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Environmental Protection (Single-use Plastic Products) (Wales) Bill

NO JUSTIFICATION FOR BANNING OXO-BIODEGRADABLE PLASTIC

Oxo-biodegradable technology is the only way to deal with plastic in the environment which cannot realistically be collected.

On 23rd September we responded to the public Consultation on this Bill, which did not show any significant level of public support for any ban on “oxo-degradable” or “oxo-biodegradable” plastics. There were 33 responses, and only 7 of them made any mention of this material at all. Four of them did not support a ban, and only 3 did support a ban.

The Information Commissioner has made it clear that “when any individual or organisation attempts to influence the future direction of a public authority, there is a pressing need for transparency so that the public can see who is trying to influence policy and why. This acts as a deterrent for anyone wishing exercise, or to accept, undue influence.”

We therefore requested the Welsh Government to send us the responses received to their earlier Consultation Document (WG40193) which they say support a ban on oxo-biodegradable plastic. **We received the responses, on 7th October 2022. The majority do not mention oxo-degradable or oxo-biodegradable plastic at all.**

We said that we would be surprised if the general public responding to the consultation had any real understanding of oxo-biodegradable technology, and so it has proved. In fact we have been surprised by the **very high level of misunderstanding shown** by those respondents who did mention oxo-degradable or oxo-biodegradable plastic.

Some reveal an emotional hatred of any kind of plastic, based on little or no understanding of the advantages and disadvantages of this material.

One respondent said “I don't know what Oxo-degradable plastics means, but I'm assuming it breaks down into micro plastics which isn't good for the environment. Another admitted “I'm not qualified to comment on this subject.”

Another respondent said “The impact of this plastic on the environment is just awful. Images of animals feeding young with plastic pieces and masses of the stuff spilling out of their stomachs is truly heartbreaking. We MUST do something to stop this. We HAVE to make a change.”



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Indeed we do. This respondent is referring to the harm caused by ordinary plastic, and this is why Wales should replace it with oxo-biodegradable plastic, which is proved to biodegrade much more quickly instead of fragmenting and lying or floating around for decades, as ordinary plastic does. **The Senedd should lead the way by refusing to ban oxo-biodegradable plastic and by making it compulsory for the short-life plastic products which are not being banned.**

MICROPLASTICS

There is a fundamental misunderstanding here.

Very many of the respondents focus on microplastics, and express concern about the harm they do. We agree with them, but the respondents do not seem to know that these microplastics are coming from the fragmentation of **ordinary plastic** under the influence of weathering, and it is these materials which can lie or float around for decades. There is no evidence that any of the microplastics to which the respondents refer have come from oxo-biodegradable plastic products. This is not surprising, because oxo-biodegradation has been invented to deal with this very problem by making sure that the dwell time in the environment is very much shorter. It has not in any event been widely used in Wales.

There would be no point in putting additives into plastic if all they did was to cause fragmentation, and we know of no manufacturer who does so. Oxo-biodegradable technology has therefore been designed to convert the plastic at the molecular level into a waxy substance which is biodegradable. None of the respondents seem to be aware that biodegradation has been proved beyond doubt by the Oxomar study – a three-year scientific study sponsored by the French government. This is not a marketing statement – it is **scientific proof of the highest order.**

Nor do the respondents seem aware that that in 2017 the European Commission referred to the European Chemicals Agency (ECHA), the very question of whether what they called “oxo-degradable” plastic created microplastics. This led to a Call for Evidence by ECHA, who received many hundreds of pages of scientific evidence. However, ECHA produced **no dossier to support a ban**, and on 30th October 2018 they said that they were **not convinced that microplastics were formed.** If they are not convinced, then how can any of your respondents be convinced?

EUROPEAN UNION

Many of the respondents say that just because oxo-degradable plastic has been banned in the EU, then oxo-*biodegradable* plastic should be banned in Wales.

It is most unusual for any substance to be banned in the EU without a dossier from ECHA. There was no ban in the Commission’s proposal for a Directive, but a ban was slipped into the draft Article 5 by lobbyists acting for the “compostable” plastics industry at the Committee stage in the European Parliament, thus **circumventing all the safeguards** against arbitrary action in Arts. 69-71 of the REACH Directive.

The European Parliament did not use the definitions written by the scientific experts at CEN in TR15351 (which distinguish between oxo-degradable and oxo-biodegradable plastics), but adopted the definition proposed by the lobbyists, which the same lobbyists are inviting the Senedd to adopt. We are requesting under the Freedom of Information Act details of any

meetings between Welsh Government officials and Senedd Members and officials, with representatives of “European Bioplastics” “BBIA” and anyone else representing the “compostable” plastics industry.

Article 3(3) of the Directive as adopted defines “oxo-degradable plastic” as “plastic materials that include additives which, through oxidation, lead to the fragmentation of the plastic material into micro-fragments or to chemical decomposition.”

In the case of oxo-*biodegradable* plastics, as confirmed by the Oxomar report, the plastic is consumed by bacteria and fungi.

The Consumer Goods Forum support the global use of oxo-biodegradable (as distinct from oxo-degradable) technology <https://www.biodeg.org/oxo-degradable-vs-oxo-bio-degradable-plastics/> but the tragic irony in the EU is that, due to failure to distinguish clearly between oxo-degradable and oxo-biodegradable plastic in the Art. 3(3) definition, and in the May 2021 Commission Guidance, sustainable alternatives have also been effectively restricted. This has resulted in confusion in the marketplace, a failure of due-process, and a challenge to Art. 5 in the EU courts (Case T-745/20 which is awaiting a hearing).

WRONG PRODUCT

Some of the respondents have mistaken oxo-biodegradable plastics for some other product. For example: “As a member of a group who regularly cleans the rivers and waterways of Cardiff, I am very aware of the damage of oxo-degradable products. In particular, wet-wipes which are now embedded into river banks and washed down into the sea to cause continuing damage for decades to come.” **Wet-wipes are not made with oxo-biodegradable plastic.**

“I work for Welsh Water and have seen first-hand the detrimental effect oxo-degradable plastics have on the environment. I worked on a scheme in Mermaid Quay in Cardiff where we extracted 500 tons of wet wipes and other materials which were clogging the sewer. As a result of constant flushing of the sewer of the wet wipes etc, we had to then make the critical decision to replace the sewer.” Again, wet wipes have nothing to do with oxo-biodegradable plastic.

Another respondent said “Microplastics being recovered from the oceans are from “oxo-degradable” plastics, which degrade and fragment but do not biodegrade. These are **conventional plastics which undoubtedly create persistent microplastics**, and this is why they need to be banned. They have already been banned in Saudi Arabia and 11 other countries.” This is correct. The respondent is referring to ordinary plastic, and a range of products made with ordinary plastic have indeed been banned in the Middle East. Welsh exporters of plastic products to these countries have to make them oxo-biodegradable.

RECYCLING

Some respondents object to oxo-biodegradable plastic because they say it is incompatible with recycling. This is not correct, as explained in detail at <https://www.biodeg.org/subjects-of-interest/recycling-2/> In particular, oxo-biodegradable plastic is not used in P.E.T. – it is used only in PE and PP.

If some recyclers have created a perception that oxo-biodegradable plastic is incompatible with recycling, it is for them to change that perception. They cannot expect legislators to ban oxo-biodegradable plastic and accept the accumulation of ordinary plastic in the oceans for decades, just because recyclers are failing to correct a wrong perception.

NOT COMPOSTABLE

There is nothing wrong with composting, but **plastic of any kind has no role in this process.**

As one respondent said “We need to be careful not to be “greenwashed” by alternatives to single use plastic, such as products which claim to be compostable (but in fact only compost in industrial composting units) or use plant-based plastics (such as some tampon applicators which still behave the same in the ocean as normal plastic).”

This has nothing to do with oxo-biodegradable plastics – which do not claim to be compostable – but it draws attention to the need to ban plastics which falsely claim to be compostable and biodegradable. This is greenwashing, because **there is no such thing as compostable plastic.** This is because the relevant standard (EN13432) requires the plastic to convert into CO₂ gas (not compost) within 180 days. It is also greenwashing to call them “biodegradable,” because they are tested to biodegrade in an industrial composting unit, not in the open environment.

In any event, as one respondent pointed out “There are limited in-vessel composting facilities available to most areas in Wales (definitely no capacity to meet the current waste plastic tonnages) meaning the issue would persist.” Even if enough facilities existed, there are better things to do with plastic than waste it by turning into CO₂.

Another respondent drew attention to a study which “showed that PLA underwent less than 10% relative biodegradation in all unmanaged environments tested (soil, fresh water, marine and anaerobic aquatic digestion) and was not home compostable.” The type of plastic deceptively marketed as “compostable” is usually made from PLA.

LANDFILL

A few respondents object because oxo-degradable or oxo-biodegradable plastic (they are not quite sure which) will not degrade in landfill. Oxo-degradable plastic will not degrade in landfill because it is just ordinary plastic. Oxo-biodegradable plastic will not degrade in landfill unless oxygen is present, but if a piece of plastic has been put into a landfill it has been responsibly disposed of and there is no need for biodegradation. Indeed, biodegradation in anaerobic conditions is highly undesirable, because it generates methane.

TOXIC

Some respondents think that oxo-degradable or oxo-biodegradable plastic (again they are not sure which) leaves toxic residues in the environment. This might be the case with ordinary plastic, because it does not have to be tested for ecotoxicity, and because it can lie or float around for long enough to attract extraneous toxins to its surface, but it is not the case with oxo-biodegradable plastic. Oxo-biodegradable plastic is tested according to ASTM D6954, and has to pass specific ecotoxicity tests. It has been tested according to OECD standards and shown to be non-toxic to plants, fish and earthworms.

LABELLING

Some respondents refer to confusion in the public mind.

One reason for this is that even public authorities fail to distinguish between oxo-degradable and oxo-biodegradable plastic. Also, they use the word “biodegradable” which is confusing as there are different types of biodegradable plastic with very different characteristics.

For the reasons mentioned above the “compostable” plastics industry falsely markets its product as “compostable” and “biodegradable” and this practice should be stopped.

The oxo-biodegradable plastics industry does not set out to deceive the public. We do not refer to our product as simply “biodegradable” and we make it clear that it is intended to biodegrade if it gets into the open environment, not in compost or landfill. We are quite willing to accept a statutory obligation to make this clear.

EVIDENCE

Most of the respondents who mention “oxo-degradable” plastic make statements which are simply wrong, and their statements are not supported with any kind of evidence. The statements were very repetitive, which suggests that they had been orchestrated by a lobbying organisation.

Those few respondents who do attempt to support their statement with evidence have cited Wikipedia, which is not a reliable source (and is being constantly amended by the “compostable” lobby), and they also cite a paper published by “European Bioplastics” which is part of that lobby.

We, and our trade Association the BPA have responded to the Report by the Group of Chief Scientific Advisors (GCSA) of the European Commission, and the Report by Science Advice for Policy by European Academies (SAPEA) See <https://www.biodeg.org/wp-content/uploads/2021/03/OPA-Response-to-SAM-Report-Feb-2021-1-3-21.pdf> Also the Eonomia Report <https://www.biodeg.org/wp-content/uploads/2020/08/BPA-Comment-on-the-Eonomia-Report-2016.pdf> The EU Commission Report <https://www.biodeg.org/wp-content/uploads/2018/01/BPA-RESPONDS-TO-EUROPEAN-COMMISSION.pdf> the Ellen MacArthur Report <https://www.biodeg.org/wp-content/uploads/2019/11/emf-report-1.pdf> and the Plymouth Report <https://www.biodeg.org/wp-content/uploads/2019/04/BPA-Comments-on-Plymouth-10.pdf>

None of these studies justifies a ban on oxo-biodegradable plastic.

EN13432 requires 90% biodegradation for plastic which biodegrades in compost. In the case of oxo-biodegradable plastic **92.74% biodegradation has been proved by Intertek** in 180 days according to the relevant standard (ASTM D6954) but nobody is claiming that it will biodegrade to that extent within that timescale under all conditions in the open environment. The process will proceed more slowly in cold conditions than in warm sunny conditions, but it will continue even in the dark. The key point is that it will proceed much more quickly than ordinary plastic under the same conditions. That must therefore be a much better and more reasonable timescale than for ordinary plastic.

Nobody has advanced any reason why biodegradation should stop before completion, but even if it did it would still be better than ordinary plastic, which would have fragmented but not biodegraded at all.

Some make the point that that testing is in the laboratory, not in the open environment, as to which see <https://www.biodeg.org/wp-content/uploads/2021/02/Swift-evidence-to-BEIS.pdf> Abiotic degradation has in fact been tested in the real world, but biotic degradation and ecotoxicity have to be tested in the laboratory.

CONCLUSION

The Senedd should not impose any ban which could apply to oxo-biodegradable plastic. Instead it should lead the way by making oxo-biodegradability compulsory for all the short-life plastic products which are not being banned. It is the only way to deal with plastic in the environment which cannot realistically be collected.

The technology is not banned in England or Scotland, and we are communicating with the authorities in both countries. When they introduced bans on single-use plastics they did not include a ban on oxo-biodegradable plastic.

We are advised by Leading Counsel that any ban which includes oxo-biodegradable technology, and which is not supported by clear and sufficient scientific evidence, would be unlawful, and would be challenged in the High Court.