EXTENT OF SINGLE-USE LITTER IN THE UK II

A report by **PLANET PATROL**

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EXECUTIVE SUMMARY

This report is the second of a five-year series by Planet Patrol to monitor and inform progress towards eliminating single-use materials by 2025, in line with the UK Government's targets from its 'Resources and Waste Strategy' to:

- "Become a world leader in using resources efficiently and reducing the amount of waste we create as a society"; and
- "Work towards all plastic packaging placed on the market being recyclable, reusable or compostable by 2025"(1).

The report presents Planet Patrol's findings from analyses of data recorded in the free Planet Patrol litter tracking app from 1st January 2020 to 31st December 2020. Items of litter were recorded in 33 countries; 88% of the data was collected in the UK, which is the focus of this study.

43,187 pieces of litter were recorded in the app between 1st January 2020 to 31st December 2020 in the UK and these are the focus of this report. Of these, 16,752 items were recorded by brand.

Infographic to show the top 10 brands and litter types recorded in the Planet Patrol app in 2020
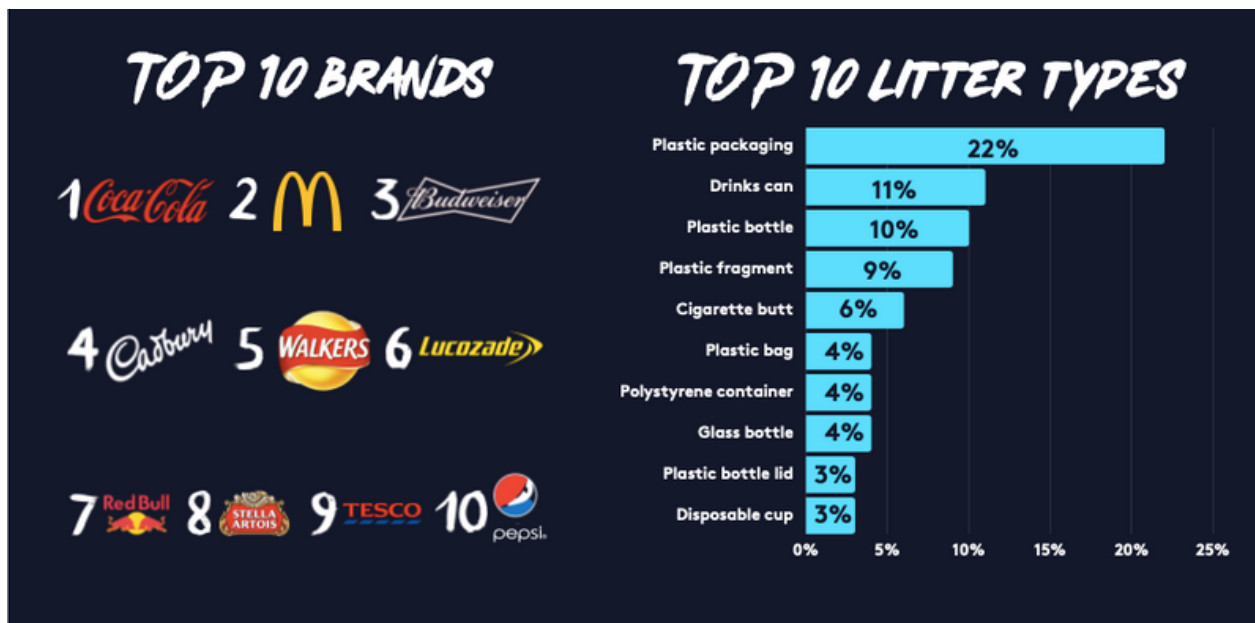
The top 10 most frequently recorded types of litter were:

1. Plastic packaging (22%)
2. Drinks cans (11%)
3. Plastic bottles (10%)
4. Plastic fragments (9%)
5. Cigarette butts (6%)
6. Plastic bag (4%)
7. Polystyrene / styrofoam container (4%)
8. Glass bottle (4%)
9. Plastic bottles lids (3%)
10. Disposable cups (3%)

(1) Defra (2018) Our Waste, Our Resources: A Strategy for England, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf

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A total of 1,243 brands were recorded. The top 5 brands recorded were:

1. Coca-Cola
2. McDonald's
3. Budweiser
4. Cadbury
5. Walkers

Brands were mapped to a total of 809 parent companies (companies with a controlling interest of the brand), of which the top 5 were:

1. Coca-Cola Company
2. Anheuser-Busch
3. PepsiCo
4. Mondelez International
5. McDonald's

Despite extensive media coverage on the huge number of PPE (e.g. face masks and plastic gloves) found littered in the natural environment, such items made up only a small proportion of the litter recorded in the app in 2020; PPE was the 15th most frequently recorded type of litter, representing 1.5% of the total.

Planet Patrol recommends the following to reduce waste and help the UK transition to a circular economy:

1. **A reformed waste producer responsibility system coupled with a transparent regulatory framework.**

2. **An 'all-in' Deposit Return Scheme (DRS) that goes beyond drinks containers to include all single-use materials and container types and sizes.**

3. **Public consultations regarding views surrounding 'on-the-go' recycling and waste disposal facilities for better insight into what is needed.**

4. **Improvements to the provision of on-the-go recycling and waste disposal facilities by local authorities and national government, including information resources to educate people on what can and cannot be recycled, as well as nationwide consistency in what is collected for recycling.**

5. **A nationwide ban on all single-use carrier bags (including plastic bags, paper bags and those made from low-density polyethylene, e.g. most 'Bags for Life').**

A full breakdown of the methodology and wider results are found in the report.

GLOSSARY

Circular economy	An alternative to a linear economy (make, use, dispose) in which we keep finite resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.
Deposit Return Scheme (DRS)	A recycling system in which customers pay a small deposit for containers, which can be refunded upon their return.
Extended Producer Responsibility (EPR)	A policy approach which extends a producer's responsibility for a product to the post-use stage beyond point of purchase.
On-the-go litter	Litter from any edible product which can be consumed immediately upon exiting the premise in which it was bought.
LDPE	Low-density polyethylene (a type of plastic, used to make thinner 'Bags for Life').
Single-use	Designed to be used once before being thrown away or recycled.
SME	Small-to-medium sized enterprise.

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1.0 BACKGROUND

1.1. About Planet Patrol

Planet Patrol is a non-profit organisation with a mission to eliminate single-use materials and reconnect people with nature. It combines citizen science with community action by crowdsourcing nationwide data on litter from the general public using a free mobile app. This provides evidence and groundswell to inform solutions that protect the environment from harmful effects of litter.

The Planet Patrol mobile app is a free tool which allows us to identify global pollution trends. Users upload photos of the litter they find and record the type, brand, and number of items, with the location of each photograph automatically added to each upload. The app is available to use anytime, anywhere, by anyone, allowing Planet Patrol to take an 'always on' approach to data collection. Inviting the general population to volunteer increases the amount of litter recorded, not only providing detailed data worldwide but also increasing awareness of the problem publicly.

Planet Patrol's target for 2021 is to collect and record one million pieces of litter through the Planet Patrol app. Data are licenced and accessible for free when used for research or non-profit purposes and Planet Patrol welcomes proposals. Planet Patrol's citizen science programme is supported by researchers at the University of Glasgow and University of Nottingham. Data collected by the public are reviewed and analysed to better understand the problem, to inform, accelerate and monitor the transition to a circular economy.

Several other projects contribute to Planet Patrol's mission:

- Activity-based clean ups: free outdoor activities are combined with litter picking to provide opportunities for our community to get outside, try something new and help clean up the planet at the same time. Activities include: paddleboarding, yoga, outdoor HIIT/fitness sessions and kayaking.

- Community Guardians: the voice of Planet Patrol in local communities, passionate individuals organising local litter picks, engaging their local communities, sharing our messages, and encouraging local businesses and governments.

- Planet Patrol's Kids Programme: our education programme for kids. Educating and inspiring 6 to 11 year olds on environmental issues relating to litter pollution, empowering them to reduce litter and waste in their own lives and communities.

Target for 2021 is to collect and record ONE MILLION PIECES of litter. At the start of 2021 the total was 310,000 pieces

1.2 Our Story

In 2016, Founder, Lizzie Carr, became the first person to paddleboard the length of England's waterways, solo and unsupported. Along the 400-mile journey, she catalogued more than 3,000 photos of litter she found. Fast-forward to 2020 and Planet Patrol has developed into a global movement, having run 500+ clean-ups, involving 25,000+ people, collectively recording over 310,000 pieces of litter in the free Planet Patrol app across 83 countries.

Image 1: Planet Patrol Founder, Lizzie Carr

Image 2: Lizzie and a clean-up volunteer on paddle boards

Plastic Patrol → Planet Patrol

In September 2020, we changed the name of our organisation from Plastic Patrol to Planet Patrol. It's not just plastic pollution we're taking strides towards eliminating and it's important to us that our name reflects that. On our litter picks we collect everything from metal drinks cans and 'biodegradable' cups to glass bottles and foil sweet wrappers. Our 2020 data shows aluminium drinks cans to be the 2nd most common type of litter recorded - above plastic bottles. To achieve our mission of a future free from single-use materials and litter pollution, we need solutions to combat all types of litter and single-use waste.

It's time to end the 'throwaway' culture and focus on eradicating all types of single-use litter we collect, not just plastics.

"There are immense benefits to using plastics, but - like any relatively new technology - it's about learning to use them responsibly and harnessing those benefits without the largely unintended side effects"
Professor Richard Thompson, OBE FRS

PLANET PATROL

2020 HIGHLIGHTS

We introduced our Community Guardian Programme, with 53+ amazing volunteers representing Planet Patrol regionally

Founder, Lizzie Carr was awarded the Prime Minister's 'Point of Light' and Stylist Magazine's 'Inspiration of the Year' Award

Planet Patrol's Kids Programme was launched to educate and inspire the next generation of change makers

Total of
310,000+
pieces of litter recorded on the Planet Patrol mobile app
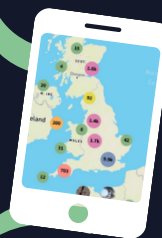
Over 9,000 people took part in Planet Patrol and partner REN Clean Skincare's
MOVE WITH PURPOSE
campaign, getting active for their mental health and environmental health over lockdown

The number of users on the Planet Patrol app increased by
167%
since 2019

We changed our name from

PLASTIC PATROL ➤ PLANET PATROL

150+
socially-distanced organised litter picks

1.3 The Single-Use Crisis, progress and Covid-19

Plastics, metals and other finite materials are valuable resources within the global economy due to their durability and high functionality. However, the way our society currently uses these materials is problematic. Our throwaway culture sees many plastic and metal products being disposed of after just one or a handful of uses, destined for landfill or left to pollute the natural environment:

- Global plastic use is expected to double in the next 20 years (2).
- Nearly 2 trillion drinks containers, including plastic bottles, drinks cans, glass bottles and plastic drink pouches, were used in 2019 (3).
- By 2030, plastic waste in the UK is expected to reach 5.3 million tonnes - a 20% increase from 2018 (4).
- In the UK, 7.7 billion metal drinks cans and 14.4 billion plastic bottles were used in 2018 (5).
- After a first use, it's estimated that 95% of plastic packaging material value is lost to the global economy, equivalent to £62 -117 billion per year (2).

These not only impact the global economy, but also the environment and wildlife:

- Plastic pollution is responsible for the deaths of over 1 million seabirds and 100,000 marine mammals and turtles every year (6).
- Plastic pollution was found to interfere with the growth, photosynthesis and oxygen production of marine photosynthetic algae, which plays an important role in producing the oxygen we breathe (7).
- Microplastics were found in 90% of table salt brands sampled worldwide (8).
- The ocean is expected to contain 1 tonne of plastic for every 3 tonnes of fish by 2025, and more plastics than fish (by weight) by 2050 (2).

Recent reports have shown that 45% of global emissions come from systems of consumption and production (9). The link to net-zero is clear and something the UK government must take seriously and act upon if it is to achieve net-zero greenhouse gas emissions by 2050, as required by law (10).

The link between a circular economy and achieving net-zero is recognised by the Scottish government in its updated Climate Change Plan (2020), stating:

"The circular economy represents an enormous economic and industrial opportunity for Scotland and contributes directly to a green recovery. It tackles emissions through influencing product design, manufacturing and waste and resource management, and is a vital part of sectors delivering net zero aspirations." (11)

In light of the threats our current behaviours and approach to resource use places on the environment, wildlife and potentially to human health, the government and many brands are committing to targets to transition to a circular economy, for example:

- The UK Plastics Pact, with 166 members - including 79 businesses which account for 80% of plastic packaging products sold in the UK. Its ambition is for all plastic packaging to be reusable, recyclable or compostable (12).

(2) World Economic Forum, Ellen MacArthur Foundation, McKinsey & Company, (2016) The New Plastics Economy — Rethinking the future of plastics: http://www.ellenmacarthurfoundation.org/publications)

(3) World Economic Forum (2019) 2 trillion drinks containers are made every year - so where do they go?: https://www.weforum.org/agenda/2019/05/2-trillion-drinks-containers-are-made-every-year-so-where-do-they-go/

(4) WWF, (prepared by Eunomia Research and Consulting Ltd.) (2019), A Plastic Future, Plastics Consumption and Waste Management in the UK. Plastics Consumption and Waste Management Final Report: https://www.wwf.org.uk/sites/default/files/2018-03/WWF_Plastics_Consumption_Report_Final.pdf

(5) WRAP (prepared by Valpak and Recoup) (2019) Drinks Recycling On-the-Go: https://wrap.org.uk/sites/files/wrap/OTG%20Drinks%20Containers%20Final%20Report%20ENG017-012.pdf

(6) UN (2017) Factsheet: Marine pollution: https://sustainabledevelopment.un.org/content/documents/Ocean_Factsheet_Pollution.pdf

(7) Macquarie University (2019) Plastic pollution harms the bacteria that help produce the oxygen we breathe: https://www.sciencedaily.com/releases/2019/05/190514081738.htm

(8) National Geographic (2018) Microplastics found in 90 percent of table salt: https://www.nationalgeographic.com/environment/2018/10/microplastics-found-90-percent-table-salt-sea-salt/

(9) Edie (2021) A net-zero New Year? The 7 green policies UK businesses are still waiting for: https://www.edie.net/news/11/A-net-zero-New-Year--The-7-green-policies-UK-businesses-are-still-waiting-for/

10) Department for Business, Energy and Industrial Strategy (2019) UK becomes first major economy to pass net zero emissions law: https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law

(11) Scottish Government (2020) Securing a green recovery on a path to net zero: climate change plan 2018–2032 - update, https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/pages/11/

(12) WRAP (2018) The UK Plastics Pact A Roadmap to 2025: https://www.wrap.org.uk/content/the-uk-plastics-pact-roadmap-2025

- The UK Government's 'Resources and Waste Strategy' has set targets to eliminate all avoidable waste by 2050, eliminate avoidable plastic waste by 2042 and make progress towards all plastic packaging being reusable, recyclable or compostable by 2025 (13).
- In October 2020, the UK Government banned the supply of plastic straws, stirrers and plastic-stemmed cotton buds in England (14).

The UK's Environment Bill revokes out-dated legislation on producer responsibility and makes provisions for the introduction of news laws in the future to extend producer responsibility and introduce a deposit return scheme (15).

Progress of some environmental policies, the Environment Bill included, has been impacted by the Coronavirus pandemic, with debates and consultations (such as second consultations for the proposed Extended Producer Responsibility and the Deposit Return schemes) being postponed from 2020 until early 2021. Upon publication of this report, no dates have been set for these second consultations. Environment Bill debates have now been delayed for the third time, after the debate scheduled for 26th January 2021 was postponed, again with little indication of when this will take place.

To make a lasting change and develop an effective roadmap towards a truly circular economy, we must first understand and measure the extent of the problem. When Planet Patrol launched in 2016, we were not able to find a reliable, impartial and statistically robust tool to gather evidence about litter and waste disposal behaviours globally, so we built our own: the Planet Patrol app. Crowdsourced data on polluting materials is essential to monitor progress towards a circular economy, allowing citizens to 'police' the system and help develop a set of ambitious targets to eliminate single use materials in nature.

Planet Patrol's Top 3 Litter Pickers of 2020

🥇 Becky Lever - 4,332 pieces recorded

🥈 Faye Serlin - 3,169 pieces recorded

🥉 Nick Huyghe - 1,363 pieces recorded

(13) Defra (2018) Our Waste, Our Resources: A Strategy for England:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf
(14) Defra (2020) Start of ban on plastic straws, stirrers and cotton buds: https://www.gov.uk/government/news/start-of-ban-on-plastic-straws-stirrers-and-cotton-buds
(15) Defra (2019) Environment Bill policy statement: https://www.gov.uk/government/publications/environment-bill- 2019/environment-bill-policy-statement#a-new-direction-for-resources-and-waste-management

2.0 METHODOLOGY

2.1 Method

Litter was collected and recorded by volunteers in the Planet Patrol app, to gather information on the type, brand, amount and location of litter found.

Between 1st January and 31st December 2020, 43,187 pieces of litter were recorded in the app, 16,752 of which included the type and brand of litter.

These 13,701 items of litter found and recorded in the UK are the focus of this report.

Images 3 & 4: Clean-up participants recording litter on the Planet Patrol app

How the app works

The free Planet Patrol litter tracking app is a tool used by the general public to record the litter they find. Whether participating in a clean-up organised by Planet Patrol or on independent litter picks, volunteers upload their findings on the Planet Patrol mobile app by photographing the items found and manually adding information on the type and brand (with predictive brand and type tagging). All photos are geo-tagged, providing the exact location in which the photograph was taken. A new barcode scanning function was introduced in 2020, allowing app users to scan the barcode on litter found (if present) so that the type and brand of the litter is inputted automatically.

1. GET OUTSIDE AND PHOTOGRAPH POLLUTION IN NATURE

2. UPLOAD YOUR PHOTO - COUNT THE NUMBER OF PIECES AND CATEGORISE YOUR HAUL BY TYPE AND BRAND

3. VIEW YOUR PHOTO IN OUR INTERACTIVE MAP AND SEE HOW YOU'VE HELPED FIGHT POLLUTION

Figure 1: Infographic detailing the basic steps to use the Planet Patrol app

2.2 Analysis

The main stages of analysis are as follows:

- Filter data points for UK locations
- Filter data points for which there was no categorisation of the type or brand added by the user
- Review spellings of brands manually typed by users, ensuring one consistent spelling is used for each brand
- Review spellings of types manually typed by users, ensuring one consistent spelling is used for each type
- Map recorded brands to parent companies
- Calculate the total number of items and percentage of total for each type and brand of litter recorded.

Cleaning of data is done manually, as there are many different spellings of types and brands used. Cross-checking is required to ensure the 'type' of litter matches the recorded brand and also, in some cases, to check that the 'type' and 'brand' recorded match the photograph provided.

Mapping of brands to parent companies is done by a manual process, with the 'ultimate' parent brand being recorded. If a brand is owned by different companies in different countries, the UK owner is selected.

Once the data are cleaned and filtered for the UK, these are transferred to a separate database. Data points are then grouped by types and brands, and then sorted.

Analyses are undertaken to determine the material composition of litter items, 'types' of litter, brands and parent companies of litter recorded. For the top types of litter, the brands and parent company composition of that litter type is investigated. As this is now our second annual Litter Report, we are able to compare the results of the 2019 report with the 2020 data, and analyse any changes or patterns found.

Image 5: Litter collected and recorded on the Planet Patrol app

Image 6: Clean-up participant sorting litter

2.3 Distribution

The Planet Patrol litter tracking app is used to gather data on litter polluting the natural environment. All images are geo-tagged and each user is individually verified, offering insight into the most engaged and most disengaged communities. Planet Patrol then uses this insight to target specific communities in clean up efforts.

Items of litter were recorded in 33 countries throughout 2020. 88% of the data was collected in the UK, which is the focus of this study.

Figure 3 shows a map of the UK, with circles representing the number of photos which have been uploaded to the Planet Patrol app in that area. Table 1 summarises information displayed in Figure 3, presenting the most engaged cities/towns based exclusively on insight gathered by Planet Patrol app users.

Figure 2: Map showing the distribution of uploads to the Planet Patrol app in the UK. Each circle represents the number of photos added to the app in that area. Image taken from the Planet Patrol interactive app on 30th January 2021, https://app.plasticpatrol.co.uk/

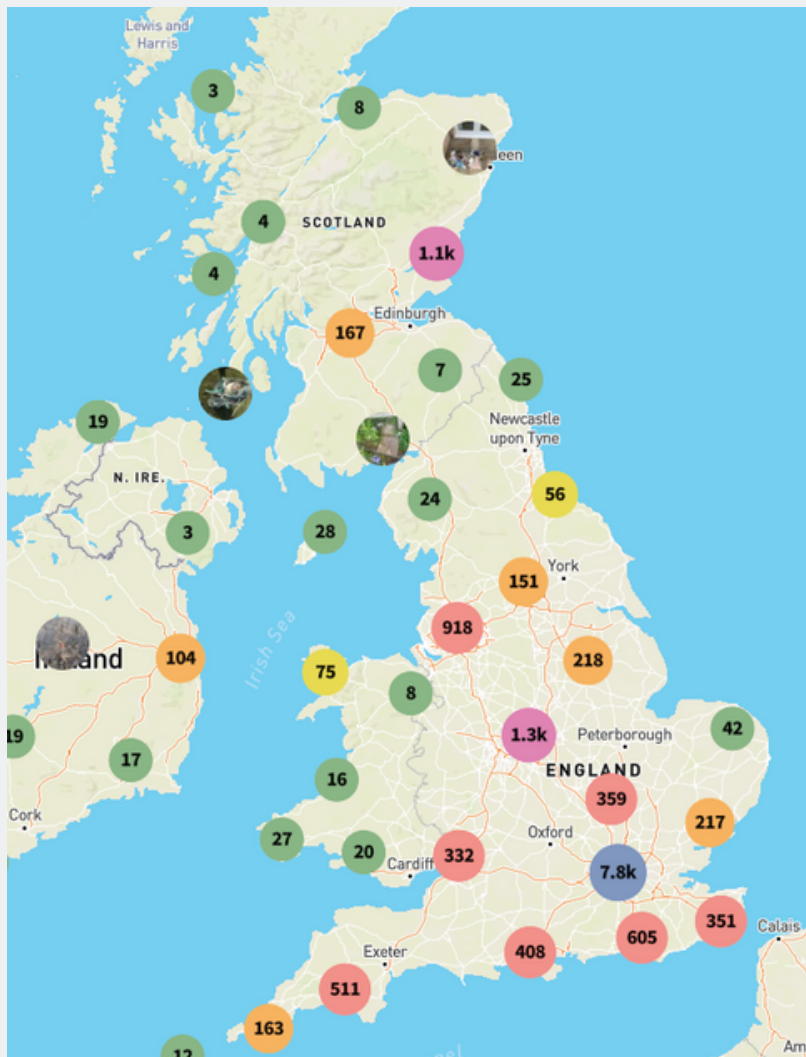*Table 1: Most engaged UK locations, determined by the number of uploads to the Planet Patrol app in 2020.*

Most engaged locations
Richmond (London)
Poole (Dorset)
Enfield (London)
Woking (Surrey)
Ashford
Ware (Hertfordshire)
Plymouth
Dundee
Brighton
Hackney

Table 2: Most engaged constituencies, determined by the number of uploads to the Planet Patrol app in 2020.

Most engaged constituencies	No. of items	% of 2020 total*
Poole (Dorset)	4,856	11.2
Richmond Park (Greater London)	3,435	7.9
Enfield North (Greater London)	2,859	6.6
Twickenham (Greater London)	1,960	4.5
Woking (Surrey)	1,832	4.2
Ashford (Kent)	1,483	3.4
Hertford and Stortford	1,313	3.0
Plymouth, Sutton and Devenport	1,126	2.6
Preseli Pembrokeshire	1,094	2.5
Dundee East	924	2.1

percentages given to 1 decimal place

Table 3: Number of uploads and individual items recorded on the Planet Patrol app in the top 10 most deprived areas in England .

Most deprived areas in England*	Uploads to app	No. of items
Middlesborough	0	0
Liverpool	95	512
Knowlsey	11	73
Kingston upon Hull	5	24
Manchester	0	0
Blackpool	25	241
Birmingham	10	24
Burnley	1	1
Blackburn with Darwen	0	0
Hartlepool	0	0

Determined by the Ministry of Housing, Communities and Local Government's report 'The English Indices of Deprivation 2019 (15)

Link between engagement and social deprivation

Our data shows a link between engagement from the public and social deprivation. Areas experiencing higher levels of social deprivation generally show lower engagement rates in using the Planet Patrol app.

Social deprivation is determined according to 7 factors: income, employment, education, health, crime, barriers to housing and services, and living environment. Living environment measures the quality of both the 'indoor' and 'outdoor' local environment (16).

The top 10 constituencies have been calculated according to the number of pieces of litter uploaded to the Planet Patrol app in 2020. Of these, 4 constituencies (Richmond Park, Twickenham, Woking, and Hertford & Stortford) were ranked in the top 10% of least socially deprived areas in England and 6 constituencies (Richmond Park,Twickenham, Woking, Hertford & Stortford, Poole and Ashford) were in the top 50% (17).

Of the top 10 most socially deprived areas in the England, number of uploads and total number of items recorded were both generally low. Liverpool and Blackpool are exceptions, where 512 and 241 items were recorded in the Planet Patrol app in 2020 (respectively). Planet Patrol has previously targeted both of these locations by organising a series of paddleboarding clean ups free for the public. Planet Patrol now has reps and Community Guardians in both of these locations.

(16) Ministry of Housing, Communities and Local Government (2019) The English Indices of Deprivation 2019 (IoD2019):
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/835115/IoD2019_Statistical_Release.pdf
(17) UK Parliament House of Commons Library (2019) Deprivation data for parliamentary constituencies:
https://researchbriefings.files.parliament.uk/documents/CBP-7327/CBP7327.xlsx

3.0 KEY FINDINGS

3.1 Material Types

Plastic makes up the majority of the items categorised (63.1%), followed by metal (14.3%) composite materials (11.6%) and glass (3.9%).

Composite materials refers to items made from more than one type of material, e.g. crisp packets, which are made from a combination of plastic and aluminum (known as aluminium-plastic laminate).

Of the composite materials, 98.7% of these items were made partly from plastic.

Table 4: Material types recorded in the Planet Patrol app in the UK in 2020

Material type	No. of items	% of 2020 total*
Plastic	27,241	63.1%
Metal	6,166	14.3%
Composite	5,012	11.6%
Glass	1,670	3.9%
Paper	1,442	3.3%
Fabric	1,264	2.9%
Rubber	258	0.6%
Wood	123	0.3%
Latex	8	0.02%
Ceramic	3	0.01%

*percentages given to 1 decimal place, apart from where necessary to give to 2 decimal places
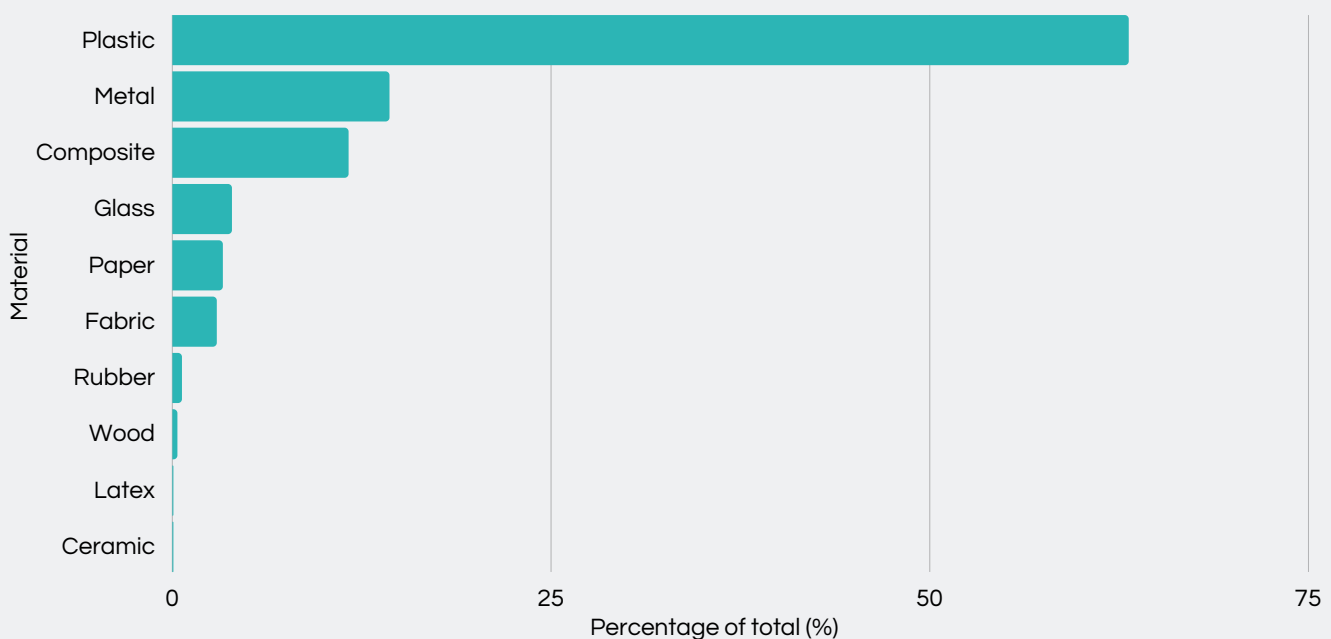

Figure 3: Material types as a percentage of total litter recorded in the Planet Patrol app in the UK in 2020

3.2 Top Litter Types

36,693 items recorded were categorised by type, either by the user when the data was uploaded or by the Planet Patrol team by looking at the photo provided. Items were classified into 68 different categories (see Appendix 1).

The top 10 types (listed) accounted for 77.8% of the litter recorded.

Plastic packaging was the most common recorded litter type (21.7%), followed by drinks cans (11.2%), plastic bottles (9.9%), plastic fragments (9.4%), polystyrene / styrofoam (6.0%), cigarette butts (5.9%), plastic bottle lids (3.9%), plastic bags (3.4%), glass bottles (3.3%) and disposable cups (3.0%).

Plastic packaging has remained the top litter type recorded in the Planet Patrol app since 2019 (21.3% of the total in 2019 and 21.6% in 2020). Drinks cans have moved from 5th to 2nd most common litter type, with a percentage increase from 7.0% in 2019 to 11.2% in 2020. Plastic bottles also represent a larger proportion of total litter recorded, from 4th most common type (8.6%) in 2019, to 3rd in 2020 (9.9%).

New to top 10 list:

- Disposable cups - 10th (3.0%) in 2020, compared to 12th (1.7%) in 2019.

No longer in top 10 list:

- Fishing net, rope and pieces - 14th (1.7%) in 2020, compared to 8th (5.4%) in 2019.

Top Litter Types:

Table 5: Top 10 litter types recorded in the Planet Patrol app in the UK in 2020

Rank in 2020	Rank in 2019		Litter type	No. of items	% of 2020 total*
1	1		Plastic packaging**	9,383	21.7%
2	5	↑3	Drinks can	4,848	11.2%
3	4	↑1	Plastic bottle	4,282	9.9%
4	2	↓2	Plastic fragment	4,073	9.4%
5	6	↑1	Polystyrene/ styrofoam	2,594	6.0%
6	3	↓3	Cigarette butt	2,551	5.9%
7	9	↑2	Plastic bottle lid	1,678	3.9%
8	7	↓1	Plastic bag	1,482	3.4%
9	10	↑1	Glass bottle	1,440	3.3%
10	12	↑2	Disposable cup	1,300	3.0%

*Percentages given to one decimal place
**Plastic packaging is here defined as any item used to hold, protect, handle, deliver and present goods, excluding bottles, bottle lids, bags, cups, polystyrene / styrofoam, which are separate categories. The majority of packaging recorded was from the food industry, such as sweet and chocolate wrappers, crisp packets etc.
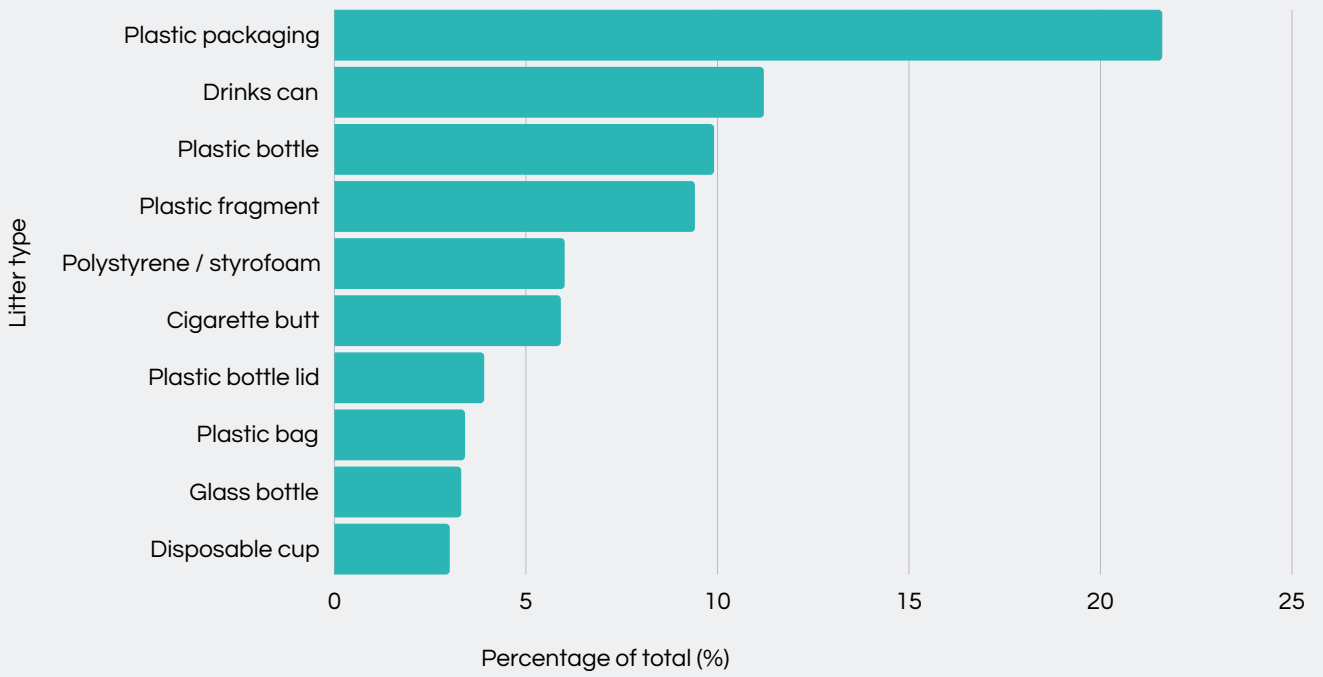
Figure 4: Litter types as a percentage of total litter recorded in the Planet Patrol app in the UK in 2020

Image 7: Bucket full of rubbish uploaded onto the Planet Patrol app

For the top types recorded, the brands and parent companies were further analysed. A parent company is here defined as a company that has a controlling interest in another company, giving it control over its operations. For cigarette butts, plastic fragments and polystyrene / styrofoam categories the brands were in the vast majority unknown or unbranded. Therefore, the brand breakdown for these types is not included in this report.

3.3 Top Brands and Parent Companies

Of the 43,187 items recorded in the app in 2020, 16,752 were categorised by type and brand. 1,243 brands were recorded, which mapped to 809 parent companies. This section analyses only those items which were listed by both type and brand.

The top 10 brands accounted for 32.7% of items recorded. Nearly two thirds of the brands (772) had fewer than 3 items recorded. The top 10 parent companies accounted for 50.2% of the items recorded.

Like 2019, Coca Cola was the number 1 litter brand recorded in 2020 and represents 6.8% of the total litter recorded (compared to 7.4% in 2019). Coca Cola was also ranked first for branded drinks cans recorded (see section 3.2.2) and second for branded plastic bottles (see section 3.2.3).

New to top 10:

- Budweiser - 2nd (4.1%) in 2020, compared to 18th (1.1%) in 2019.
- Red Bull - 8th (2.5%) in 2020, compared to 14th (1.4%) in 2019.

No longer in top 10:

- Mars -14th (1.3%) in 2020, compared to 4th (3.2%) in 2019.
- Boost Energy - 23rd (0.8%) in 2020, compared to 7th (2.6%) in 2019.

Top Brands:

Table 6: Top 10 brands recorded in the Planet Patrol app in the UK in 2020

Rank in 2020	Rank in 2019		Brand	No. of items	% of 2020 total*
1	1		Coca Cola	1,141	6.8%
2	10	↑ 8	McDonald's	650	3.9%
3	16	↑ 13	Budweiser	601	3.6%
4	2	↓ 2	Cadbury	531	3.2%
5	3	↓ 2	Walkers	527	3.2%
6	6		Lucozade	514	3.1%
7	14	↑ 7	Red Bull	442	2.6%
8	9	↑ 1	Stella Artois	421	2.5%
9	5	↓ 4	Tesco	367	2.2%
10	8	↓ 2	Pepsi	289	1.7%

percentages given to 1 decimal place

Top 10 Brands Commitments and Targets

Table 7: Commitments and targets set by top 10 brands recorded in the Planet Patrol app in the UK in 2020

Brand	Commitments / Targets	Member of UK Plastics Pact?
Coca Cola	• All packaging 100% recyclable by 2025 (18) • At least 50% recycled material in all packaging by 2030 (18) • Collect and recycle a bottle or can for each one sold by 2030 (19)	YES
McDonald's	• By end of 2020, all primary fibre-based guest packaging to come from recycled or certified sources. Progress: As of 2020, 78% comes from fibre-based materials, with remaining 22% made up from plastics (20). • By 2025, recycle guest packaging in 100% of McDonald's restaurants (21). • In 2020, announced a global partnership with Loop (TerraCycle) to test a Deposit Return Scheme (DRS) for hot beverages in UK restaurants (to be trialled in 2021) (21). • Pledge to remove non-recycled and non-renewable hard plastic from Happy Meal toys. From 2021, Happy Meals will include either a soft toy, paper-based toy or a book (21).	YES
Budweiser	• By 2025, 100% of our product will be in packaging that is returnable or made from majority recycled content. (Planet Patrol was unable to find exact target percentages from research) (22). • Budweiser supports DRS for plastic bottles, as the "only way to meet the EU ambition for a 90% collection rate for plastic bottles by 2029", but argue Extended Producer Responsibility scheme is a more effective and carbon friendly method for reaching higher rates of recycling for glass and aluminium (23).	NO - but not a plastic product
Cadbury	• All packaging designed to be recycled by 2025 (24). • Recycling information on all products by 2025 (24). • Parent company has vision to create zero net waste packaging through its three-pronged 'Pack Light and Pack Right' strategy of; packing optimisation; addressing the collection and recycling of packaging and investing in post-consumer recycled material; and making it easier for consumers to recycle (24).	YES - under Mondelez International (parent company)

(18) The Coca-Cola Company (2020) 2019 Business and Sustainability Report: https://www.coca-colacompany.com/content/dam/journey/us/en/reports/coca-cola-business-and-sustainability-report-2019.pdf
(19) The Coca-Cola Company (2018) Coca-Cola announces ambitious sustainable packaging goal: https://www.coca-colacompany.com/news/coke-announces-ambitious-sustainability-goal
(20) McDonald's (2019) Responsible Sourcing: https://corporate.mcdonalds.com/corpmcd/our-purpose-and-impact/food-quality-and-sourcing/responsible-sourcing.html
(21) McDonald's (2019) Packaging and waste: https://corporate.mcdonalds.com/corpmcd/our-purpose-and-impact/our-planet/packaging-and-waste.html
(22) Anheuser-Busch InBev (2020) Circular Packaging - Driving Sustainable Packaging: https://www.ab-inbev.com/sustainability/2025-sustainability-goals/circular-pakaging.html
(23) Environment, Climate Change and Land Reform Committee Deposit Return Scheme
Written submission from Budweiser Brewing Group UK&I: https://www.parliament.scot/S5_Environment/Inquiries/ECCLR_DRS020_WritSub_Budweiser.pdf
(24) Mondelez International, Snacking Made Right: https://www.mondelezinternational.com/Snacking-Made-Right

Brand	Commitments / Targets	Member of UK Plastics Pact?
Walkers	• Pledge to make all packaging 100% recyclable, compostable or biodegradable by 2025 (25). (Planet Patrol was unable to to find out through research whether this refers to home recycling/composting or whether recycling through their Terracycle scheme would count).	YES - under PepsiCo (parent company)
Lucozade	• Pledge to move to 100% sustainable plastic bottles by 2030 ('sustainable' here means 'using only plastic that has been previously used or bio-sourced to reach its target' (26). • As a UK Plastics Pact signatory, the company has agreed to eliminate problematic or unnecessary single-use plastic packaging and ensure 100% of its plastic packaging is reusable, recyclable or compostable by 2025 (27).	YES - under Suntory (parent company)
Red Bull	• All cans 100% recyclable already. • Red Bull supports anti-littering campaigns such as Keep Britain Tidy and Every Can Counts to promote recycling and the effective clean-up of beverage cans from the environment (28).	NO - but not a plastic product
Stella Artois	• 100% of product in packaging returnable or made from majority recycled content by 2025 (22).	NO - but not a plastic product
Tesco	• Remove all plastic packaging where possible (29). • Reduce all unnecessary packaging - Tesco hit target to remove 1 billion pieces of plastic in 2020 (30). • Introduce a scalable reusable packaging offer for customers (29). • Packaging fully recyclable by 2025 - currently 83% of own brand packaging is 'widely recycled' in UK (29). • All paper and board used will be 100% sustainable by 2025 (29). • Trialled in-store reverse vending machines for plastic bottles (29).	YES
Pepsi	• Design 100% of packaging to be recyclable, compostable or biodegradable by 2025 (31). • 100% recycled plastic bottles by end of 2022 (all plastic bottles in GB will be made from entirely recycled plastic by end of 2022) (31). • Targets to grow reuse and refill systems like SodaStream (31).	YES

(25) Walkers, FAQs about Sourcing & Sustainability: https://walkers.co.uk/faq/sourcing-sustainability
(26) Steffen, A.D. (2019) Lucozade Pledges To Move To 100% Sustainable Plastic Bottles By 2030: https://www.intelligentliving.co/lucozade-pledges-sustainable-plastic-bottles-2030/
(27) Lucozade Ribena Suntory, Ribena announces next green move: https://www.lrsuntory.com/blog/our-brands/ribena-rpet/
(28) Duggan, J. (2021) Manufacturers disappointed to see their products among most-littered items on Northamptonshire country road:
https://www.northamptonchron.co.uk/news/environment/manufacturers-disappointed-see-their-products-among-most-littered-items-northamptonshire-country-road-3090475
(29) Tesco Plc (2020) Little Helps Plan Report 2019/20: https://www.tescoplc.com/sustainability/download-report/
(30) Moore, D. (2021) Tesco removes one billion pieces of plastic: https://www.circularonline.co.uk/news/tesco-removes-one-billion-pieces-of-plastic/
(31) PepsiCo (2020) PepsiCo Commits to 100% Recycled Plastic Beverage Bottles for its Pepsi Brand in 9 EU Markets By 2022: https://www.pepsico.com/news/press-release/pepsico-commits-to-
100-recycled-plastic-beverage-bottles-for-its-pepsi-brand-in-9-eu-markets-by-2022

Top Parent Companies:

Table 8: Top 10 brands recorded in the Planet Patrol app in the UK in 2020

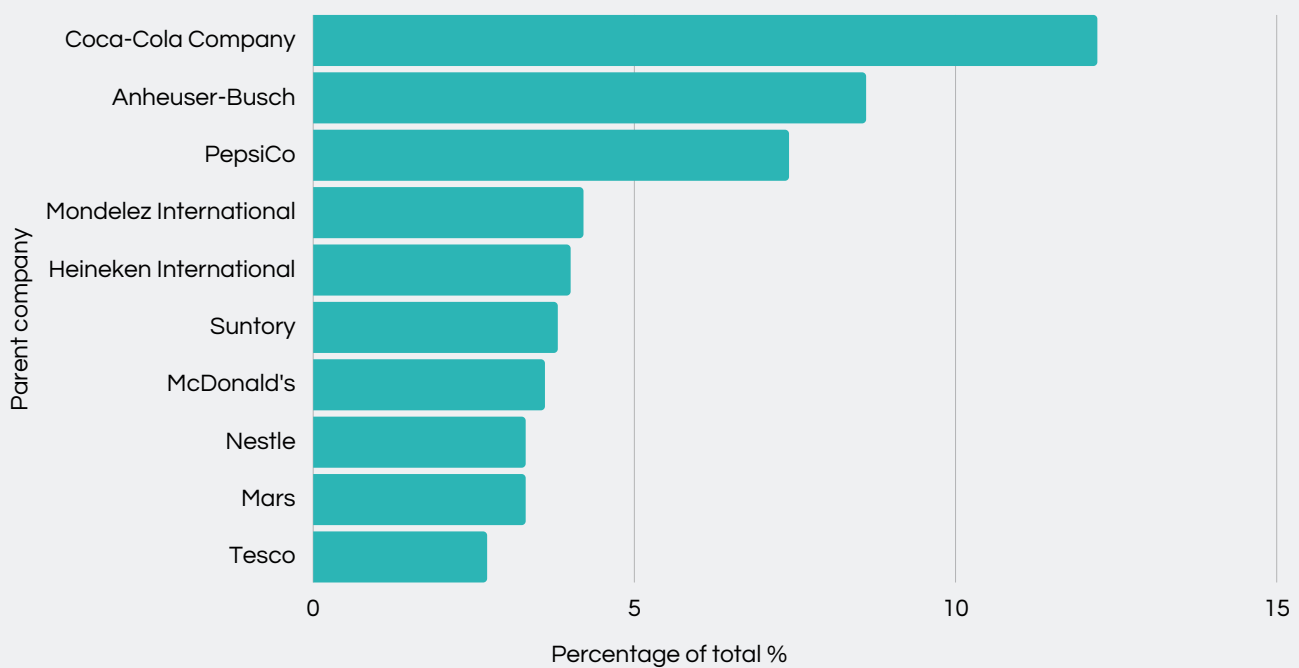| Rank in 2020	Rank in 2019		Parent Company	No. of items	% of 2020 total*
1	1		Coca-Cola Company	1,588	12.2%
2	6	↑4	Anheuser-Busch	1,119	8.6%
3	2	↓1	PepsiCo	969	7.4%
4	3	↓1	Mondelez International	544	4.2%
5	7	↑2	Heineken International	517	4.0%
6	5	↓1	Suntory	492	3.8%
7	12	↑5	McDonald's	466	3.6%
8	9	↑1	Nestle	429	3.3%
9	4	↓5	Mars	428	3.3%
10	8	↓2	Tesco	347	2.7%

percentages given to 1 decimal place

Figure 5: Parent companies as a percentage of total litter recorded in the Planet Patrol app in the UK in 2020

3.3.1 Plastic Packaging

9,342 items of plastic packaging were recorded, accounting for 21.6% of the total litter recorded in 2020. These were composed of products from 564 brands and mapped to 334 parent companies. The brands of 3,811 plastic packaging items were 'unknown' (unbranded, unidentifiable or not visible) - these items were excluded from the analysis for this section.

The top 10 brands accounted for 39.7% of plastic packaging recorded. When mapped to parent companies, the top 10 parent companies accounted for 61% of plastic packaging.

Cadbury moved from most common plastic packaging brand in 2019 to 2nd most common in 2020, swapping places with Walkers as number 1 plastic packaging brand for 2020. However, there was only a difference of one item separating the two brands: 527 items from Walkers, compared to 526 from Cadbury.

New to Top 10 list:
- Sainsbury's - 9th (1.6%) in 2020, compared to 13th (1.1%) in 2019.
- McVitie's - 10th (1.6%) in 2020, compared to 16th (1.0%) in 2019.

No longer in Top 10 list:
- Coca Cola - 24th (0.8%) in 2020, compared to 6th (2.8%) in 2019.
- McDonald's - 16th (1.1% in 2020, compared to 10th (1.7%) in 2019.

Plastic Packaging Brands:

Table 9: Top 10 plastic packaging brands recorded in the Planet Patrol app in the UK in 2020

Rank in 2020	Rank in 2019		Brand	No. of items	% of 2020 total*
1	2	↑1	Walkers	527	9.5%
2	1	↓3	Cadbury	526	9.5%
3	3		Mars	222	4.0%
4	5	↑1	Haribo	203	3.7%
5	7	↑2	Tesco	170	3.1%
6	4	↓2	Nestle	167	3.0%
7	8	↑1	Kinder	111	2.0%
8	9	↑1	Maoam	95	1.7%
9	13	↑4	Sainsbury's	89	1.6%
10	16	↑6	McVitie's	86	1.6%

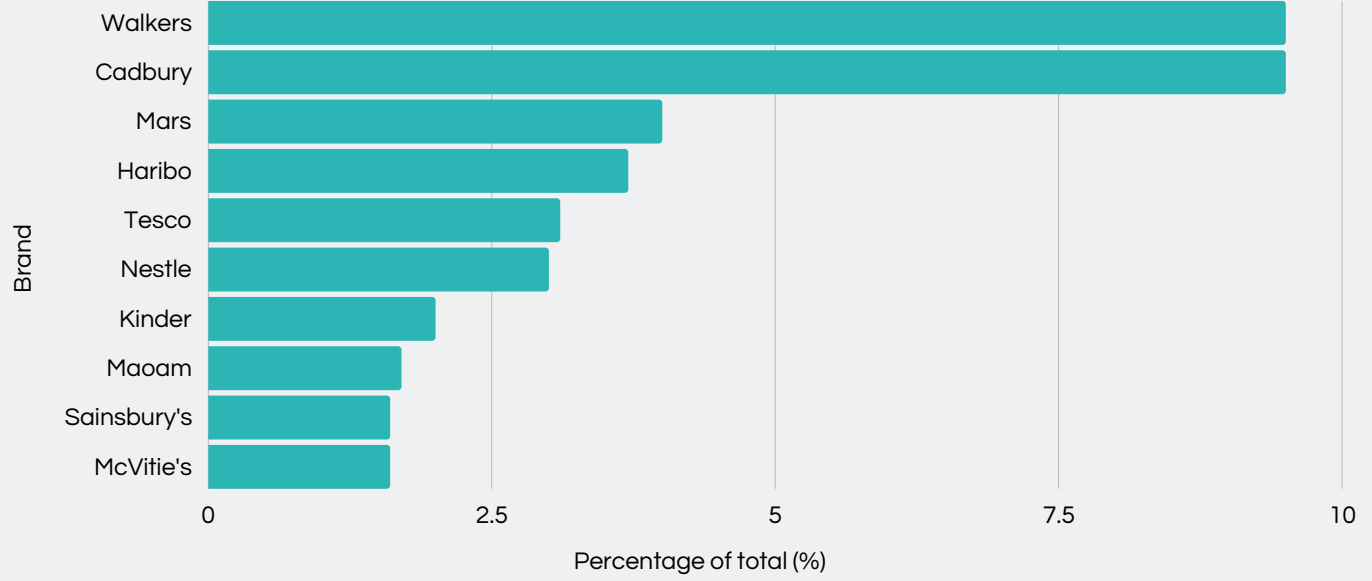*percentages given to 1 decimal place*

Figure 6: Plastic packaging brands as a percentage of total plastic packaging recorded in the Planet Patrol app in the UK in 2020

Image 8: Litter haul from a clean-up, including lots of plastic packaging, uploaded onto the Planet Patrol app

Plastic Packaging Parent Companies:

Table 10: Top 10 plastic packaging parent companies recorded in the Planet Patrol app in the UK in 2020

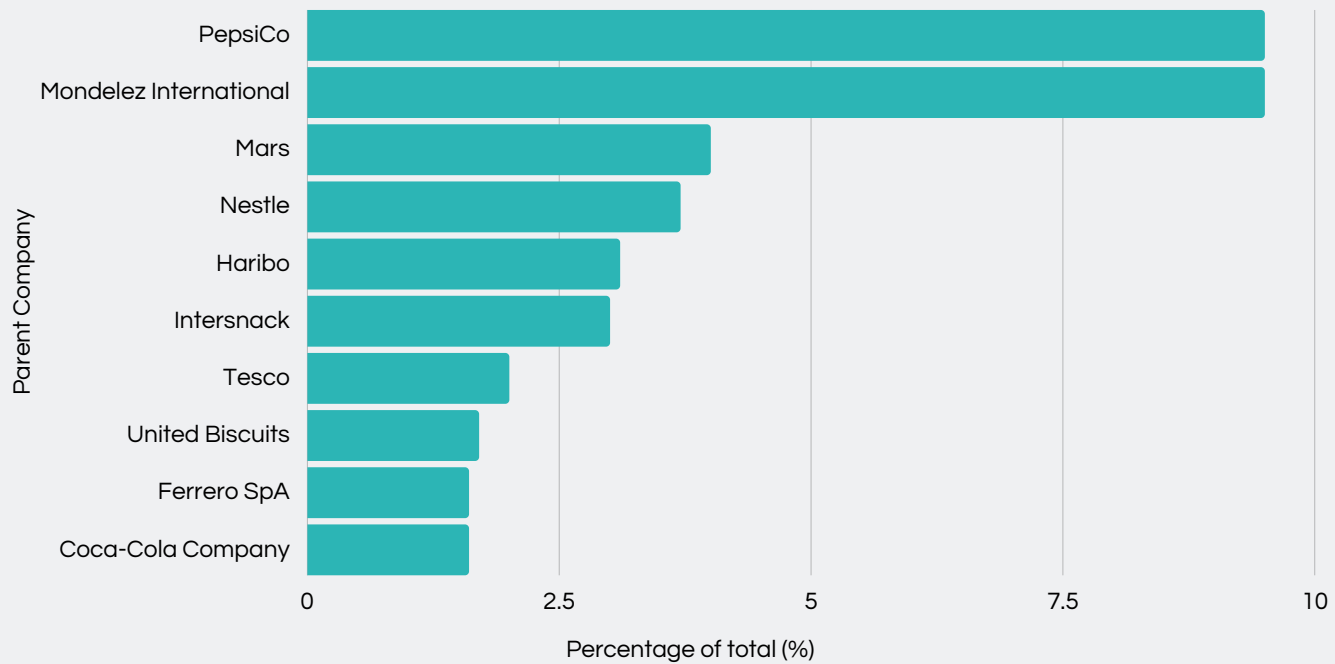| Rank in 2020	Rank in 2019		Parent Company	No. of items	% of 2020 total*
1	1		PepsiCo	745	9.5%
2	2		Mondelez International	667	9.5%
3	3		Mars	495	4.0%
4	4		Nestle	371	3.7%
5	5		Haribo	298	3.1%
6	6		Intersnack	216	3.0%
7	8	↑ 1	Tesco	172	2.0%
8	13	↑ 5	United Biscuits	145	1.7%
9	9		Ferrero SpA	142	1.6%
10	7	↓ 3	Coca-Cola Company	130	1.6%

percentages given to 1 decimal place

Figure 7: Plastic packaging parent companies as a percentage of total plastic packaging recorded in the Planet Patrol app in the UK in 2020

3.3.2 Drinks Cans

4,259 drinks cans were recorded in the app in 2020 (11.2% of total), from 223 different brands which mapped to 141 parent companies. The brand of 589 drinks cans were 'unknown' (unbranded, unidentifiable or not visible) and so were excluded from the analysis for this section.

The top 10 brands accounted for 62% of the drinks cans. When mapped to their parent companies, the top 10 drinks can parent companies accounted for 78% of all drinks cans.

Coca Cola was ranked the number one brand for drinks cans recorded for the second year running. The brand represents 16% of the total branded drinks cans recorded in 2020, compared to 12.3% in 2019.

New to the top 10 list:

- Budweiser (4th in 2020, 12th in 2019)
- Monster Energy (7th in 2020, 104th in 2019)
- Fanta (9th in 2020, 11th in 2019)
- Carlsberg (10th in 2020, 14th in 2019).

No longer in the top 10 brands:

- Carling (7th in 2019, 13th in 2020)
- Boost Energy (8th in 2019, 11th in 2020)
- Euro Shopper (9th in 2019, 17th in 2020)
- Kronenbourg (10th in 2019, 15th in 2020).

Drinks Can Brands:

Table 11: Top 10 drinks can brands recorded in the Planet Patrol app in the UK in 2020

Rank in 2020	Rank in 2019		Brand	No. of items	% of 2020 total*
1	1		Coca Cola	666	16.0%
2	3	↑1	Red Bull	442	10.3%
3	2	↓1	Stella Artois	326	7.7%
4	12	↑8	Budweiser	269	6.3%
5	6	↑1	Strongbow	255	6.0%
6	4	↓2	Foster's	183	4.3%
7	104	↑97	Monster Energy	178	4.2%
8	5	↑1	Pepsi	143	3.4%
9	11	↑4	Fanta	93	2.2%
10	14	↑6	Carslberg	75	1.8%

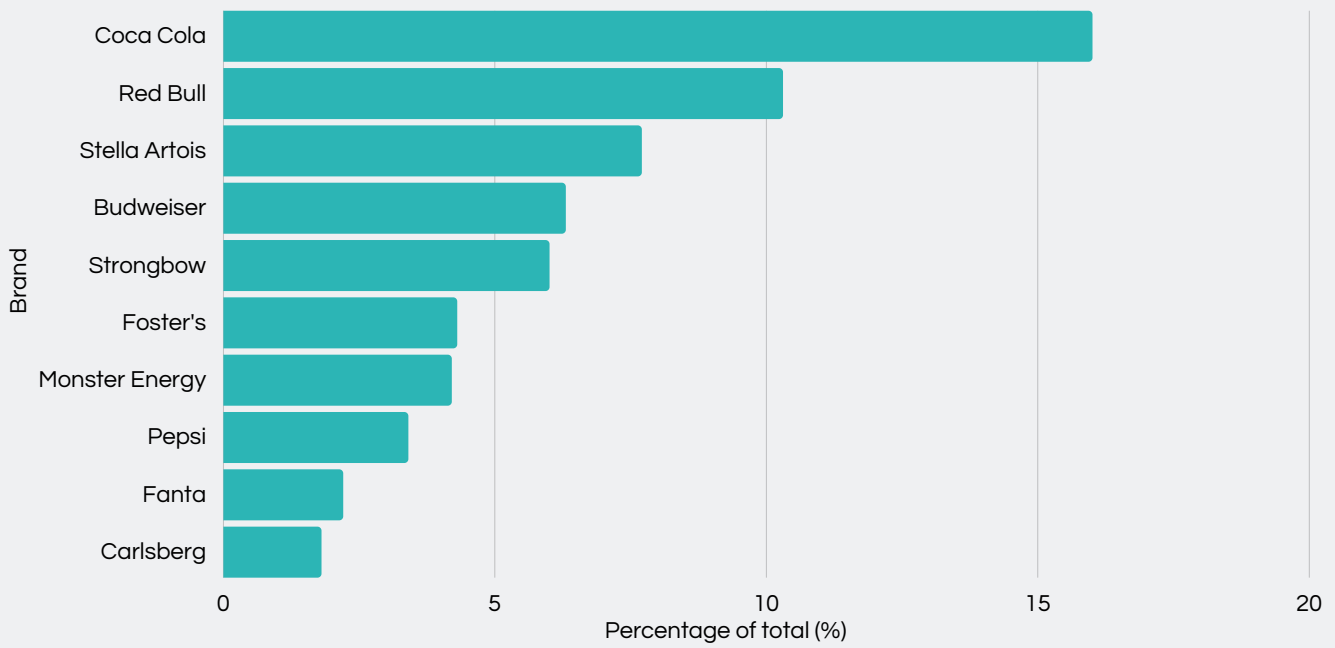*percentages given to 1 decimal place*

Figure 8: Drinks can brands as a percentage of total drinks cans recorded in the Planet Patrol app in the UK in 2020

Images 9 & 10: Lots of cans found on clean-ups and recorded onto the Planet Patrol app

Drinks Can Parent Companies:

Table 12: Top 10 drinks can parent companies recorded in the Planet Patrol app in the UK in 2020

Rank in 2020	Rank in 2019		Parent Company	No. of items	% of 2020 total*
1	1		Coca Cola Company	998	23.4%
2	3	↓1	Anheuser-Busch	795	18.7%
3	5	↓2	Red Bull GmbH	442	10.4%
4	2	↓2	Heineken International	373	8.7%
5	6	↑1	PepsiCo	193	4.5%
6	4	↓2	Carlsberg Group	161	3.8%
7	10	↑3	Diageo Plc	132	3.1%
8	7	↓1	Molson Coors Brewing Co.	78	1.8%
9	8	↓1	Boost Drinks Ltd	70	1.6%
10	9	↓1	Asahi Brewing	65	1.5%

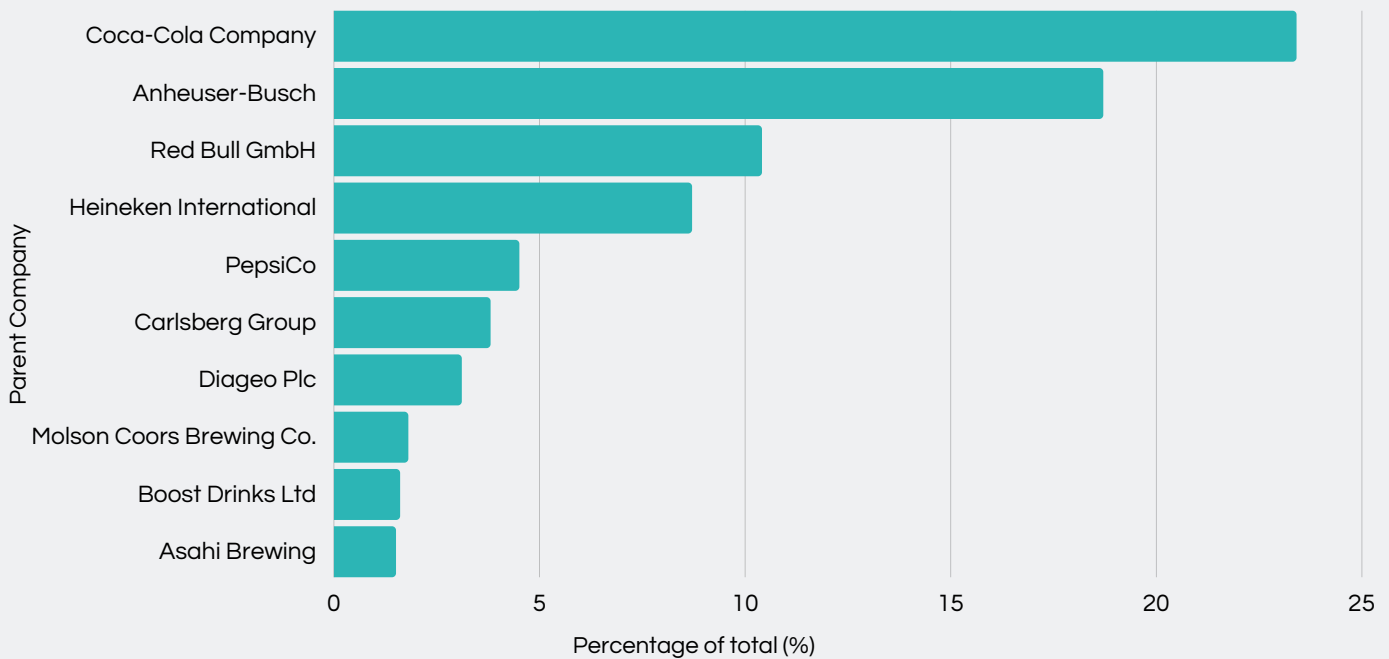*percentages given to 1 decimal place*

Figure 9: Drinks can parent companies as a percentage of total drinks cans recorded in the Planet Patrol app in the UK in 2020

3.3.3 Plastic Bottles

4,282 plastic bottles were recorded (9.9% of the total) from 224 different brands, which mapped to 152 parent companies. The brand of 1,306 plastic bottles was 'unknown' (unbranded, unidentifiable or not visible) so these items were excluded from the analysis for this section.

The top 10 brands accounted for 54.3% of plastic bottles. When mapped to parent companies, the top 10 parent companies accounted for 72.4% of all plastic bottles recorded.

Lucozade takes the number spot for plastic bottle brands in 2020, replacing Coca Cola (2nd) as the number one brand in 2019.

New to top 10 list:

- Robinson's - 8th (2.9%) in 2020, compared to 15th (1.24%) in 2019.
- Tropical Sun - 9th (2.7%) in 2020, compared to 128th (0.04%) in 2019.
- Kirkland - 10th (2.5%) in 2020, compared to 23rd (0.7%) in 2019.

No longer in top 10 list:

- Boost Energy - 16 (1.6%) in 2020, compared to 3rd (9.1%) in 2019.
- Oasis - 11th (2.4%) in 2020, compared to 7th (3.0%) in 2019.
- Buxton - 14th (1.9%) in 2020, compared to 10th (2.4%) in 2019.

Plastic Bottle Brands:

Table 13: Top 10 plastic bottle brands recorded in the Planet Patrol app in the UK in 2020

Rank in 2020	Rank in 2019		Brand	No. of items	% of 2020 total*
1	2	↑1	Lucozade	478	16.0%
2	1	↓1	Coca Cola	371	12.5%
3	4	↑1	Evian	120	4.0%
4	9	↑5	Highland Spring	110	3.7%
5	6	↑1	Volvic	104	3.5%
5	5		Pepsi	104	3.5%
7	8	↑1	Fanta	89	3.0%
8	15	↑7	Robinson's	86	2.9%
9	128	↑119	Tropical Sun	80	2.7%
10	23	↑13	Kirkland	74	2.5%

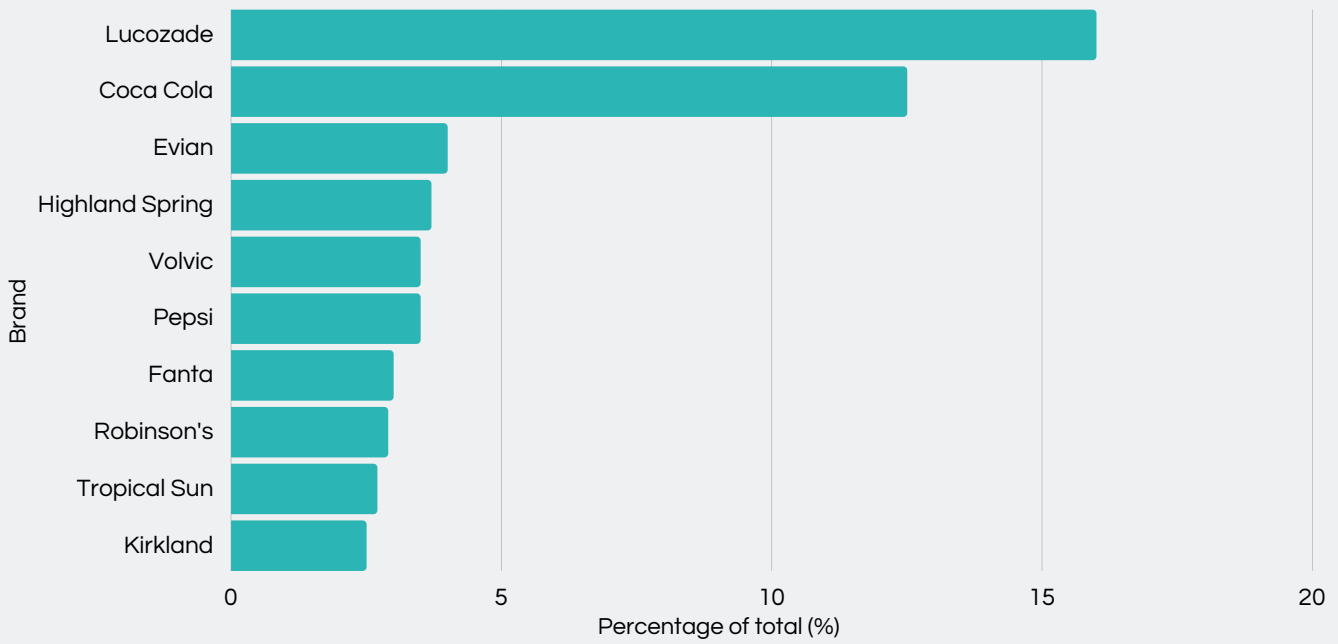*percentages given to 1 decimal place

Figure 10: Plastic bottle brands as a percentage of total plastic bottles recorded in the Planet Patrol app in the UK in 2020

Image 11: Large litter haul, including lots of Tropical Sun and Lucozade plastic bottles, uploaded onto the Planet Patrol app

Plastic Bottle Parent Companies:

Table 14: Top 10 plastic bottle parent companies recorded in the Planet Patrol app in the UK in 2020

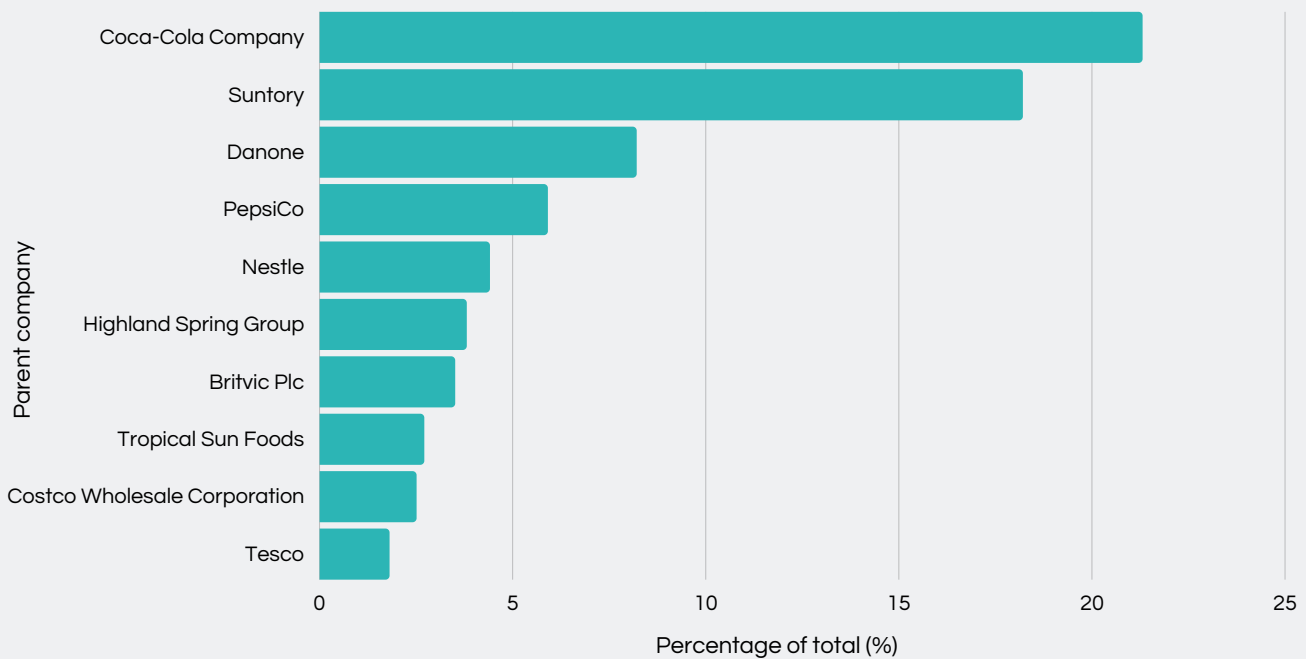| Rank in 2020	Rank in 2019		Parent Company	No. of items	% of 2020 total*
1	1		Coca-Cola Company	635	21.3%
2	2		Suntory	542	18.2%
3	3		Danone	245	8.2%
4	5	↑1	PepsiCo	175	5.9%
5	6	↑1	Nestle	132	4.4%
6	7	↑1	Highland Spring Group	112	3.8%
7	8	↑1	Britvic Plc	105	3.5%
8	58	↑50	Tropical Sun Foods	80	2.7%
9	18	↑9	Costco Wholesale Corp	75	2.5%
10	12	↑2	Tesco	54	1.8%

*percentages given to 1 decimal place

Figure 11: Plastic bottle parent companies as a percentage of total plastic bottles recorded in the Planet Patrol app in the UK in 2020

3.2.4 Plastic Bags

1,402 plastic bags were recorded in total (3.4% of the total), with a large majority (1287) recorded as 'unbranded' (no brand visible). This represents 87% of the total plastic bags recorded. This is similar to the 2019 results, where 85.4% of plastic bags recorded were 'unbranded'.

52 brands were recorded to cover the remaining 115 plastic bags.

The top 4 plastic bag brands are Tesco (2.6% of total), Sainsbury's (2.0%), Asda (1.2%) and Waitrose (0.7%).

In 2019, the top 4 brands were Tesco (3.6%), Asda (2.2%), Sainsbury's (1.3%) and Morrison's (0.6%).

The remaining 48 brands accounted for 6.4% of the total branded plastic bags recorded.

Plastic bag brands:

Table 15: Top plastic bag brands recorded in the Planet Patrol app in the UK in 2020

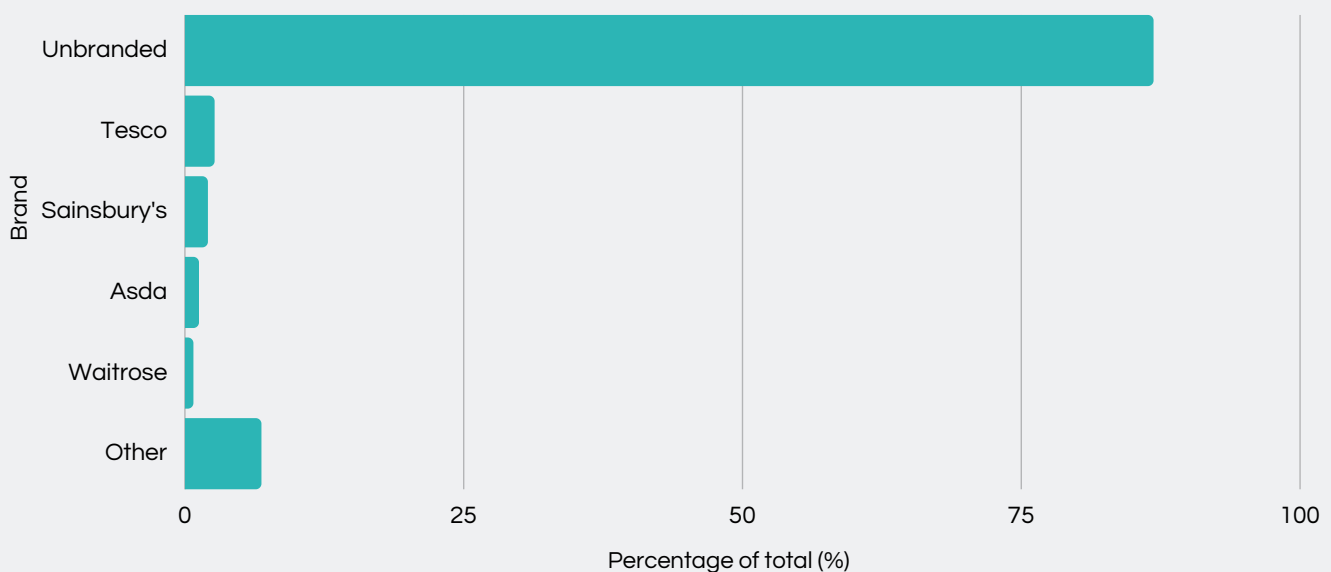| Brand	No. of items	% of 2020 total*
Unbranded	1,287	86.8%
Tesco	38	2.6%
Sainsbury's	29	2.0%
Asda	18	1.2%
Waitrose	10	0.7%
Other	100	6.8%

*percentages given to 1 decimal place

Figure 12: Plastic bag brands as a percentage of total plastic bags recorded in the Planet Patrol app in the UK in 2020

3.4 'On-the-go' litter

21,703 items have been categorised as 'on-the-go', equating to 44.8% of total litter found.

'On-the-go' litter is here defined as 'litter from any edible product which can be consumed immediately upon exiting the premise in which it was bought' (32). For the purposes of this report, 'on-the-go' litter includes the following litter types: chocolate wrapper, crisp packet, disposable cup, drinks can, glass bottle, metal bottle cap, plastic bottle, plastic bottle lid, plastic cup, plastic cup lid, plastic cutlery / utensil, polystyrene / Styrofoam container, straw (plastic or paper), sweet wrapper.

Drinks cans and plastic bottles are significantly more common in our 2020 data, accounting for 22.3% and 19.7% of total on-the-go litter recorded (respectively) and a combined total of 42.0% of total on-the-go litter.

On-the-go litter types:

Table 16: On-the-go litter types recorded in the Planet Patrol app in the UK in 2020

Litter type	No. of items	% of total*	% of on-the-go litter
Drink can	4,849	11.2%	22.3%
Plastic bottle	4,284	9.9%	19.7%
Chocolate wrapper	1,812	4.2%	8.4%
Plastic bottle lid	1,687	3.9%	7.7%
Sweet wrapper	1,527	3.5%	7.0%
Crisp packet	1,512	3.5%	7.0%
Glass bottle	1,440	3.3%	6.6%
Disposable cup	1,302	3.0%	6.0%
Plastic packaging (on-the-go)	824	1.9%	3.8%
Metal bottle cap	760	1.8%	3.5%
Plastic cup lid	402	0.9%	1.9%
Polystyrene / stryrofoam container	378	0.9%	1.7%
Paper packaging (on-the-go)	324	0.8%	1.5%
Straw (plastic or paper)	306	0.7%	1.4%

percentages given to 1 decimal place

(32) Defra (2004) Reducing litter caused by 'food on the go' – A Voluntary Code of Practice for local partnerships:
https://www.keepbritaintidy.org/sites/default/files/resources/KBT_Reducing-litter-caused-by-food-on-the-go_2004.pdf

On-the-go brands

Of the 21,703 items included in the 'on-the-go' litter category, 14,844 were categorised by brand. A total of 857 brands were recorded within the 'on-the-go' category.

Coca Cola is the most frequently recorded 'on-the-go' litter brand, representing 7.7% of the total items recorded. The next most frequent, Budweiser, represents 4.0% of the total.

As this is a new category of litter being analysed in our annual Litter Report, it is not possible to draw comparisons between the 2019 and 2020 data.

On-the-go brands:

Table 17: On-the-go litter types recorded in the Planet Patrol app in the UK in 2020

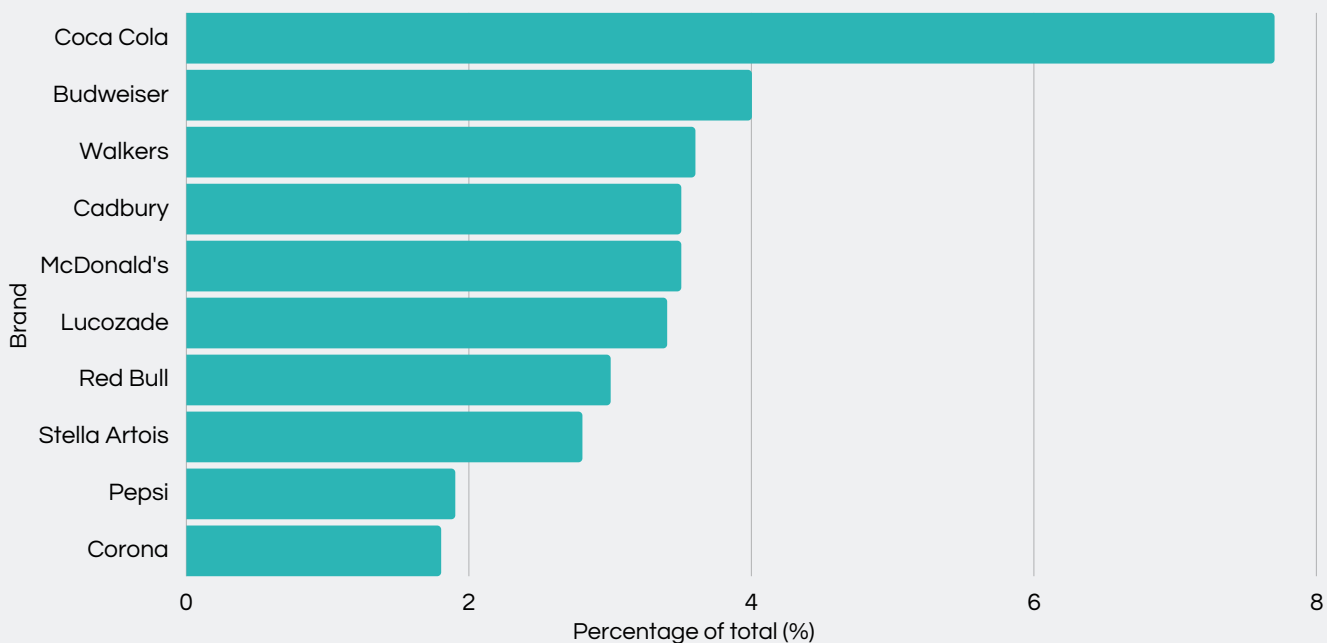| Rank in 2020	Brand	No. of items	% of 2020 total*
1	Coca Cola	1,140	7.7%
2	Budweiser	592	4.0%
3	Walkers	527	3.6%
4	Cadbury	526	3.5%
5	McDonald's	518	3.5%
6	Lucozade	510	3.4%
7	Red Bull	443	3.0%
8	Stella Artois	411	2.8%
9	Pepsi	286	1.9%
10	Corona	260	1.8%

percentages given to 1 decimal place

Figure 13: On-the-go litter brands as a percentage of total on-the-go litter recorded in the Planet Patrol app in the UK in 2020

3.4.1 Crisp packets, sweet wrappers and chocolate wrappers

Of all 'on-the-go' litter logged in 2020, nearly a quarter (22.4%) was made up of crisp packets, sweet wrapper and crisp packets.

15.32% of items recorded within this category were unknown (unbranded, unidentifiable or not visible).

Walkers was the most common brand recorded for all sweets wrappers, crisp packets and chocolate wrappers. The brand was associated with 527 items, representing 12.8% of the total.

Cadbury was the second most common brand, with 526 items recorded and also accounting for 12.8% of the total.

Crisp packet, sweet wrapper and chocolate wrapper brands:

Table 18: Crisp packet, sweet wrapper and chocolate wrapper brands recorded in the Planet Patrol app in the UK in 2020

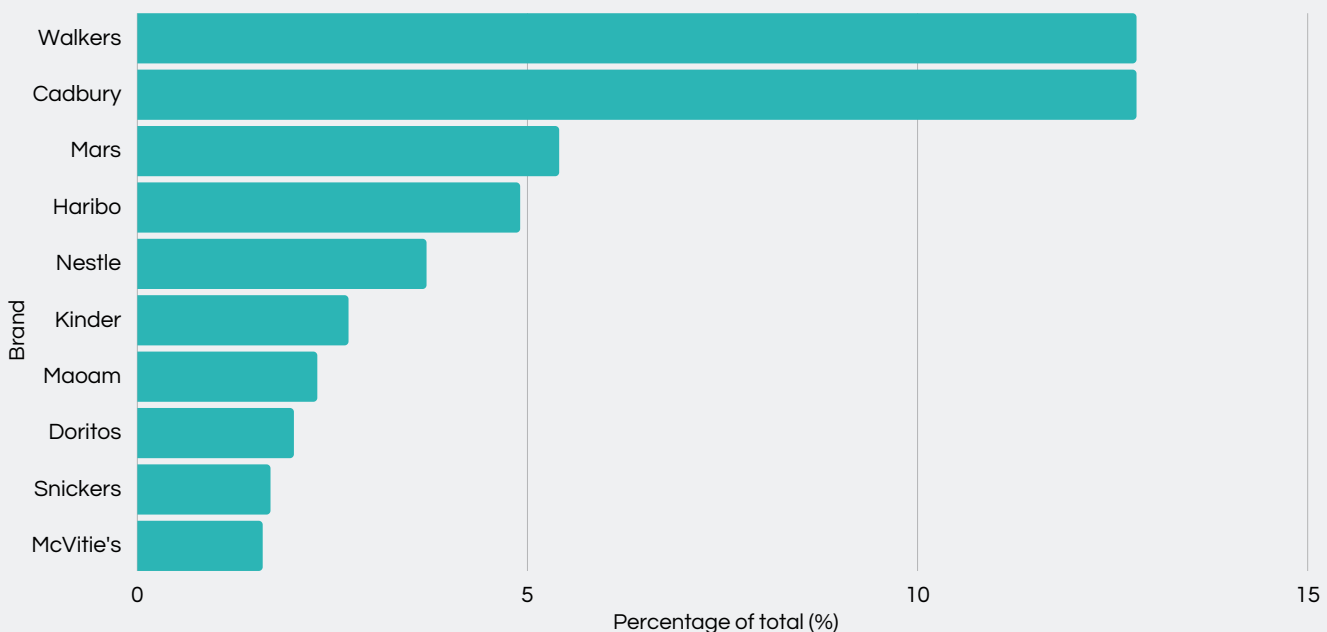| Rank in 2020	Brand	No. of items	% of 2020 total*
1	Walkers	527	12.8%
2	Cadbury	526	12.8%
3	Mars	222	5.4%
4	Haribo	203	4.9%
5	Nestle	153	3.7%
6	Kinder	111	2.7%
7	Maoam	95	2.3%
8	Doritos	83	2.0%
9	Snickers	69	1.7%
10	McVitie's	64	1.6%

percentages given to 1 decimal place

Figure 14: On-the-go litter brands as a percentage of total on-the-go litter recorded in the Planet Patrol app in the UK in 2020

3.4.2 Disposable cups and disposable cup lids

7.9% of total 'on-the-go' litter recorded was a disposable cup (including plastic, paper and coffee cups) or disposable cup lid.

62.4% of all disposable cups and cup lids recorded on the app were recorded as brand unknown (unbranded, unidentifiable or not visible). These were excluded from the analysis for this section.

Of those branded, McDonald's was the most common brand representing 44.5% of the total branded disposable cups and lids recorded. This is over double that of the 2nd most common brand, Costa, representing 18.1% of the total.

Disposable cup and lid brands:

Table 19: Top 5 disposable cup and lid brands recorded in the Planet Patrol app in the UK in 2020

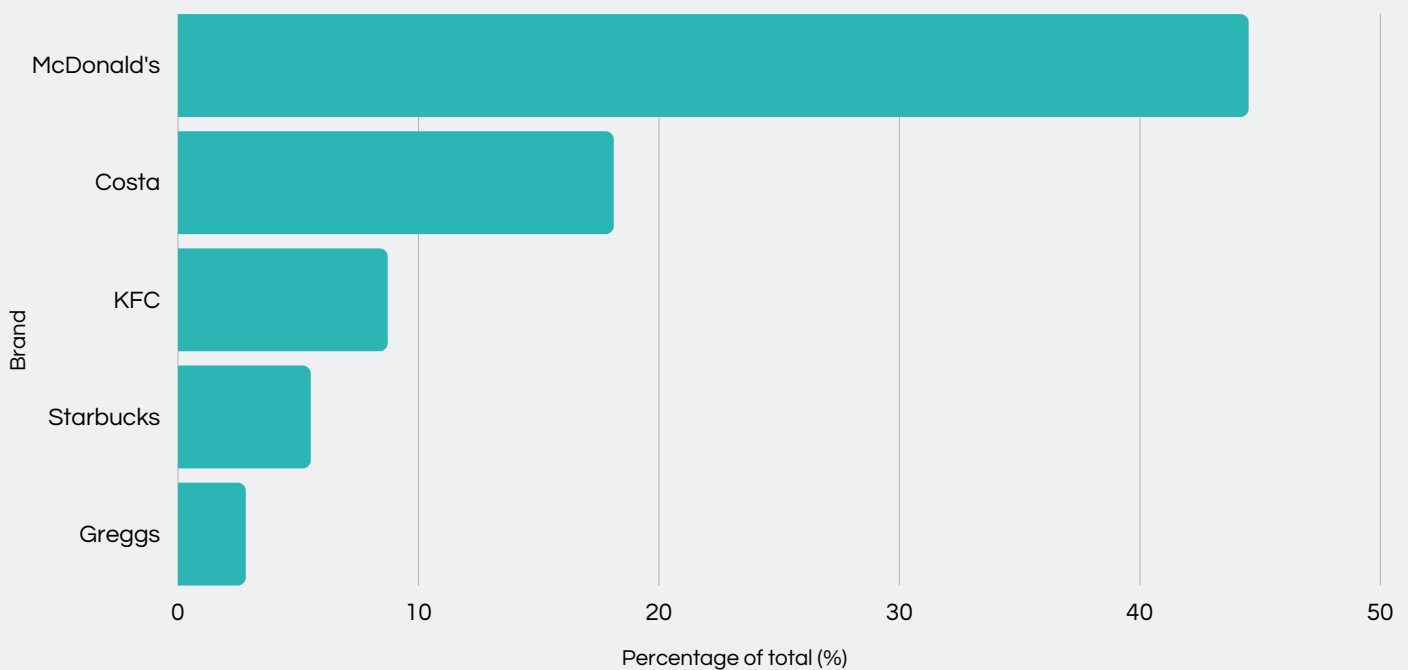| Rank in 2020	Brand	No. of items	% of 2020 total*
1	McDonald's	285	44.5%
2	Costa	116	18.1%
3	KFC	56	8.7%
4	Starbucks	35	5.5%
5	Greggs	18	2.8%

*percentages given to 1 decimal place

Figure 15: Disposable cup and lid brands as a percentage of total disposable cups and lids recorded in the Planet Patrol app in the UK in 2020

4.0 LIMITATIONS & CONSIDERATIONS

Data were crowdsourced manually through the Planet Patrol app, leaving room for human error. As the data are collected through mobile technology, users' ability in using technology varies. Anomalous entries were identified and removed, and data cleaning removed inconsistencies in categorisation and brand naming.

For manually inputted data there were spelling errors, which occasionally made it difficult to recognise the relevant brand associated. Users may also have categorised the same items differently from the drop-down list due to semantics around how a particular item would be described, e.g. bottle cap and bottle lid. This is expected to be the case for fragmented pieces of litter, the source of which is difficult to trace. Biases are expected, such as a bias towards recording larger items or better-known brands. Users were identified by clean up leaders as being uncomfortable collecting and recording specific items such as sanitary products or condoms, so results may not show a true reflection of the extent of pollution by such items. PPE items (such as face masks and plastic gloves) were also amongst those which users may have avoided, due to worries of contamination and spreading for the coronavirus.

It should be considered that data were collected by volunteers at organised, socially-distanced clean-ups and by individuals in their local area. Data was not collected using a systematic sampling campaign that could account for variation through space and time. Sampling locations are a reflection of areas in which Planet Patrol has engaged in the clean-up movement rather than a reflection of the distribution of litter in space.

Image 12: Clean-up participant uploading pictures of litter on the Planet Patrol app

Image 13: Clean-up participants sorting litter to record on the Planet Patrol app

5.0 DISCUSSION & RECOMMENDATIONS

5.1 The Covid-19 Pandemic and Lockdowns

The Covid-19 pandemic and resulting lockdowns - in the UK and around the world - presented new and unexpected challenges for Planet Patrol, meaning we needed to rethink and adapt our strategy:

- Between March and May 2020, we were forced to cancel 22 clean-ups and had to largely adapt our organisation model and programmes to work in the age of social distancing.
- To replace outdoor activity-based clean ups, we ran 8 virtual 'Move with Purpose' activity sessions between June and August, including yoga, HIIT workouts, pilates and a meditation/breathwork session followed by independent litter picks. These were attended by over 9,000 participants.
- From June, as lockdown eased we kick-started our group paddle boarding, yoga and fitness clean ups with restricted numbers and new health and safety procedures to comply with government guidelines.

Image 14: Single-use PPE items recorded on the Planet Patrol app

"Public health must include maintaining the cleanliness of our home, the Earth" - Dr Mark Miller, former director of research at the US National Institute of Health's Fogarty International Centre

PPE: face masks and gloves

According to our 2020 data, PPE items were the 15th most common type of litter found, representing 1.34% of the total. As mentioned in section 4.0, PPE items were amongst those that app users were reportedly less inclined to pick up and record in the app due to concerns around contamination and spreading the coronavirus. Based on reports throughout 2020 related to PPE pollution, PPE representing only 1.34% of the total litter recorded in our data may be lower than expected. It's possible that the issue has been amplified in the media as it is a timely discussion topic, but may not be a true reflection of the severity of the issue compared to litter pollution as a whole. Littering or incorrect disposal of single-use PPE is an important issue and contributes to the single-use crisis; however, the top pollutants and key areas to focus efforts are those listed in the top 10 litter types, such as plastic packaging, drinks cans and plastic bottles.

Worsening litter rates during the pandemic?

It's difficult to accurately determine the impact the pandemic has had on litter rates; however, many members of our community have commented that they believe littering rates have increased. There are a number of reasons why this may be the case:

- People have been spending more time exploring the outdoors within their local areas during the pandemic, so spend more time eating and drinking products outside which may then be littered.
- Poor 'binfrastructure' (either a lack of bins or infrequent emptying of bins) which lead to the bins overflowing or litter being left next to bins and can then blow away or be carried away by animals.
- Companies capitalising from the opportunity to advertise single-use products as more hygienic/ safer options than reusables to avoid spreading the virus.
- The regression or pausing of policies aimed at reducing single-use materials; for example, removing the plastic bag charge over lockdown for quicker, contactless deliveries, and coffee shops refusing to accept reusables and using single-use coffee cups instead.
- Displacement of 'home rubbish' to 'on-the-go' rubbish, as more people are meeting outside instead of at home, or inside cafes and restaurants. As a result, on-the-go infrastructure in some places has been overwhelmed.
- New single-use 'eco-friendly' materials, such as biodegradable coffee cups and compostable plastic cups, are being used, but there is a general lack of public awareness around such items. These often require very specific conditions to allow them to biodegrade or decompose.

5.2 Lessons from 2020

Reverting to single-use

During 2020, we saw many individuals and businesses revert back to single-use bags, containers and utensils for fear that reusables may contribute to the spread of the virus. In response, research was undertaken and statements signed by health experts from around the world to reassure retailers and the general public that reusables can be used safely during the pandemic by employing basic hygiene (33). Signs of such behaviour are recognised in the Scottish government's updated Climate Change Plan as a potential impact of the Covid-19 pandemic. Scottish MPs are reportedly working to explore this further (11).

Adapting in times of crisis

The global pandemic forced us to adapt to a different life in many ways. We have seen how quickly humans can adjust to new routines and behaviours in times of crisis. Lockdown and government restrictions meant many people were unable to spend time outside or mix with friends and family from outside their households. We've been told to avoid all but totally necessary travel, to work from home and wear masks in indoor public spaces.

This is the same level of response and willingness to adapt that we need in order to handle the single-use crisis. Litter pollution poses a threat to the health and wellbeing of humans, wildlife and the natural environment simultaneously (34).

(33) Greenpeace (2020), Health Expert Statement Addressing Safety of Reusables and COVID-19, https://www.greenpeace.org/static/planet4-international-stateless/2020/07/0c3a6a32-health-expert-statement_updated.pdf
(34) Azoulay, A., Villa, P., Arellano, Y., Gordon, M., Moon, D., Miller, K., Thompson, K. (2019) Plastic & Health: the hidden costs of a plastic planet, https://www.ciel.org/wp-content/uploads/2019/02/Plastic-and-Health-The-Hidden-Costs-of-a-Plastic-Planet-February-2019.pdf

5.3 Progress update on 2019 recommendations

In our 2019 Litter Report, we gave our top 3 recommendations to reduce waste and accelerate the transition to a circular economy. These were:

1. A reformed waste producer responsibility system coupled with a transparent regulatory framework;
2. An 'all-in' Deposit Return Scheme that goes beyond drinks containers to include all single-use material and container types and sizes; and,
3. A nationwide ban on plastic bags.

In this section, we discuss each of these recommendations, the progress that has been made over the last year and how our new findings fit in with these recommendations.

5.3.1 Extended Producer Responsibility

In our 2019 Report, we discussed and recommended an Extended Producer Responsibility (EPR) scheme to be introduced in the UK. EPR is a policy approach which extends a producer's responsibility for a product to the post-use stage beyond point of purchase (35). Following a consultation in 2019 on reforming the packaging producer responsibility system, the UK government stated they 'intend to progress our policy proposals and introduce an EPR scheme for packaging in 2023' (36). Plans for the scheme, as outlined by Defra, place the responsibility on obligated businesses to pay full net costs for managing packaging waste, including collection, recycling, disposal and clean up of litter.

We recommended that the scheme goes beyond this, to include not just packaging, but all single-use items. We also showed our support for the EPR scheme to include full net costs of management and clean up of waste, as this will incentivise innovation in packaging design and waste management infrastructure, which is essential for a circular economy. Our third and final recommendation stemmed from the need to ensure costs are fairly distributed between producers, calling for a transparent, data-driven regulatory and monitoring framework to be used.

The Planet Patrol app provides an opportunity to support such a framework, where citizens are able to help collect data themselves and provide a large database of evidence. However, to further this approach, the disclosure of data from businesses providing the quantity of packaging and material produced and handled is necessary in order to determine whether a brand's share of polluting items is in line with levels of use.

During 2020, the Environment Bill progressed somewhat and includes provisions which revoke out-dated legislation on producer responsibility (namely sections 93-95 of the Environment Act 1995 and the Producer Responsibility Obligations (Northern Ireland) Order 1998). Unfortunately, as a result of the pandemic, a second consultation on the specifics of an EPR scheme has been postponed until early 2021, with no date set upon publication of this report. It, therefore, remains to be seen whether the scheme will follow the recommendations listed above.

In response to the delay, we advocate for businesses and local authorities to take on extended responsibilities themselves, without waiting for an EPR scheme to be introduced by the Government. In the midst of a crisis, we shouldn't be waiting until we are legally obligated to act to take action, and the single-use litter crisis is not something we can push back on the agenda any longer.

(35) HM Government, Our Waste, Our Resources: A Strategy for England, 2018
(36) Defra (2019) Consultation on reforming the UK packaging producer responsibility system, Summary of consultation and next steps, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/819467/epr-consult-sum-resp.pdf

5.3.2 Deposit Return Scheme

In response to the high proportion of 'on-the-go litter' in the 2019 report, we recommended the introduction of a Deposit Return Scheme (DRS). In February 2019, Defra held consultations on the introduction of a DRS scheme for drinks containers, for the purpose of reducing litter, improving recycling rates and retention rates of high quality materials within the economy, and promoting recycling through clear labelling and consumer messaging (37). In response, the UK Government said they are 'minded' to introduce a DRS scheme in England and Wales for drinks containers to come into effect in 2023, and that further details of the scheme would be discussed in a second consultation in 2020 (38). The Scottish government plans to implement its Deposit Return Scheme from 2022, a year earlier than the UK government (11). If the UK government wants to adopt a UK-wide approach, as stated in its 'Resources and Waste Strategy' (34), they ought to commit to joining Scotland in its commitment to implement the DRS in 2022.

The data presented in this year's report largely echoes that of last year's, and further supports our recommendations given in the 2019 report:

Firstly, we recommended an 'all-in' DRS, which would cover containers of any size, as opposed to an 'on-the-go' model, only including containers containing 750ml or less sold in single format.

We also advised that the DRS goes beyond drinks containers, as outlined in the initial Defra consultations, to apply to all material types and sizes, including bottle lids, coffee cups and other single-use and recyclable plastic packaging (e.g. wrappers and sachets) as we have identified these as contributing to a high proportion of litter recorded in our study.

Again, a second consultation to discuss the specifics of the DRS has had to be rescheduled for early 2021 as a result of the pandemic, so we await to see whether our recommendations will be considered and included in the plans for the scheme.

As recommended in the section above, we urge businesses to implement their own DRS schemes wherever possible. If large retailers take the initiative to do this themselves, it would be a huge step towards a circular economy that we so desperately need.

In 2019, Scottish MPs called for the UK government to "step up" in areas where key powers are reserved, as it became clear that the UK government's policy ambitions did not match Scotland's

(37) Defra (2019) Introducing a Deposit Return Scheme (DRS) in England, Wales and Northern Ireland: Executive summary and next stepshttps://www.gov.uk/government/consultations/introducing-a-deposit-return-scheme-drs-for-drinks-containers-bottles-and-cans/outcome/introducing-a-deposit-return-scheme-drs-in-england-wales-and-northern-ireland-executive-summary-and-next-steps
(38) Defra (2019), Consultation Outcome: Introducing a Deposit Return Scheme (DRS) in England, Wales and Northern Ireland: Executive summary and next steps

5.3.3 Plastic bag ban

Since 2015 in England, large retailers (those with over 250 full-time employees) have been required to charge a minimum of 5p for single-use carrier bags. Small-to-medium enterprises (SMEs), (those with fewer than 250 full-time employees) are exempt from the charge, as well as paper bags and bags containing certain foods (e.g. raw meat, fish, prescription medicines) (39). A similar charge is also effective in Wales (since 2011), Northern Ireland (since 2013) and Scotland (since 2014), however it applies to all enterprises, including SMEs. The aim of the charge is to reduce the number of plastic bags being produced, disposed of and littered, and to increase reuse rates (39). Defra report that the charge has led to a 95% decrease in single-use plastic bags sold by retailers since 2015 (40).

The charge was amended in 2020 to remove the exemption of SMEs (in England) and increase the minimum charge from 5p to 10p per bag (all UK countries) (41). This suggests the UK Government recognises that plastic bags are a real issue and that the 2015 plastic bag charge has not been entirely effective. However, we still feel the amended legislation does not go far enough.

To support the introduction of the initial charge in 2015, 'Bags for Life' were introduced in all major supermarkets and are now a popular alternative to single-use bags. Some stores (e.g. Waitrose, M&S) have now ceased sales of single-use plastic bags so that customers are required to either buy reusable 'Bags for Life' or bring their own. These bags, on average, contain 3 times as much plastic as their single-use counterparts and need to be used 4 times to have an environmental impact equivalent to single-use bags (42). However, this doesn't seem to be the case: the average UK household purchased approximately 57 'Bags for Life' in 2019, making the name 'Bag for a Week' more suitable name than 'Bag for Life' (43). It's clear these bags are not being reused as intended, nor are they an effective solution to reduce the amount of plastic carrier bags being produced.

Plastic bags feature in our Top 10 Litter Types recorded in 2020 for the second year running, coming in at number 8. A similar proportion of bags recorded this year were listed as 'unbranded' or 'brand unknown' (87.2% in 2020 compared to 85.4% in 2019). These unbranded bags are characteristic of SMEs, who are exempt from the 2015 carrier bag charge, but will be required to charge for bags under the amended legislation as of April 2021.

The amended legislation maintains the same purpose as the 2015 charge: 'to reduce the use of single-use plastic carrier bags, and the litter associated with them, by encouraging people to reuse bags' (39). This isn't enough and so we stand by our 2019 recommendation calling for an outright ban, but are extending this to call for a ban on all single-use plastic and paper bags, as well as LDPE 'Bags for Life'.

Planet Patrol was unable to find the most recent figures on plastic bag sales for 2020 upon publication of this report. Lockdowns and the ongoing threat of the coronavirus meant large numbers of people relied on grocery deliveries and, in response, many retailers had to increase their delivery capacity: Tesco increased its number of delivery slots from 660,000 each week to 1.5 million (44) and Sainsbury's from 340,000 in March 2020 to 700,000 in October (45). Tesco, Asda, Ocado, Sainsbury's, Morrison's, Co-Op, Iceland and Waitrose all stopped offering bag-free home deliveries for at least some of 2020, in order to speed up delivery times and reduce the risk of transmission of the virus. Some retailers who usually offer carrier bag recycling schemes also stopped this service for health and safety reasons. These temporary policy changes are likely to result in a considerable increase in the number of carrier bags used.

(39) Defra, Carrier bags: why there's a charge, https://www.gov.uk/government/publications/single-use-plastic-carrier-bags-why-were-introducing-the-charge/carrier-bags-why-theres-a-5p-charge
(40) Defra (2020) Plastic carrier bag sales slashed by more than 95% since 5p charge introduced: https://www.gov.uk/government/news/plastic-carrier-bag-sales-slashed-by-more-than-95-since-5p-charge-introduced
(41) Defra (2020) War on plastic waste stepped up with extension of plastic bag charge, https://www.gov.uk/government/news/war-on-plastic-waste-stepped-up-with-extension-of-plastic-bag-charge
(42) Environmental Investigation Agency & Greenpeace (2019), Checking Out on Plastics II: Breakthroughs and backtracking from supermarkets, https://eia-international.org/wp-content/uploads/Checking-Out-on-Plastics-2-report.pdf
(43) Environmental Investigation Agency and Greenpeace (2021) Checking Out On Plastics III: https://eia-international.org/wp-content/uploads/Checking-Out-on-Plastics-III.pdf
(44) Tesco, Tesco Covid-19 Updates, https://www.tesco.com/help/covid-19/
(45) Sainsbury's, Sainsbury's dials up digital, doubling capacity and extending delivery times, https://www.about.sainsburys.co.uk/news/latest-news/2020/28-09-20-sainsburys-dials-up-digital

A study done by the Environmental Investigation Agency and Greenpeace in November 2019 concludes that the recommended price for a carrier bag to discourage sale is 70p, a charge 6 times higher than the price consumers in the study were willing to pay (42). This is considerably higher than the 10p maximum retailers in the UK will be obligated to charge from April 2021.

The reason we advocate for a ban that includes plastic, paper and LDPE 'Bags for Life' is to avoid a swap from one single-use material to another. Studies into the environmental impact of plastic bags versus paper bags claim the latter have an environmental footprint between 3 and 4 times higher than plastic bags, due to factors such as water consumption, land use and transport emissions (46). Each paper bag would need to be reused between 3 and 4 times to have an equal environmental impact to plastic bags, which is often not possible due to the material's limited durability. So, while paper may appear to be a better option than plastic for its recyclability and ability to decompose, it's not quite that simple.

Instead of changing the materials we use, we need to change our unsustainable behaviours and this includes items that are unnecessarily single-use. Carrier bags need to be made from fully recyclable and durable materials so they can be used again and again, and then recycled to make other products when no longer functional as bags.

Over 30 countries globally have already implemented plastic bag bans. Bans have proven to be effective in these countries when properly implemented: for example, California banned plastic bags in 2014 and has since seen a 71.5% reduction in plastic bag consumption (47). Rwanda has strict laws which prohibit the manufacture, use, importation and sale of plastic bags, with violators facing fines and even jail time (48). The ban has led to reductions in animal deaths, soil erosion, flooding and malaria (48). If our government is genuine about its ambition to "become a world leader in using resources efficiently and reduce the amount of waste we create as a society" (49), we need to start implementing stricter and more ambitious measures that will end our unsustainable behaviours. Banning plastic bags is just the beginning, but it would be a valuable and promising first step.

Images 15 & 16: Plastic 'Bags for Life' recorded on the Planet Patrol app

(46) Northern Ireland Assembly (2011) Comparison of Environmental Impact of Plastic, Paper and Cloth Bags:
http://www.niassembly.gov.uk/globalassets/documents/raise/publications/2011/environment/3611.pdf; Environment Agency (2006) Life cycle assessment of supermarket carrier bags: a review of the bags available in 2006: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/291023/scho0711buan-e-e.pdf;
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(49) Smith, L., House of Commons Library (2020) Plastic Waste: https://commonslibrary.parliament.uk/research-briefings/cbp-8515/?mc_cid=1724c238c6&mc_eid=63448e7d53

5.4 Discussion and recommendations: 2020 data

According to the 2020 data and the trends and changes between this and the 2019 data, Planet Patrol makes three further recommendations. These are introduced and discussed in this section.

5.4.1 On-the-go litter

A closer look into 'on-the-go' litter has been included in this report as this category makes up a significant proportion (44.8%) of the total litter recorded on the app in 2020. As this is a new category for our Litter Report, it is not possible to draw comparisons from our 2019 report.

For the purpose of this report, 'on-the-go' litter includes 14 different types of litter (as listed in section 3.4 and Appendix 2).

Litter of this kind may be left for a number of reasons, including lack or absence of waste disposal facilities, overflowing bins, lack of respect for the natural environment or belief that certain items will decompose in the natural environment. It's not possible to determine why the items recorded in our data were left without speculating, however we can still draw conclusions from the information we have on the types, brands, materials and number of items recorded.

Key areas highlighted for businesses to focus their efforts are crisp packets, sweet wrappers and chocolate wrappers, which are non-recyclable and accounted for 22.6% of on-the-go litter recorded in 2020. Walkers - the number one polluting brand for this category - has made a commitment to make all its packaging recyclable, compostable or biodegradable by 2025, which could make a huge difference to material recovery rates from on-the-go food packaging. This needs to be a priority for all companies selling these types of products (see table 17 and figure 17 for the top polluting brands for this category).

Image 17: Overflowing bin in London surrounded by single-use coffee cups

In saying that, a large problem with compostable waste of this kind (i.e. industrially-compostable waste, which composts in certain specific conditions and is, therefore, not suitable for home composting) is that we currently only have two composting facilities in the UK. If Walkers achieve their target and (at least part) of their newly designed packaging is made to be compostable, it's not possible for all of this to be composted with the facilities we currently have in the UK. Such commitments and targets set by brands and retailers need to be paired with improved infrastructure for collection, recycling and composting.

As a result of the pandemic and concerns that reusable containers are less hygienic, many retailers have reverted back to using single-use packaging, containers and utensils throughout the pandemic. Disposal cups are one example of this, where many businesses refused to allow customers to bring their own reusable drinks containers. However, a direct effect of this is, of course, a rise in the number of disposable cups being thrown away and, with little (if any) additional measures to ensure the responsible disposal of these items, many more will have been littered or sent to landfill. In response to this, the Scottish government has announced plans for a consultation on a charge on disposable beverage cups, to take place at some point in 2021 (11). The UK government, in contrast, has concluded that a levy on disposable cups would not deliver a decisive shift from disposable to reusable cups, and so alternative measures to combat disposable cup use will be considered if necessary (35).

A 2017 survey (Recoup, 2017) of nearly 100 local authorities across the UK, concluded that current on-the-go recycling has 3 key downfalls:

1. High levels of contamination
2. Insufficient budget for public communications and education
3. Cost of resources and facilities, maintenance and collection (50).

Unfortunately, for many local authorities, the costs of providing on-the-go recycling facilities are deemed too high for the benefits it can bring. This is largely due to high contamination rates which mean much of the waste put in recycling bins cannot be recycled and, instead, is sent to landfill. These authorities tend to prefer to spend the money on improving kerbside recycling instead. However, research done by WRAP showed 'an assumption that there will be inadequate provision [of recycling facilities]' to be a significant barrier preventing people from recycling (51). More research into the matter is needed to determine why this view exists and how policies can be improved to provide effective and consistent on-the-go recycling facilities.

Image 18: Overflowing bin in London surrounded by single-use coffee cups and single-use takeaway food packaging

As previously mentioned in sections 5.1.2 and 5.2.2, the government is in the process of developing an EPR scheme and a DRS in the UK, to come into effect in 2023. Both of these would provide funding for on-the-go recycling, by extending producer responsibility to include the full net costs of waste management (EPR scheme) and by incentivising the public to recycle through financial remuneration (DRS).

For both schemes, we advise that 'on-the-go' litter is made a priority. Funding is needed to cover the infrastructure costs for providing bins, litter collection and maintenance. Nationwide consistency in what is collected and able to be recycled is needed, as well as better communication with the public to ensure good knowledge of what can and cannot be recycled.

Campaigns to encourage responsible disposal of on-the-go waste

From our data, it is clear that some brands are particularly prevalent within the 'on-the-go' litter category. Many brands and companies already partner with anti-littering charities and movements, such as Keep Britain Tidy and Every Can Counts, but litter remains a huge problem in the UK and worldwide. It's clear that this current approach isn't entirely effective.

Instead, we suggest that the top 'on-the-go' litter brands named in this report (see section 3.4) introduce campaigns to encourage the responsible disposable (as designed) of their packaging. This could include improved messaging on packaging with information on how to dispose of the product, or an incentive scheme that rewards customers for responsible disposal. Many of these 'on-the-go' items are 100% recyclable, such as drinks cans, and hence of value to the economy.

(50) Recoup (2017) Disposal 'On the Go' - Local Authority Survey: https://www.recoup.org/news/7558/disposal-on-the-go-local-authority-survey
(51) Zero Waste Scotland, WRAP (2017) Recycling on the go: http://www.wrap.org.uk/sites/files/wrap/ZWS165%20RotG%20Guidance%20final.pdf

5.4.2 Using data for insight

You can't manage what you can't measure. At Planet Patrol, we analyse crowdsourced data collected by our community to develop a global database of evidence and use this to spot trends in the type, brands, number and location of litter pollution. However, there's a lot more that can be done with our data than the Planet Patrol team can do alone. Using the data collected by volunteers, we are able to license this to Government and brands to be used as a tool to gain insight into the problem and develop suitable, effective solutions, as well as to other non-profit organisations and researchers. This way, our data can be used for more than our own analysis and recommendations, to develop targeted waste-reduction strategies, raise awareness and communicate tangible evidence of successes long-term.

In the Scottish government's recently updated Climate Change Plan, the administration recognises that further, more far-reaching fiscal incentives will be needed in addition to the proposed DRS and EPR system in order to achieve its ambitious 2025 targets and that further investigation into the issue is needed (11). Data, such as that recorded by citizens on the Planet Patrol app, plays a crucial role in such research, providing evidence and useful insights into both the scale of the problem and the effectiveness of current 'policy 'solutions'.

People power is central to Planet Patrol, and our mission wouldn't be possible without it. It is only through the efforts and commitments of our community that we are able to collect the evidence we use to provide recommendations and solutions to the problems we face. Our community is growing year on year - with a 167% increase in app users since 2019 - and we want to continue this growth and spirit of community action to contribute towards the development and monitoring of effective litter reduction strategies, to eventually create a circular product supply chain.

Image 19: Buckes full of litter, collected on a Planet Patrol clean up and recorded in the Planet Patrol app

5.5 Summary

In response to the findings and points discussed in this report, we recommend the following:

1. A reformed waste producer responsibility system coupled with a transparent regulatory framework.
2. An 'all-in' Deposit Return Scheme (DRS) that goes beyond drinks containers to include all single-use material and container types and sizes.
3. Public consultations regarding views surrounding 'on-the-go' recycling and waste disposal facilities for better insight into what is needed.
4. Improvements in the provision of on-the-go recycling and waste disposal facilities by local authorities and national government, including information resources to educate people on what can and cannot be recycled, as well as nationwide consistency in what is collected for recycling.
5. A nationwide ban on the sale of all single-use carrier bags (including plastic bags, paper bags and those made from low-density polyethylene, e.g. most Bags for Life).

Image 20: Group of volunteers with litter picking equipment

Image 21: Lizzie litter picking on a paddle board

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7.0 APPENDIX

Appendix 1: Categories of Litter

During data collection, users of the Plastic Patrol app can categorise items of litter in the following categories.

Table 19: Categories of litter in the Plastic Patrol app

Litter type		
4/6 Pack Rings	Footwear	Plastic bottle
Aerosol can	Furniture	Plastic bottle lid
Balloon	Gas canister	Plastic cup lid
BBQs / grill (disposable)	Glass bottle	Plastic cutlery / utensil
Bicycle part	Glass fragment	Plastic fragment
Boating equipment	Glasses (facial)	Plastic item (large)
Building material	Household battery	Plastic item (small)
Car part	Industrial sheeting	Plastic packaging
Cardboard	Lighter	Plastic straw
Cardboard packaging	Make-up / cosmetic container	Poo bag
Ceramic / pottery	Mesh bag	PPE
Cigarette packaging	Metal bottle cap	Rubber
Cigarette butt	Metal cutlery / utensil	Sanitary item
Clothing	Metal fragment	Styrofoam / polystyrene
Condom	Metal item (large)	Tape
Cotton bud	Metal item (small)	Tin
Disposable cup	Metal can tab	Toy
Drinks can	Nappy	Tyre (car or bike)
Electrical	Needle / syringe	Wet wipe
Fabric	Paper	Wood piece
Fishing net, rope, equipment	Paper packaging	
Foam	Paper straw	
Foil	Plastic bag	

Appendix 2: On-the-go Litter

On-the-go litter, as discussed in sections 3.4 and 5.4.1, include the following types of litter:

Table 20: Types of litter included in the 'on-the-go' litter category

Litter type	
Chocolate wrapper	Plastic bottle lid
Crisp packet	Plastic cup
Disposable cup	Plastic cup lid
Drinks can	Plastic cutlery / utensil
Glass bottle	Polystyrene / styrofoam container
Metal bottle cap	Straw (plastic or paper)
Plastic bottle	Sweet wrapper

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