

Single-use plastic: unflushables

August 2018

Key findings

- Millions of unflushables are used, and disposed of, every day in London. Disposable wet wipes, nappies and period products are convenient, effective and popular but these products cause significant environmental damage when incorrectly disposed of.
- Like all single-use products, unflushables waste natural resources – particularly when they are not recycled or reused. They also contain large amounts of plastic, which increases the damage they cause.
- Wet wipes and period products are often flushed down the toilet, where they combine with fat and oil to create fatbergs and sewer blockages. Those that escape into the wider environment cause further damage – the extent of this damage is still unknown.
- Nappies are either sent for incineration—contributing to local air pollution—or dumped as landfill.
- The cost of unflushables isn't only to our environment, it's also costing us financially. Because of their cost, many people are forced to choose between buying food, nappies or period products.
- The Mayor, the Government and manufacturers need to do more to tackle the problems these products cause and promote the message of “bin it, don't flush it”. We make a number of recommendations, including promoting alternative products, improving labelling and a ban on non-flushable wet wipes.



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Unflushable waste in the UK

The UK uses and throws away huge quantities of plastic contained in unflushable products. Every year, across the country over eleven billion wet wipes, nearly 2.5 billion period products, nearly four billion nappies and over a billion incontinence products are bought. These numbers are growing: wipes by over a quarter, and adult incontinence products by nearly half, compared to five years ago.¹

Consumers would find it hard to identify the presence of plastic in unflushables by looking at the packaging alone. Currently, there is no legal requirement for manufacturers to list materials on the packaging of products.² It has been estimated that, on average:³

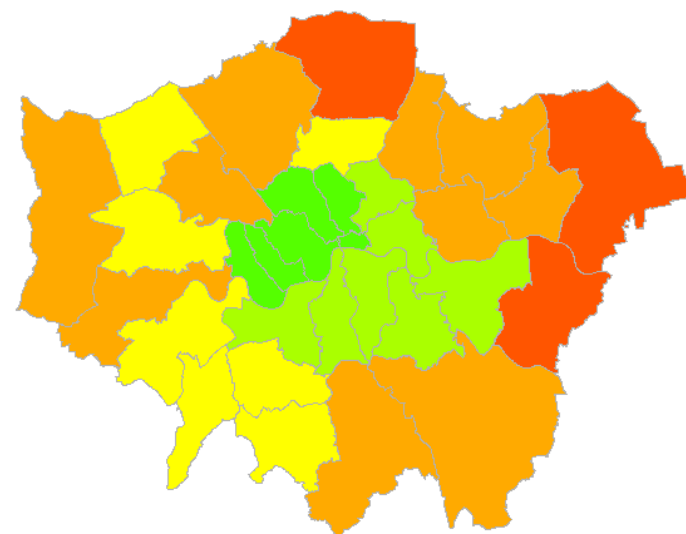
- tampons contain five per cent plastic
- period pads may contain 90 per cent plastic
- nappies are around 50 per cent plastic and similar polymers

(tampons often also come with a plastic applicator, and many of the products are packaged in plastic, sometimes individually)

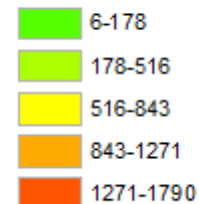
Because these items are single-use and contain plastic, their production and disposal has a number of negative environmental effects. While people are increasingly aware that using and disposing of products including plastic bottles and coffee cups is bad for the environment, little attention has been given to other plastic products

such as nappies, wet wipes, and period and incontinence products (which for the purposes of this report we will refer to as unflushables).

Map 1: Wet wipes and period products cause a considerable number of blockages across London⁴



Blockages caused by wet wipes or period products



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Binning unflushables

The qualities that have made unflushables so popular—their strength, durability and water-resistance—also mean that their disposal damages the environment. Manufacturers have developed these products to perform effectively, and consumers have responded by switching away from reusable products (made from natural ingredients) to these single-use products (containing plastics).

Unflushables that people properly dispose of in the bin may end up being sent to one of London’s incinerators. Every year, waste authorities collect around 100,000 tonnes of nappy waste, of which the majority will be sent for incineration – adding to London’s carbon emissions and polluting the air.⁵ Those nappies that go to landfill reportedly take 400 years to disintegrate.⁶

“If Henry VIII had been wearing a [single-use disposable] nappy [...] it would still be in landfill now.”

Kate Metcalf, Co-Director, Women’s Environmental Network

Unflushables cannot currently be recycled. Nappy and other absorbent hygiene material cannot currently be recycled in the UK, despite the technology being available elsewhere. Sometimes people put nappies

into the recycling—often because they are confused by the labelling—which can lead to the rejection of a whole truck-load of recycling. Martin Capstick, Managing Director of North London Waste Authority, told us that “disposable nappies are a significant source of contamination”.⁷ This suggests there may be problems with product labelling or public messaging.

“When I used to use disposable products, I would typically flush them. That was what felt more convenient for me.”

Mandu Reid, Founder, The Cup Effect

Many may miss or ignore the advice to bin their unflushables. A recent study showed that over 50 per cent of women flushed their period products. More than the apparent convenience of flushing, people report that concerns about hygiene, privacy and discretion are the reasons for flushing period products and wipes.⁸ Recent campaigns about unflushables have chosen to shy away from addressing period waste, focusing on wet wipes instead. People need to be less squeamish about this normal human process and talk more about disposing of used period products.

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Flushing unflushables

No wet wipe, period or incontinence product currently on the market disintegrates fully when flushed. Once flushed, there are number of things that will happen to plastic products but fully disintegrating into water is not one of them. Firstly, flushed products may be picked up in local treatment works. Thames Water removes 30 tonnes of unflushable material every day from just one of its sites. Secondly, unflushables can combine with fat, forming local sewer blockages and fatbergs. Thames Water unclogs five house blockages a day from London's sewers – a 30 per cent increase from last year. Sewer blockages cost Thames Water, and ultimately the consumer, £12 million a year.⁹

Some products won't be picked up in the sewage treatment process and will end up in rivers and oceans. Thames 21, which runs clean-up operations in the Thames, collected nearly 10,000 wet wipes from just one location over a two-year period.¹⁰ Even those products that partially disintegrate can remain in the environment – a recent study found high numbers of microplastic particles at all study sites in the Thames, and packaging products were found to be a common source of microplastic pollution.¹¹

Labelling of unflushables is inconsistent despite industry guidance. The industry has attempted consistent labelling: for wet wipes in particular, the European Disposables and Nonwovens Association has recently updated its guidance to manufacturers, encouraging them to put 'do not

flush' symbols in a prominent place on the packaging. However, because disposal labelling is voluntary, 'do not flush' symbols are not universally used. Water UK found several different locations, symbols and advice for correct disposal used on unflushable packaging.¹²

Our reliance on disposables isn't just costing us environmentally, but financially too. A strong case for reusable products is that, after the initial cost, the cost per wear is lower when compared to disposables. Menstrual cups currently retail at around £20 and can last up to ten years. Considering the cost of disposables, swapping to reusables could save menstruating people £2,000 over a lifetime.¹³ If a parent or carer were to choose reusable nappies for their baby, a full supply would require an upfront cost of £120-300. Compared to disposables, this could save £1,000 during the time a child is in nappies.¹⁴ If they were to use the nappies for a second or third child, participate in a local voucher scheme or get the nappies second-hand, the costs could be lower still. The industry has acknowledged concerns that the cost of period products and nappies may rise post-Brexit, due to tariffs or other barriers to trade.¹⁵

Reusable nappies

There are three main types of reusable nappy: pocket, flat and fitted nappies. Most are made from a natural material such as cotton. Bio-degradable paper liners or washable (cotton, silk and fleece) liners can be placed inside the nappies for convenience.

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Reusable period products

There are three main types of reusable period products: menstrual cups, washable period pads and reusable period underwear.

Menstrual cups are made of silicone, which is safe for the body, and inserted into the vagina to collect blood internally. Washable pads are available in a variety of colours, shapes and designs for comfort and choice. Reusable period underwear can, depending on the flow, replace pads, liners, and tampons, or be worn with tampons and cups for extra protection.

Disposable period products and nappies are given out at food banks and nappy and period poverty have been widely documented in the media. A study by a Scottish women's campaigning group found that nearly one in five respondents had to go without period products because of finances, while one in ten had been forced to prioritise essential household items, such as food, over buying period products.¹⁶ Teenagers may be particularly vulnerable to period poverty: 15 per cent have struggled to afford period products and one in five (19 per cent) have changed to a less suitable product due to cost.¹⁷ Even in the UK, this puts children and young people at risk of missing school.

Thanks to a range of benefits, reusable products are becoming increasingly popular. Along with the reported rise in the sale of reusable period products, uptake of reusable nappies is becoming more widespread. The global market for menstrual cups is expected to grow to over 1.5 billion US dollars by 2023.¹⁸ Certain waste authorities in London offer money-off reusable nappies, equal to the cost of sending disposable nappies to landfill. Real Nappies for London offers a peer-to-peer service to new parents using reusable nappies. However, reusable products are increasing from a small share of the current market: ten per cent of families in one survey of parents of three-year-olds.¹⁹ This may change as awareness grows of the negative effects of single use products and the availability of alternatives.

Efforts to limit London's residual waste problem need to take account of our reliance on unflushable products. Use of adult incontinence products has grown by over 50 per cent in the last five years.²⁰ Many boroughs are attempting to reduce waste by restricting residual waste collections to fortnightly, and encouraging people to recycle more of their waste. However, because of the number of nappies accumulating between residual waste collections, some boroughs have introduced weekly collections of nappy waste, which seems to run counter to the Environment Strategy. Alternatively, there are several ways the Mayor and boroughs could help residents to cut down their waste, encourage the use of reusables and prevent unflushables clogging up sewers, rivers and oceans.

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Recommendation 2: During the next update of its guidance, the London Waste and Recycling Board (LWARB) should include the offer of a reusable nappy incentive as a tool for boroughs to increase their recycling rate. Boroughs should partner with midwives and health visitors to communicate to new parents and carers the availability of reusable nappies and the need for responsible disposal of nappies and period products. LWARB and boroughs should also explore the possibility of incentivising reusable menstrual products as a complement to this scheme, for example by working with schools and health visitors.

Period positive education reduces stigma about menstruation and raises awareness of more affordable reusable options and encourages correct disposal. Campaigners believe that better education about the impact of single-use plastics and possible reusable alternatives would help reduce waste, sewer blockages and even address period poverty. Too often, product information and education in schools is still given by companies that only offer single-use period products. Anglian Water has been piloting an initiative that tells audiences about the impact of improper disposal and the range of period products, including reusables. The pilot has been successful in changing attitudes, increasing the proportion of residents who said they made an effort to bin unflushables from 51 per cent to 72 per cent and seeing a dramatic reduction in the number of sewer blockages.²²

The campaigning group City to Sea targets period education to combat shame, disgust, lack of awareness and the perception of the toilet as a second bin. It cites evidence that almost half of menstruating school students are embarrassed by their periods and four-fifths have concealed their menstrual products.²³ By openly discussing periods and using positive language, we can help challenge the stigma around menstruation and inform audiences of alternatives which may have a lesser impact on the environment and benefit people financially. A similar educational programme, embracing period positivity may benefit London. Given London's diverse population, all such campaigns and educational programmes must be culturally sensitive and work with community based organisations who understand local dynamics.

Recommendation 3: Under the accreditation review, the Mayor's London Healthy Schools initiative should ask schools to demonstrate that they are period positive. This would mean using period positive language to reduce stigma about menstruation, informing children about binning not flushing, and promoting the range of reusable and disposable period products available. The Mayor should also lobby Ofsted and the Department for Education to ensure this is included in the curriculum and national standards and guidance.

Labelling for unflushables should be clear and consistent. Although labelling for correct disposal is on most period and incontinence products and nappies, it is often missed by users. Consistency across

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products makes it easier to understand and remember the message. Furthermore, for transparency, all unflushables should state their use of plastic. The European Commission has proposed that certain products such as period pads require clear, standardised labelling which indicates proper disposal, environmental impact, and the presence of plastic.²⁴ We believe similar regulation should apply to unflushables in the UK.

Recommendation 4: The Mayor should write to the Environment Secretary requesting a statutory format to display proper disposal information and the presence of plastic in unflushable products.

Enforceable flushability standards should be designed by water companies, rather than manufacturers. As Thames Water and other water companies have been challenging manufacturers about their flushability claims, they should be the ones to create the standard of compatibility with sewage treatment processes. With independent testing, users can be confident that products are truly flushable. We believe it is unlikely wet wipes or period products can be designed to disintegrate fully in water without leaving residue such as microplastics.

Recommendation 5: Along with water companies, Ofwat should be involved in developing an independent testing model and standard for flushable products. These companies should seek input from environmental experts to ensure that new products do not leave environmentally damaging residue. Water companies should liaise with designers, manufacturers and retailers on the merits of having the standard displayed prominently on their packaging.

To halt the increasing impact on the environment, a national ban on plastic in disposable wet wipes must be seriously considered. Selective banning for avoidable plastic waste such as unflushable wet wipes would significantly benefit sewage treatment in London and the wider environment. Although initially controversial and seemingly radical, disincentivising plastic has proved successful in the case of plastic bags. For example, the Marine Conservation Society recently recorded a 30 per cent drop in plastic bags found on the floor of the North Sea.²⁵ The UK Government has not ruled out a ban on unflushable wet wipes as part of their ambition of zero avoidable waste by 2050.²⁶ We believe that this would be the only way to stop people flushing plastic down the toilet.

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Recommendation 6. The Mayor should write to the Environment Secretary supporting a ban for unflushable wet wipes that contain plastic and advising that only products that have passed a robust flushability standard are allowed on the market.ⁱ

For unavoidable plastic waste, recycling options should be explored.

Currently, all nappy waste collected by boroughs goes to incineration or landfill but recycling options are possible. Procter & Gamble, which is currently running nappy recycling pilots in Italy and the Netherlands, recently signalled an interest in a UK facility.²⁷ The London Borough of Camden previously trialled a nappy recycling service and although users and the local authority were happy with the scheme, they could not continue the trial because of a lack of recycling facilities.²⁸ A site in London was previously explored but didn't get planning permission.²⁹ We encourage LWARB to investigate recycling of disposable nappies and period and incontinence products.

Recommendation 7: LWARB should investigate recycling for unflushable waste in London.

Failure to provide adequate disposal for unflushables will always lead to indiscriminate flushing. During our investigation, it was brought to our attention that the UK has no legal requirement to provide bins for

disposal of unflushables in men's toilets. This means that men who use incontinence pads or other unflushable products either have to carry their personal waste to the next available bin, or flush. The NHS estimates that three to six million people in the UK have some degree of urinary incontinence, around a third of whom are men.³⁰ In the last five years Germany has updated its legislation in response to the growing numbers of people experiencing incontinence: workplaces are now instructed to install at least one unflushables bin (incorporating a lid so waste is hidden) in men's washrooms so that people can easily dispose of their unflushable waste.³¹

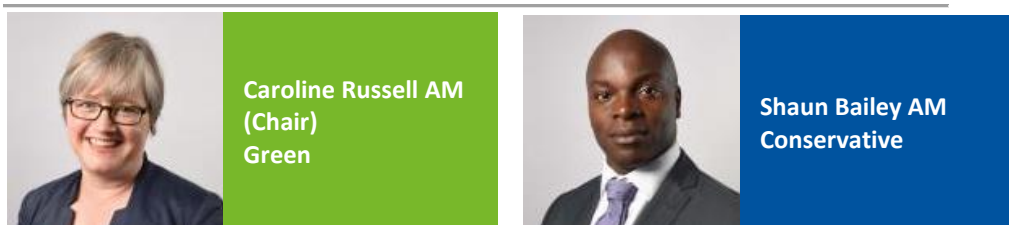
Recommendation 8: The GLA Group should provide bins in its men's toilets for unflushable single-use products and encourage other public and private sector organisations to adopt this approach.

ⁱ The GLA Conservative Group and UKIP dissent from recommendation 6 as they believe that through better communication of the effects of disposing of wet wipes via toilets and improved labelling a reduction in the number of flushed wet wipes can be achieved.

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About the Environment Committee



The **Environment Committee** examines all aspects of the capital's environment by reviewing the Mayor's strategies on air quality, water, waste, climate change and energy.

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For further information about the work of the Environment Committee, and to see our current investigations, visit [our website](#).

About the London Assembly

The London Assembly holds the Mayor and Mayoral advisers to account by publicly examining policies and programmes through committee meetings, plenary sessions, site visits and investigations.

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End notes

¹ Evidence supplied by EDANA

² Tracy Stewart, AHPMA, at the meeting of the Environment Committee on 23 May 2018

³ Evidence supplied by Women's Environmental Network, based in part on correspondence with AHPMA and Natracare and Evidence supplied by Real Nappies for London

⁴ Evidence supplied by Thames Water

⁵ Local authorities collect around 3.7 million tonnes of waste per year, of which 54 per cent is sent to incineration and 12 per cent landfilled (GLA in the London Environment Strategy Evidence Base; of the remaining waste, most is recycled, which will not include nappies) and around three per cent of this is nappies (Martin Capstick, North London Waste Authority, at the meeting of the Environment Committee on 23 May 2018)

⁶ Alice Walker, Real Nappies for London, citing BBC research at the meeting of the Environment Committee on 23 May 2018

⁷ Martin Capstick, North London Waste Authority, at the meeting of the Environment Committee on 23 May 2018

⁸ *FOG and un-flushables Peterborough pilot: Pre- and post- research findings*, Anglian Water, 2011. 'Most important' reasons for flushing period products and wipes: more hygienic 32 per cent; more private and discreet 23 per cent; easy and convenient 22 per cent.

⁹ Evidence supplied by Thames Water

¹⁰ Evidence supplied by Thames 21

¹¹ *Large microplastic in sediments of tributaries of the River Thames, UK – Abundance, sources and methods for effective quantification*, Horton, A., Svendsen, C., Williams, R., Spurgeon, D. and Lahive, E, 2017 (available online)

<https://www.sciencedirect.com/science/article/pii/S0025326X16307251>

[accessed 16 July 2018]

¹² *Sewer Misuse – monitoring Product Labelling and Plastic Content 21st Century Drainage Programme – Workstream 4*, WaterUK 2017

¹³ Evidence provided by Women's Environment Network.

¹⁴ Alice Walker, Real Nappies for London at the meeting of the Environment Committee on 23 May 2018

¹⁵ Tracy Stewart, AHPMA, at the meeting of the Environment Committee on 23 May 2018

¹⁶ Women for Independence, 2018 (forthcoming publication)

¹⁷ Plan International UK, 2017 <https://plan-uk.org/media-centre/1-in-10-girls-have-been-unable-to-afford-sanitary-wear-survey-finds> [accessed 23 July 2018]

¹⁸ *Menstrual Cup Market Research Report- Forecast To 2023*, Market Research Future, July, 2018. Online article <https://www.marketresearchfuture.com/reports/menstrual-cup-market-1407> [accessed 27 July 2018]

¹⁹ Survey of 208 parents conducted for Bambino Mio

²⁰ Evidence supplied by EDANA

²¹ Evidence supplied by Real Nappies for London

²² *FOG and un-flushables Peterborough pilot: Pre- and post- research findings*, Anglian Water, 2011 and Evidence supplied by Anglian Water included an 84 per cent reduction in sewer blockages after the Peterborough Pilot, citing "PECT (Peterborough City Environmental Trust) based on six month before and six month after visits to 2,040 properties and 784 initial surveys, Peterborough July 2017"

²³ Evidence previously supplied by City to Sea, May 2018. Available online at https://www.london.gov.uk/moderngov/documents/s70302/summary%20list%20of%20actions%20--%20City-to-Sea_Unflushables-Report_2017-18_FINAL.pdf

²⁴ *Single-use plastics: New EU rules to reduce marine litter*, European Commission Press Release Database, 28 May 2018 (available online) http://Europa.eu/rapid/press-release_IP-18-3927_en.htm

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²⁵ *30% drop in plastic bags littering the sea floor around Britain*, Marine Conservation Society, 2018. Online article https://www.mcsuk.org/news/sea-floor_bag_drop [accessed 27 July 2018]. Based on:

[Below the surface: Twenty-five years of seafood litter monitoring in coastal seas of North West Europe \(1992-2017\)](#), Maes et al, 2018, *Science of the Total Environment*, Volumes 360, pages 790-798

²⁶ *Wet wipes 'to be eliminated in UK' in effort to save marine life, government says*, Independent, 7 May 2018. Online version

<https://www.independent.co.uk/environment/wet-wipes-banned-uk-pollution-single-use-rubbish-sea-life-environment-a8340111.html> [accessed 27 July 2018]

²⁷ *P&G unveils plans to recycle used nappies*, LetsRecycle.com, 13 October 2017. Online article <https://www.letsrecycle.com/news/latest-news/pg-unveils-plans-recycle-used-nappies/> [accessed 27 July 2018]

²⁸ Evidence supplied by Camden Council

²⁹ *Knowaste appeal for nappy recycling plant dismissed*, LetsRecycle.com, 28 March 2017. Online article <https://www.letsrecycle.com/news/latest-news/knowaste-appeal-nappy-recycling-plant-dismissed/> [accessed 27 July 2018]

³⁰ *Service Specification for Complex Gynaecology Services – Recurrent Urinary Incontinence*, NHS (available online)

https://www.engage.england.nhs.uk/consultation/specialised-services-policies/user_uploads/recurnt-inctnce-serv-spec.pdf [accessed 8 August 2018]

³¹ *Vectair Systems campaigns for hygiene bins in men's toilets*, Vectair Systems, 6 December 2015. Online article <https://www.vectairsystems.com/news/vectair-systems-campaigns-for-hygiene-bins-in-mens-toilets/> [accessed 27 July 2018]

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