

PAS 9017:2020, *Plastics – Biodegradation of polyolefins in an open-air terrestrial environment – Specification*

Wildlife and Countryside Link response
July 2020

Wildlife and Countryside Link (Link) is the largest environment and wildlife coalition in England, bringing together 57 organisations to use their strong joint voice for the protection of nature. Our members campaign to conserve, enhance and access our landscapes, animals, plants, habitats, rivers and seas. Together we have the support of over eight million people in the UK and directly protect over 750,000 hectares of land and 800 miles of coastline.

This response is supported by the following Link members:

- ClientEarth
- CPRE, The Countryside Charity
- Environmental Investigation Agency
- Greenpeace
- Keep Britain Tidy
- WWF-UK
- Zoological society of London (ZSL)

CONSULTATION RESPONSE

Tackling the devastating impacts of plastic pollution on our natural world has become a priority in recent years but the problem has already existed for decades and will continue to exist while our consumption of plastics increases year on year.

Whilst we welcome innovation which seeks to address this problem, we must ensure that we do not create additional problems which further exacerbate the situation. The planet's resources are finite and reduction in the use of these resources remains the priority, alongside systemic change to accelerate a shift towards a circular economy.

This standard seeks to support the use of a solution which allows for both conventional and non-conventional plastics to be littered in the open-air terrestrial environment and therefore supports the continued use of plastics in society at an unsustainable rate. **We do not support solutions where any plastic, even biodegradable plastic, ends up in nature.**

Our main comments on the PAS are as follows:

- Although the testing used to determine biodegradation should require the application of "*appropriate test methods to mimic real life degradation*", in practice this is not the case. As with oxo-degradable plastics, lab testing does not accurately reflect how these materials will perform in real-world conditions. A ban on oxo-degradable plastics enters into force in June 2021 across the whole EU under the Single-Use Plastics Directive. This includes the UK who voted for it in 2018.
- Some associations signatory to this response also signed the Ellen MacArthur Foundation global appeal in 2017 to ban the sale and use of "*Oxo-degradable plastics (which) are conventional polymers (e.g. LDPE) to which chemicals are added to precipitate the oxidation and fragmentation of the material under the action of oxygen, accelerated by UV light and/or heat.*" Moreover, the UK Government signed the appeal.¹

¹ <https://www.newplasticseconomy.org/about/publications/oxo-statement>

- This standard considers additives "*non-terrestrially toxic*" if they are not biologically hazardous towards organisms in the trophic levels tested. This is insufficient to ensure these additives are not actually harmful to real-world ecosystems and the wildlife they support. There are no restrictions on constituents, e.g. heavy metals or regulated substances such as SVHCs or flame retardants.
- The biodegradation test passing criteria is as follows: "*The test sample shall be deemed valid if it achieves a % biodegradation of greater than or equal to 90% within less than or equal to 730 days (2 years) of testing.*" Plastics, whether engineered to be biodegradable or not, leave lasting impacts during the degradation process. We do not support the notion of any plastic in nature, as this will increase the serious consequences for the ecosystems which the plastic sits in over the degradation period which starts "*within two years*" but could go on for much longer. For example, between 2005 – 2019, the RSPCA received over 6,000 calls relating to animals injured by general litter and 15,000 related to angling gear injuries.² If littering increased due to such standards, this will likely increase further.
- The biodegradation of plastic covered by this PAS excludes key environments including "*freshwater, marine, landfill and anaerobic environments of biodegradation*" and does not account for "*the effect of marine pollution, such as bioaccumulation of plastics and its effect on biodiversity*". 8 million tonnes of plastic enter our ocean annually, impacting marine wildlife and habitats³ and studies have already shown that certain biodegradable plastics do not break down in the marine environment.⁴ Therefore, testing the impacts of these additives under laboratory conditions based on a single ecosystem does not sufficiently prove the degraded material has no adverse impacts on nature. We are not aware of any ecosystems without humidity where 60c temperatures are consistent over many months. The lab tests do not minimally reflect reality.
- The claim of biodegradability has been proven to validate the behavior of littering as consumers believe these materials are less impactful to the environment⁵, will eventually disappear or could even be beneficial for wildlife.⁶ The principles of a circular economy are also undermined if materials are designed for a linear outcome.
- There is no evidence of peer-reviewed research as part of the development process for this PAS.
- The risk that plastics containing this additive will impact the quality of post-consumer recycled material or compost if it is mixed into the system has not been addressed at all. This could serve to undermine confidence in the quality of post-consumer recycle and result in increased use of virgin plastics.
- The Packaging (Essential Requirements) Regulations 2015, Schedule 1, paragraph 2 states that "*Packaging must be designed, produced and commercialised in such a way as to permit its reuse or recovery, including recycling, and to minimise its impact on the environment when packaging waste or residues from packaging waste management operations are*

² <https://www.itv.com/news/meridian/2020-07-17/rspca-litter-plea-after-trapped-fox-rescued-from-a-plastic-bottle-in-portsmouth>

³ Jambeck, J.R., Geyer, R., Wilcox, C., Siegler, T.R., Perryman, M., Andrady, A., Narayan, R. and Law, K.L., 2015. **Plastic waste inputs from land into the ocean.** *Science*, 347(6223), pp.768-771. (<https://science.sciencemag.org/content/347/6223/768.abstract>)

⁴ Imogen E. Napper and Richard C. Thompson. **Environmental Deterioration of Biodegradable, Oxo-biodegradable, Compostable, and Conventional Plastic Carrier Bags in the Sea, Soil, and Open-Air Over a 3-Year Period.** *Environmental Science & Technology* 2019 53 (9), 4775-4783. <https://pubs.acs.org/doi/pdf/10.1021/acs.est.8b06984>

⁵ Klöckner, C.A. (2013). A comprehensive model of the psychology of environmental behaviour—A meta-analysis. *Global Environmental Change*, 23(5), 1028-1038

⁶ Zero Waste Scotland. 2013. Rapid evidence review of anti-littering behaviour and anti-litter policies. (<https://www.zerowastescotland.org.uk/sites/default/files/Rapid%20Evidence%20Review%20of%20Littering%20Behaviour%20and%20Anti-Litter%20Policies.pdf>)

disposed of.“ Furthermore, under the specific requirement on biodegradable packaging, such packaging must decompose into compost under the conditions regulated by BSIEN13432 or 14995. In no way does this technology support any of the required outcomes above.

Based on these points, we are unable to support the publication of this draft PAS and request that it is withdrawn.