

Joint position on keeping plastics out of digestates and composts

The [Renewable Energy Association \(REA\)](#) and the [Anaerobic Digestion and Bioresources Association \(ADBA\)](#) are trade associations that represent operators of commercial anaerobic digestion (AD) facilities in the UK. The REA also represents operators of commercial composting facilities. This document covers issues relevant to plastics and biodegradable waste materials supplied for composting or AD treatment, including steps that operators, local authorities and the packaging industry can take to help achieve our aim for plastics-free composts and digestates.

The biowaste recycling sector – comprising composting and AD – plays a key role in the move to a more circular economy. The sector uses food, garden and other biodegradable wastes from businesses, households and other premises to make composts and digestates that contain vital nutrients and organic matter and, in the case of AD, renewable energy.

There is an urgent need to tackle plastic pollution in our soils, rivers and seas. Plastics pollution has gained considerable attention in recent months, which is welcomed by the biowaste sector. As an industry we are committed to producing digestates and composts of the highest quality.

When recycling biowaste and reducing the amount of plastic sent for composting or digesting, the [waste management hierarchy](#) should be adhered to at all times. At the top of the hierarchy, producers and retailers of food and drink should avoid the use of unnecessary plastic in food packaging, which is the most effective way of minimising the amount of plastic entering the food waste stream. Where plastic is required, the food supply chain should use products suitable for recycling through the dry recyclates infrastructure. If biodegradable packaging is intended to be composted, 'dry' digested or 'wet' digested then undergo a phase of composting after use, an independent body must certify that the packaging product conforms to a standard that sets appropriate criteria¹.

It is also in the power of every individual to put their waste in the right bin. Incorrect use of household waste and recycling collections causes additional, unnecessary cost for local authorities, which takes their resources away from other vital services and if not effectively managed could contaminate the end products, compost and digestate. Communication with individuals is vitally important and can significantly reduce the level of plastics and other contamination present in food/garden waste. The operators of AD and composting plants often work closely with the local authority to monitor and improve feedstock quality. Businesses too should take appropriate steps to ensure that contents of bins destined for biowaste recycling contain only suitable materials.

Plastics can be present in wastes delivered to composting and AD facilities due to:

- Use of plastic bags to line food waste caddies (where accepted by the local authority and plant operator)
- Unclear guidance
- Over packaged food products
- Incorrect use of bins for 'biodegradable only' wastes

It is well known that supplying caddy liners increases the amount of food waste that is collected. Due to the recent awareness of the environmental issues that plastics can create if not correctly disposed or recycled, the food waste recycling sector is getting an increasing number of enquiries questioning why they are being encouraged to put plastic caddy liners in their food waste caddy.

Due to the presence of the plastics in both food waste and garden waste, the food waste recycling supply chain organisations - from the local authority through to the recycler - all try to minimise the amount of non-target materials which are sent for recycling. The non-target materials include plastics.

¹ For making compost products acceptable standards are EN 13432, EN 14995 or ASTM D6400. For making digestate products acceptable standards are BS EN 13432, DIN V 54900 or ASTM D6400.

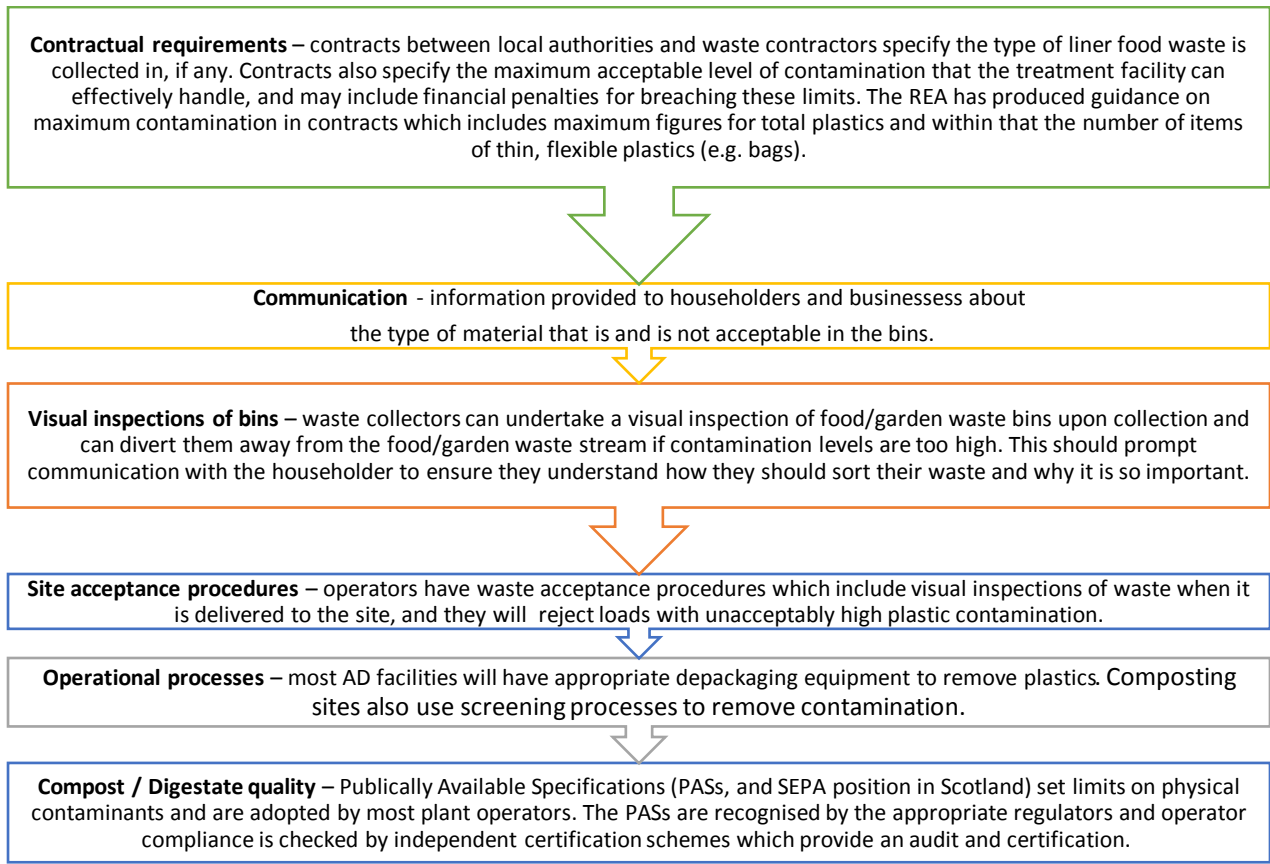
Operators of AD and composting plants work closely with their local authority to agree what food and garden waste they will recycle. Where food waste is collected for recycling this will include what type of caddy liners are acceptable, how quality will be monitored and how to improve feedstock quality. Where the food waste is going to AD, having consulted with their recycling plant, local authorities may specify conventional plastics rather than compostable plastic caddy liners. Conventional plastic liners are cheaper than compostable liners and all liners, irrespective of what material they are made of, are removed before the food waste is digested if the treatment is 'wet' digestion only. (Compostable liners can be fed into 'dry' AD systems and 'wet' AD systems where digestion is followed by a phase of composting the separated solids. Conventional plastic liners can't be fed into such systems.) Businesses too should take appropriate steps to ensure that contents of bins destined for biowaste recycling contain only suitable materials.

Local authorities communicate with their residents, providing them with information on the best way to send their food and garden waste for recycling including what materials can and cannot be placed in these bins. Communication with individuals is vitally important and can significantly reduce the level of plastics and other contamination present in both food and garden waste. It is in the power of every individual to put the right waste in the right bin.

When collecting biowastes the collection crews may carry out a visual inspection. Any bins containing non-target materials will not be collected and the resident told why they were unable to empty the bin.

On arrival, both composting and AD facilities will inspect the biowaste against the criteria they have agreed with their local authority or waste supplier. Contaminants are largely removed but if a biowaste delivery is highly contaminated it will be rejected. During the recycling process, AD and composting facilities use various technologies, including manual picking and mechanical sorting (e.g. screens and wind sifters), to remove plastic and other contamination. This means that residual plastics (e.g. from caddy liners or carrier bags) are removed as part of this. The plastic waste is processed through the recovery or disposal route that is the highest possible, affordable and practicable option in the waste management hierarchy. Most often it goes to Energy from Waste facilities, landfill being the less preferred alternative. Most biowaste treatment operators meet strict plastic limits set in Publicly Available Specifications (PASs, which set minimum quality standards for composts and digestates) before their fertiliser and soil conditioning products can be used in markets, including agriculture.

The following are measures in the food waste recycling chain that aim to address plastic contamination (these are not exhaustive).



The biowaste industry has an ongoing project focussed on improving quality – the Quality Action Plan for digestate and compost (QAP) – which involves a number of industry organisations working together to collate and disseminate information and guidance on good practice for plant operators and collectors, such as how to maximise removal of plastic contaminants.

FAQs

What happens to the plastic bags used as caddy liners?

In some areas, the local authority has decided to allow food waste to be collected in plastic bags as opposed to certified compostable liners or no liners.

Before allowing this, the local authority should ensure that the plant operator accepting and treating the waste has suitable operational equipment to ensure that composts and digestates are of adequate quality, in line with [guidance that has been published by WRAP](#).

What about small amounts of plastic which aren't obviously present (e.g. plastic used in some teabags)?

The biowaste sector is clear that the best way of producing high-quality digestate and compost is through the provision of feedstock that is plastic-free. Some teabag manufacturers are moving away from the use of plastics as a sealing product and the biowaste sector welcomes this move.

What about microplastics?

Microplastics are an increasing subject of research and an issue that society at large must understand and address as quickly as possible.

The biowaste sector is seeking to identify if and where microplastics may be entering the food/garden waste recycling process and how this can be avoided.

Further info

REA guidance on maximum plastics contamination in feedstocks <http://www.organics-recycling.org.uk/page.php?article=2904>

Standards and Certification Schemes

	Publicly Available Specification	Certification Scheme
Compost	PAS100	Compost Certification Scheme
Digestate	PAS110	Biofertiliser Certification Scheme

Digestate

- Biofertiliser Certification Scheme - <http://www.biofertiliser.org.uk/>
- PAS110 - <http://www.wrap.org.uk/content/bsi-pas-110-producing-quality-anaerobic-digestate>
- AD Quality Protocol (England, Wales, Northern Ireland) - <https://www.gov.uk/government/publications/quality-protocol-anaerobic-digestate>
- Position Statement of Regulation of Outputs from AD (Scotland) - <https://www.sepa.org.uk/media/219842/wst-ps-016-regulation-of-outputs-from-anaerobic-digestion-processes.pdf>

Compost

- Compost Certification Scheme - <http://www.qualitycompost.org.uk/>
- PAS100 - <http://www.wrap.org.uk/content/bsi-pas-100-producing-quality-compost>
- Compost Quality Protocol (England, Wales, Northern Ireland) - http://www.qualitycompost.org.uk/upload/cqp_2012.pdf
- Regulation on outputs from composting processes (Scotland) - <https://www.sepa.org.uk/media/219843/wst-g-050-regulation-of-outputs-from-composting-processes.pdf>

Information on certified compostable products:

http://www.dincertco.tuv.com/search/companies_with_product?locale=en&title_id=85

<http://www.okcompost.be/en/certified-products/>

<http://www.renewableenergyassurance.org.uk/compostable-packaging-bio-based-materials/certified-products>

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