



BIO-BASED AND BIODEGRADABLE
INDUSTRIES ASSOCIATION

Registered Office 2 Old College Court
29 Priory Street
Ware
Herts
SG12 0DE

Telephone 03707 369369
E-mail admin@bbia.org.uk

Single-use plastics call for evidence
Energy and Transport Tax team
HM Treasury
1 Horse Guards Road
London
SW1A 2HQ

By email to ETTanswers@hmtreasury.gsi.gov.uk

May 18th, 2018

Dear Sirs,

We thank the Treasury for opening this public consultation and for giving us the opportunity of presenting our evidence.

We are herewith submitting our evidence and are available for any clarification you may need.

We thank you for your consideration.

Yours sincerely,

David Newman
Managing Director



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Scope:

“the government would like to understand how further economic incentives can be effective in continuing to reduce waste from single-use plastics by reducing unnecessary production, increasing reuse, and improving recycling. “

“the government would like to explore how the same economic incentives can drive innovation, for example by stimulating businesses to develop and integrate new technology, or by encouraging growth in the recycling industry by addressing barriers to investment”

”the government wants to look broadly across the whole supply chain, from production and retail to consumption and disposal, in order to gain the best possible understanding of the whole landscape before deciding on the best course of action”

Introduction to BBIA members' activities

The BBIA is a trade association representing manufacturers and distributors of materials that have as an essential component the ability to biodegrade in controlled conditions and reduce environmental impacts in their production phases for example, by reducing the use of non-renewable feedstocks.

Where these materials are used for packaging, the European and British standard which determine their suitability for organic rather than mechanical recycling is the BS EN13432 standard adopted in the UK in 2000, which defines time, space, output, and toxicity of the materials. This standard links two of the relevant aspects of the packaging Essential Requirements; packaging recoverable in the form of composting and biodegradable packaging, the latter of which must result in the production of compost. For food waste to achieve “end of waste ” status, it must be transformed into a product; if that product is compost it must meet the BSI PAS100 specification and in England and Wales have reached a proven final market. Therefore the chain which links compostable packaging through to soil fertilisers is governed by these standards and respective certifications.

Organic Recycling of Packaging

Industrial composting as part of organic recycling, is recognised under the EU Packaging and Packaging Waste Directive 1994/62/EC as recycling on a par with mechanical recycling (Annex II 3 a - d). The intention is that those materials recovered through the AD and/or composting process should be counted as recovery or recycling as if they are recovered through a mechanical process. They can therefore be included in statistics on plastics recycling and contribute towards achievement of mandatory targets.



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Oxo Degradable Plastics

A note about oxo degradable plastics. These are neither suitable for mechanical or organic recycling. They are **conventional plastics** with additives to assist their disintegration into micro-plastic particles. Under USA usance, but also in other countries around the world, it is **illegal practice to market these plastics as biodegradable**. Indeed, the European Commission in their 16th January 2018 Plastics Strategy declared they will take measures to limit the use of oxo plastics in the EU. See <http://ec.europa.eu/environment/circular-economy/pdf/oxo-plastics.pdf>.

DEFRA, for the UK Government, will shortly sign the latest EC Packaging and Packaging Waste Directive. The Directive contains the minimum “Essential Requirements” which packaging must meet if it is placed on the European market.

“Biodegradable packaging waste shall be of such a nature that it is capable of undergoing physical, chemical, thermal or biological decomposition such that most of the finished compost ultimately decomposes into carbon dioxide, biomass and water. Oxo-degradable plastic packaging shall not be considered as biodegradable.”

This will further clarify the position that oxo-degradable plastics are not biodegradable.

George Eustice (Minister of State for Agriculture, Fisheries and Food) recently stated “We have assessed the environmental impacts of oxo-biodegradable plastics across their life cycle and, as a consequence, have no current plans to make the use of oxo-biodegradation additives mandatory in the manufacture of everyday plastic items. The current evidence on the overall environment benefits of oxo-biodegradable plastic is not conclusive. The main concern which has been raised is that oxo-biodegradable plastics could take time to degrade without oxygen and sunlight once they have leaked into the broader environment. It is suggested that this lack of complete degradation could result in the generation of micro plastics, which can be more harmful to the environment and aquatic life.”

We cannot emphasise enough how much confusion the misleading claims of oxo degradable plastics vendors make in the marketplace. Time and time again we are asked what is the difference between compostable and oxo degradable; as the powders added to plastics to make them oxo degradable are a small additional cost, vendors tell potential customers that these plastics are truly a cheap biodegradable alternative. As compostable plastics derive from an industrial process, their cost is not comparable to a traditional plastic with a chemical additive making compostable plastics appear to be an expensive choice.

Finally, vendors of the additives used to disintegrate these plastics do not invest in industrial scale facilities to produce the plastics themselves. They sell powders, or additives, which are known as “masterbatches” to plastics converters. Companies producing compostable plastics invest tens of millions of pounds in refineries where feedstocks are converted into compostable



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polymers. These employ hundreds and thousands of people across the EU. Research into new materials and products is continuous. The products conform to standards which take years to agree among international experts and then are enshrined into law. EN 13432:2000 is the European norm accepted across the EU including the UK. Oxo degradable plastics have no such conformity.

POLICY ASK 1

We therefore ask the UK Government : as oxo degradable plastics have no recycling benefit nor other proven environmental benefits and bring nothing to the UK economy other than microplastics, we ask that the UK Government takes exactly the same position as the European Commission and bans their use in the UK. This includes banning the use of such materials for film mulch used in agriculture.

UK Recycling of Food Waste and Compostable Materials

The infrastructure to receive and treat compostable materials does exist though is not present throughout all of the UK. 53 compost plants with circa. 2 MT of capacity are authorised to accept food waste under the Animal By-Products Regulation EC 1774/2002 ex 1069/2009 (updated with EC 142/2011 and adopted in UK law in 2013) and regularly receive and treat compostable materials, especially the bags used to collect food waste but also compostable products such as table ware, coffee pods, teabags, films for packing food and some compostable blister and consumer goods packaging.

Wet anaerobic digestion plants also regularly receive compostable materials which are however, usually stripped out before the digestion process and sent to disposal. Where dry AD is practiced, greater material recovery occurs through the post anaerobic treatment of the digestate into compost.

In the case of organic recovery in the UK it has to be stated that an enormous cost and technical impact is imposed upon these plants (whether AD or compost) in having to deal with plastic waste. All food waste delivered to recovery is contaminated by plastic. Anecdotal evidence supplied by members of the Organic Recycling Group of the R.E.A. indicate 5% minimum contamination of garden and food waste by non-compostable plastics. As these plants treat a total of circa 4,5 million tonnes of organic waste (90% garden waste), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/683051/UK_Statisticson_Waste_statistical_notice_Feb_2018_FINAL.pdf it can be assumed plastics contamination of food waste amounts to **circa 225,000 tonnes/annum.**

AD/Compost facilities therefore have to extract the plastics to ensure the final compost product meets end of waste standards under BSI PAS100, and dispose of them. Extraction of a tonne of plastic waste costs circa £10/tonne of received food or garden waste, plus the cost of



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disposal of the extracted plastic, more than £100/tonne. Over the 225,000 tonnes circa which are sent to disposal from organic recycling, we can estimate a total annual cost to this system of £27,250,000. AD/Compost facilities receive no compensation or supplementary gate fee to undertake this exercise. Their operating margins are determined by plastic waste contained in food waste collection systems over which they usually have zero control. Given the low rate of food waste interception in the UK (less than 800,000 tonnes out of 7.3 million tonnes available), compost plants compete to receive food waste at ever lower gate fees and have no leverage over the quality of materials entering the plants.

A similar case occurs for AD facilities where packaging is stripped out prior to process. Under current practices any packaging they receive becomes a cost in terms of extraction and disposal, as well as a loss of organic material stripped out with them, and a consequential loss of energy yields.

All this preamble is to point to the issue of plastic contamination of food waste, our principle waste stream, and the need to use innovative solutions to reduce this.

The Treasury's consultation therefore raises the opportunity of resolving two problems in one: **improved food waste recovery, reduced plastic waste production.**

Food waste and Compostable Packaging

Technological progress over the last 20 years has allowed the development of a new generation of bioplastic materials. Those used for packaging are designed to compost industrially and to meet both the EN13432 standard and to ensure compost meets the BSI PAS100 standard. There are other uses including mulch films used for farming that is certified under the European Standard BS EN17033:2018 to degrade in soil thus eliminating plastic pollution and reducing disposal costs.

Further standards recognised internationally are also the BS EN 14995 ('Plastics. Evaluation of compostability. Test scheme and specifications.') and ISO 17088 ('Specifications for compostable plastics').

Increasingly compostable materials are used for packaging (from films to blisters to loose pack fill to sweet wrappers); to coffee pods and teabags; to carrier bags and fruit and vegetable collection bags; but also for table ware and cups, including coffee cups; and many others. The world's claimed "first plastic free aisle" in a Netherlands supermarket has achieved this through the use of compostable plastics suitable for recovery with food waste. (see <https://www.ekoplaza.nl/pagina/ekoplaza-lab-1>) This is proof that compostable materials are present on the market, they are suitable for food packaging, they are economically competitive, and they are organically recyclable.



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The recovery of these materials through organic recycling resolves one of the conundrums of mechanical recycling: how to recycle materials which are contaminated with food waste. By treating bioplastics like food, collecting them together and sending them to AD/composting, we can increase the amount of food waste recovered, as well as recover much of the packaging that food was contained in before becoming waste. At the same time, we can reduce plastic contamination of food waste and its treatment facilities, improve compost quality, and lower costs of treating food waste through enhanced efficiency and reduced waste disposal.

We know from the UK example that plastic films recycling, especially those used in food waste packaging, is negligible. This is understandable: these films are covered in inks, contaminated by food, flimsy and difficult to collect, harder to sort from mixed waste and impossible to distinguish between polymers. We wish to emphasise that the mythology around plastic film recycling needs to be broken- virtually the only plastic films that are recycled are from shrink wrap covering pallets delivered to stores, and other industrial uses. Consumer plastic films are rarely if ever recycled. Furthermore, even the post-use industrial film recycle rarely makes it back into packaging and never into food packaging applications.

Were compostable films used to substitute many of these uses, recycling through the food waste streams becomes a technically feasible option. To do so, one needs to think cross-sectorially and include the recovery of food waste as a strategic option for the reduction and recycling of some plastics. This requires wider thinking too, around the quality of soil, the need to recover organic carbon to ensure soil productivity. In this sense we refer to the statement from DEFRA that UK soils lose 2.9 million tonnes of topsoil each year (see <https://sustainablesoils.org/>) much of which could be replenished by compost derived from food waste; the need to meet climate change targets through capturing biogas derived from food; reduction of chemical synthetic fertilisers in farming; improving air quality through reduced methane and ammonia emissions. The case for food waste collection and treatment in terms of the UK's global climate change commitments has been made by among others, the Committee on Climate Change and needs not be reiterated here. Everything is connected.

The missing key in England to developing such a system is the quantity and quality of food waste collections. The devolved nations have introduced obligatory food waste collection but England has not. This has resulted in less than 800,000 tonnes of food waste entering treatment facilities against the 7,3 million tonnes available, according to WRAP and DEFRA statistics. Without food waste collections across the nation, the case for using compostable materials in food packaging and other uses whereby the materials can be recovered as a food waste, becomes weaker. Without this, we cannot envisage the reduction of plastic food packaging waste.



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Therefore the next BBIA policy ask from this consultation is that the Treasury

POLICY ASK 2

Considers the case for obligatory food waste collections across England as a reduction and recycling measure for plastic waste and not simply for the value of food waste itself and that the T.E.E.P. exclusions from the food waste collection obligation regards only scarcely populated rural areas.

Plastic Packaging Collection and Recovery

As the June 2017 Valpak report makes clear (see https://www.valpak.co.uk/docs/default-source/environmental-consulting/valpak_packflow-2025-summary-report.pdf?sfvrsn=db806d10_10) the UK packaging industry supports collection and recovery measures to a far smaller degree than similar European programmes. The conclusion that the UK industry needs to pay 9 times more than the current PRN scheme, in order to meet the new EU Packaging and Packaging Waste Directive targets for 2025 and beyond to 2035, indicates how little has been paid to date. The cost of packaging recovery has therefore been borne by councils and UK citizens.

The failure of the PRN system to adequately fund packaging recovery has transferred the burden to councils, depriving them of resources to invest in other collection programmes, such as food waste. Further, given there is no differentiation in the contribution made by producers regarding the recyclability of the materials, there has been no incentive to improve recyclability or to introduce new, easier to recycle materials (disposable coffee cups are a perfect example).

A revision of funding of the packaging collection and recycling programmes

- a) Is necessary to ensure compliance with EU legislation on full cost recovery programmes which are agreed under the new Directive on Packaging and Packaging Waste recently voted by the EU Parliament and supported by the UK.
- b) Is required to ensure equity, i.e. a level playing field in which the burden does not just fall upon councils but is shared by industry under the Polluter Pays Principle.
- c) Will provide funding for new waste management programmes including anti-littering and food waste.
- d) Should penalise the placement upon markets of materials for which there is no reasonable recycling option and incentivise the placement of materials on the market that are easily recyclable with a bonus/malus analysis such as that practiced in France.
- e) Could mandate the use of recycled materials in the production of new packaging- for example, plastic bottles must contain 50% recycled content by 2025 and 75% by 2030.



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This will increase the domestic demand for plastic recycle materials and avoid the export of these.

- f) Producers of compostable plastics are willing to make their contribution to the renewed EPR programmes in the UK as they do in other countries. However, such contributions have to be directed to those that recover these materials through organic recycling, ie AD and composting facilities. Such contributions would financially reward them for accepting compostable plastics, at the same time compensate them for the costs they have in disposing of non -compostable plastics contamination. (see above and below)

The third policy ask of the BBIA to the Treasury is that

POLICY ASK 3

Government adopts the case for full cost recovery of packaging waste to include collection and treatment, including the cost of littering, and an introduction of malus/bonus measures to raise the recyclability of all materials.

Compostable Packaging and the Bioeconomy

Studies undertaken by among others in 2014 the House of Lords (<https://publications.parliament.uk/pa/ld201314/ldselect/ldsctech/141/141.pdf>) have stated the case for the use of plant- based resources available abundantly in the UK for the production of a new range of materials. These include bioplastics. The UK is far behind many nations in the use of new technologies for the production of bioplastics. A study commissioned by this association of the research body CEBR (see <http://bbia.org.uk/wp-content/uploads/2015/11/BBIA-CEBR-Report.compressed.pdf>) has shown the possibility of creating some 30,000 new jobs across the whole value chain of biowaste management and biomaterials production under the right conditions.

“ CEBR predicts that the gross output impacts of the bio-plastics sector at full capacity could amount to £4.2 billion. From this (.....) roughly £1.92 billion of gross value added is predicted to be contributed to the UK economy. Further, we estimate that the bio-plastics sector will pay around £1.01 billion in gross employment compensation“.

Any new process or product entering established markets will do so at a price premium simply due to a question of scale. From solar power to batteries, from flat screen TVs to laptop PCs, we have seen how the growth of scale has led to the fall in unit costs- in some cases by as much as 90% on initial market prices. Now we see renewable energy suppliers competing without subsidies against fossil fuels; electric vehicles entering the mainstream automotive market; LED lighting substituting incandescent light bulbs; so we are seeing compostable materials today entering markets at a price disadvantage. As with other innovative technologies, Government intervention is useful if the target is to develop the use of



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compostable plastics in the UK. By this, we do not ask for financial incentives but for the creation of market conditions conducive to their development.

Where compostability is a criteria of acceptance, price becomes less of an issue to buyers ; the barriers concern competitive practices between packaging producers and retailers. It is difficult for any one single company to adopt new practices unless their competitors do too, because the price differential is a deterrent. Whilst Iceland Food Stores have declared their intention to be “plastic free” by the end of 2023, no other major retailer has followed suit. It has yet to be seen how the recently launched Plastics Pact, of which this association is a Founder Signatory, helps develop markets for compostable plastics.

In order to gain greater market acceptance, and to drive down the volumes of unrecyclable plastic waste through improving food waste collections, we have asked already for food waste to be considered as an instrument in this challenge; and for the packaging industry to pay the real costs of collection and treatment and for penalties to recognise low recyclability.

Government intervention can help to drive the bioeconomy and to increase the manufacturing capacity in the UK of these new materials, reducing imports and creating jobs at home. By linking packaging taxes and incentives into the desire to grow the bioeconomy industrial infrastructure in the UK, we can achieve both objectives. Currently, materials certified as compostable are not included in the PRN programmes or the new Extended Producer Responsibility programmes as they become modified under EU law. This means that whilst manufacturers of compostable packaging are not liable to pay for the recovery of these, the structures which recover them, (compost facilities) receive no incentive to do so. Whilst those same recycling facilities receiving traditional plastics do, through the PRNs. Nor are compost plants compensated for the plastic contamination they receive and have to deal with. Were there to be a financial incentive for composting plants to accept compostable materials, the routes back to organic recycling would improve.

The fourth policy ask is that

POLICY ASK 4

Packaging materials that are certified compostable under the BSEN13432 standard should pay into the reformed EPR system as “organically recyclable plastics” and that the compost plants that recover these can receive the same financial benefits available to mechanical recyclers.



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Finally, we enter into the specific questions asked by the consultation as below:

1. Question: How should the government define single-use plastics, and what items should be included and excluded, and why ?

The recently proposed - and under discussion - EU Directive of the European Parliament and of the Council on the reduction of the impact of certain plastic products on the environment (see this link) https://g8fip1kplyr33r3krz5b97d1-wpengine.netdna-ssl.com/wp-content/uploads/2018/04/2018-04-27-11-52_01.pdf

uses a clear definition under Article 3. We agree with this:

'single-use plastic product' means a product made wholly or partly from plastic that is not conceived, designed and placed on the market to accomplish within its lifecycle multiple trips or rotations by being refilled or re-used for the same purpose for which it was conceived".

This definition is an inversion of the definition of reuse from the Packaging and Packaging Waste Directive. What the Directive does not include is a definition of reusable or refillable, nor is a minimum number of trips or rotations specified. Within the Packaging and Packaging Waste Directive this is acceptable as within the harmonised standards which support the Directive there is a definition of reusable packaging. This definition requires that a packaging which is reusable has a system of reuse (collection, reconditioning, supply) to enable the packaging to be reused.

For packaging, the systems for reuse have a fairly simple logic and can be seen in daily life – glass milk bottles to wooden pallets to plastic drums. However, for consumer products which contain plastic it is a more difficult to define. Certainly there are simple examples of refillable packaging – detergent bottles – but even for something as simple as a drinking it cup it is more difficult. A high street plastic lined paper coffee cup is probably not reusable as it is unlikely to sustain a hygienic washing cycle but it is refillable, the same applies to the plastic glasses used at water fountains.

For a majority of plastic containing products, ranging from industrial to agricultural to consumer, the decision as to whether a product is actually reused or is only used once is determined by the user not by the definition. Others are actually designed to only be used once, some of which without question will deposit macro and microplastics in the environment; fireworks, military and recreational ammunition, meteorological balloons, others are destined to end up in the environment by irresponsible or misinformed consumers – classic examples being straws, wet wipes, cotton buds.

So, whilst harmonisation with the rest of Europe on this definition is essential in the medium term, given the UK is likely to move first it is in the unique position of setting the standard. As noted above, almost every plastic article is potentially single use or potentially not, setting such



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a definition is likely to arise in legal challenges: either it will be too specific and thus not meet its needs or it will be too open and thus subject to legal challenges on a case by case basis.

Rather than attempting to define single use, it might be better to simply consider on a product by product or category basis whether or not it is reusable or refillable to an acceptable level. A number of assessment criteria could be used:

1. Does the plastic article / plastic containing article play an essential role or bring benefit to today's society?
2. Is the plastic article / plastic containing article designed to be deliberately released into the environment?
3. Is the plastic article / plastic containing article likely to be released into the environment?
4. Are environmentally benign alternatives available to the plastic / plastic constituent?
5. Are alternative articles available which by their design promote and enable their reuse or refilling over multiple trips, cycles or rotations?
6. Are there any safety or regulatory reasons why reuse or refilling is not possible?

Using these criteria, a matrix could be developed as to whether or not a plastic article falls under a new tax regime or restrictive measures.

As a second stage, a further layer of taxation should be applied to plastic articles / plastic containing articles which are not materially or organically recyclable or biodegradable within the market to which they are going to be sold. In the case of material recycling, a market for the recyclate needs to be established, e.g. if a coffee cup, sandwich pack or a drinks carton recycling process only recycles the fibres back to a market and the plastic / other constituents do not have a market then these cannot be considered recyclable.

2. Question:

What are the most important problems associated with single-use plastics, and why ?

Which polymer types are particularly problematic?

Which items are particularly problematic?

Plastic waste not only contaminates the environment when it inadvertently ends up as litter. It contaminates other waste streams too when mixed with them. Further, plastics contaminate each other as polymer types are usually incompatible for re-use with each other and need to be sorted from one another. Finally, plastics which are lightweight are extremely difficult to collect separately and when used for food packaging are often contaminated by the food itself.

Lightweight plastics therefore contaminate food waste collections creating a burden upon food waste treatment plants estimated annually to be approximately £27 million in extraction and disposal costs, as well as contaminating through micro-plastics the output of these plants, known as compost and digestate.



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1. Are there more environmentally friendly alternatives, currently available or possible in the future, to these types of single-use plastic items or their manufacturing processes and can they still offer similar benefits?
2. Should the government encourage biodegradability in plastics, and if so, how ?

Lightweight plastic products (such as straws, coffee pods, teabags, tableware) which are used for packaging of food can often be substituted by compostable materials (which are biodegradable in composting facilities). These are widely available on the marketplace and their use on existing extruding machines within plastic manufacturers is possible with no major modifications. Therefore no jobs losses or closure of existing plastic manufacturers would result from substitution of certain lightweight plastics by compostable plastics. By using compostable products it is possible to recycle them in composting facilities. The advantages of this is the reduced contamination of food waste with plastic and enhanced recycling and improved quality of compost returned to soil.

To enable higher recycling and recovery of compostable films, the Government can incentivise these by ensuring food waste collections are obligatory throughout England as they are in Scotland, Wales and Northern Ireland. Thus materials have a route back to recycling and recovery which currently in England they do not always have as less than 40% of councils have food waste collections.

Further, the UK Government can take action, as other EU nations have, to ensure food waste is only collected with bags that are suitable for organic recycling alongside the food waste they contain. By making food waste collections obligatory using certified compostable bags, Government would stimulate production of these, reduce food waste contamination, improve compost to soil quality, and reduce dramatically the plastic contamination of food waste collections, a major environmental and financial burden.

When discussing biodegradable plastics however, it is imperative that we discuss plastics which adhere to nationally and internationally recognised standards in which the claim “biodegradability” is supported by certification of how, when and where these materials biodegrade. Currently, for consumer products, biodegradability is intrinsically linked to compostability and organic recycling. For all consumer products, we strongly urge Government to seek to restrict the use of claims of biodegradability.

In the case of products which have a non-consumer market e.g. agriculture, aquaculture, arboriculture, and the product meets internationally recognised specifications for biodegradation in the relevant environment then biodegradable may be used.

Question 7. What proportion of the plastic that you produce is commercially recyclable and what are the barriers to increasing this and improving the grade it can be recycled to?

All certified compostable plastics can be commercially recycled in compost facilities. As stated above, the principle barrier to this is the lack of separate food waste collections enabling the



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return of these materials to composting. Theoretically whatever is certified compostable can be composted, ie organically recycled.

Another barrier is plastic pollution going to compost facilities as mentioned above. As these receive so much plastic contamination they are understandably aware of receiving further plastic inputs. We therefore have to ensure that materials going to compost plants are effectively compostable and eliminate from food waste collections plastic contamination.

Question 8. In your opinion, how can the tax system or charges play a role in delivering better environmental outcomes at this stage?

As we have said above it is fundamental that the packaging industry respects the Polluter Pays Principle and pays its fair share of packaging collection and recovery. This means revising totally the existing PRN system and introducing a contributory system in which materials that are easier to recycle and are effectively recycled are privileged with lower costs, whilst materials that are difficult to recycle and are effectively not recycled, pay higher contributions. This will drive redesign, use of fewer polymers in single products, use of compostable materials for organic recycling, and drive down plastic waste.

We believe that compostable plastics should pay the same contribution as “easily recyclable plastics” as they can be organically recycled. These contributions should then be directed towards those facilities that effectively recycle the materials through organic recycling.

What interventions should be implemented, and why?

As above

What behavioural effect would these interventions have, both on this stage in the supply chain, and more broadly?

As above

What would be the impact on your business?

As far as producers of compostable plastics are concerned, they are willing to contribute to full cost packaging recovery contributions provided that these are then destined to who effectively recovers these materials, ie compost plants. The impact on our businesses would be to increase sales due to increased recovery options and to clarify the status of compostable plastics in the UK.

Discarding and waste treatment

Overall it has to be clear that the UK waste management system is seriously underfunded. On average, a UK resident will pay council taxes from which circa £100/year/household is destined to



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- a. Waste collection
- b. Waste recycling
- c. Waste disposal
- d. Tackling littering and graffiti
- e. Street cleaning

This amount can differ from council to council and across the UK.

In comparison we know that citizens of other major European economies pay between 2 and 3 times as much per household for the same services and that these services are better at reducing littering, keeping streets clean, recycling waste. France, Germany, Belgium, Italy, the Scandinavian countries, all pay considerably more than in the UK. An average household in Oslo pays Euros 446/annum. The result is that the UK system is straining to improve performance without having the finances to pay for improved services. Where devolved government have directly invested in waste management, as in Wales, we have seen recycling levels rise considerably, accompanied by the simplification of collection systems.

We have seen that contributions from the existing EPR programme (PRNs) contribute very little. The burden of these costs is almost totally borne by councils, for household waste, and businesses, for business waste.

This is in contrast to the principle, to which the UK has formally and legally adhered, that the Polluter Pays. Those placing plastic materials onto the market do not pay the cost of collection, littering from them, recovery and recycling of them.

Therefore our answers to questions 17 and 18 are that the principle barrier to improved waste management and therefore reduced littering of these materials, increased recycling of them, is economic and not technological. Whilst certain laminate materials (plastics to paper for example) are impossible to recycle, these should be phased out through penalising them by making these materials pay higher PRN contributions.

ENDS