

SCOTTISH ENVIRONMENT PROTECTION AGENCY

Plastic contamination in digestate: Lessons learned

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World Biogas Expo
June 2022

A PRESENTATION TO THE WORLD BIOGAS EXPO

A SHORT HISTORY...

Mandatory separate collection of food waste began in 2014

Even before that, quality assurance schemes and trade bodies had negative views on waste derived fertilisers

Market demand and quality are closely connected

Ultimately, the market dictated what was acceptable



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SEPA
Guidance

Food waste

Purpose

This Food Waste Management Guidance sets expectations across the food waste supply chain...

Background

Section 34 of the *Environmental Protection Act* respect to the management of waste...

The Food Waste Hierarchy

Section 34 (2A) of the EPA, places a duty on reasonable steps to apply the waste hierarchy.



Figure 1: Food waste hierarchy

Preventing food waste across the supply chain should, where possible, be used by redistributing surplus food for human consumption...

SEPA Guidance | WST-G-049 | version 1 | issued Decem

wrop Working together for a world without waste

PAS 110:2014

Specification for whole of separated fibre derived from source-segregated bio-waste



SEPA
Position statement

Regulation of Outputs from Anaerobic Digestion

Background

Anaerobic digestion (AD) is a managed biological process in naturally occurring micro-organisms in the absence of oxygen called 'digestates', which is rich in nutrients such as nitrogen, phosphorus, potassium and other minerals...

Regulation of AD Outputs

The regulation of AD outputs depends upon the following criteria:

- Whether the digestate meets the specification in Scotland¹
- The conditions set out in SEPA's Position on the Use of Digestates
- Whether the digestate was produced using only agricultural non-wastes (e.g. energy crops grown specifically for AD)

Digestates derived from waste materials are normally regulated under waste management legislation. However, in certain circumstances, digestates can be used for agricultural purposes.

Note, that in all cases the digestates can only be used for agricultural purposes.

The use of the digestates must comply with all other regulatory requirements. For use in agriculture, such requirements include:

- CAR Diffuse Pollution General Binding Rule (GP GB)
- Prevention of Environmental Pollution From Agriculture (PEPA) Code and the Four Point Plan
- Nitrate Vulnerable Zones Regulations (NVZ) regulations

Part 1- SEPA's Position on the Use of PAS110 Digestates

SEPA considers that the application of waste controls to the use of digestates from AD processes would be disproportionate. However, the use of digestates from AD processes should be controlled under the conditions listed below.

- AD facilities and processes that produce the digestates should be subject to environmental authorisation and operate in compliance with the conditions listed below.

¹ Such as limits on physical contaminants (including plastic) as set out in the Diffuse Pollution General Binding Rule (GP GB).

Information on the Diffuse Pollution regime including copies of Code of Practice can be found at: <http://www.sepa.org.uk/information-and-consultation.aspx>


SEPA Position Statement | WST-P-214 | version 3 | issued February 2014




Written by
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Work undertaken between October 2013 and February 2014

Cover images: Top – plastic fragments from a biogas plant
Bottom – past example of visible plastic in grass



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Work undertaken February 2014

Cover images: Domestic food waste

economia

Understanding Microplastics in the Scottish Environment

The sources, fate and environmental impact of microplastics in the Scottish terrestrial, freshwater and marine environment

Simon Hann
Olly Jamieson
Alice Thomson
Chris Sherrington
28th November 2019

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Lessons learned

Quality is key at all stages of the chain

Link between high quality recycling and LA recycling targets

Communication between all sectors in the chain needed

Funding

Research



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