



Update on By-product Legislation

Presentation to Coal Research Forum, April
2010

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Tuesday, 20 April 2010

Consultation on the legal definition of waste and its application

January 2010

Who has made the biggest difference on waste management issues in the past five years?



a) Stavros Dimas
European
Commissioner for the
Environment
2004 - 2010



b) Hilary Benn
UK Secretary of State
for the Environment
2007 -



c) My local authority

Can we fix it?

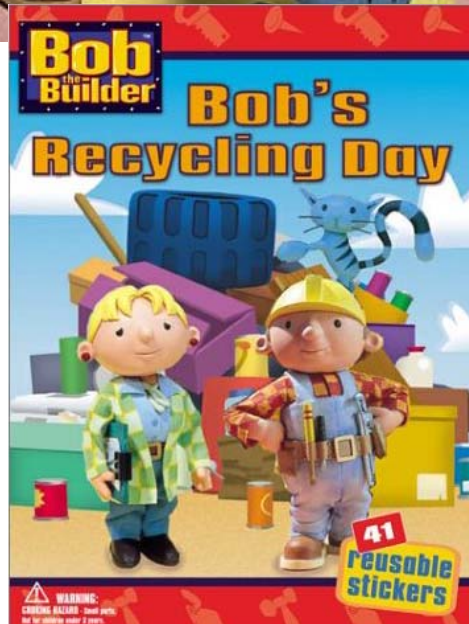
Reduce, Reuse, Recycle

Ask students if they help with recycling at home or at school. They may have seen the triangular loop of arrows on

packages that the material can be recycled. One of the three arrows indicates the recycling process, and another arrow points into new recyclable materials. The recycling loop avoids landfills and

For Discussion:

What does it mean to Reduce, Reuse, and Recycle?



Do Your Part!

Here are ways you can help to reduce, reuse and recycle!

- Turn off lights and other electrical equipment when you are not using them.
- Don't leave the water running while you brush your teeth or wash your hands.
- Close doors and windows to reduce the need for air conditioning and heating.

Can you think of other ways to help keep the environment clean?



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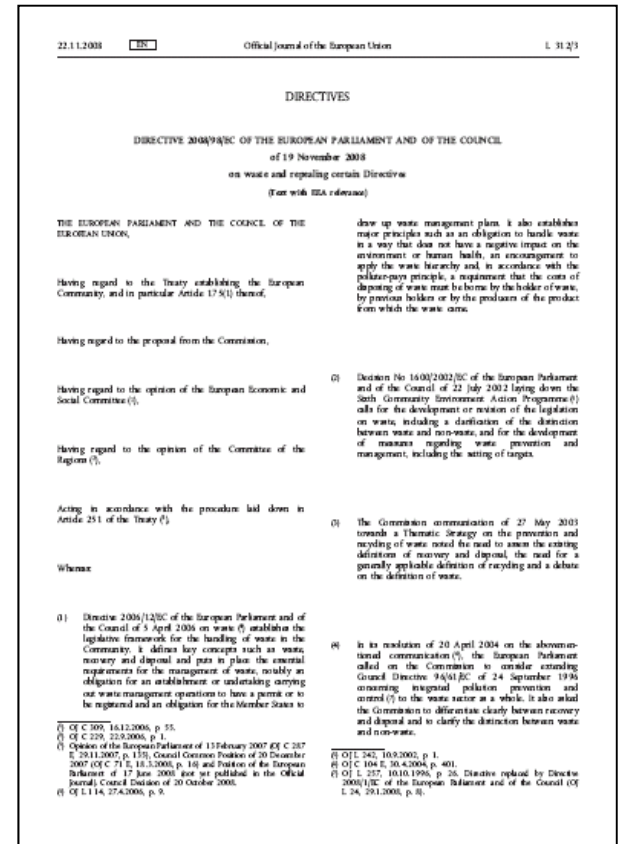
1. Waste Framework Directive
 - By-product definition
 - End-of-waste criteria
2. WRAP Quality Protocol
3. Landfill Tax
4. REACH

Definition of waste

- “Waste” means any substance or object which the holder discards or intends or is required to discard.
- Definition comes from the Waste Framework Directive
 - This is a European Directive, transposed into UK law through the Environmental Permitting Regulations

Revised Waste Framework Directive (2008/98/EC)

- Entered into force on 12 December 2008
- An explicit definition of the term “by-product” enshrined in EU law for first time
- Incorporates case law resulting of European Court of Justice rulings since last revision of WFD
- Also allows for waste to cease being a waste after a recovery operation



By-product

A substance or object, resulting from a production process, the primary aim of which is not the production of that item, may be regarded as not being waste referred to in point (1) of Article 3 but as being a by-product only if the following conditions are met:

- a) further use of the substance or object is certain;
- b) the substance or object can be used directly without any further processing other than normal industrial practice;
- c) the substance or object is produced as an integral part of a production process; and
- d) further use is lawful, i.e. the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts.

So, are ashes and gypsum by-products?

- Good question!
 - Industry view has always been yes – all tests can be met
 - Current view of the Environment Agency under current UK legislation is:
 - Yes for gypsum, based primarily on 100% sale
 - No for ashes
- DEFRA has to transpose the revised Framework Directive into UK law within 2 years of it coming into force at European level
 - i.e. December 2010
- Good point to have the discussion again
- And if EA still considers PFA a waste?



End-of-waste status

Certain specified waste shall cease to be waste within the meaning of point (1) of Article 3 when it has undergone a recovery, including recycling, operation and complies with specific criteria to be developed in accordance with the following conditions:

- (a) the substance or object is commonly used for specific purposes;
- (b) a market or demand exists for such a substance or object;
- (c) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and
- (d) the use of the substance or object will not lead to overall adverse environmental or human health impacts.

The criteria shall include limit values for pollutants where necessary and shall take into account any possible adverse environmental effects of the substance or object.

Priority substances for “end-of-waste” criteria

Subcategory I.1	Breakdown into subtypes and materials	Remarks
<ul style="list-style-type: none"> ▪ Metal scrap of iron and steel, aluminium, copper 	<p>e.g. different grades of ferrous scrap, different grades of aluminium scrap, different grades of copper scrap</p>	<p>Only certain fractions contaminated with coatings or oil need additional data on leachability of concern in transport and storage operations.</p>
<ul style="list-style-type: none"> ▪ Plastics 	<p>PET, PVC, HDPE, LDPE and PS are the main recyclables.</p>	<p>The sub-streams candidates for EoW criteria would cover mostly highly homogeneous and clean pre-consumer plastics fractions from industry, but also post-consumer household and commerce separate collection fractions for recycling. All other post-consumer plastics and pre-consumer mixed plastics are covered by the "solid waste fuel" stream under Category II.</p>
<ul style="list-style-type: none"> ▪ Paper 	<p>e.g. cardboard/ newsprint/ graphic paper</p>	
<ul style="list-style-type: none"> ▪ Textiles 	<p>for reuse/ for recycling/ natural fibres/synthetic fibres/industrial fractions/ household fractions</p>	<p>EU-wide quality harmonisation not detected, even though recycling and especially reuse are commonplace in the EU. Mixed fibre textiles are covered by the "solid waste fuel" stream under Category II.</p>

Priority substances for “end-of-waste” criteria

▪ Glass	e.g. flat / beverage clear / beverage coloured / electronics	EU-wide quality harmonisation not detected, even though recycling of glass takes place in the EU (in particular packaging glass pursuing targets under the Packaging Directive 94/62/EC)
▪ Metal scrap of Zinc, Lead, and Tin	e.g. different grades of Zinc waste, different grades of Lead waste	Environmental issues concerning leaching during storage need to be specifically documented.
▪ Other metals	Cd, Co, Ni, Hg, alkaline with further breakdown	No environmental information available, but it is assumed that recycling has large benefits, as reported for other better documented metals. Environmental issues concerning leaching under storage need to be specifically documented.
Subcategory I.2		
▪ C&D waste aggregates	e.g. concrete / ceramics / tiles / sand / stones	Environmental issues concerning leaching are key and will need to be specifically documented.
▪ Ashes and slag	e.g. coal power plant bottom ash, coal power plant boiler slag, municipal waste incineration bottom slag	Environmental issues concerning leaching are key and will need to be specifically documented
▪ Biowaste materials stabilised for recycling	e.g. different compost types, different anaerobic treatment digestates	Environmental issues concerning leaching are key and will need to be specifically documented. EU-wide quality harmonisation currently discussed, but not yet achieved

Agree to disagree for the moment

- Option A
 - Lengthy, costly legal battle
 - Would involve one generating company breaching the law and the EA deciding to take a case
- Option B
 - Judicial Review
 - If there is an improper (irrational) exercise of power, not a re-evaluation of the merits of a decision
- Option C
 - Find a mutually acceptable way solution without involving lawyers

How many lawyers does it take to change a light bulb?



Waste and Resources Action Programme

Material change for a better environment

- WRAP works with partners to prevent waste, promote recycling and develop markets for valuable products.
- WRAP works with the public providing information and tools that support recycling and reduces food waste.
- This helps bring measurable gains to the economy and long term benefits to the environment.



Quality Protocols in action

- Biodegradable waste (source-segregated) for compost
 - Biodegradable waste (source segregated) for anaerobic digestate
 - Cooking oil and rendered animal fat
 - Glass
 - Plastics (non-packaging)
 - Tyres – tyre-derived rubber material
 - Plasterboard
 - Lubricating oil
-
- Intention is that the Quality Protocol meets the requirements of the “end-of-waste” criteria in the revised Waste Framework Directive

Ash Quality Protocol - Progress to date

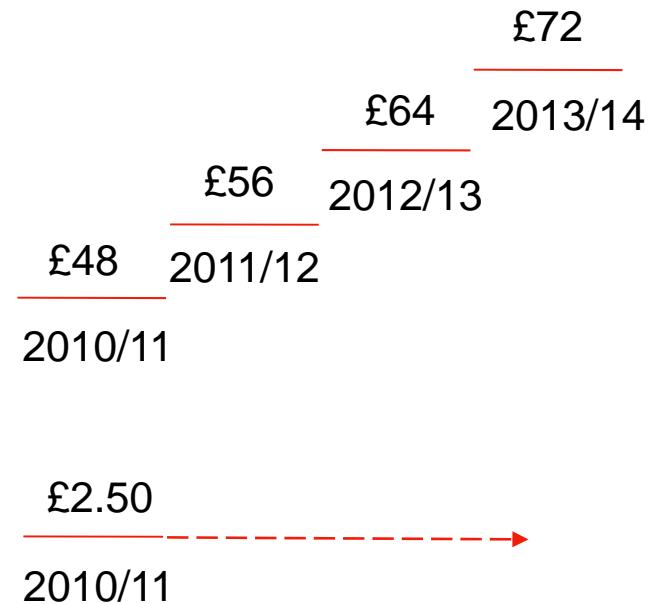
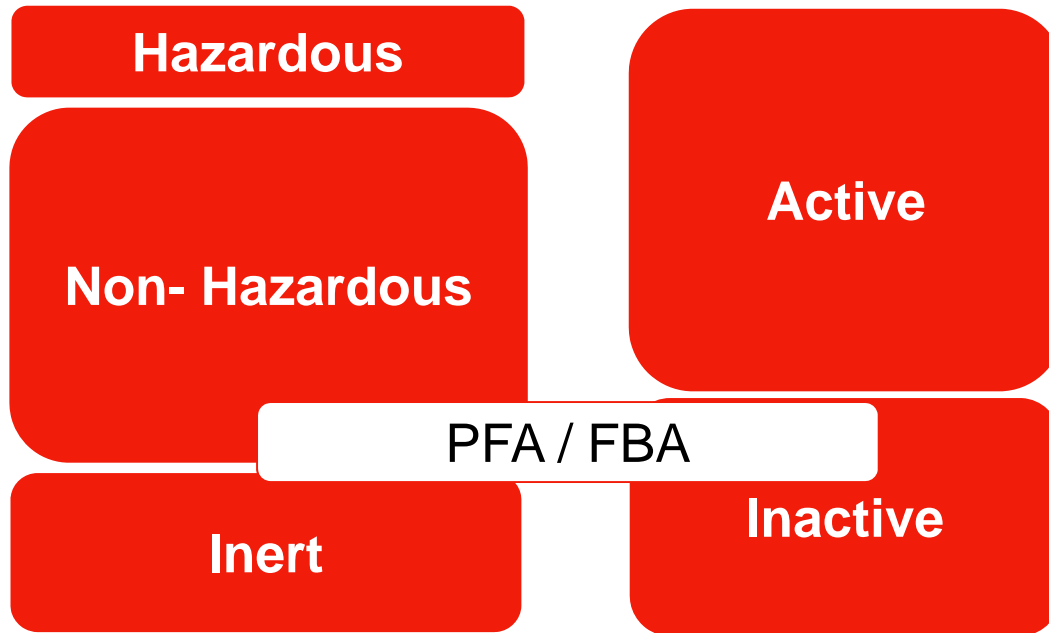
- Long, tortured history
- Process restarted in earnest in January 2008
- Industry was part of the Technical Advisory Group (TAG)
 - Responsible for assessing any risks associated with use of PFA
 - Agreed that risk was insignificant, provided industry good practice guides followed (UKQAA, BRE CoP)
- Consultation in Summer 2008 on
 - Draft Quality Protocol
 - Technical Report
 - Risk Assessment Report
 - Financial Impact Assessment

In the meantime.....

Proposed changes to landfill tax

Environmental
Regulation

Landfill tax



State of play April 2010

Government will not progress with Landfill Tax proposal

- Small print:
 - Only ash sent to monofill will be taxed at lower rate
 - Active / Inactive categories will be renamed Higher / Lower rate
 - Tests for lower rate will be redefined
 - Lower rate guaranteed for the next two years

Quality Protocol

- Protocol agreed with EA to remove waste stigma from ash destined for “bound” and “grout” applications, but need to agree testing to demonstrate compliance
- Sent to Europe for approval – must not present “barriers to trade”
- Joint Industry / EA characterisation exercise commenced on ash for “unbound” applications
 - Upflow percolation “column” experiments on a range of UK ashes
 - Simultaneous conventional leachate tests
 - EA hopes to be able to link the two

REACH

- REACH, the Registration, Evaluation, Authorisation and Restriction of Chemicals, is an EU regulation controlling chemicals and their safe use. It came into force on 1 June 2007.
- REACH aims to improve the protection of human health and the environment through the better and earlier identification of the properties of chemical substances.
- Under REACH, those who place chemicals on the market will be responsible for understanding and managing risks associated with their use.



REACH state of play



- Substances had to be “pre-registered” by Nov 2008
- 2,428 substances registered so far
- Registration process to be completed by end 2010

- Substance Information Exchange Fora established for groups of pre-registrants
 - SIEF charges for membership and for sharing technical information
 - Substance Information Profile (SIP) defines boundaries of characteristics

- Ashes registered as “coal combustion products”
 - Registration being managed through ECOBA and VGB
- Gypsum registration being managed by Eurogypsum

- Cost of registration is €30k per substance, per legal entity

Summary

- Waste Framework Directive
 - By-product and end-of-waste
- WRAP Quality Protocol
- Landfill Tax
- REACH



Can we fix it?

Yes, we can!



Uhhh...
I think so.



Backup

Tuesday, 20 April 2010

Waste Hierarchy

The following waste hierarchy shall apply as a priority order in waste prevention and management legislation and policy:

- (a) prevention;
- (b) preparing for re-use;
- (c) recycling;
- (d) other recovery, e.g. energy recovery; and
- (e) disposal.

- **Waste Protocols Project**

- We're examining a variety of waste materials through this project. By looking closely at each waste we're able to establish if and how it can be fully recovered and turned into one or more alternative, quality products. If it can, it can lose the stigma of "waste" and can present a number of potential benefits for the producer, the recycler and the end user. It encourages businesses to transform wastes into valuable resources, rather than send them to landfill.
- Waste management regulations, which mainly fall under the EU Waste Framework Directive, are designed to protect human health and the environment. In doing so, however, they can impose administrative and legislative burdens on business. The legislation can also be complex and it can be difficult for businesses to establish when the wastes they produce are fully recovered and the legislation no longer applies. The Waste Protocol Project addresses these two issues.
- Where possible, we produce a quality protocol for each waste material, which clearly explains what has to be done to produce a fully-recovered, non-waste, quality product.
- The project is a partnership between us, WRAP (Waste & Resources Action Programme), Northern Ireland Environment Agency and Welsh Assembly Government.
The project is so successful it was 2009 winner in the "better regulation" category of the UK's premier cross-industry accolades, the National Business Awards.

- **What are the benefits?**

- The project has far-reaching benefits for business as well as for the environment. We estimate that protocols for the first 12 materials alone will create around £1 billion in business savings and increased sales of waste-derived products by the year 2020 – the latter through strengthening existing markets and stimulating new ones. By following the quality protocol producers can create sustainable resources in which end users can have total confidence.
- Quality protocols for these first 12 materials should over the same time period divert around 17 million tonnes of waste from landfill, preserve 14 million tonnes of raw materials and avert at least 2.1 million tonnes of carbon dioxide equivalent emissions (CO₂e).

- **State of progress for each material**

- We have published **final** quality protocols for these waste materials:

- Biodegradable waste (source-segregated) for compost
- Biodegradable waste (source segregated) for anaerobic digestate
- Cooking oil and rendered animal fat
- Glass – flat
- Plastics (non-packaging)
- Tyres – tyre-derived rubber material
- Plasterboard
- Lubricating oil

- We have published **draft** quality protocols for these waste materials:

- Pulverised fuel ash and furnace bottom ash

- The following materials are currently in UK public consultation:

- None currently.

- Quality protocols for the following waste materials are currently being considered by the project:

- Paper sludge ash
- Incinerator bottom ash
- Steel slag

- The following waste materials are currently at initial stages of assessment:

- Glass – CRT
- Marine-dredged materials
- Poultry litter ash
- Tyres – tyre bales