

Dŵr Cymru position statement on microplastics – April 2018

Microplastics in the environment are an issue of concern to us. Although the issue only began to receive media attention comparatively recently, we have been concerned for a long time about plastics and microplastics entering our raw water sources, sewerage systems and from there the aquatic environment.

Microplastics and Dŵr Cymru's wastewater systems:

Privatisation of the water industry in 1989 heralded a major investment in improvements to waste water discharges and in particular here in Wales to our coastal water discharges. Until that time, very few discharges from wastewater treatment works received any substantive treatment. Since then, we have spent over £1 billion on improvements to our coastal discharges alone, which has led to a transformation of bathing water quality in Wales (we currently have around a third of the UK's Blue Flag beaches (45) despite only having 11% of the UK's coastline) and significantly reduced the levels of plastics reaching the sea from our discharges.

While our wastewater treatment processes and screens catch most plastics of a certain size (current estimates are that 80% to 95% of plastic microfibers are retained within the treatment process) there is currently no agreed methodology for measuring microplastics (or plastics more generally) before and/or after treatment.

The water and sewerage industry is keen to improve its understanding of the occurrence and types of plastics in its processes and are commissioning research in this area.

In 2017, we responded to a Defra and Welsh Government consultation on "Proposals to ban the use of plastic microbeads in cosmetics and personal care products in the UK and call for evidence on other sources of microplastics entering the marine environment". The consultation is here: <https://consult.defra.gov.uk/marine/microbead-ban-proposals/> and a copy of our response to this consultation is attached.

Microplastics and drinking water:

Water companies spend billions of pounds each year to protect and enhance the environment and to make sure that they can provide resilient water and wastewater services now and in the future. As such,

UK drinking water quality levels are among the best in the world.

We are constantly reviewing the risks to drinking water and ensuring that public water supply is of the highest quality. The risks posed by microplastics are small, but we continue working with stakeholders to assess impacts and, where necessary, take measures to reduce their presence.

Microplastics are a wider global issue beyond the public water supply and the risks to public health need to be taken into context. Analytical methods need refining to enable scaling up to water industry level requirements and research is currently ongoing in this area.

Industry research:

On 1st February 2018, the European Commission adopted a proposal for a revised drinking water directive to improve the quality of drinking water and provide greater access and information to citizens. This includes a requirement to understand microplastics and the proposals can be found here: http://ec.europa.eu/environment/water/water-drink/review_en.html. The proposed World Health Organisation study, referred to in this link is a positive move towards contributing further evidence to the situation.

The inquiry by the UK Government Environmental Audit Committee on the Environmental impact of microplastics is a useful summary of measures and options to control plastics in British waters:

<https://www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/inquiries/parliament-2015/environmental-impact-of-microplastics-15-16/>

We have commenced our own research project into microplastics through the UK's water industry research body, UKWIR. This will look at a wide range of plastics-related issues including the fate of plastics entering our sewers, plastics in biosolids and any potential drinking water matters.

We currently believe that the quantity of sewer derived plastics that make their way into our seas is likely to be a small fraction of the overall plastic load to the marine environment. This is something we hope our research will be able to quantify and so enable us to put any further investments into context with the pollution caused by other, far greater sources of plastics in the aquatic environment.

Our Director of Environment leads the water sector's work on improving our drainage systems, which is entitled "The 21st Century Drainage Programme". This programme of work has so far delivered a number of useful tools and other evidence to help water companies in the UK plan future drainage and sewerage treatment investment better. The programme is very much based upon partnership working with a wide range of bodies and has the support of all the relevant regulators and governments in the UK, professional institutions, environmental NGOs et al.

As part of this we have also been undertaking a range of work to deal with the plastics which find their way into our sewers, focusing on facilitating solutions at source i.e. within households. By way of example, we are in the process of establishing, with the manufacturers of products such as wet wipes (which get flushed down peoples' toilets), how such products should be labelled i.e. with a prominent 'do not flush' logo.

We are also working closely with the Marine Conservation Society (MCS) on this issue, who are members of the 21st Century Drainage Programme. We have co-funded aspects of the campaigns that they have designed to make our customers more aware of the impacts of their decisions when disposing of plastics, and flushing them down the toilet in particular.



Tony Harrington
Director of Environment

Summary

We are pleased to say that there is now a broad recognition that ultimately the only way to tackle this global problem is by elimination and controls at source. The decision by the UK's Westminster and devolved Governments to ban plastic microbeads from cosmetics and personal care products is an important first step, as is the decision by the Scottish Government to ban the plastic element of cotton buds - something we have lobbied for, for a very long time.

These measures send out a very clear signal that Governments are actively looking for ways of reducing the plastics that escape into the aquatic environment and are willing to exercise their regulatory powers to achieve that goal.

We recognise the importance of controlling microplastics at source and we support efforts to change consumer behaviour to prevent plastics from being flushed into drainage systems or discarded to the environment. We are leading the water sectors work in this area as part of the 21st Century Drainage Programme.

The source, amount, fate, behaviour and impact of all micro and macro plastics is an important and growing area of research and we look forward to continuing to work with our customers and other key stakeholders to minimise the impact on drinking water, wastewater and the environment.

28th February 2017

Marine Policy Team
Welsh Government
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Cardiff
CF10 3NQ

Email to: marine@wales.gsi.gov.uk

Dear Sir,

PROPOSALS TO BAN THE USE OF PLASTIC MICROBEADS IN COSMETICS AND PERSONAL CARE PRODUCTS IN THE UK AND CALL FOR EVIDENCE ON OTHER SOURCES OF MICROPLASTICS ENTERING THE MARINE ENVIRONMENT

Thank you for consulting on ways to reduce the levels of plastic microbeads and other microplastics entering the marine environment.

These comments are from Dŵr Cymru Welsh Water, the statutory water and sewerage undertaker that supplies over three million people in Wales and some adjoining parts of England. Our supply area includes the entire Welsh coastline. We are owned by Glas Cymru, a single purpose, not-for-profit company with no shareholders. We provide essential public services to our customers by supplying their drinking water and then carrying away and dealing with their wastewater. In this way we make a major contribution to public health and to the protection of the Welsh environment. Our services are also essential to sustainable economic development in Wales.

Questions a., b. and c. (***on whether the ban is fit for purpose; the range of products; and possible exemptions***)

Dŵr Cymru very much welcomes the proposals by the UK Government and devolved administrations, including the Welsh Government, to ban the use of plastic microbeads in cosmetics and personal care products.

Preventing the problem at source is the only way to stop such products contributing to what is, admittedly, the much wider problem of plastics in the marine environment. Dŵr Cymru recognises that many cosmetics manufacturers have already voluntarily undertaken to remove these ingredients and, as a way of supporting those companies, we agree that the Governments should act to create a level playing field across the sector. The proposed ban also accords with the polluter pays principle enshrined in both national legislation and policy.

Question d. – *If products are not designed to go down the drain, but may still be disposed of in this way, what interventions or warning are appropriate to protect the marine environment?*

If cosmetic products contain plastic microbeads, they will inevitably go down the drain directly (through ablutions and teeth washing) or indirectly (through transference onto clothes, towels, bedding etc. which are subsequently washed). That is why banning microbeads as an ingredient in cosmetics is the only practical way to reduce marine microplastics from this source.

There are no waste water treatment processes specifically designed to capture plastic microbeads, so waste water treatment is currently not a viable, reliable intervention. Nor is there a nationally agreed methodology for measuring microplastics (or plastics more generally) before and/or after treatment.

Most sewage treatment processes rely on settling out solids, so materials that are more buoyant may pass through the treatment process and enter the aquatic environment. That is not to underestimate the contribution that our sector already makes: for example, current treatment processes catch most items of over 6mm in two dimensions. We also meet regulatory standards relating to suspended solids and turbidity.

In terms of items that should not be disposed of down the drain, the water industry is having to cope with increasing numbers of wet wipes and other products which contain plastics being flushed into our sewers. Many wet wipes contain plastic fibres and, because they are often used to cleanse cosmetics, they are also a vehicle for the transmission of cosmetics microbeads into the sewer. Wet wipes also cause many sewer blockages, especially when combined with fats and grease also illegally put into the sewer to form “fatbergs” (there are around 2,000 sewer blockages every month in Wales).

Through our “Let’s Stop the Block” campaign Dŵr Cymru tries to educate our customers about the problems caused by what we call sewer misuse, such as sewer blockages and, in turn, flooding, as well as environmental issues. In a pan-industry initiative in which Dŵr Cymru is playing a leading role, the sewerage sector has made a concerted effort during the last year, taking every media and other opportunity, to educate the public about the impact of sewer misuse, particularly through the disposal of wet wipes.

Our experience of educating customers tells us that making the connection between individual behaviours and consequence for services and the environment does make a difference. If people realise that inappropriate disposal of personal products can harm the environment, they will be less likely to do so. In this light, the most appropriate intervention would be for government to publicise (and take credit for) the ban on microbeads with an explanation of why it is important to do so. Spreading this message is something that sewerage undertakers can assist with.

Our sector has also been working with wet wipe manufacturers and retailers to encourage the correct labelling of such products i.e. as having a clear and prominent ‘do not flush’ label on the front of any packaging. We are also completing the preparation of a Water Industry Specification (standard) which will set out tests to establish if a product is flushable. It will examine the product and ensure it does not contain plastics and or breaks down as toilet paper does when flushed. We would welcome the Governments’ continued endorsement of our efforts to discourage the flushing of potentially damaging wet wipes and other products into our sewers including, if needs be, banning the use of the term “flushable” to describe these sorts of products on labels.

Question e. and f. – ***How should compliance be monitored and enforced?***

The Detergents Regulations 2010 (SI 2010, No 740) may provide a useful model. They introduced stricter limits on levels of phosphate in detergents in order to protect the aquatic environment and established an enforcement regime involving local authorities (we assume that it would be Trading Standards staff who would be on the front line of this sort of function).

We welcome the proposed use of civil sanctions. As an enforcement tool they offer a much more constructive outcome for the environment than conventional court proceedings. Having said that, prosecution should remain an option in the unlikely event that there are persistent, deliberate breaches of the ban.

We anticipate that the cosmetics sector will generally accept the ban, not least because so many of the major players have already voluntarily moved in this direction, with the significant reputational benefits that has brought them. The hardest area to tackle may well be imports.

As a more general observation, the cosmetics industry already routinely undertakes toxicity and safety testing of products before they are launched on the market. In a similar vein, perhaps the sector could be encouraged to be more proactive in considering the eventual fate, impact and longevity in the environment of their products and their ingredients. The plastic microbeads that have escaped from cosmetics into the marine environment cannot now be retrieved, so it would have been better had they not been introduced in the first place.

To that end, we would ask that the Governments develop and enforce some sort of environmental quality assurance labelling on products starting in the cosmetics sector but which could, in due course, be rolled out to other relevant products which are flushed down toilets or enter the sewerage network via some other route and so find their way into the environment.

Question g. – ***What costs and/or constraints would industry, including in particular SMEs, incur in meeting a ban on microplastics in cosmetics and personal care products?***

For the reasons given above, our sector welcomes the proposed ban. We cannot comment on the potential impact on SMEs.

Question h. – ***On the impact on imports***

We are not qualified to comment on this.

Question i. – ***What are the risks that alternatives to microbeads will themselves have significant environmental impact?***

The potential risks will, of course, depend on the alternatives that the cosmetics industry decides to adopt. Having said that, if the sector was more proactive in considering the fate of product ingredients (see our answer to questions e. and f. above), it would reduce the risks and hopefully be encouraged to use only benign organic or mineral alternatives.

Question j. – ***Any other comments***

The consultation understandably focusses on marine impacts as that has been the area that has attracted most attention and research. However, there is emergent research suggesting that there may also be impacts on the freshwater environment, including drinking water supplies: see for example: <https://news.agu.org/press-release/wastewater-treatment-plants-significant-source-of-microplastics-in-rivers-new-research-finds/>

Part 3 of the consultation paper seeks to gather evidence to inform future UK action on marine microplastic pollution.

Question a. – ***Are there other sources of microplastics apart from those listed in Part 3 of the consultation?***

The list in the consultation looks comprehensive. The impact of plastics on the oceans is an area in which there seems to be considerable interest in the scientific community, so it is possible that significant additional sources may emerge as research progresses.

Questions b and c. - ***Which sources of microplastics pose the greatest risks to the marine environment; and how should sources be prioritised for action?***

Efforts to reduce plastics in the environment should form part of a wider waste minimisation agenda, underpinned by the well-established waste hierarchy.

As a general policy, the use of non-biodegradable products - including plastics - in non-essential products should be discouraged, particularly if they are likely to find their way into the aquatic environment and there are already environmentally-friendly alternative materials. Priority for action should be given to products where alternatives already exist, e.g. for the manufacture of cotton buds.

There is also a need to educate the public about the potential damage caused by the disposal of plastics through inappropriate routes. Once alive to the issues, consumers can be very

influential: public opinion has undoubtedly played a part in persuading cosmetics manufacturers to reconsider the merits of microbeads.

Consumers can also influence retailers. Cotton buds are another major source of the plastics that end up in our sewers and, because they can elude waste water treatment processes, they blight the coastline and seas. Alternatives to plastics have been available for years. Consumer concerns have led to many major retailers deciding to stop selling plastic cotton buds, which is excellent news for the environment. If the ban on plastic microbeads in cosmetics is considered a success, cotton buds would be another product where a ban on the use of plastics could be examined to ensure a level playing field for that sector.

There is also the problem of larger plastic items that, through degradation, eventually become a source of microplastics. The plastic bag levy, in which Wales played a leading role, shows how a small financial nudge can dramatically change consumer behaviour. We feel sure that there may be other sources of plastic, including some that enter our sewers, and from there the environment that would lend themselves to such an approach.

Within a comparatively short time, man-made fibres have displaced wool in numerous products - including clothes - which is likely to have contributed to the volume of microplastics being released into the aquatic environment. The potential for washing machine filters to play a greater role in removing such fibres, thus preventing them entering the sewerage system, should be explored. Perhaps as part of its wider agenda of sustainable natural resource management, the Welsh Government may want to consider promoting the environmental advantages of natural products, such as wool, which would also support Wales' sheep rearing sector.

A copy of this response is being sent to your colleagues in the Welsh Government's Water Branch, as well as to Defra's Marine Litter Policy Team.

Yours faithfully,



Tony Harrington
Director of Environment