

# WHAT LONDON'S WASTE SAYS ABOUT US MASKING THE PROBLEM

A report by Bywaters





## INTRODUCTION

Throughout history, the stories of those we can no longer speak to have been told by what they have left behind. This phenomenon hasn't changed, with the history of London being told in real-time by the trends we see in waste.

At Bywaters, we conduct an essential service for Londoners by recycling over 125,000 tonnes of waste each year. Waste materials come from households and businesses far and wide, giving us a unique glimpse into the lives of those in London. By sorting through mixed recyclables, we have begun to uncover some interesting insights about life in the city. Our research looks at various themes, such as fashion choices made by consumers or media items disposed of by those living and working in London. Our research provides unique insight into London's story, through the waste left behind.

## The story of two masks

The past three years have been an emotionally taxing time for people all over the globe. Masks have become a symbol of the experience, representing the requirement to wear PPE in response to Covid-19 and the use of 'laughing gas' as some Londoners seek solace in alternative methods. While it is undoubtedly easy to demonise specific trends, it is far more important to understand them and look for solutions that could benefit everyone. Such a holistic approach leads us towards healthier communities, where people can support one another and find real solutions to their problems.

# The COVID-19 Pandemic

Throughout the pandemic, we noticed a significant waste increase, led by the growth in disposable PPE usage. Over the first two years, more than 5.6 billion items of PPE were delivered to England's health and social care system, up from 2.43 billion in 2019. During the first peak of the virus, some hospitals used over 80,000 disposable face masks daily. This and other societal changes led to vast quantities of PPE ending up in the recycling stream and being sorted by many waste management facilities, including ours over at Bywaters.

In early 2020, our MRF (Material Recycling Facility) sorting lines picked up considerable contamination of PPE, leading to legitimate concerns over processing recyclable waste with PPE in loads. Working with our NHS clients, we implemented a detailed plan over several months to tackle correct source segregation and maximise recycling efforts.

During the pandemic, we did notice a lot more facemasks, tissues, gloves and even rapid covid tests that people threw away in the irregular waste; we made sure all our staff had the correct PPE to deal with these hazardous materials. Due to it all leading back to covid, they had FFP3 facemasks, gloves, and safety goggles, with all material found on the MRF put into quarantine and disposed of correctly.

While it's understandable that the sudden increase in PPE waste during the pandemic was unprecedented and practically unavoidable, it has nonetheless revealed the urgent need for waste management companies to have dedicated portals to reach out to members of the public and extend their education and resources around recycling such new trends. This way, all can better comprehend and participate in sustainable practices whenever a similar situation arises. Our research reveals the story of London so far. However, our goal is to help the City tell a better story every year.



In 2019 hospitals disposed of 80,000 face masks a day



In 2019 Multiple 7701 bins of infectious waste were exchanged every hour



Bywaters onsite teams had to remain flexible, working 24/7 to manage the workload required

## Masking the problem

The growing trend of nitrous oxide (Nos) misuse has been widely reported and can be easily recognised by looking at our streets. For years, small silver canisters have filled our pavements and parks. In recent times larger canisters have gained popularity amongst users, clearly showing the scope and scale of this pandemic. Intended for use in high-end kitchens to create culinary delights, this repurposing as a powerful hallucinogenic serves as a chilling reminder of the impact of the pandemic on our City. While 'hippy crack' has become embedded in the discourse surrounding the drug misuse phenomenon that has taken over London's streets, its effects on our young people cannot be ignored; with individual health significantly impaired from inhaling such potent gases. The volume can be seen in our waste facility.

The canisters cannot be recycled using traditional methods and must instead be individually sorted and sent to bespoke recycling centres; this is a very different to other materials sent to our centre. The unique handling process for these items has cost us over £100,000 in just nine months. Not only this, but the compressed cylinders can be hazardous to our staff, and when the material is crushed, it can explode if there is any gas left, increasing the risk of injury. Fortunately, through recycling programs, we can responsibly dispose of these canisters and do our part for the planet.

The number of pressurised nitrous oxide canisters has drastically increased over the past two years, reaching a record high. Our facility noticed an immense surge in the summer months this year compared to last year, collecting a total of 16,499

large canisters between March and November. We believe this increase is directly linked to the summer season and the warm weather, which encourages more people to find reasons to socialise and use these products.

Historically, drug use peaks during the summer months. According to a recent study by the National Institute on Drug Abuse (NIDA), figures suggest that first-time drug use is even more common during the summertime than established drug use.

We take great care in monitoring the number of canisters that reach our facility so that we are aware of any changes which may affect London in any way.

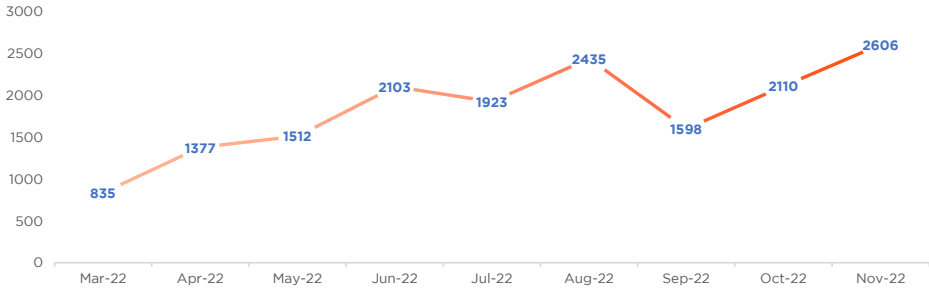
In just nine months it cost us over

**£100,000**

to process large NoS canisters



## Units of canisters month by month March 22 - Nov 22



**Total Cannisters:**  
**16,499**

## Summer highs, London lows

As part of our responsible waste management, we have closely tracked canister-based items in our facilities since March 2022. We believe that the notable increase in these items detected since January/February of the same year is connected to a broader concept of ‘freedom to throw’. This far-reaching freedom has allowed irresponsible disposal tactics to manifest and create a more significant social problem. To tackle this, we inform local councils and encourage them to spread the word amongst their constituents on the proper ways to discard waste.



## Lithium's finite possibilities

Lithium is a finite resource with limited availability, so it is essential that we handle it carefully and prioritise reusing rather than disposal. With the current rate of use and production, we only have a limited amount left in the world - possibly as little as 70 years - making practical usage more urgent. Therefore, increasing efforts to collect and recycle pre-existing lithium debris is needed to reduce the consumption of new resources while helping our environment. This step will not only preserve what natural deposits remain, but it can also work towards substantially decreasing emissions associated with extracting, processing, and transporting primary sources of this metal.

With the ever-expanding use of lithium batteries in our everyday lives, it is becoming increasingly important to stay aware of these items' potential dangers. Many people might not realise how commonplace lithium batteries can be - ranging from phones to tablets, and even vape pens. As this type of battery powers more and more devices, there is a corresponding increase in the number of fires caused, especially at waste management facilities. Every day we collect as many as 50 batteries from our conveyors, upwards of 80,000 batteries a year.

At Bywaters, we recognise this threat and have implemented protocols for dealing with any lithium material. Due to the risks of ignition within dry, highly flammable materials such as paper and cardboard, the increasing volume of batteries is alarming, both for our staff and the planet.

Bywaters processes

**80,000**

Batteries each year



## Autumn's Vape waste

Lithium batteries are in many single use items designed to be thrown away; one significant example is disposable vape pens.

The amount of waste generated by vaping is staggering. During a recent major summer event in London, 129 kg of disposable vapes were found in our waste collection, over just 2 days. This hints at the need to find more sustainable solutions for such materials. The recycling rate for e-cigarettes indicates that more needs to be done to ensure that they are disposed of sustainably. While the amount of vape waste found was troubling, it also provides an opportunity to highlight further the need for improved systems.



*"Users in the UK are throwing away around two disposable vapes every second. The number of discarded disposable vapes accounts for around 10 tonnes of lithium being sent to landfill or waste incinerators each year - enough of the metal to make batteries for 1,200 electric cars." - Sky News*

## Our suggestion - Household 'electrics' recycling service

Households should have specific bins for electronics. At Bywaters, we recognise the importance of embracing modern technological advancements and reimagining recycling solutions to accommodate the rapidly changing market. In our efforts to reduce waste and ensure resources are better managed, we recommend a nationwide electronics recycling bin initiative. Gone are the days when general and recycling bins reflect most domestic waste. In 2023, electronics have become commonplace in the UK, thus making it essential to build more effective electronic recycling systems. To make this possible, Bywaters calls for national education and resources that promote electronic recycling in households all around the country. The immediate environmental impact can be minimised significantly through increased awareness and programmes encouraging regular usage of (WEEE) recycling bins specifically designed for electronic products.

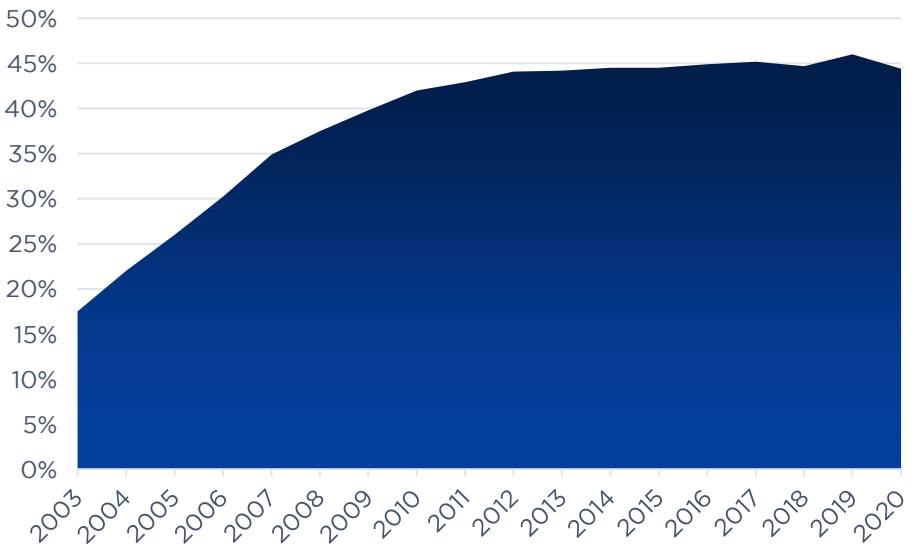


# Summary

Throughout history waste has represented the story's of the people disposing of it. It's one thing to track trends, another to take actions based on them. What we recycle should be based on what people use, not what they can afford. The historic Household Waste Recycling Act got the royal stamp of approval in 2003, setting a new precedent for waste management and significantly transforming the way we disposed of household waste with the introduction of domestic recycling bins. It's no surprise then that this Act was met with overwhelming approval by members of parliament and the late Queen Elizabeth II herself.

In the 10 years following UK recycling rates went from below 15% in 2003, to over 40% in 2013. This was a perfect example of how people respond when presented with a choice.

England household recycling rate by year -Using gov.uk waste data



E-waste bins in UK households will be crucial as the introduction of domestic recycling bins in 2003. Edie found that in 2019, per capita rates of E-waste production in the UK were second only to Norway's 26kg, with 23.9kg reported. The global average rate was 7.3kg per capita, making the UK's rate 3x higher than the world average. 2021 figures from the Environment Agency placed recycling and reuse for electrical and electronic equipment at 31.2%, notably above the UN's 2019 global average of 17.4%. By increasing household access to e-waste bins, there is potential for significant improvement.

The presence of recycling bins brought about an almost unconscious improvement in decision making amongst UK households. The difference in colours, the availability and increase in recycling based information and bins around London brought a growth of over 35%.





At Bywaters' it is our responsibility to manage London's waste, but that is secondary to our mission of ensuring we improve and help the City. Our detailed fact-keeping around London waste is shared with the intent of building a better future through decisions that reflect the people they will impact. When PPE waste grew, the people of London and Bywaters banded together to ensure it was managed as best as possible.

The United Kingdom currently stand in the top 10 countries around the world for use of electronic products, even though we barely rank in the top 80 for size (total area). This is also reflected in phone ownership, with around 98% of adults in the UK owning a mobile phone. At Bywaters we collect masks, but we can't place one over the severity of our City's situation. The best thing about this report is it leads to an opportunity. With the research of Bywaters, the care of the nation and the support of those reading this, we can implement a change as drastic as 2003, by ensuring the bins in domestic homes represent the items we all own. As well as this, we can begin to build a line of communication between waste management company's and decision makers. The information we collect is vital to changing recycling habits and rates in the UK, through a collaborative effort we believe the City of dreams can wake up to the trends it's facing and respond in a timely manor.

If you'd like to contact us at Bywaters about this report, please visit our website or send us a message. It's important we keep this conversation going. The people making the decisions are as important as the people these decisions impact. Let us know your thoughts. We look forward to hearing from you!

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