

Single-use plastics

Global report 2021



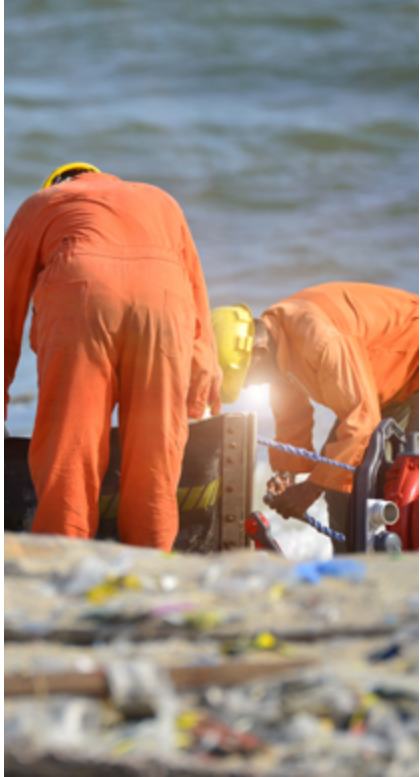
Executive summary

Welcome to our first single-use plastics (SUP) report. In 2021, we amended our environment policy to include a specific objective to remove avoidable SUP in our European business by the end 2022 and by the end of 2023 in the remaining regions.

Our plastics working group (PWG) is responsible for reviewing our overall plastic footprint and working with global teams to make reductions where there are viable alternatives. There is more information about our progress in this report, but these are some of the most important lessons we've learned.



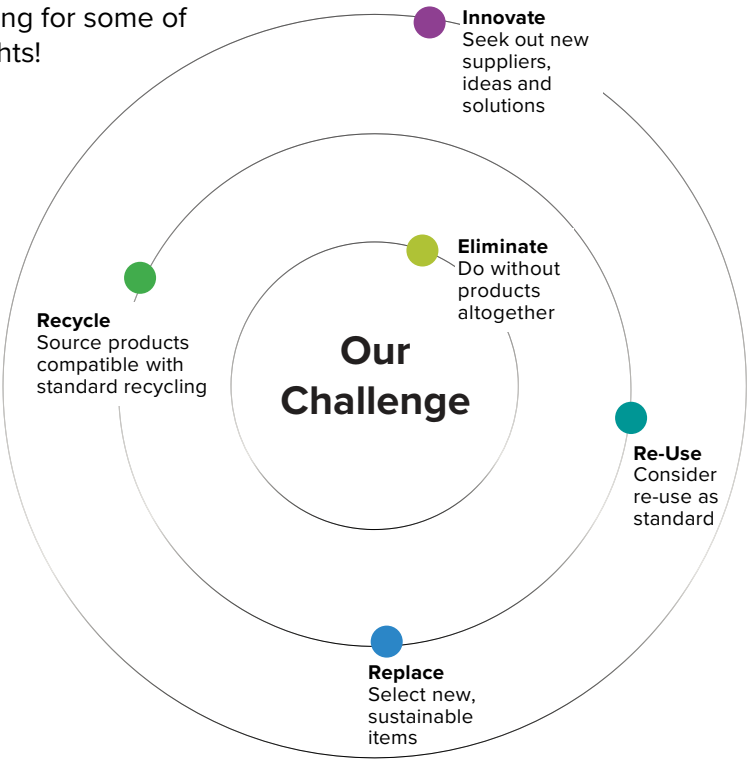
1.
We need to apply a holistic approach to reducing our plastic footprint.
It's important to review each item independently, alongside the potential replacements, to make sure that the benefits of removing SUPs aren't outweighed by any unexpected consequences.



2.
We must take time to understand different cultures.
Although plastic waste is acknowledged as a global problem, we now understand that not only is waste management different from country to country, but so is the ability to use plastics differently. All the changes we propose are reviewed by our dedicated regional teams and assessed in a local context to ensure we take account of the cultures of all our people.

3.
External best practice may support our own objectives.
We looked closely at the policies and strategies implemented by other organisations to see what we could learn from proven successes, but often found it difficult to see proof of change. That emphasised the importance of not just sharing our targets, but also our ongoing progress.

Keep reading for some of the highlights!



95%

cleaning wipes removed in our international development, South Asia, Middle East and Africa (ISMA) region.

4500+

five-gallon water bottles removed from our Abu Dhabi and Dubai offices.



Best practice award – Chartered Institute of Ecology and Environmental Management.

Multiple plastic monitoring projects in UK and Ireland.

Creation of SUP database in our North and South Americas (NASA) region to report items and provide information.



1. Highlights

84%

straws removed in NASA.

136

offices audited globally.

900+

colleagues surveyed on domestic SUP use.

100%

printer paper wrapping removed from European offices.

100%

plastic cups and cutlery removed from UK offices (c. 10,000 items).

100%

food packaging removed in our Mott MacDonald Bentley and JN Bentley business.

2. Our objectives

1.

Review and reduce

Focus on reducing the plastic we use, specifically single-use plastic, as part of a holistic approach to managing our impact on the environment.

2.

Adopt best practice

Optimise the use and re-use of plastic, both in our business and the services we deliver. Optimisation should be built into our work and client work.

3.

Raise awareness

Educate our people about the issue of single-use plastics and what they can do to improve and reduce their usage.

4.

Work with our supply chain

Assess the plastic we procure and actively seek out and support new innovations and solutions.

5.

Develop new revenue streams

Showcase our expertise and knowledge to develop tools and solutions for the benefit of current and future clients.



3. Review and reduce

We set ourselves a range of targets and associated activities to help us understand the SUP in our business and provide a baseline for where we needed to source alternatives. This is a summary of just some of the progress made to date.

Improve procurement support		Progress		Action in 2022
Identify procurement support / sponsors – work with Asia Pacific, New Zealand and Australia (APNA) region Carbon Neutral Working Group	●	<ul style="list-style-type: none"> Sponsors appointed in all regions except ISMA 	>	<ul style="list-style-type: none"> Ongoing engagement and implementation of SUP strategy Identify ISMA sponsor
Appoint SUP reduction champions	●	<ul style="list-style-type: none"> Champions appointed in all regions except MMBC, specific locations would benefit from their own champion 	>	<ul style="list-style-type: none"> Identify MMBC champion Identify new NASA champion Location champions to be appointed
Undertake home working survey and continue to educate staff on reducing SUP personally	●	<ul style="list-style-type: none"> 2021 survey data analysed and global update shared with our people SUP education is also included with regular unit level newsletters 	>	<ul style="list-style-type: none"> Undertake home working survey in Q1 2022 Continue to educate staff on reducing SUP personally
Prioritise 'quick wins'		Progress		Action in 2022
Identify at least ten SUP items from global plastic audit to replace (where viable and sustainable market alternatives are available) and brief those responsible for office procurement to make changes by September 2021	●	<ul style="list-style-type: none"> SUP registers created Champions worked to highlight items already removed or replaced by some offices as an illustration of alternatives to be considered by others Europe and UK (EUNA) procurement catalogue now being regularly updated with replacements NASA has created specific SharePoint site for list of alternatives 	>	<ul style="list-style-type: none"> Track and update against the home working survey Q1 2022 Include top 10 items in ongoing staff SUP education and review procurement for each office Review and update Local Environmental Practice Plans Create regular communication with Office Managers etc. to promote alternatives
All meeting rooms to be SUP-free	●	<ul style="list-style-type: none"> Review carried out in Q3 2021 Many offices now have SUP-free meeting rooms, with the exception of the reintroduction of hand sanitiser during the pandemic 	>	<ul style="list-style-type: none"> Audit again in Q2 2022
Continue to source alternative SUP		Progress		Action in 2022
Work with existing suppliers to source alternatives where not already available	●	<ul style="list-style-type: none"> Further review of options is required in some regions, but many suppliers are already working hard to meet their own sustainability targets and so helping to support ours 	>	<ul style="list-style-type: none"> Continue to source SUP-free alternatives, trial different products, particularly for packaging materials received from suppliers
Collect evidence of SUP reduction		Progress		Action in 2022
Update audit tool to enable language accessibility and better quantity measurements	●	<ul style="list-style-type: none"> Review with all regions completed. New audit tool is available with greater definitions of measurements enabling more accurate comparisons 	>	<ul style="list-style-type: none"> Next audit now proposed for Q2 2022
Offices report on replacements made in 2021	●	<ul style="list-style-type: none"> Deferred to 2022 as office occupation was low during pandemic which affected supplies being purchased in offices overall 	>	<ul style="list-style-type: none"> Review in Q1 2022

**Project: Seabin installation
and monitoring, Ireland**

**Partner: Department of Agriculture,
Food and the Marine (DAFM)**

As part of Mott MacDonald's investment in marine plastic solutions we funded the installation of a Seabin in Dublin, Ireland, and partnered with a local company, Panda Waste, to install a second.

With the support of the harbour master and his team, the local community and our Dublin office colleagues, these Seabins have made a huge impact on the area. We've contributed to raising overall awareness with stakeholders about the amount of litter in the marine environment and continue to monitor the type of materials being captured by each Seabin. We also improved health and safety for harbour staff who were previously employed to collect waste by hand.

Since installation, more than 16 tonnes of plastic waste has been removed from the harbour waters. In addition, the DAFM has been impressed with the ability of the Seabins to capture oil and fuel dispersed in the water by fishing vessels, something they were unable to manage effectively before.



A large pile of plastic waste, including various types of plastic bottles, bags, and fragments, is being buried by a bulldozer. The bulldozer's blade is visible, pushing the waste into a deep trench. The background shows more of the waste pile.

4. Best practice

We've looked closely at current and proposed legislation, as well as the actions that other organisations are taking, to understand how that may impact our activities and any best practice we should consider.

Regulation and policy is being developed around the production and/or processing of SUP, but none is yet consumer-facing or focused on the purchase, use and disposal of plastics.

There also seem to be relatively few organisations with publicly available policies and strategies focused on SUP, and even those who have stated objectives provide very little proof of change. We want to be clear about where we're making progress and where we have more work to do.

We asked all our offices to complete a SUP audit in 2019 and from those identified the top 10 most used items in each region. In 2021 we reviewed those items to show our progress in removing them from our business. It's encouraging to see that we've made significant advances in either removing or replacing many of the most common SUP in all regions.

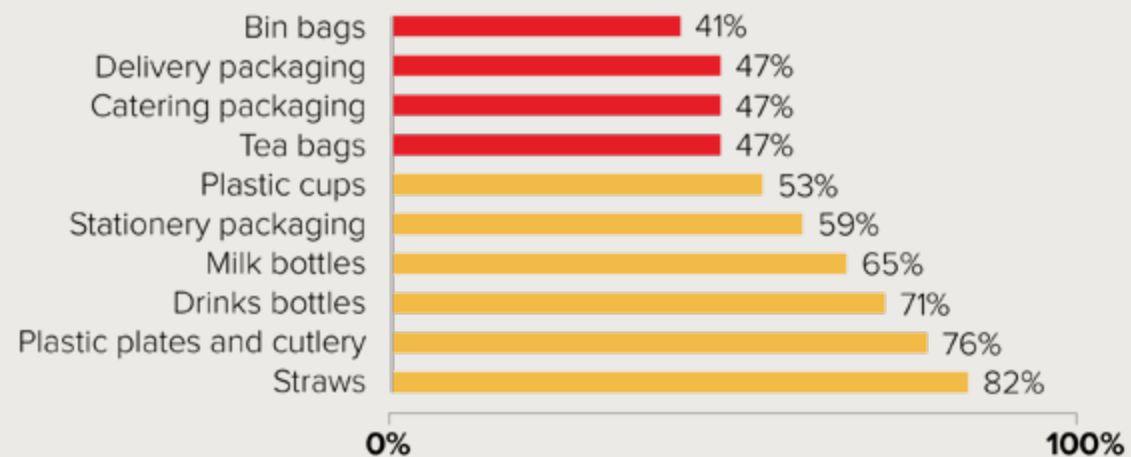
However, there are some items that we haven't been able to remove, for example:

- Hand sanitiser – was being phased out in meeting rooms but has been reintroduced due to COVID-19 health and safety requirements. Where possible, we are now purchasing five-litre bottles to decant into the smaller bottles, making them multi-use rather than single-use.
- Bin bags – biodegradable replacements have been trialled but were not fit for purpose and no viable alternatives have been sourced so far.

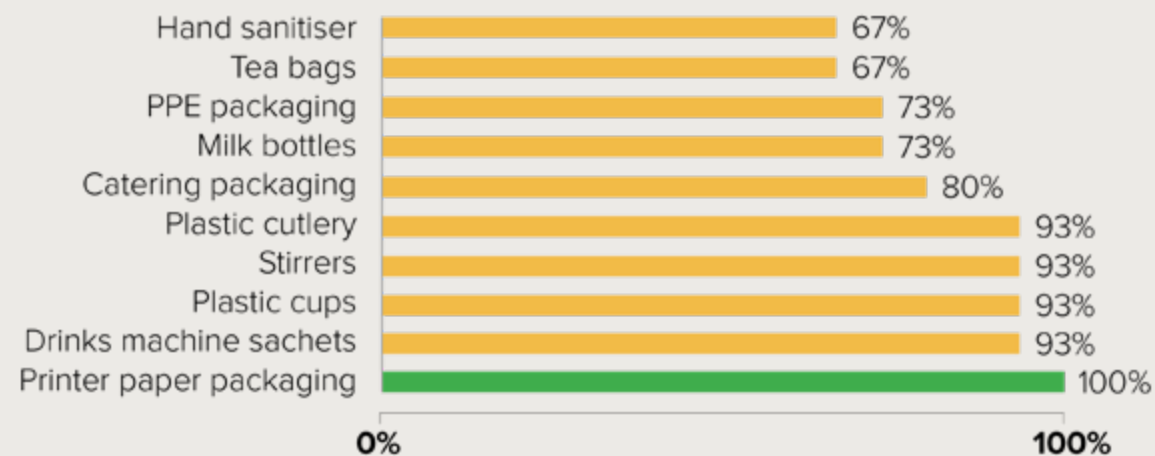
- Personal Protective Equipment wrapping – has been reduced but is still used by suppliers to protect the integrity of the product. We continue to liaise with manufacturers to discuss alternative solutions.

Our plan was to conduct another audit in November 2021 to measure our corporate plastic footprint again. However, the pandemic meant that office occupation levels were fluctuating which would have impacted the accuracy of the data. We are ready to conduct another audit as soon as practical and, in the meantime, the PWG and regional champions will focus on removing 100% of the most used items, where there is a viable alternative.

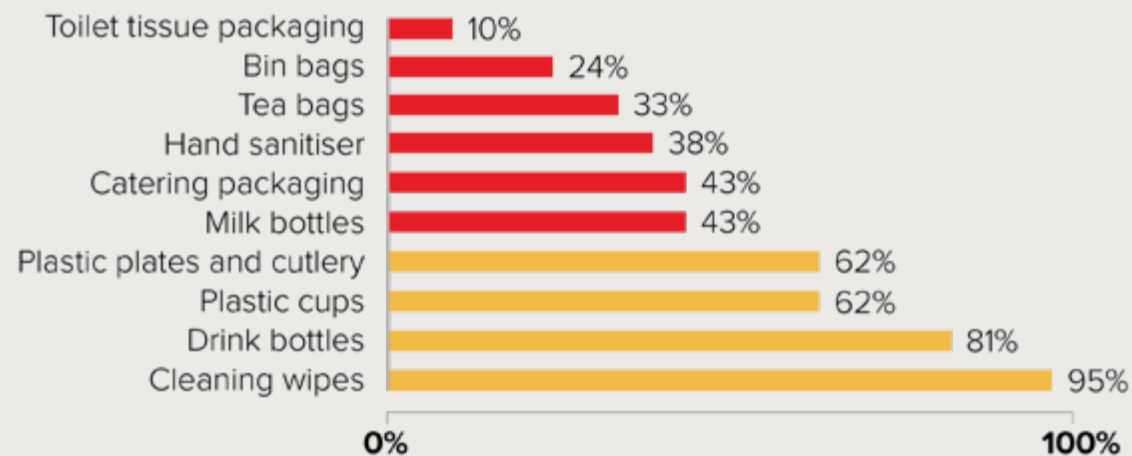
% of most used SUP removed from APNA offices



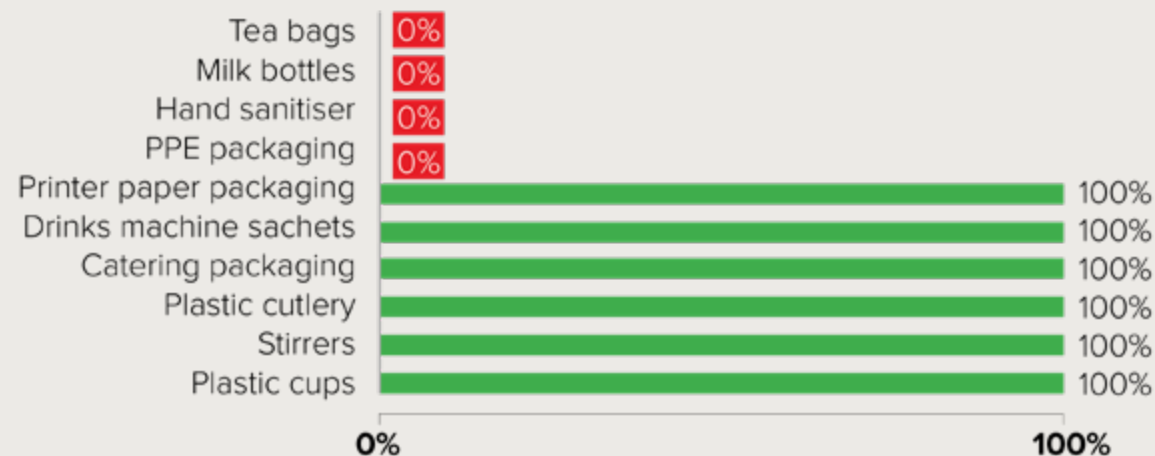
% of most used SUP removed from European offices



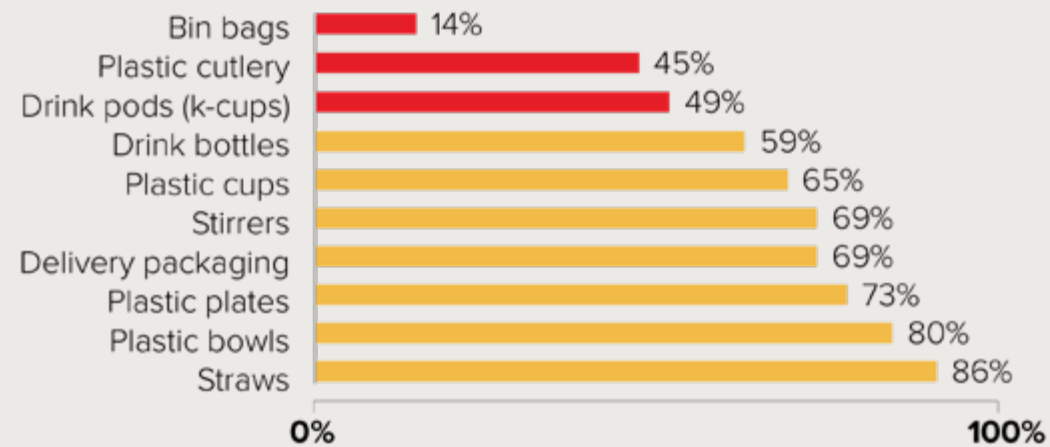
% of most used SUP removed from ISMA offices



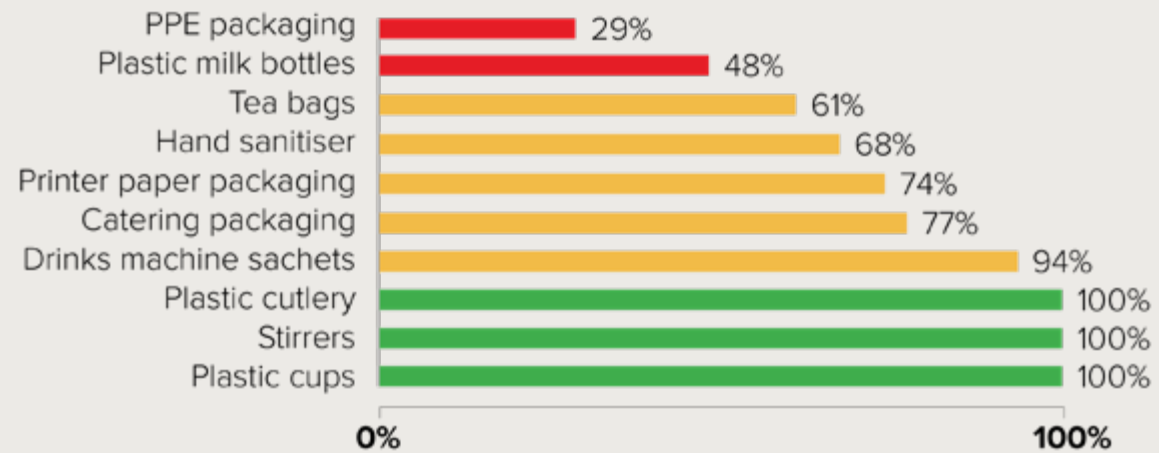
% of most used SUP removed from MMBC offices



% of most used SUP removed from NASA offices



% of most used SUP removed from UK offices





5. Awareness

Raising awareness about the impact of plastics on our environment is central to the objectives of the PWG. As well as engaging with our clients and the wider market on the global challenge and sharing best practice to influence behaviour, we have prioritised external knowledge sharing.

5.1 External

We have undertaken a large range of webinars and workshops with clients and industry organisations.

Other external initiatives include:

- **New South Wales Department of Education Game Changer Challenge.**
- **Sponsorship of Seabin in Penarth Marina by Cardiff office.**
- **Founding member of East of England Plastic Coalition,** comprising the Unflushables Working Group, the Litter Reduction Working Group and the Marine Debris Working Group.
- Advisory board position at **OceanHero.**
- Work with Highways England in establishing plastics as a pollutant and pathways to waterways.
- Working with **RECOUP** on plastic recycling chain activities.
- We've also completed a number of studies with key industry partners to improve the understanding of the issue of plastics in the environment and focus on potential solutions.

Project: Wastewater treatment works study, UK
Client: Anglian Water

In partnership with Anglian Water and the University of East Anglia, we conducted a pioneering study at a water recycling centre to assess the amount of plastic being flushed into the network.

As part of the initial screening process of wastewater, rubbish is removed and collected before the water goes to the next stage of the treatment process. Our study involved analysing random samples from the waste collection to identify the quantity and type of plastic removed at this early stage to understand the origin of these items.

The results of the study will support an estimation of the type and amount of macro plastics found in the average UK wastewater processing site and provide a firm ecological baseline.

We hope this will encourage further industry-based innovations to support the removal of plastics from aquatic waterways and the marine environment.



5.2 Internal

We have been raising awareness about the global challenge of plastics in our environment with our colleagues for many years.



Regular communication has been central to this as well as sharing knowledge and best practice, including:

- Introduction to our updated Environment Policy.
- Results of personal SUP survey.
- APNA presentations to staff on good waste practices both in the office and at home and the SUP alternatives they can purchase.
- Across both UAE offices (Abu Dhabi and Dubai), five-gallon water bottles have been replaced with filtered tap water dispensers. Staff are now using glasses or their own refillable bottles in the offices. Not only is this initiative reducing plastic, but it also lessens the risk of injuries associated with lifting the bottles, decreases costs and our carbon footprint – as well as lowering the amount of storage space required. Before implementing this change, 4500 five-gallon water bottles were used every year across Abu Dhabi and Dubai.



Reducing plastics in ecology surveys

In response to our commitment to remove SUP from our business, our ecology practice has been evaluating the use of plastic in the surveys and mitigation measures they undertake. Although it's a reliable, inexpensive and hygienic material, during the survey season large quantities are required, including plastic gloves which are necessary for all staff.

Our engagement with the suppliers of survey equipment identified a number of potential alternatives and initial field research has shown these to be viable and suitable for further investigation. We believe future opportunities would benefit from working groups and potential pilot studies with organisations such as Natural England, the Mammal Society and the Amphibian and Reptile Group (ARG UK) to develop alternative methods with the aim of updating current best practice survey guidance and subsequent protocols within Mott MacDonald.

6. Supply chain

As part of our commitment to reducing the plastic in our business, we are constantly engaging with our supply chain about the products we buy and how they are delivered to minimise SUP. For example, in the UK:

1.

Personal protective equipment

SUP is now being removed from parcels prior to dispatch to Mott MacDonald. The manufacturers are still considering how to ensure instructions are delivered with products which have always been placed inside a plastic bag. However, alternative solutions are being explored.

2.

Vending consumables

Plastic-free tea bags are now available which also come in cardboard boxes without plastic wrapping. Tubs of coffee can be purchased in bag refills. Other SUP-free consumables are available such as sugar and hot chocolate.

3.

Stationery

One supplier, Commercial, has launched a SUP-free 'aisle' on their website called Products with Purpose, where all products are categorised under at least one of the four environmentally responsible practices: social impact, ethical manufacturing, workers' rights and recyclable content. Our commercial sustainability manager is reviewing the entire range of products we buy for SUP alternatives, for example, branded lanyards made from bamboo and a full SUP-free kitchenware range including silicon sponges and compostable cutlery.

We are always looking for new innovations and solutions.

4.

First aid supplies

Bubble wrap has been swapped for brown paper when packing orders and any packaging material received in the supply chain is re-used. We are working with the charity, St John Ambulance, to review its future sustainability plans and the possibility of plastic-free first aid kits. However, this is an area where it may not be possible to find a viable alternative for all the medical-grade consumables.

5.

Office groceries and catering

Milk can be purchased in glass bottles. We have also sourced silicon lids to keep the milk fresher for longer to overcome an initial challenge which had led to significant wastage. Fruit deliveries and business lunches are now available with bamboo packaging.





7. Revenue streams

We want to establish Mott MacDonald as thought leaders in marine plastics and become a trusted advisor to our clients on the issue, with expertise in delivering a range of projects.

The number of market opportunities focused on the theme of plastics in our environment is increasing and during 2021 we were appointed to some high-profile roles which will provide a solid foundation for future work.

Project: Wastewater treatment works plastics assessment, UK
Client: Anglian Water

Mott MacDonald was appointed by Anglian Water to undertake a plastics baseline assessment of material removed from a sewer network in Southend-on-Sea, Essex. The aim was to identify the types of plastics present in residue from the pipeline at Southend, providing a high-level overview and analysis of the plastics found within the sediment. The baseline survey data was used to identify size, scale and polymer type of plastics present and enable Anglian Water to identify suitable avoidance and mitigation measures.

- We conducted an initial site visit to collect a range of sediment and plastic samples and also carried out an additional, high-level walkover to document other plastics that were present within the wastewater treatment works. The walkover was done to identify plastics and pollution receptor pathways to aid this study and the pollution pathway receptor model analysis.
- Samples were taken from the onsite residue left from the pipeline and visually analysed. Sampling methodology and the analysis process did not involve any lab testing or microscope work but were gridded and examined visually. The methods used were focused on the type of plastic particles that were collected and observed.



The results of our survey highlighted the presence of many plastics with the main types being polyethylene terephthalate (PET) plastic and high-density polyethylene (HDPE) plastic fragments and polymers. These common sources of plastics are frequently responsible for fragmenting so the impact will increase as the pieces degrade into smaller parts and fibres, affecting water quality and the wider environment. Following our survey, we were able to provide Anglian Water with a range of potential mitigation measures to better manage the issue in future.

- Although not all plastics were identifiable due to their size, a selection of the results was then presented as representative of the scale and polymer type of plastics found within the pipeline residue. The plastics found on the site and in the samples provided by Anglian Water were classified by type.

For example, there is ongoing research into the potential to use post-consumer PET plastic for energy conversion and chemical recycling, which could provide an opportunity to make alternative forms of energy. Additionally, we advised that Anglian Water could introduce a plastic footprint monitoring programme at each site where plastic types and baselines could be regularly recorded and so provide a clear picture of the type and scale of plastics present. This system data would not only allow better management of the challenge but also place Anglian Water as one of the pioneers in the management of this pollution pathway. It would allow targeted programmes highlighting the costs, issues and consumer behaviour.



Opening opportunities with connected thinking.

Talk to us.

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