

## THE WASTE AUDIT OR GET TO KNOW YOUR WASTE

There are **TWO Key Elements** to a basic waste audit:

- ◆ Know the waste that you produce
- ◆ Know how much time and money waste costs your business

Steps to take:

1. Walk around buildings and grounds and identify sources and types of waste. Identify all activities that produce waste (e.g. toilets, renovations, kitchen/restaurant, maintenance, factory, production processes, stock area, engineering, garden, office). Don't forget one-offs: old computers, machinery, office furniture, DIY or building wastes;
2. Identify resource and process management problems (too much stock, end of line products, high wastage on production line, machine maintenance, energy consumption);
3. Identify total cost of waste (treatment, handling, storage, transport, final disposal, but also resource loss, loss of labour due to process/maintenance problems, energy and water loss, loss of working space);
4. Identify hazardous wastes and consider how they can be replaced with a non hazardous products;
5. Involve all staff in environmental and waste issues and elect a 'Waste Champion'.

## WASTE MINIMISATION (RESOURCE EFFICIENCY)

The best way to deal with waste is to reduce the amount of waste you produce:

- ◆ Re-design or rethink your packaging. Focus on packaging going out as product not as waste.
- ◆ Select raw material before feeding into process; off spec fall-out (before shaping) can be used or resold for other purposes
- ◆ Increase process control and machine maintenance to prevent stop/start waste, down-time and increase machine lifespan.
- ◆ Stock keeping and demand monitoring;
- ◆ Avoid use of disposables; use re-washable protective clothing, cleaning rags, mugs/cups.
- ◆ Use materials with longer life spans;
- ◆ Reduce hazardous qualities of your products by changing to water based paints and varnishes or use waxes
- ◆ Computerised system to calculate required quantities for process.

## RELEVANT LEGISLATION AND REGULATIONS

- 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
- Producer Responsibility Obligations (Packaging Waste) Regulations 1997 (See page 9 of the user's guide from DEFRA first)
- Pollution Prevention Control (PPC) Regulations 2000 (See for guidance EA website and/or NetRegs)

### SOURCES OF INFORMATION

DEFRA Central Government  
[www.defra.gov.uk](http://www.defra.gov.uk)

Environment Agency Wales  
[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)

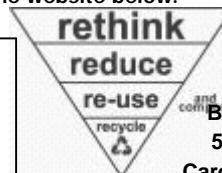
Waste Resources Action Plan  
[www.wrap.org.uk](http://www.wrap.org.uk)

Letsrecycle  
[www.letsrecycle.com](http://www.letsrecycle.com)

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.



BRASS Centre  
54 Park Place,  
Cardiff CF10 3AT  
Tel: 02920 876562  
Fax: 02920 876061

[www.brass.cf.ac.uk/wastesurvey.html](http://www.brass.cf.ac.uk/wastesurvey.html)

## WASTE MANAGEMENT in the wood processing and manufacturing INDUSTRY



In the second series of business briefing notes published by the BRASS Centre, the waste issues experienced by individual business sectors are addressed and some basic guidance is provided. Issue 4 of Series 2 highlights waste issues in the wood processing and manufacturing sector, a sector with very specific waste management problems and concerns. This leaflet is for the following business sectors: sawmills, carpenters, joiners, manufacturers of wood products, ranging from custom built kitchens to pallets. The leaflet draws on data collected from companies involved in the Commercial and Industrial Waste Survey 2003 conducted in Wales.

Series 2/Issue 4

## WASTE AND YOUR BUSINESS

The more waste you generate, the less profit you earn. Waste can be a cost to your business due to inefficient processes resulting in lost product, it is also a cost due to treatment and disposal and these costs are set to increase due to new and proposed waste legislation. For example:

- ◆ Increasing Landfill Tax and pressures to divert waste from landfill;
- ◆ Packaging regulations;
- ◆ Hazardous waste regulations for companies that treat wood or use glues, paints and varnishes.

Wood, is a natural and infinite resource if managed properly. The use of such large amount of wood creates a large amount of valuable wood waste. This leaflet provides some information on how your company can respond to some of the pressures. It provides information on wastes in this sector and how they can be managed.

### TYPICAL WASTE TYPES IN THE WOOD PROCESSING AND MANUFACTURING INDUSTRY

The following are typical waste types disposed by wood processing and manufacturing companies participating in the Commercial and Industrial Waste Survey (Wales). Standard European Waste Catalogue (EWC) codes are provided in red to enable you to complete your waste Transfer Notes and also added is a **recommended waste management option** in bold.

1 The largest, most common and costliest waste stream amongst survey companies was the 'mixed waste' (200301) stream. In almost all cases this waste type was disposed to landfill by a local council. The main components of this waste stream:

- ◆ Packaging waste: Cardboard/paper (150101) **recycling** or **composted** on site; Plastic (150102) **recycling**; Cans/tins (150104) **recycling**
- ◆ Kitchen/Restaurant (200108) or garden waste (200201) **composted** on site
- ◆ Office/factory waste: Cleaning wastes (200301) Office paper (200101) Floor sweepings (200301) all to **landfill** and some garden waste (200201) **composted**.

### 2 Process waste - clean wood waste. (Chapter 3 EWC)

Dust and shavings (depending on quality/quantity):

- ◆ Large quantities to be **recycled** into chipboard and MDF or **landspread** by farmers;
- ◆ small quantities **re-used** as animal bedding and as mulch on gardens

European Waste Catalogue codes:

- ◆ waste bark and cork (030101)
- ◆ sawdust, shavings, cuttings, wood, particle board and veneer (030105)
- ◆ Wood preservatives (03 02 05\*)
- ◆ Wood off cuts (03 01 05)

Other sustainable waste management options:

- ◆ On site **incineration** with energy recovery
- ◆ Conversion into high-calorie bio-fuel pellets and subsequent **incineration** with energy recovery

3 Hazardous wastes can be **recycled, treated, incinerated** or disposed to **hazardous landfill** site after **treatment** (least preferred). Usually these wastes are managed by specialist companies that are licensed to do so (It's your duty to check licences)

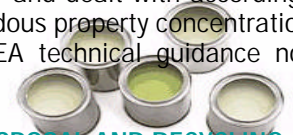
- ◆ Off-cuts, sawdust, shavings, cuttings, particle board and veneer, contaminated with hazardous substances like glues, varnishes, paints, creosote, CCA preservatives (030104\*)
- ◆ Waste preservatives and residues (0302..\*)
- ◆ Waste paint, varnishes, lacquers and glues (0801..\* & 0804..\*)
- ◆ Sludges/Interceptor wastes containing dangerous substances to be tinkered off site (080113\*/15\* & 080411\*/13\*)
- ◆ Waste lubricating and hydraulic oils (1301..\*/1302..\*/1303..\*)
- ◆ Solvents (08...\* & 140602/03\*)
- ◆ Fluorescent tubes (200121\*)
- ◆ Contaminated packaging, **see next page for more information** (150110\*)
- ◆ Contaminated rags and cloths (150202\*)
- ◆ Contaminated paint brushes (200137\*)

### 4 Single packaging waste streams (separated):

- ◆ Wooden packaging (150107) **re-use/recycle**
- ◆ Cardboard/paper (150101) **recycling**
- ◆ Cans/tins (150104) **recycling**
- ◆ Plastic packaging (15 01 02) **recycling**

## CONTAMINATED PACKAGING

Empty packaging like drums and paint tins which contain residues of the original hazardous contents are Hazardous Waste (150110\*), unless the containers hold less than 0.1% of their original contents. If the contents were of a very toxic or carcinogenic nature, that limit is further reduced to 0.01% (NETREGS) If you wash or drain containers such as IBC's before disposal to reduce their hazardousness, remember that washing water should be treated as contaminated water and dealt with accordingly. For the list of hazardous property concentrations (H1-H14) see the EA technical guidance note WM2.



### MAIN WASTE DISPOSAL AND RECYCLING PROBLEMS IN THIS SECTOR

The main wastes, like packaging and process wastes (paper and cardboard, cans/tins, plastics, wood wastes), can be recycled, re-used composted. However, this is often difficult due to the following reasons:

- ◆ Mileage per tonne is too high to have it picked up by recyclers, whereas volumes are usually too insignificant to be viable - Stock piling in trailers can be an alternative
- ◆ Source separation of recyclables can be costly; with landfill cost increasing year on year the balance has to be regularly re-assessed.
- ◆ Liquid (hazardous) waste like sludges and interceptor wastes are already banned from landfill.
- ◆ Biodegradable waste (including wood and wood dust) - a major contributor of emissions from landfill sites; will be banned from landfill sooner or later - pelletising and incineration with energy recovery might be a solution.
- ◆ Hazardous wastes can only go - after treatment - to hazardous waste landfill sites (none in Wales), resulting in rising transport cost.

### MANAGING YOUR WASTE SUCCESSFULLY

Before you try managing your waste you and your staff will have to raise awareness of the waste you produce and how much it costs you. The first step to take is to conduct a waste audit (see below).