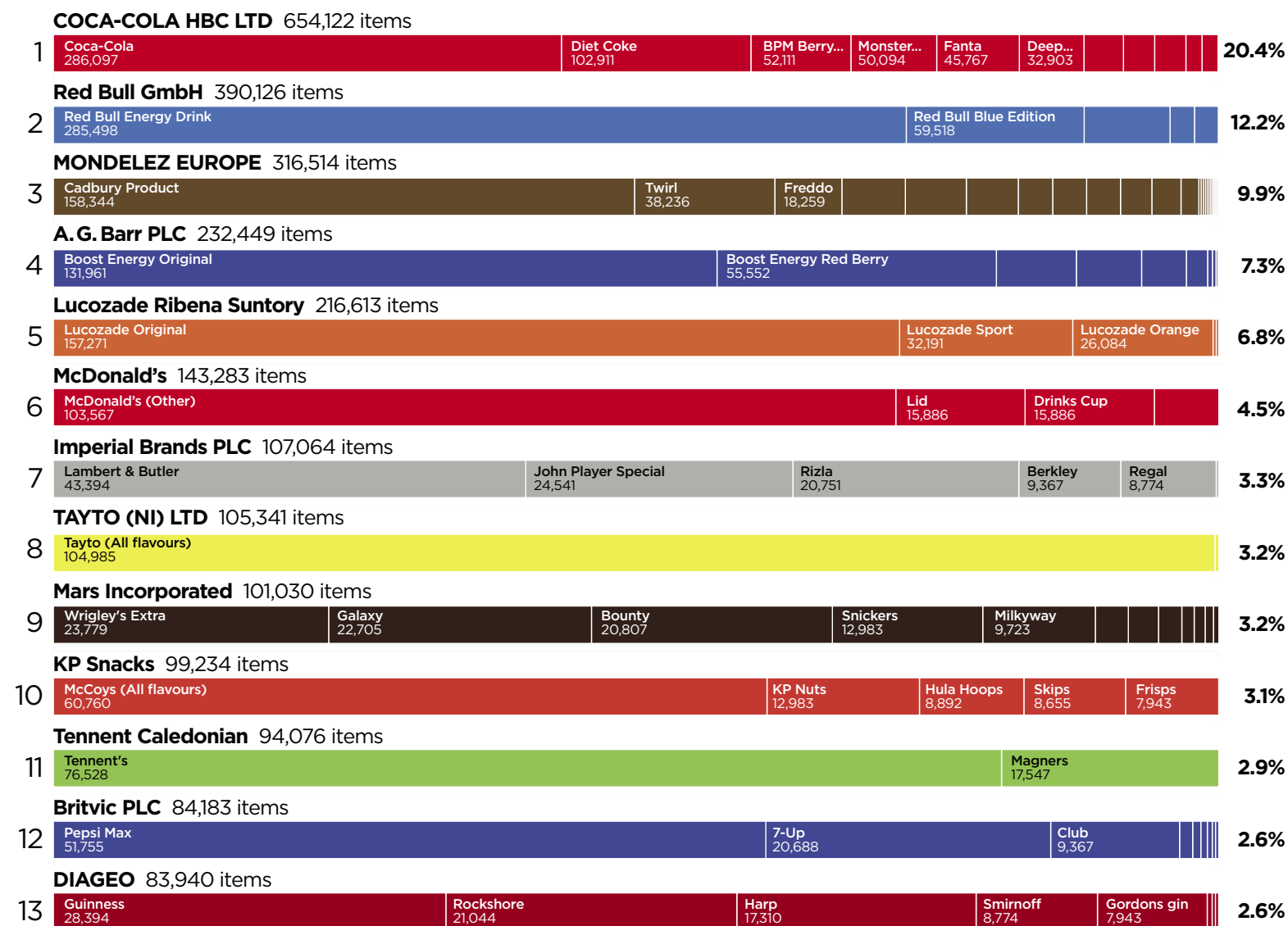




# The Top 25 Producers of Northern Ireland's Litter Lament

Producers of cigarettes, drinks and food dominate the litter picture in Northern Ireland. The standout items here are the packaging of soft drinks, chocolate and chewing gum, with the manufacturers of these products commanding 64% share of all estimated branded litter existing across the country. Overall, it is just four producers that account for half of the damage wreaked by branded litter (50%).

Branded cigarette packaging constitutes 5% of the litter forecast for Northern Ireland. However, the 1,194,692 unbranded cigarette butts that persistently pollute our environment mean that, in reality, JTI UK and Imperial Brands are culpable for closer to 10% of the problem.



This graph shows the estimated number of branded litter items across Northern Ireland at any one time by producer, and a percentage share of branded litter based on our estimates. The numbers you see are estimated numbers, which have been calculated using a multiplier with an urban/rural weighting.



# Extended Producer Responsibility and Coffee

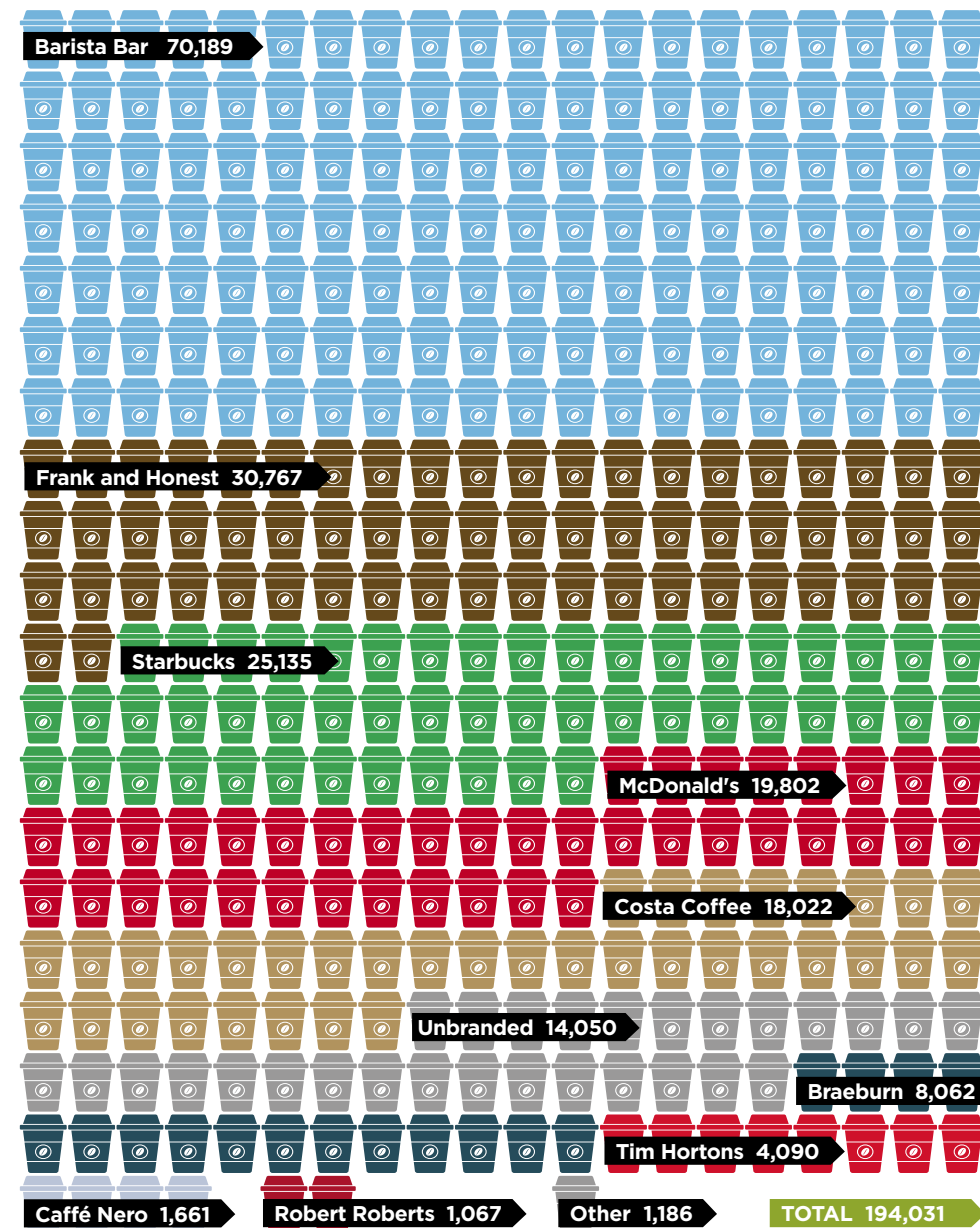
The coffee-litter conundrum is very much a problem that starts at home. At least 45%<sup>1</sup> of this litter originates from a small number of producers native to the island of Ireland.

Although coffee cups account for just 2% of litter, the omission of paper cups from the incoming Deposit Return Scheme for Northern Ireland (and the wider UK) means that their negative impact will not be mitigated by this policy intervention. In fact, as most industries reap the rewards of increased recycling rates, coffee producers are likely to see their place in the litter issue become more prominent in the years to come.

For this reason, it is proportionate and fair that a takeback scheme is included within the scope of pending Extended Producer Responsibility (EPR) legislation. Moreover, the necessity of this outcome is deepened by the systemic inability of local councils across the UK to process any of the market-leading coffee cups in their home recycling and composting infrastructure.

*This graphic illustrates the estimated number of littered coffee cups on our streets at any one time based on coffee-cup brands recorded more than once.*

## Single-Use Disposable Coffee Cups by Brand<sup>2</sup>



## Ushering in a Circular Economy

The circular economy has been described as “a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible.”<sup>3</sup> By closing the loop between producers and the buyers of their goods, it is clear how policies like a Deposit Return Scheme and Extended Producer Responsibility will bring Northern Ireland closer to creating a zero-waste society.

However, while materials like glass, aluminium, cardboard and paper possess excellent recycling qualities that make them highly compatible with a circular economy, the same cannot be said of plastic, which has a finite scope for its ability to be recycled. To arrive at a truly circular economy, Keep Northern Ireland Beautiful believes that the inevitable waste trajectory of plastics needs to be addressed with more levies and bans on single-use plastic items.

We have provided more details on this policy development in our recommendations.

<sup>1</sup> As a percentage of the 246,081 estimated coffee cup items existing as litter.

<sup>2</sup> Does not include coffee-cup brands that were found just once and other outliers. When these are included, the total estimated number of coffee cups littered is 246,081. See page 12 for more information.

<sup>3</sup> [www.europarl.europa.eu/news/en/headlines/economy/20151201STO05603/circular-economy-definition-importance-and-benefit](http://www.europarl.europa.eu/news/en/headlines/economy/20151201STO05603/circular-economy-definition-importance-and-benefit)





# Introduction of A Deposit Return Scheme

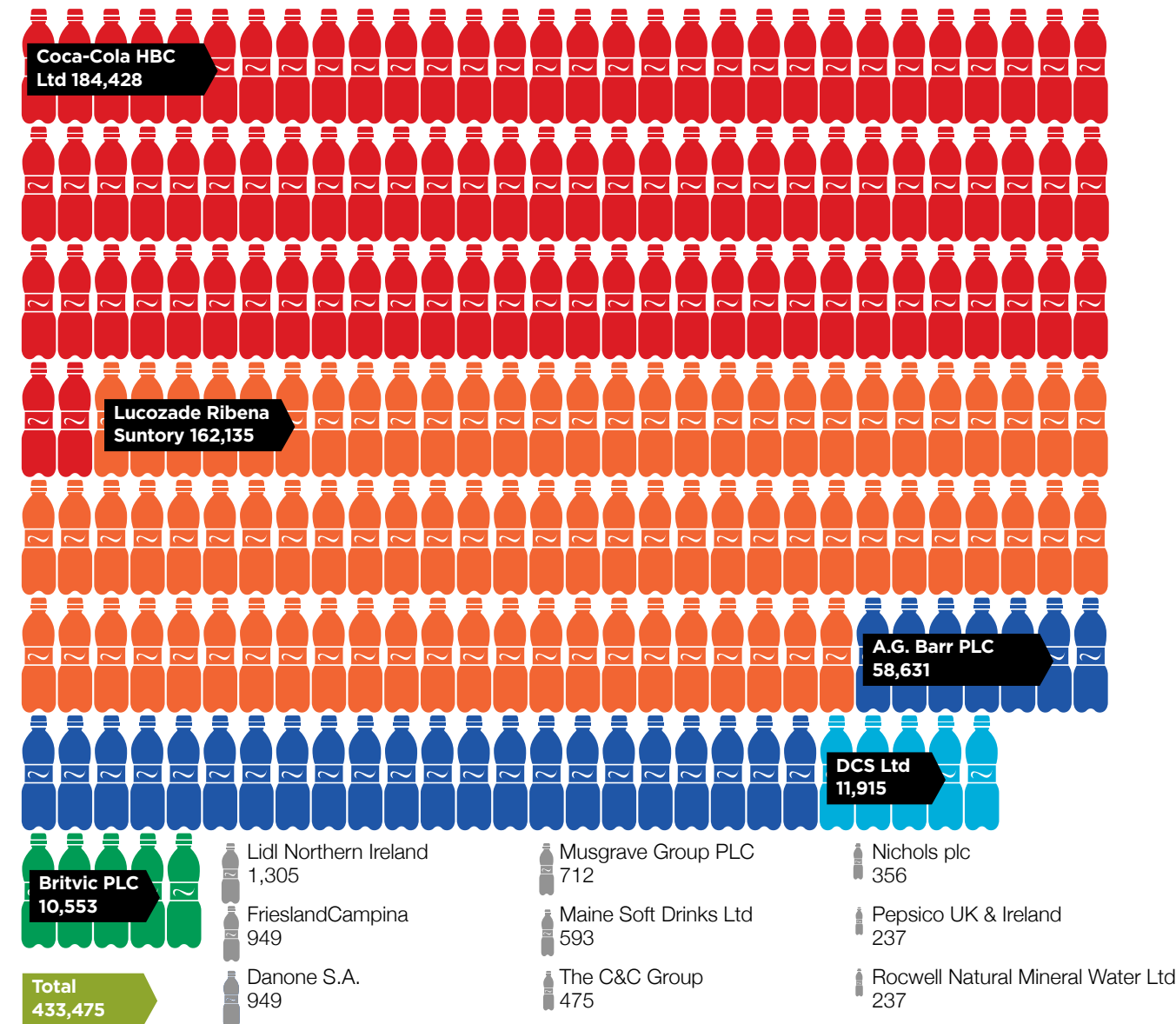
Based on our analysis, we estimate that there are over 400,000 plastic bottles on our streets at any one time. Keep Northern Ireland Beautiful has long advocated for a Deposit Return Scheme (DRS) to tackle this issue and welcomed the recent announcement of such a scheme for Northern Ireland.

The scheme, announced by the Department of Agriculture, Environment and Rural Affairs (DAERA) and set to be introduced in 2025, will incentivise correct disposal of single-use drinks containers through a small, refundable deposit. Materials captured in the NI scheme will be single-use drinks containers made from polyethylene terephthalate (PET) plastic, steel, and aluminium.

Deposit Return Schemes are also set to be introduced in Scotland, England and Wales, but there are differences in how they will run. Scotland was due to launch DRS in August 2023, but this has now been delayed to 2025 and will coincide with the same introduction date as England, Wales and Northern Ireland. Another point of difference is that the schemes in Scotland and Wales will include glass containers, while those in NI and England will not.

The introduction of a Deposit Return Scheme in NI should increase recycling rates, reduce carbon emissions and reduce litter. The scheme will also greatly reduce the number of plastic items reaching our seas, increase material quality and recyclability of plastic bottles, therefore helping Northern Ireland achieve its circular economy ambitions.

## Single-Use Plastic Bottles by Producer



This graphic illustrates the estimated number of littered plastic bottles on our streets at any one time.



## Applicable Materials for DRS

Material	Count	%
Glass	143,875	6%
Polyethylene terephthalate (PET) plastic	752,158	31%
Aluminium and steel	1,516,841	63%

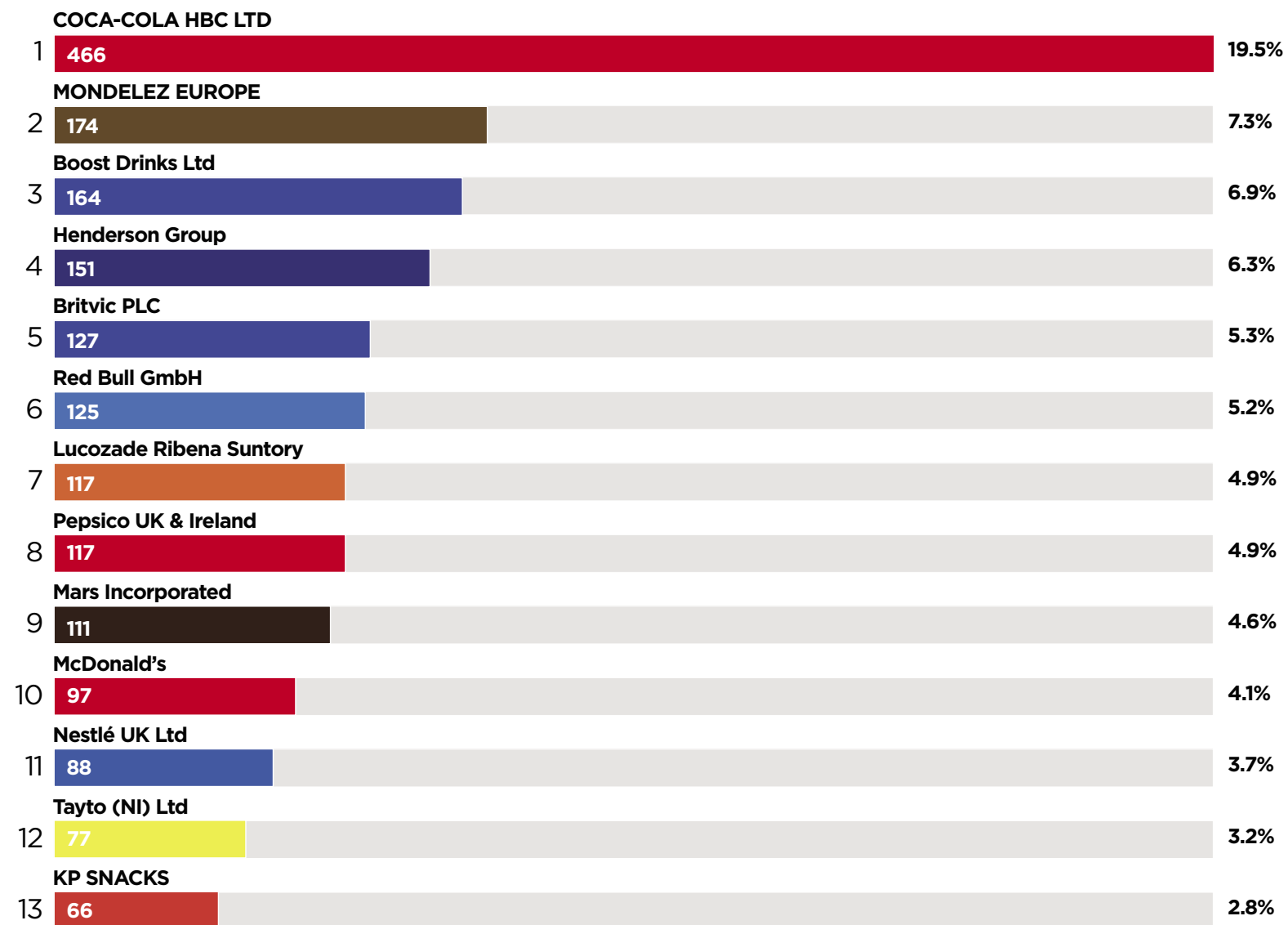
Note: under DRS regulations, only plastic and aluminium/steel will be captured in Northern Ireland



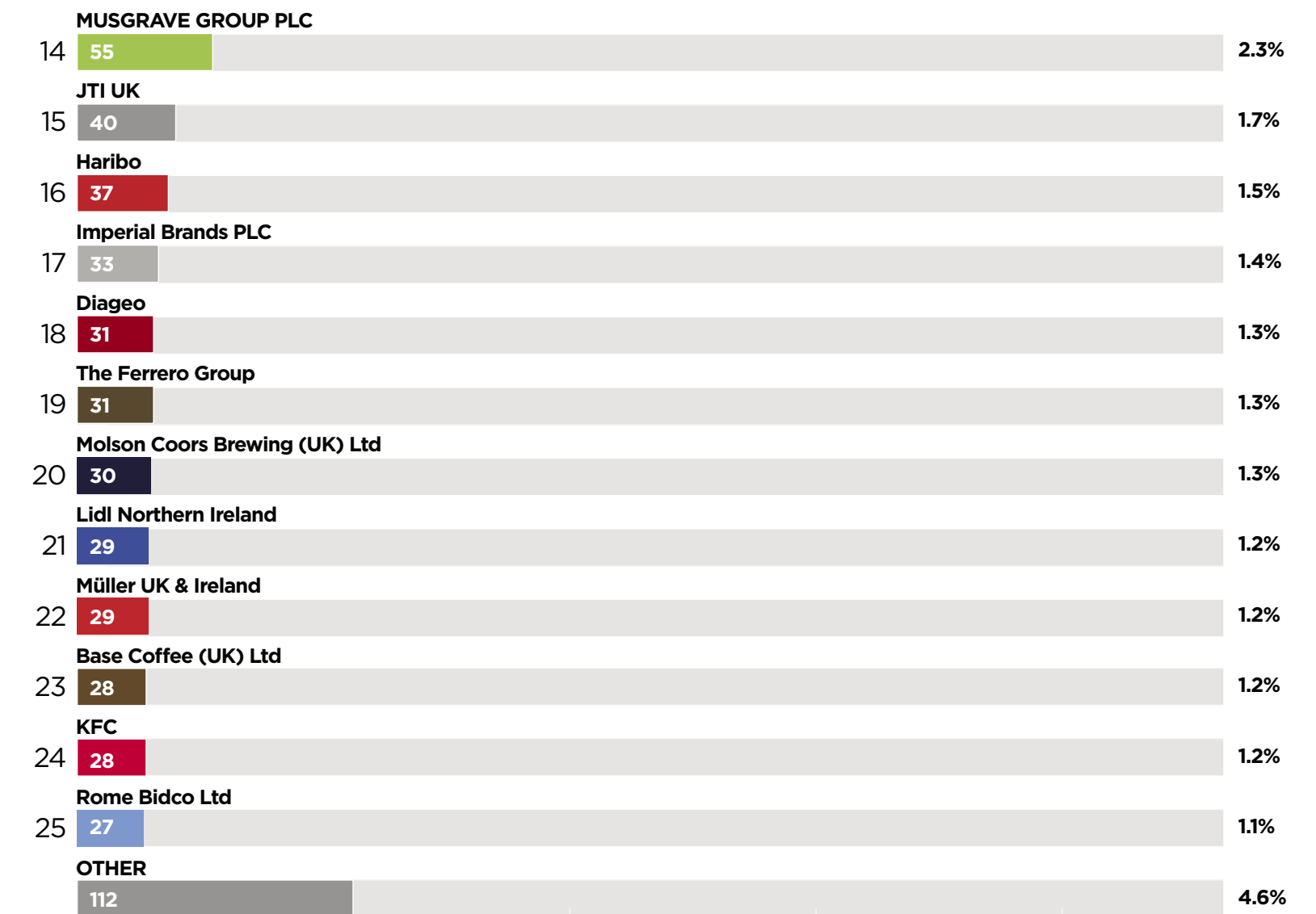


# Top 25 Producers, Waste in Bins

Below is a breakdown of the branded items recorded in the 279 public bins analysed as part of this report. Estimates have not been used for waste in bins, and the figures shown are actual numbers of items recorded. Many of the same producers appear across the Top 25 for both litter and bin waste. Indeed, Coca-Cola HBC LTD easily tops both charts, with both Red Bull and Mondelez Europe making up the rest of the top 3 in both charts.



However, there are some interesting differences: producers of single-use coffee cups, for example, feature more prominently in bin waste than in littered items. It is also worth noting that producers of alcoholic drinks only appear twice in the bin waste top 25, compared to seven such producers in the littered items list.



This graph shows the actual number of branded items recorded in bins, and a percentage share of branded bin waste.



# Analysis of Waste in Bins

The analysis revealed that just over half the waste in our bins is packaging of one form or another. Beverage containers accounted for a combined total of 28% of bin waste analysed, with food packaging a close second at 22%.

Of the non-packaging items recorded, dog fouling in bags and cigarette butts were the most frequently recorded items. Together, they accounted for just over a fifth of the total bin waste analysed.

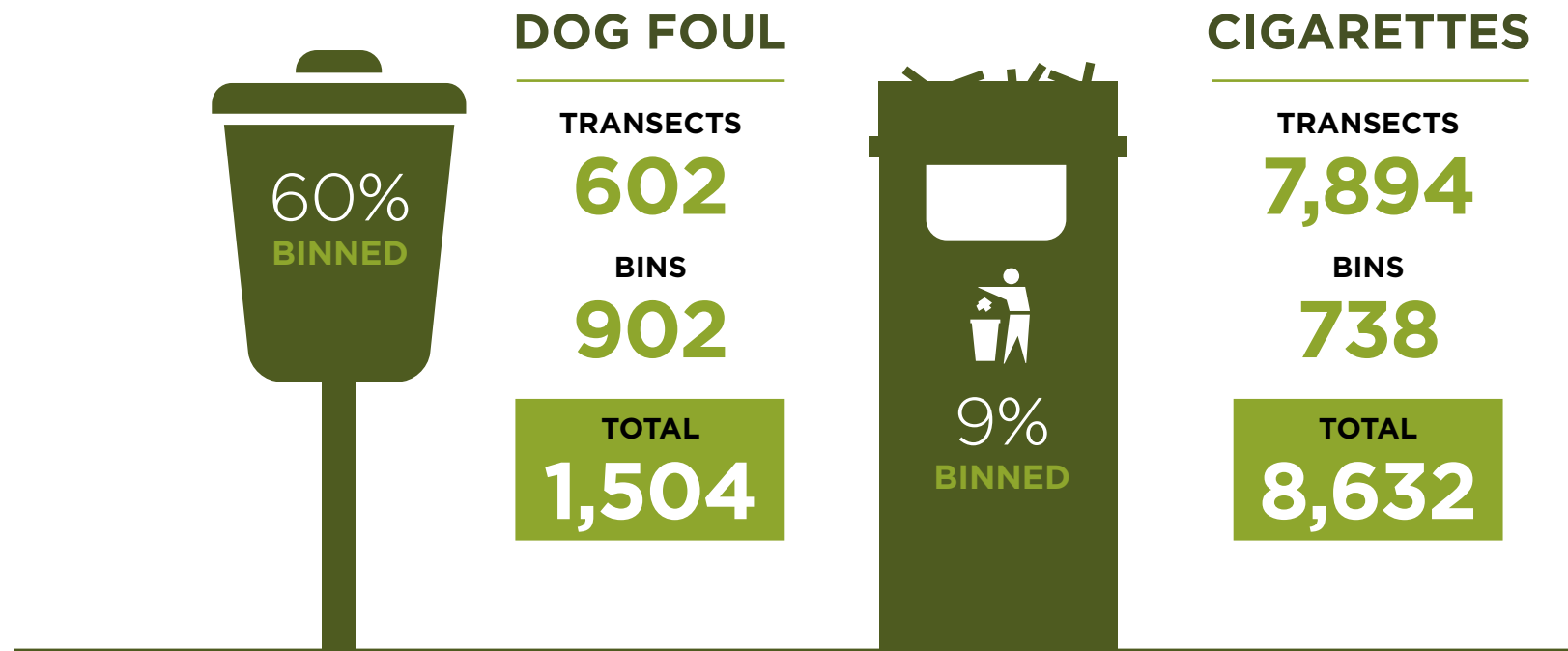
Composition of Bin Waste



## In Focus - Dog Foul vs Cigarettes

Some interesting insights into littering habits were revealed, when comparing data across both bins and road transects.

Certain items were considerably more likely to make their way to a bin than others. For example, 60% of all dog foul recorded in the survey was found in a bin, compared to just 9% of recorded cigarette butts, as illustrated below.





# Nature-Based Solutions with Notpla

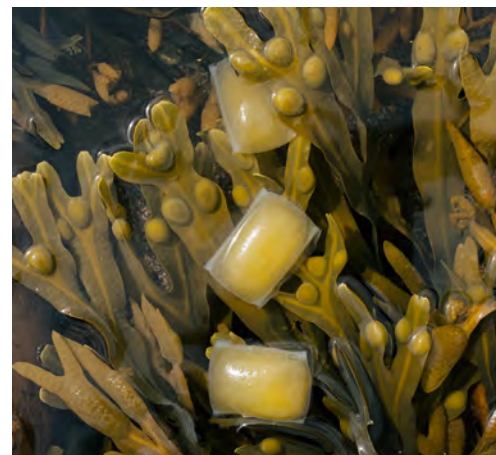
## How to take litter out of the equation altogether

In 2019, award-winning packaging start-up Notpla did something remarkable: it partnered with Lucozade to remove the need for 36,000 single-use plastic cups and bottles at the London Marathon that year.

How did they do it? Through the use of Ooho: Notpla's edible drinks bubbles that are 100% plastic-free, vegan, naturally biodegradable, home compostable, and a viable receptacle for drinking water at major sporting events like the London Marathon.

Scaled up and supported appropriately, Ooho has obvious massive potential to eradicate the twin problems of drinks-related plastics and litter with its zero-waste packaging. But the seaweed-wrapped ingenuity does not stop there, and Notpla has been busy developing further packaging solutions that can significantly reduce waste and pollution issues.

**Food Boxes and Trays** - Notpla coating has many of the same grease and water-resistant qualities of traditional takeaway packaging, but is coated with seaweed, not plastic. Therefore, they biodegrade and can be recycled or thrown in



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home compost, leaving no harmful traces behind in the environment. Encouragingly, Notpla has worked with Just Eat to introduce this product into the food sector, helping it to move away from the reliance that takeaway options has on plastic or chemicals to hold food. These are now available in the UK, Austria, Poland, Germany, the Netherlands and Ireland.

**Pipettes** - the world's first seaweed packaging for single-dose oil. Designed for home meal kits, restaurants and takeaways, the Pipettes replace plastic sachets. They are 100% natural, home-compostable, and vegan. As with Notpla's signature Ooho bubbles, they are also edible.

**Paper** - a seaweed fibre paper made from the by-products of the company's industrial processes. This seaweed paper requires 30% less wood pulp than conventional paper, lowering pressure on forests while reducing waste from the seaweed supply chain, making it a first-class sustainable solution. Research is ongoing to develop packaging such as boxes, envelopes or sleeves.

Further products are in development at Notpla, including flexible films that could be heat sealable and used as an alternative for dry products that are currently in plastic sachets.

## Why Seaweed?

Notpla aren't the only company exploring seaweed as an alternative to plastic. B'Zeos, an Oslo-based start up has used seaweed to produce edible plastic-free drinking straws. Kelpi, a company founded in the UK and working alongside the University of Bath, recently secured more than £3 million in funding to advance its pioneering technology creating biomaterial coatings from seaweed.

So why seaweed? Well, it's one of the earth's most abundant sources of biomass: its production does not compete with food crops and requires no fertiliser or fresh water to produce. When farmed, seaweed also captures carbon 20 times faster than trees, addressing one of the key causes of the climate crisis. Seaweed-based material can have many of the packaging properties needed in applications that currently use plastics, such as transparency, lightweight, and being squeezable. But unlike plastics or bioplastic, seaweed's unique qualities enable Notpla, and others, to create circular and sustainable materials.

Seaweed is also compostable - in line with the new EU Single-Use Plastic Directive, which aims to ban synthetic materials such as PLA, PHA and other bioplastics.



# NI's Estimated Litter Composition

Based on our analysis, we estimate there are just under 12 million items of litter on our streets at any one time. This staggering figure equates to approximately 6 items of litter per person in Northern Ireland, despite spending £30,961,701 of rate-payers money on street cleansing annually.<sup>1</sup>

This pie chart shows the split between packaging (46.3%) and non-packaging items (53.7%), and includes a breakdown of the top ten most commonly found items for each.

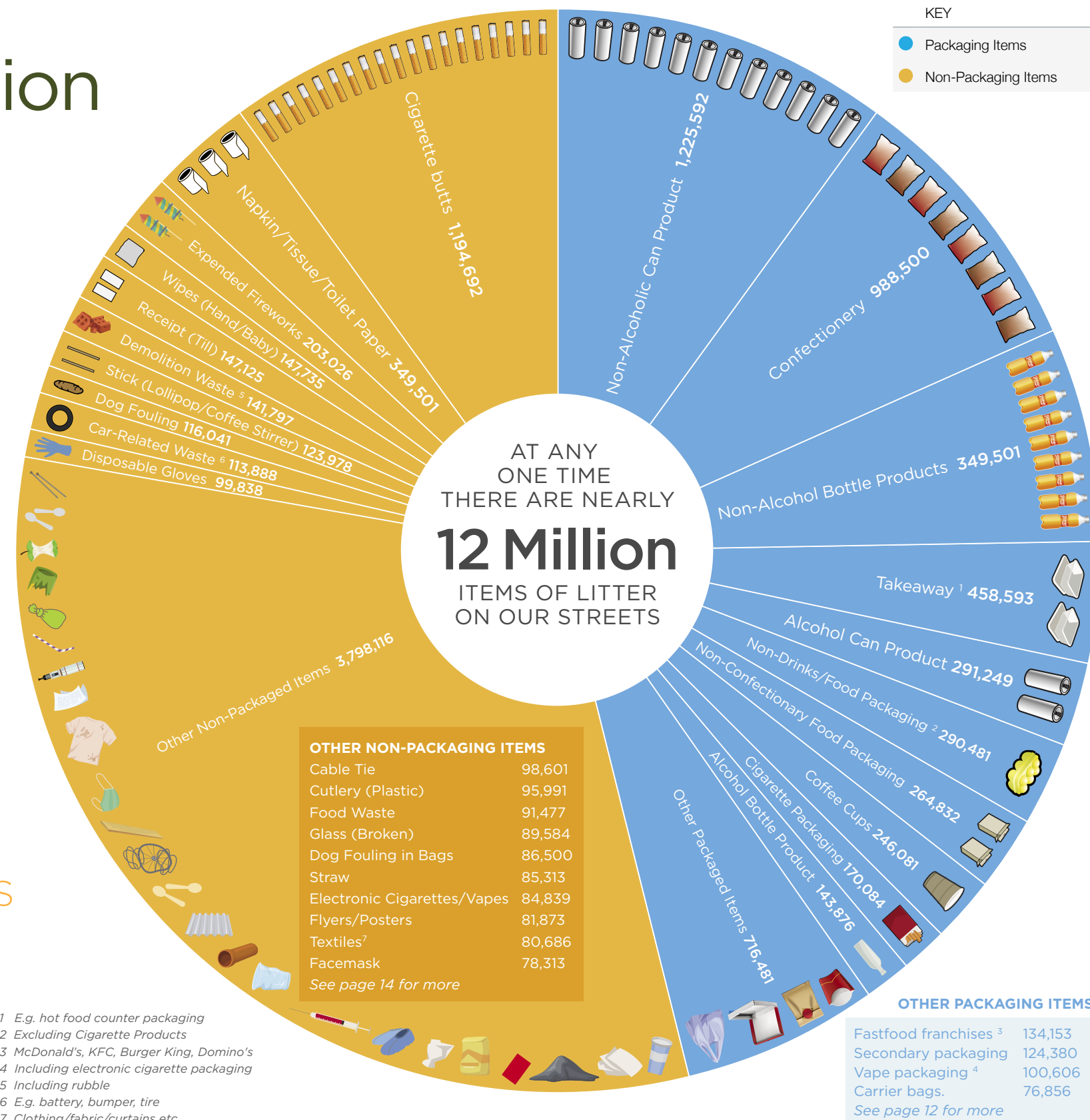
Non-alcoholic drinks cans are estimated to be the most littered item in Northern Ireland with just over 10% (10.23%) share, and cigarette butts following closely behind at just under 10% (9.97%). The complete, detailed breakdown of items can be seen on page 14.

The split between packaging and non-packaging items is fairly even, with an estimated 5,547,926 packaging items and 6,435,738 non-packaging items littered across the country. Drinks bottles and cans and confectionery packaging combined account over a third of packaging litter (34%), while there are also close to half-a-million pieces of non-packaging litter arising from the likes of discarded napkins and ice-cream sticks.

One surprising discovery in our estimations is that drinks-cans litter is almost two times more prevalent than plastic-drinks bottles. Although this suggests a welcome lower consumption of single-use plastic bottles than drinks can, it also provides evidence that the move towards a more plastic-free society will not alone solve our long-standing litter culture.

**ALL PACKAGING ITEMS**  
46.3% | **5,547,926**

**ALL NON-PACKAGING ITEMS**  
53.7% | **6,435,738**



<sup>1</sup> Estimation based on figures shared by Councils and projections for Ards and North Down Borough Council, Derry City and Strabane District Council, and Newry Mourne and Down District Council using previous year's data.

<sup>1</sup> E.g. hot food counter packaging  
<sup>2</sup> Excluding Cigarette Products  
<sup>3</sup> McDonald's, KFC, Burger King, Domino's  
<sup>4</sup> Including electronic cigarette packaging  
<sup>5</sup> Including rubble  
<sup>6</sup> E.g. battery, bumper, tire  
<sup>7</sup> Clothing/fabric/curtains etc.



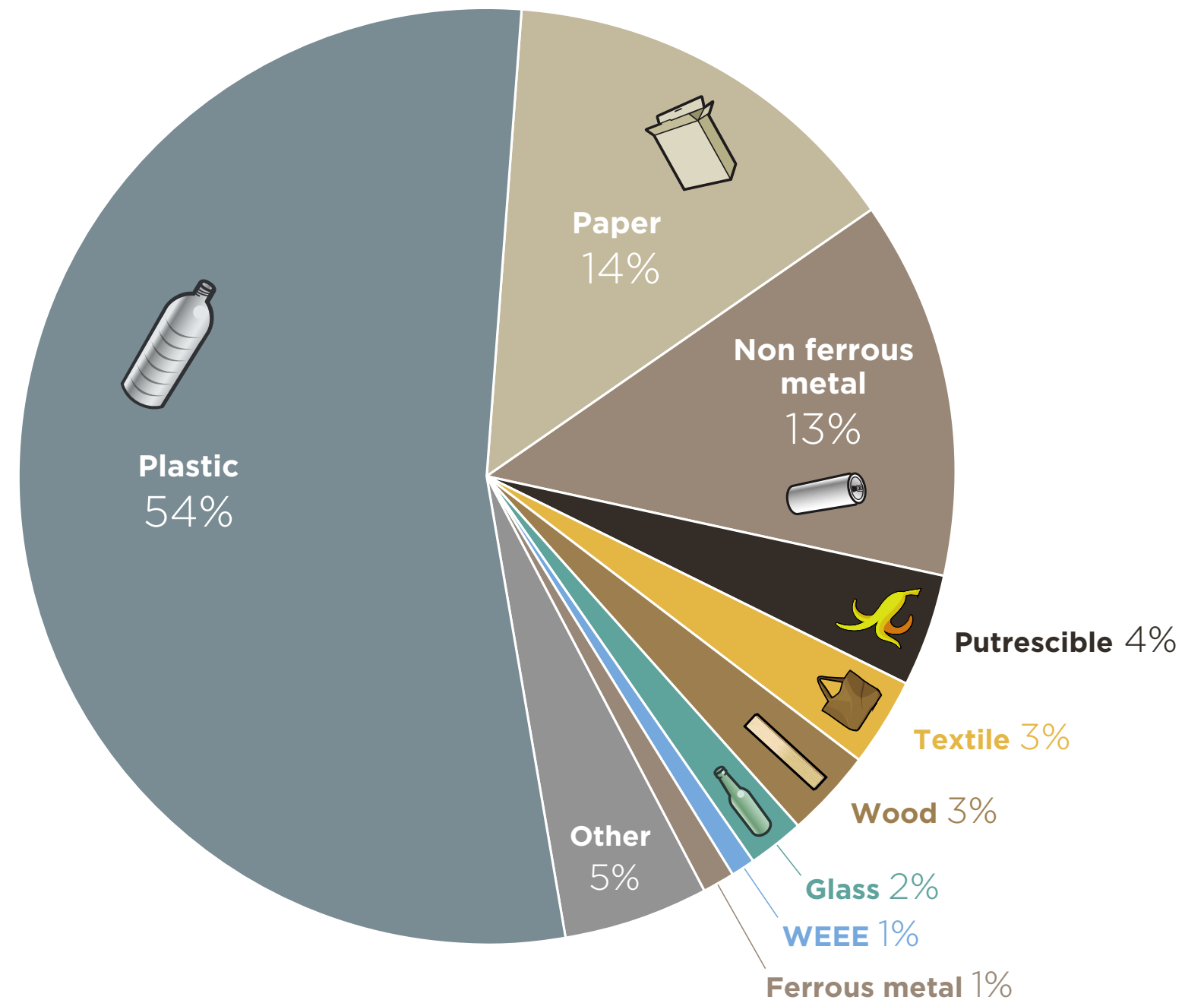
# Composition of Materials

The chart opposite highlights the categories of littered items, and the amount of litter that could be on our streets at any one time.

The extrapolated figures suggest that 54% of littered items contain plastic. That's a total of 6,509,262 items. Of these items 1,194,692 were cigarette butts, followed by 988,500 confectionery wrappers.

The second most common category was paper based products at 14%. This was due to items such as napkins, toilet paper, cigarette/vape packaging being prominent. Thirdly at 13%, it is estimated over 1.5 million non-ferrous metal products have been discarded in the environment. This is due to both alcoholic and non-alcoholic canned drink products.

Litter isn't just an unpleasant sight along our urban streets and rural roads. Litter, especially plastic, pollutes waterways, leaches toxic chemicals into soil and groundwater as it breaks down and reduces the appeal and usability of our open and public places. When items like plastics, glass bottles and paper, are littered, they end up as waste products that are not recycled. We must examine research and development both nationally and internationally to eliminate problematic and unnecessary items such as single-use plastics. Support needs to be given in particular to the food and beverage industry to encourage innovation so that the plastic we do produce is produced in a circular fashion and can be recyclable or reused.





## Estimated Composition of All Littered Items in Northern Ireland

● Non-Alcohol Can Product	1,225,592	<b>10.23%</b>
● Cigarette Butts	1,194,692	<b>9.97%</b>
● Confectionery	988,500	<b>8.25%</b>
● Other Packaging items	817,443	<b>6.82%</b>
● Non-Alcohol Bottle Product	752,158	<b>6.28%</b>
● Takeaway (E.g. Hot Food Counter Packaging)	458,593	<b>3.83%</b>
● Napkin/Tissue/Toilet paper	349,501	<b>2.92%</b>
● Alcohol Can Product	291,249	<b>2.43%</b>
● Non-Drinks/Food Packaging (Exc. Cigarette Products)	290,481	<b>2.42%</b>
● Non-Confectionary Food Packaging	264,832	<b>2.21%</b>
● Other Non-Packaging Items	248,177	<b>2.07%</b>
● Coffee Cups	246,081	<b>2.05%</b>
● Expended Firework	203,026	<b>1.69%</b>
● Cigarette Packaging	170,084	<b>1.42%</b>
● Wipes (Hand/Baby)	147,735	<b>1.23%</b>
● Receipt (Till)	147,125	<b>1.23%</b>
● Alcohol Bottle Product	143,876	<b>1.20%</b>
● Demolition Waste Inc. Rubble	141,797	<b>1.18%</b>
● Fastfood Franchises (McDonald's, KFC, Burger King, Domino's)	134,153	<b>1.12%</b>
● Secondary Packaging	124,380	<b>1.04%</b>
● Stick (Lollipop/Coffee Stirrer)	123,978	<b>1.03%</b>
● Dog Fouling	116,041	<b>0.97%</b>
● Car-Related Waste (E.g. Battery, Bumper, Tyre)	113,888	<b>0.95%</b>
● Electronic Cigarettes/Vape Packaging	100,606	<b>0.84%</b>
● Disposable Gloves	99,838	<b>0.83%</b>

● Cable Tie	98,601	<b>0.82%</b>
● Cutlery (Plastic)	95,991	<b>0.80%</b>
● Food Waste	91,477	<b>0.76%</b>
● Glass (Broken)	89,584	<b>0.75%</b>
● Dog Fouling in Bag	86,500	<b>0.72%</b>
● Straw	85,313	<b>0.71%</b>
● Electronic Cigarettes/Vape	84,839	<b>0.71%</b>
● Flyers/Posters	81,873	<b>0.68%</b>
● Textiles (Clothing/Fabric/Curtains Etc.)	80,686	<b>0.67%</b>
● Facemask	78,313	<b>0.65%</b>
● Wood Treated (E.g. Chipboard, MD)	77,483	<b>0.65%</b>
● Carrier Bags	76,856	<b>0.64%</b>
● Lottery/Scratchcard	76,652	<b>0.64%</b>
● Scrap Metal (Mixed)	72,500	<b>0.60%</b>
● Lighter	71,788	<b>0.60%</b>
● Cutlery (Wood)	70,958	<b>0.59%</b>
● Hessian Bag	69,178	<b>0.58%</b>
● Straw Wrapper	68,704	<b>0.57%</b>
● Newspaper/Magazines/Directories	68,466	<b>0.57%</b>
● WEEE	68,348	<b>0.57%</b>
● Furniture (Tables, Chairs Etc.)	68,229	<b>0.57%</b>
● Matches	68,229	<b>0.57%</b>
● Aluminium Foil	68,110	<b>0.57%</b>
● Teabag (Used/Unused)	67,992	<b>0.57%</b>
● Polystyrene	67,873	<b>0.57%</b>
● Bookmaker's Pen	67,754	<b>0.57%</b>

● Bungee Cord	67,754	<b>0.57%</b>
● Footwear	67,636	<b>0.56%</b>
● Plant Pot	67,636	<b>0.56%</b>
● Plastic Tubing	67,636	<b>0.56%</b>
● Ziploc Bag	67,636	<b>0.56%</b>
● Car-Parking Sticker	67,517	<b>0.56%</b>
● Clingfilm	67,517	<b>0.56%</b>
● Cord	67,517	<b>0.56%</b>
● Dumped Cement	67,517	<b>0.56%</b>
● Dumped-Cement Bags	67,517	<b>0.56%</b>
● Flexible Plastic Off Cut	67,517	<b>0.56%</b>
● Fragment of a Bottle Brush	67,517	<b>0.56%</b>
● Frank and Honest Branded Paper	67,517	<b>0.56%</b>
● Medical Canula	67,517	<b>0.56%</b>
● Nylon Strap	67,517	<b>0.56%</b>
● Tertiary Packaging	24,428	<b>0.20%</b>
● Tickets (Bus/Rail etc.)	8,423	<b>0.07%</b>
● Bottle Caps (Sodas and beer)	7,881	<b>0.07%</b>
● Household Batteries	3,796	<b>0.03%</b>
● Plastic Drinking Cups	3,678	<b>0.03%</b>
● Scrap Paper	3,322	<b>0.03%</b>
● Ceramics	3,085	<b>0.03%</b>
● Bank-Statement Receipt	2,373	<b>0.02%</b>
● Personal Hygiene	2,373	<b>0.02%</b>
● Healthcare Waste	1,780	<b>0.01%</b>
● Kitchen Roll (Inc.Core)	1,305	<b>0.01%</b>

KEY

● Packaging Items	<b>Bold</b>	<b>Percentage Value</b>
● Non-Packaging Items	Normal	Estimate Value
● Food-Waste Caddy Bags	1,186	<b>0.01%</b>
● Unidentified Foil and Cardboard	1,186	<b>0.01%</b>
● Beer Barrel Seal	1,068	<b>0.01%</b>
● Latex Balloon	1,068	<b>0.01%</b>
● Soft Furnishings/Cushions	949	<b>0.01%</b>
● Cutlery (Metal)	475	<b>&lt;0.00%</b>
● Metal Button	475	<b>&lt;0.00%</b>
● Rubberbands	475	<b>&lt;0.00%</b>
● Carpet/Rug	475	<b>&lt;0.00%</b>
● Pen Lid	356	<b>&lt;0.00%</b>
● Firework Debris	356	<b>&lt;0.00%</b>
● Plastic Cup Unbranded	356	<b>&lt;0.00%</b>
● Plastic Drainpipe	356	<b>&lt;0.00%</b>
● Child's Dummy	237	<b>&lt;0.00%</b>
● Disposable Nappies	237	<b>&lt;0.00%</b>
● Elastic Bands	237	<b>&lt;0.00%</b>
● Greeting Cards	237	<b>&lt;0.00%</b>
● Jubilee Clips	237	<b>&lt;0.00%</b>
● Kinder Surprise Egg Toy Capsule	237	<b>&lt;0.00%</b>
● Pen	237	<b>&lt;0.00%</b>
● Poppy	237	<b>&lt;0.00%</b>
● Scrap Piece of Plastic	237	<b>&lt;0.00%</b>
● Silicone Tube Nozzle	237	<b>&lt;0.00%</b>
● Small Domestic App	237	<b>&lt;0.00%</b>
● Soccer Ball	237	<b>&lt;0.00%</b>
<b>Total</b>	<b>11,983,664</b>	



# The Evolving Smoking Problem

## Cigarette litter is both a familiar and new-fangled foe.

With no litter strategy in place, cigarette-butt litter will remain a formidable issue. At present, they constitute close to 10% of total litter and, as is well documented, their inappropriate disposal not only looks unsightly, but also causes grave environmental damage and endangers wildlife and habitats. This is largely driven by cellulose acetate in cigarette filter tips, an invisible plastic that takes over 10 years to decompose and can remain in the environment for decades in the form of microplastics.

When analysed for their distribution across the country, cigarette butts were detected on 639 transects, equating to 59% of total areas surveyed. Certain land uses are more likely to suffer cigarette litter – 58% of cigarette butts were recorded on retail land-use (primary and secondary), while only 1% were found on rural roads.

Although it extends beyond the scope of this report, it must be noted that cigarettes are not just a terrestrial or plastic concern. The vast majority of waste produced throughout the tobacco product life cycle is hazardous, and their filters also release nicotine, heavy metals and other toxic chemicals into ecosystems. For marine life, cigarettes are the greatest single source of litter worldwide, and they are commonly found in the stomachs of fish, birds, whales and other wildlife. <sup>1</sup>

## The Emerging Environmental Impact of Vaping

Disposable e-cigarettes, or vapes, have surged in popularity in recent years. Research by Material Focus found that around 1.3 million single-use e-cigarettes are thrown away in the UK every week - equivalent to two every second. A [survey of current vapers by ASH](#) (Action on Smoking and Health) found that disposables are now the most-used vaping product, soaring from 7% in 2020 to 52% in 2022.

We are seeing these trends reflected in our data. We estimate that 84,839 e-cigarettes devices and 100,606 instances of their accompanying packaging are ever present in locations around the country. This means that producers of vaping products now own nearly 2% of the problem, placing them on a par with perennial litter offenders like coffee cups and food waste.

In many aspects, vapes reintroduce identical issues as their traditional counterparts. When littered, their toxic chemical and plastic waste leach and fragment into our environment just the same as tobacco, contaminating ecosystems and wildlife in similar ways.

They also represent another fire hazard when thrown in bins, with their lithium batteries capable of exploding or starting a fire, if accidentally turned on or crushed in compactors. <sup>2</sup>

A key difference between the products, however, is that safe-disposal guidance for vapes and their components is virtually non-existent from manufacturers. Proper disposal of an e-cigarette requires removing the filler material, rinsing it under running water until all nicotine residues are removed, and then wrapping it in a scrap of biodegradable material. The cartridge itself should be similarly rinsed and then sealed with its original plug. Only then can it all be discarded like any other plastic waste. <sup>3</sup>

What's more, with the electrification of the cigarettes industry, a recent estimate found that with the vapes used in the UK alone, **10 tonnes of lithium** is wasted each year. This is the equivalent of producing batteries for over **1,200 electric cars**.

More regulation is required to avert the ever-growing environmental threats posed by e-cigarettes. We have included policy ideas to this end in the report's recommendations.



<sup>1</sup> Plastic straw ban? Cigarette butts are the single greatest source of ocean trash - NBC News (nbcnews.com)

<sup>2</sup> Alert: Public Health Implications of Electronic Cigarette Waste - PMC (nih.gov)

<sup>3</sup> Vaping's other problem: are e-cigarettes creating a recycling disaster? - The Guardian (theguardian.com)



# Conclusion and Recommendations

**To get the change we need to see, there has to be a coordinated set of actions for all levels of government, business and society to deliver. Northern Ireland's ambition should be bigger than the scale of the problem we face.**

These challenges are not insurmountable with the right policies and leadership; we can become leaders in tackling our waste culture and developing a vibrant circular economy for the future.

This report stresses the need for change. We cannot remain with things as they are. Let's work together to lead the change and achieve great things together. You can read some of the ambitious ideas that are listed below for government, businesses and individuals. There needs to be a partnership approach between all sectors if we are to seize these important opportunities.

Northern Ireland simply cannot afford to press the pause button on change.

## Government

This report demonstrates the urgent need for governmental action to help make a difference. There are always temptations to seek out a slower pace of change than the one we need. However, change in this area cannot wait. Our policy-makers need to be at the vanguard of the change we need to see. Below we list some familiar but necessary policy changes that are required if we are to turn the tide on litter.

### 1. A Deposit Return Scheme (DRS) that is strong.

A DRS would see consumers pay a deposit for a number of items such as drinks cans and bottles. When a consumer returns packaging to be recycled, they can redeem their deposit. An approach that can help with identifying producers is the use of a brand identifier number for items.

We recognise this proposal will require changes for some smaller businesses in Northern Ireland. This policy should be implemented by working with relevant sectors and ensuring that any start date for the policy is achievable. Furthermore, consultation is key. We need to get this change right; working in a consultative and methodical way is how we will achieve success.

### 2. Effective bans and levies on items of concern.

Northern Ireland has already taken action on plastic bags with positive results over the last decade. Levies

need to be expanded to other items that affect our environment, especially single-use plastics. We want to see bans on items such as single-use vapes and wet wipes.

### 3. Extended Producer Responsibility (EPR) needs to include litter.

From 2024, costs to councils for packaging in street bins will be met by producers of packaging. For this policy to achieve its full potential, it needs to include litter found on the ground and in the bin. EPR should also cover the waste-management costs of all public bodies in Northern Ireland. This will be the foundation stone for our circular economy going into the future.

### 4. An overarching Litter Strategy is needed for Northern Ireland.

We need to press on with developing and creating a stand-alone strategy for litter that all sectors of our society can buy into and work towards together. The targets in this strategy should bring together the three pillars that can build lasting change: education, enforcement and public engagement.

### 5. A joined-up approach in local government.

We encourage councils to take up the strongest fines available to them in order to tackle those who would litter our streets. There should be a consistent approach across the 11 councils to avoid mixed messaging that could dilute the wider public messaging.

**6. Public information campaign for a healthier society and circular economy.** Encouraging people to waste less and make healthier choices not only benefits our society but also our environment. Through the Live Here Love Here campaign there already have been major benefits delivered to communities with this type of messaging. That needs to be strengthened in the years ahead







## Producers

The economy and our environment go hand in hand - they are not in competition.

Keep Northern Ireland Beautiful wants to work with producers to guide them towards greener and more sustainable ways to do business. Our view is simple: change is coming, and we can either lead and manage it together or have it forced upon us by circumstances.

### 1. Embrace Extended Producer

**Responsibility.** We know that in this climate, change is not easy. However, the introduction of this policy creates some positive opportunities for businesses to do things in a more sustainable and environmentally friendly way. The long-term benefits of this policy far outweigh any of the short-term changes that are required. Keep Northern Ireland Beautiful is calling for support from government to assist producers in making these changes.

**2. Work with us on changes.** Keep Northern Ireland Beautiful wants to work with sectors to bring about the required changes that we need. As mentioned, our view is that the economy and the environment go hand in hand. We will work with willing partners to make long-lasting changes. The green economy is the future and partnership is how we will get there.

**3. Changing packaging.** Plastic in our packaging is harmful to our environment. We need to mitigate its impact from those who would seek to litter. There are more environmentally friendly forms of packaging that can be used. Using these alternatives will be a step in the right direction. Check out our Plastic Free Events guide for some starter tips on how you can do things differently.<sup>1</sup>

## Individuals

We all have a role to play in tackling our litter problem. All of us have a choice when we go out to enjoy a green space or a beach. Do we want to leave it better than we found it? Or do we just not care and leave a mess behind for someone else to deal with? Let's make the right choices and make this special place we call home, beautiful for everyone.

It is important that, as individuals, we recognise the need to ask the right questions of ourselves, policy-makers and retailers. You can achieve amazing results by simply asking the right questions and seeking better alternatives.

**1. One small thing.** If everyone does one small thing, it adds up to a big change across Northern Ireland. Let us educate others that making changes to our environment can start small. For example, check the packaging from your local shops and see if it can be returned to the



store, rather than putting it in your bin. From reusable cups to organising a plastic-free event, these small changes all add up.

### 2. Ask your local businesses to do better.

If you see something that you feel is using too much plastic, let that business know you would prefer other alternatives. Your power as a consumer is important in making change; let your local businesses know you want something more environmentally friendly.

### 3. Less waste can mean reduced rates.

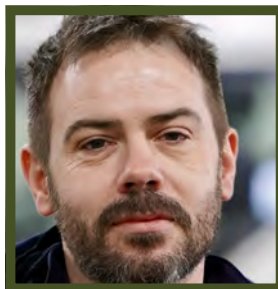
Examine how much of your rates bill goes toward dealing with waste. Then question your local representatives about how we can reduce the scale of our waste and the savings that we could utilise for other purposes in our society.

The recommendations set out above are an essential blueprint for how we can make positive change. Collaboration and ambition are what Northern Ireland needs to become a leader in this field. The changes we set out require everyone to do something. But the opportunities right in front of us are incredible. There has never been a more exciting time for Northern Ireland, government, businesses and individuals to work together and seize these opportunities.

<sup>1</sup> Plastic Free Guide available at: [www.keepnorthernirelandbeautiful.org/cgi-bin/generic?instanceID=63](http://www.keepnorthernirelandbeautiful.org/cgi-bin/generic?instanceID=63)



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