

# GLOSSARY

## OF WORDS YOU'LL HEAR IN THE RESOURCE RECOVERY INDUSTRY

**AEROBIC PROCESSES:** processes, which require or occur in the presence of oxygen.

**AGRICULTURAL WASTE:** waste material produced by the raising of plants or animals for food, including manure, plant stalks, hulls and leaves.

**ANAEROBIC PROCESSES:** processes, which do not require, or occur in the absence of oxygen.

**BIODEGRADABLE:** materials, which are able to be broken down by the action of living organisms such as bacteria into harmless constituents, such as water and nutrients.

**BIOSOLIDS:** Biosolids are a byproduct of sewage collection and treatment processes, which are beneficially reused as a soil conditioner.

**C&D (CONSTRUCTION AND DEMOLITION) WASTE:** waste from building or demolishing houses and commercial properties, including wood, plasterboard, concrete, glass, plastic, metal, etc.

**CLEANER PRODUCTION:** Cleaner production practices are those that reduce adverse environmental impacts by improving resource efficiency and reducing waste. It is a term associated with business waste minimization programmes

**CLEANFILLS:** The Ministry for the Environment defines a cleanfill as a landfill that only accepts waste that will not harm people or the environment when put on or into land. Cleanfills are waste disposal sites that accept only inert wastes. These include materials such as clay, soil, rock, concrete and bricks.

**COMBUSTIBLES:** materials such as paper, plastic, wood, and other materials, which can be burned.

**COMPACTOR:** power-driven mechanical equipment, which compresses and reduces the volume of waste materials. Compactors are often installed on residential and commercial refuse trucks. They are also essential for landfills to compress the waste to reduce open spaces where flammable gas can collect in and to make the landfill last as long as possible by squeezing more waste into it.

**COMPANY PROCEDURES:** means the documented methods for performing work activities and include health and safety, environmental and quality management requirements. They may refer to manuals, codes of practice, or policy statements.

**COMPOST:** a stable, nutrient rich soil conditioner made from biological reduction of organic (plant-derived) wastes. May sometimes include bio solids (the solids remaining after sewage treatment) where these do not contain too many heavy metals or other harmful constituents.

**CONSTRUCTION WASTE:** waste materials from construction of homes, office buildings, industrial plants, schools usually including wood scraps, metal, brick and block, wires and industrial packaging materials.

**CONTAINED GASES:** Contained gases are gases that can be controlled before being released into the air. Examples are gases from incinerators and pollution control devices.

**CONTAMINATED SITES:** Contaminated sites are land areas where hazardous substances are in concentrations above those occurring naturally and are a risk to human health or the environment. They can include service stations, farm sheep dips, timber treatment sites, closed gasworks, landfills and scrap yards.

**CONTAMINATION:** when used in reference to recycled materials it means products added to the recyclable materials of a non-specified type – i.e. glass added in to plastics.

**CORROSIVE:** acid or alkaline materials that can damage skin and other materials.

**COVER MATERIAL:** a waterproof layer, usually clay that is free of organic matter, used to cover compacted waste in a landfill.

**CULLET:** pieces of broken glass that can be melted into new glass products.

**DEMOLITION WASTE:** waste materials produced by the destruction of buildings, roads or pavements, usually including large pieces of broken concrete, pipe, plastic, wood, bricks and glass.

**DISPOSAL:** the final fate of wastes, whether to landfill or incineration.

**DECOMPOSITION:** the breakdown of waste materials by bacterial action; in aerobic decomposition, the bacteria work in concert with oxygen, and total aerobic decomposition leaves only carbon dioxide, water and inorganic solids.

**DEGRADABILITY:** ability of materials to breakdown, by bacterial (biodegradable) or ultra violet (photodegradable) action.

**DEGRADABLE PLASTICS:** plastics specifically developed for special products that are formulated to break down after exposure to sunlight or microbes, e.g. degradable plastic grocery and garbage bags and self dissolving surgical sutures. They do not breakdown completely though, they become tiny bits of plastic – plastic sand. If these enter the waterways they can be ingested by fish and enter our food chain.

**DROP OFF RECYCLING CENTRES:** facilities, often-unattended bins, where individuals can deposit recyclable materials.

**ECOLOGY:** the science of the relationship between organisms and their environment.

**ECOLOGICAL FOOTPRINT:** a measure of how much of the earth's resources we use, as individuals, cities or nations. The size of the Footprint - to how heavily it treads - indicates how many resources are used, and varies between nations and regions. From the biologically productive area on our planet that we share with 30 million other species and 6 billion other people only 1.7 hectares is available to sustain the needs of each human being to supply Food, water, energy and other materials, and to absorb waste.

**ECOTOXIC:** a material that is harmful to the environment, though it may not be to humans. For example, milk: even though we drink it without harm, if it were spilled into a waterway it is extremely ecotoxic (it uses up oxygen so fish don't have enough to breathe and thus suffocate).

**'END OF PIPE' WASTE TREATMENT:** treating a waste after it has been generated. This is virtually always more expensive than not creating a waste in the first place, and cannot deliver the same environmental benefit.

**ENVIRONMENTAL AUDIT:** a tool used by a company to measure if environmental impact, mainly in terms of resource use and waste emissions (liquid, solid, gaseous, energy); ensure the company complies with all legal requirement for environmental protection; and plan for regular monitoring of and continual improvement in environmental performance.

**EXTENDED PRODUCER RESPONSIBILITY (EPR):** Extended Producer Responsibility puts the responsibility on businesses to design environmentally friendly products and look for, and capitalise on, opportunities for resource conservation and pollution prevention throughout a product's lifecycle, including disposal.

**FLY-TIPPING/ILLEGAL DUMPING:** refers to the illegal deposit of any waste onto land (ie waste dumped or tipped on a site with no licence to accept waste).

**GASEOUS WASTE:** Gaseous waste consists of gases and small particles carried by air. It includes dust, fumes, smoke and vapour resulting from fires, industrial processes, vehicles and spray-drift.

**GREEN WASTE:** Garden waste made of grass, plants, leaves, branches etc.

**HAZARDOUS WASTE:** Hazardous waste refers to materials that are flammable, explosive, oxidising, corrosive, toxic, ecotoxic, radioactive or infectious. Examples include unused agricultural chemicals, solvents and cleaning fluids, medical waste and many industrial wastes. Hazardous waste refers to waste that poses a present or future threat to people or the environment.

**INORGANIC COLLECTION:** Generally referred to as unwanted household items set out at the kerbside for collection on an annual or regular basis. Sometimes known as a Bulky Rubbish Collection or Hard Rubbish Collection.

**LANDFILL:** A landfill is an area used for the controlled disposal of solid waste.

**LIQUID WASTE:** Liquid waste is waste generated in, or converted to, a liquid form for disposal. It includes point and non-point source discharges, stormwater and wastewater.

**MICRO ORGANISMS:** microscopically small living organisms including bacteria, yeasts, simple fungi, some algae, slime moulds and protozoan's which metabolise waste materials in composting and work in sewage treatment processes.

**MIXED PLASTICS:** a plastic created by melding together two or more different types of plastic.

**NATURAL RESOURCES:** valuable, naturally occurring materials such as soil, petroleum, wood, air, water or minerals.

**NIMBY:** acronym for 'not in my back yard', an often-stated reason for opposing a proposed site for a potentially unpopular facility such as a landfill.

**NON RENEWABLE RESOURCE:** a natural resource considered finite in supply because of its scarcity, rapid

depletion or extreme length of time to reproduce. Minerals are a good example.

**NON-POINT SOURCE DISCHARGE:** A non-point source discharge is one that has no identifiable source point. Examples include livestock effluent, and agrichemicals washed from paddocks into streams by rainwater.

**ORGANIC WASTE:** Organic waste is anything that comes from plants or animals that is biodegradable. It includes anything that will turn rot down and includes garden and kitchen waste, compostable packaging, food process wastes, and sewage sludge.

**ORGANOCHLORINES:** Organochlorines are chemicals that contain carbon and chlorine atoms joined together. Some organochlorines are persistent and present a risk to the environment and human health. Examples include dioxin and polychlorinated biphenyls (PCBs).

**PCBS:** short for polychlorinated biphenyls, PCBs were commonly used in the electrical industry in the 1950s, '60s and '70s until they were made illegal because of their carcinogenic (cancer causing) effects.

**PETROCHEMICALS:** chemicals derived from refining hydrocarbons (oil and natural gas). Plastics are created through processing petrochemicals.

**PLASTICS:** synthetic materials consisting of large molecules called polymers derived from petrochemicals (compared with natural polymers such as cellulose, starch and natural rubber). They come in a number of different types, which can be coded for ease of separation for recycling (see 'coding').

**POINT SOURCE DISCHARGE:** A point source discharge has an identifiable source point, such as a particular factory.

**POLLUTION:** the contamination of soil, water or the atmosphere by the discharge of waste.

**POLLUTION PREVENTION:** eliminating waste to achieve zero or reduced discharges into air, water or soil. It is generally cheaper and more environmentally beneficial than treating a waste after it has been generated.

**POLYMER:** a large molecule consisting of a long chain of chemically linked subunits called monomers. All plastics are made of polymers.

**POST CONSUMER WASTE:** waste, which results from a product being bought and used (e.g. a newspaper that has been read, which is then landfilled or recycled into paper or cardboard).

**PRECAUTIONARY PRINCIPLE:** The principal refers to a precautionary approach to risk management. If an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is not harmful, the burden of proof that it is not harmful falls on those taking an action.

**PRE CONSUMER WASTE:** waste, which results from a product being manufactured but not sold to a consumer. For example, the cardboard off cuts from making boxes, which can be sent back to the paper mill to be recycled into more cardboard.

**POTENTIALLY HAZARDOUS WASTE:** a waste, which may become hazardous under certain conditions, especially those likely to be encountered in a landfill as a result of migrating gases and fluids.

**PROCESS CHANGE:** altering the way in which a product is manufactured to eliminate or reduce wastes or to produce wastes which are less harmful.

**PUTRESCIBLE WASTE:** wastes, which rot. i.e. food and garden waste.

**RAW MATERIAL:** unprocessed natural resource or product used in manufacturing; for example, trees for timber or paper.

**RECLAMATION:** another term for recovery (see below), or the process of restoring materials found in the waste stream to a state of usefulness or productivity.

**RECOVER:** the fourth step in the waste management hierarchy. Recovery means extraction of materials or energy from waste so that they can be used or processed. An example of materials recovery is where high value materials

are recovered from waste streams, for example, silver from photographic wastes. An example of energy recovery is where wastes are incinerated to produce electricity or digested to produce methane and the methane collected.

**RECYCLE:** the third step in the waste management hierarchy. Recycling refers to a set of processes for converting materials, which would otherwise be discarded as waste into new products. This may be done once, several times or many times, thereby eliminating the need to use new, raw materials. For example - steel cans, aluminium cans, glass, paper and many other materials can be melted down and recycled into the same product over and over again. This represents closed loop recycling. Plastics, by contrast are usually made into a different product. For example, milk bottles can be made into insulation materials or mats and pots for plants (open loop recycling).

**REDUCE:** the first step in the waste management hierarchy. Reducing waste means lessening the amount of waste generated, for example, by not using something or by using less of it. Light weighting, or using thinner materials, is a way of using less material and thus generating less waste. Wastes can be reduced by redesigning products and using different materials, or by behavioural changes.

**RESIDUAL WASTES:** the fifth—and last—step in the waste management hierarchy. Disposing of wastes is the last resort. Why? Because it's a 'waste' of resources, which could be reduced, reused, recycled or recovered. It may also be a waste of land needed for landfill space which could support other land uses or cause water or air pollution.

**RESOURCE EFFICIENCY:** only using as much material as you need, which has environmental benefits where materials come from (forests, quarries) and where wastes are disposed of? It also saves companies money.

**REUSE:** the second step in the waste management hierarchy. Reuse means using something again in its existing form for the same purpose or a similar one, without further manufacture. For example, wooden pallets used for transporting goods can be reused many times.

## **SEPARATION AT SOURCE, OR SOURCE**

**SEPARATION:** keeping recyclable materials out of the waste stream by sorting them into separate categories {for example, glass, metal, paper, plastic. This reduces costs and provides high quality material as an input to the recycling process.

**SEWAGE SLUDGE:** Sewage sludge is a byproduct of sewage collection and treatment processes.

**SOLID WASTE:** Solid waste is all waste generated as a solid or converted to a solid for disposal. It includes wastes such as paper, plastic, glass, metal, electronic goods, furnishings, garden and other organic wastes.

**SOLID WASTE MANAGEMENT:** the entire process of collecting, sorting, storing, processing, recycling, reclaiming and disposal of refuse.

**SPECIAL WASTE:** Special wastes are wastes that cause particular management and/or disposal problems and need special care. Examples include used oil, tyres, end-of-life vehicles, batteries and electronic goods.

**STEWARDSHIP:** Stewardship puts a duty of care on everyone — government, business and the community — for waste prevention and resource recovery.

**TRADE WASTE:** Trade waste refers to liquid wastes generated by business and disposed of through the sewerage system. Trade waste includes a range of hazardous materials resulting from industrial and manufacturing processes.

**TRANSFER STATION:** a place where waste collection trucks deposit waste from residential, commercial and industrial areas, and where householders may also bring their wastes directly. Recyclable or compostable wastes may be separated out from the rest of the waste stream at transfer stations, and household hazardous wastes may also be taken there. The wastes for disposal are then compacted and loaded onto large transporters to be taken to the landfill.

**USED OIL:** Oil contaminated through use with substances that can be hazardous to human health and the

environment.

**WASTE:** Any material, solid, liquid or gas, that is unwanted and/or unvalued and discarded or discharged.

**WASTE ANALYSIS:** an essential part of good waste management, analysing the content of a waste stream tells you exactly what's in it and helps you identify wastes which can easily be reduced. Ministry for the Environment has developed a waste analysis protocol for landfills, so the results of waste surveys throughout New Zealand can validly be compared with each other.

**WASTE AUDIT OR WASTE ASSESSMENT:** an essential step in waste reduction, a waste audit or assessment gives real, quantified information about how much waste is generated, where and how much it costs. It is surprising how many firms do not have good information about this. It is essential in all cases to measure key wastes, as the perceptions of even experienced people can be inaccurate.

**WASTE HIERARCHY:** The waste hierarchy orders preferred waste management options. The most preferred option is reduce, re-use, followed by recovery, recycling, treatment and, lastly, disposal.

**WASTE MINIMISATION:** Waste minimisation refers inclusively to all activities aimed at preventing, reducing, re-using or recycling materials.

**WASTE PREVENTION:** Waste prevention refers to practices that avoid and reduce the generation of waste.

**WASTE STREAM:** waste reduced from a particular source. Can mean the total volume of all wastes from that source, or this total volume can also split into component streams of different wastes (separate waste streams).

**WASTEWATER:** Wastewater is a by-product of sewage, and liquid trade waste collection and treatment processes.

**ZERO WASTE:** Zero Waste is an aspirational goal which aims to minimise and ultimately eliminate waste.