

## RELEVANT LEGISLATION IN BRIEF

### Landfill Regulations

- Re-classification of landfill sites;
- End of co-disposal (mixing of wastes);
- Requirement of pre-treatment; and
- Liquid and certain hazardous wastes banned.

### Hazardous Waste Regulations

- Replacing Special Waste Regulations 1996
- Incorporating revised Hazardous Waste List
- To implement procedures for control and monitoring movements of hazardous waste

### Waste Acceptance Criteria

- Leaching limit values for waste to landfill;
- Setting of limits of contaminants permitted;
- Testing standards and procedures

### Waste Oil Directive

- Safe management of waste lubricating oils;
- Priority to regeneration, where technically, economically and organisationally feasible;
- Otherwise combustion under environmentally acceptable conditions.

### End of life vehicles (ELV)

- Regulations apply to sites used for the storage and treatment of ELVs;
- Operators to apply for site licence if accepting vehicles that have not been de-polluted;
- Minimum technical standards for all sites.

### Waste Electrical and Electronic Equipment Directive (WEEE) and Restriction of Hazardous Substances (RoHS) Directive

#### Combined these 2 Directives will:

- Affect producers, sellers and recyclers of electrical/electronic equipment;
- Prevent production of waste electrical and electronic equipment;
- Improve the environmental performance of all operators involved in the manufacture, supply, use and recycling and recovery;
- Restricts the use of various hazardous substances and lead, mercury, cadmium, hexavalent chromium will be banned in new products (RoHS);
- Encourage clean design.

## LEGISLATION AND REGULATIONS RELEVANT TO HAZARDOUS WASTE

- **Duty of Care Regulations (EPA 1990 Section 34) (Issue 2 of Series 1)**
- **Hazardous Waste Regulations and the European Waste Catalogue - EWC (including the Hazardous Waste List) (Due 2005) (Issue 3 of Series 1)**
- **Landfill (England and Wales) Regulations 2002**
- **End of Life Vehicles Directive 2000 (ELV)**
- **Waste Electrical and Electronic Equipment Directive 2002 (WEEE)**
- **Restriction of Hazardous Substances in Electrical and Electronic Equipment (ROHS) Directive 2002**
- **Packaging (Essential Requirements) Regulations 2003**

### SOURCES OF INFORMATION

#### Environment Agency Wales REGULATOR AND LICENSING

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

#### NetRegs legislation explained

[www.environment-agency.gov.uk/netregs](http://www.environment-agency.gov.uk/netregs)

#### Waste Resources Action Plan

[www.wrap.org.uk](http://www.wrap.org.uk)

#### Envirowise - (free) environmental advice

[www.envirowise.gov.uk](http://www.envirowise.gov.uk)

#### FSB - Federation of small businesses

[www.fsb.org.uk](http://www.fsb.org.uk)

#### CIA - Chemical Industries Association

[www.cia.org.uk](http://www.cia.org.uk)

N.B. BRASS is not responsible for the content of external internet sites

**Each week a different sector of industry or waste type will be discussed in these briefing notes, which can be downloaded from the website below.**

N.B.: These notes are merely a guidance and should not be considered as advice from any of the parties contained within this leaflet.

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## MANAGING HAZARDOUS WASTE



In this third and final series of business briefing notes, published by the BRASS Centre, attention is focussed on specific types of waste. General issues concerning the management of specific types of waste are addressed and some basic guidance is provided. Issue 2 of Series 3 highlights the management of hazardous waste, an important waste group because of its impact on the environment and human health. For information on the Hazardous Waste Regulations and European Waste catalogue (EWC), see series 1/issue 3. This leaflet is based on data gathered from the National Waste Survey 2003-2004.

Series 3/Issue 2

## HAZARDOUS WASTE – NEED TO KNOW

- Waste is hazardous when it contains substances or has properties that might make it harmful to human health or environment (using H1-H14 in Annex III of Hazardous Waste Directive);
- Almost half of all hazardous waste goes to landfill;
- July 2004 - End of co-disposal, mixing of hazardous and non-hazardous waste no longer permitted;
- Also banned: oxidizing, corrosive, explosive, flammable wastes and some clinical wastes;
- Only 10 to 15 landfill sites licensed to accept hazardous waste (none in Wales or London);
- 2005 - Hazardous Waste Regulations will change the definition of hazardous waste;
- Some newly hazardous wastes create, including end-of-life vehicles (ELV), fluorescent tubes, cathode ray tubes (CRT), certain batteries, pesticides; and
- The amount of hazardous waste produced and the number of producers will grow significantly.

## IMPLICATIONS FOR YOUR BUSINESS

- Hazardous and non-hazardous wastes have to be separated and treated before disposal;
- Hazardous waste sent to landfill will have to meet Waste Acceptance Criteria (WAC);
- Increase in transport and transport cost of Hazardous Waste due to travel distances;
- 'Polluter pays': rising waste management costs will be passed on to producers;
- Businesses will have to register as Hazardous Waste Producers (see exemptions below); and
- Producers that don't have to register will need to dispose of their Hazardous Waste in compliance with the Duty of Care Regulations.

## EXEMPT PRODUCERS

Premises exempt from notifying as HW producer include those who produce less than 200 kgs of hazardous waste (e.g. 10 small tv's or 500 fluorescent tubes or 14 lead acid batteries or 5 small fridges) a calendar year. Exemption will only apply when the waste is removed by registered or exempt carrier. Examples of possible exempt producers are:

- Shops
- Offices
- Residential and nursing homes
- Educational establishments

## LIST OF COMMON HAZARDOUS WASTES AND THEIR EUROPEAN WASTE CATALOGUE CODES

(EWC code in Red and very small quantities in blue).

- Fridges and Freezers **20 01 23\***
- TV and IT monitors **16 02 13\***
- Fluorescent tubes **20 01 21\***
- Solvents **chapter 14\*** (or **20 01 13\***)
- Photo chemicals **chapter 09\*** (or **20 01 17\***)
- Nickel Cadmium Batteries **16 06 02\***
- Lead Acid (Car) Batteries **16 06 01\***
- Mercury Batteries (Button type) **16 02 03\***
- Waste paint **chapter 08\*** (or **20 01 27\***)
- Waste pesticides **20 01 19\***

## MAIN GROUPS OF INDUSTRIAL HAZARDOUS WASTE PRODUCERS AND WASTES

Of the 5m tonnes of hazardous waste generated in 2002, 39% went to landfill. Major hazardous waste sources, producing almost 60% of the total, are:

- Construction & demolition industry waste including asbestos (21% of the total; **EWC chapter 17\***). The C&D industry was excluded from the National Waste Survey. A separate similar survey will be held soon.
- Oils, oily mixtures and oily wastes (21% of the total, **EWC Chapter 13\*** excluding vegetable and/or edible oils). The best waste management option is minimisation - change to more modern high quality oils that have a longer life span, resulting in less waste oil and less maintenance cost. Other options are oil regeneration— making a new product out of old oil or recovery by extracting energy by burning waste oil. Landfill is not an option: liquid waste is banned.
- Organic chemical process (12% of the total, **EWC chapter 07\***) Hazardous wastes in this group include: solvents, washing liquids, filter cakes, sludges, still bottoms, solids. Some of these can be regenerated, others can be recovered (energy). Some are banned from landfill. If they go to landfill they need to be treated to reduce the volume and/or hazardousness;
- Inorganic chemical process waste (7% of the total, **EWC chapter 06\***) Hazardous wastes in this group include: Acids, bases, salts and metallic oxides, phosphorous chemicals, silicones, nitrogen chemicals, fertiliser waste, activated carbon, soot, halogens, sulphur chemicals, heavy metals waste, waste containing arsenic. Some of these substances can be re-used, recycled or regenerated, others can be recovered (energy). Some may be banned from landfill. If they do go to landfill they need to be treated to reduce their volume and/or hazardousness.

## WASTE MANAGEMENT HIERARCHY

**MINIMISATION** is at the top of the best practise hierarchy. Because of its environmental impact, hazardous waste needs minimisation more than any other waste. At a time when the price of management of hazardous waste is increasing, the need to minimise output is financial as well as environmental. Hazardous waste can be minimised:

- by reducing the volume of the waste; or
- by reducing its hazardousness.

**Volume** minimisation: A major multi-national manufacturer of electrical appliances:

*"...we redesigned our circuit boards. The new design has all hazardous substances located in one pre-scored corner which can be snapped off, rendering the rest of the board non-hazardous..."*

**Hazardousness** minimisation: A manufacturer of wood products:

*"...we only use water based paints and varnishes. We don't need solvents anymore and our waste is now generally non-hazardous..."*



**RE-USE** or **RECYCLING** of hazardous substances is quite difficult because often the substances change or get contaminated during the production process.

**Re-use:** A manufacturer of telecom appliances:

*"...we have devised a process that recovers 90% of lead soldering waste, that can now be re-used..."*

Most waste oils, solvents, fluorescent tubes, car batteries and end-of-life vehicles can and should be recycled. Contaminated packaging can be recycled depending on the original contents. After draining and cleaning the drums/bottles can be recycled. Clean packaging with rags first. Remember: used cleaning liquid or rags to hazardous waste disposal.

## INCINERATION WITH ENERGY RECOVERY

means hazardous waste is incinerated at very high temperatures and the resulting energy is used for heating and power. Unlike in most other European countries this option is not very popular in Britain.

Bottom of the hierarchy real end disposal options are **INCINERATION WITHOUT ENERGY RECOVERY** Last and least disposal to **LANDFILL**.