

Recovered Resources Market Bulletin

Supporting resources – Glossary and
references

October 2019



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1. Supporting material

1.1 Glossary of terms and abbreviations

Term	Description
Beneficiation (of glass)	An optical sorting process used to separate different colours of container glass to produce cullet for reprocessing and mixed fines.
BSK	Bleached softwood kraft.
BHK	Bleached hardwood kraft.
Closed-loop recycling	Material from a product system is recycled in the same product system, and is of the same quality and functionality as the original material. Also see 'Open-loop recycling' and 'Downcycling'.
Commercial and industrial (C&I) waste	Solid inert waste generated from trade, commercial and industrial activities including the government sector. It includes waste from offices, manufacturing, factories, schools, universities, state and government operations and small to medium enterprises e.g. food waste.
Commingled recyclables	Materials combined generally for the purposes of collection, mainly through municipal collection services. Includes plastic bottles, other plastics, paper, glass and metal containers. Commingled recyclable materials require sorting after collection before they can be reprocessed. Can also be called commingled materials.
Composting	The process whereby organic materials are microbiologically transformed under controlled aerobic conditions to create a pasteurised and stabilised organic product for application to land.
Construction and demolition (C&D) waste	Solid inert waste generated from residential and commercial construction and demolition activities e.g. bricks and concrete.
CDS	Container Deposit Scheme.
Contaminants – Out throws	<p>A sorted scrap (bale) related term. Recyclable materials that are unsuitable for inclusion in the sorted grade (product) in which they are present, but can be sorted, separated and/ or removed easily during the recycling process.</p> <p>Out throws generally have significantly higher allowable thresholds, compared with prohibited materials, in bale specifications for sorted recycled material commodities. Also see 'Contaminants – Prohibited materials' entry.</p>
Contaminants – Prohibited materials	<p>A sorted scrap (bale) related term. Unrecyclable materials that are unsuitable for inclusion in the sorted grade (product) in which they are present, and cannot be sorted, separated and/or removed during the recycling process. Prohibited materials cause adverse impacts on end-products and may damage the recycling facilities.</p> <p>Prohibited materials generally have significantly lower allowable thresholds, compared with out throws, in bale specifications for sorted recycled material commodities. Also see 'Contaminants – Out throws' entry.</p>
Ceramic, Stone and Porcelain (CSP)	A type of glass fines that are contaminated with ceramic, stone and porcelain materials and so are unsuitable for recycling back into glass packaging.
Cullet	Sorted glass feedstock resulting from the beneficiation process of mixed container glass. Generally consists of sorted streams of amber, flint and green glass of particle size greater than 5-10 mm depending on the capacity of the beneficiation plant.
Delamination	The process of splitting a composite material into its component parts e.g. laminated glass.

Term	Description
DIP	Deinked pulp.
Downcycling	Recycled material is of lower quality and functionality than the original material. Also see 'Closed-loop recycling' and 'Open-loop recycling'.
Drop off centre/site	A facility where households can drop off selected materials and household items for recycling and reuse. Also called drop off facilities.
EXW / ExWorks	Incoterm (trade term) defining the sale (transfer of ownership) of goods at the gate of the seller. The buyer must carry out all tasks of export and import clearance. Carriage and insurance is to be arranged by the buyer.
End user (of recycled content raw materials)	A user of raw materials that have a recycled content. Examples of end users include plastic product manufacturers that use recycled polymer in their products, or agricultural producers that purchased composted organics as a soil conditioner/fertiliser.
Energy from waste (EfW)	The terms 'energy recovery from waste', 'waste to energy' or 'energy from waste' can be used interchangeably to describe a number of treatment processes and technologies used to generate a usable form of energy from waste materials. Examples of usable forms of energy include electricity, heat and transport fuels.
E-waste	E-waste comprises of electronic equipment with a plug or battery that requires a current to operate and that has reached end of life. It includes televisions, computers, monitors and whitegoods such as fridges and washing machines.
FAS / Free Alongside Ship	Incoterm (trade term) defining the sale (transfer of ownership) of goods once placed alongside the vessel at the named port of shipment by seller. The seller is required to clear the goods for export. This term can be used for sea transport only.
Feedstock	Raw material used to manufacture products. Material varies depending on what is being produced.
Fines (glass)	Unsorted sub 5-10 mm glass material left over from the glass beneficiation process. It can contain contamination including plastics and small pieces of metals. These fines can be further processed to produce a glass sand product which has a number of uses. Also see CSP.
FIS / Free In Store	Non-Incoterm meaning delivered to the end purchaser.
FOB / Free On Board	Incoterm (trade term) defining the sale (transfer of ownership) of goods once they pass the ship's rail at the named port of shipment at the cost of the seller. The seller must clear the goods for export. This term can only be used for sea transport.
Food organics	Food waste from households or industry, including food processing waste, out-of-date or off-specification food, meat, fruit and vegetable scraps. Excludes liquid wastes.
Garden organics	Organics derived from garden sources e.g. grass clippings, tree prunings. Also known as green organics.
Generator (of waste materials)	A C&I or C&D generator of waste materials to either landfill or recovery fates.
GFC	Global Financial Crisis.
Green organics	More accurately referred to as garden organics.
Greenhouse gases	Gases, including carbon dioxide and methane, that trap heat in the earth's atmosphere, affecting weather and climate patterns.
Hard waste	The term applied to household garbage that is not usually accepted in kerbside garbage bins by local councils e.g. old fridges and mattresses.

Term	Description
Hazardous waste	See Prescribed waste and prescribed industrial waste (PIW).
HDPE	High-density polyethylene.
Incinerator	For the purpose of this document, a site that facilitates the disposal of waste streams through incineration without producing another useful end product or capturing value from the waste material.
In-vessel composting	Composting technology involving the use of a fully enclosed chamber or vessel in which the composting process is controlled by regulating the rate of mechanical aeration. Aeration assists in heat removal, temperature control and oxygenation of the mass. Aeration is provided to the chamber by a blower fan which can work in a positive (blowing) and/or negative (sucking) mode. Rate of aeration can be controlled with temperature, oxygen or carbon dioxide feedback signals.
Kerbside waste/ collection	Waste collected by local councils from residential properties, including garbage, commingled recyclables and garden organics, but excluding hard waste.
Landfill	Discharge or deposit of solid wastes onto land that cannot be practically removed from the waste stream.
Landfill levy	A levy applied at differential rates to municipal, industrial and prescribed wastes disposed of at licensed landfills in Victoria. Landfill levies are used solely for the purposes of environment protection and fostering environmentally sustainable use of resources and best practice in waste management. They fund the activities of WRRGs, SV and EPA, helping to establish waste management infrastructure, industry waste reduction programs, education programs, regulatory controls and enforcement regimes. Levies also provide an incentive to minimise the generation of waste, sending a signal to industry that the government supports efforts to develop alternatives to disposal to landfill.
Liquid paperboard (LPB)	Liquid paperboard (LPB) is a fibre-based packaging board that is designed to hold a liquid. It is commonly comes in two main types, which are gable-topped LPB (plastic polymer layer / paperboard layer / plastic polymer layer), and aseptic LPB (plastic polymer layer / paperboard layer / aluminium foil layer / plastic polymer layer). Also see Polymer-coated paperboard (PCPB).
Materials recovered	Materials recovered from the region refers to materials diverted from landfill for use or reprocessing irrespective of where the recovery or reprocessing takes place.
Materials recovery facility (MRF)	A centre for the receipt, sorting and transfer of materials recovered from the waste stream prior to transport to another facility for recovery and management. At an MRF, materials may undergo mechanical treatment for sorting by characteristics such as weight, size, magnetism and optical density and may include cleaning and compression. Materials may be received as mixed streams such as commingled recyclables from households and businesses or single streams such as metals.
Mixed paper	Post-consumer kerbside mix of fibre based packaging and non-packaging papers. Includes materials such as magazine, newspaper, marketing, some OCC and others fibre based formats. Typically has high levels of contamination, of which broken glass is a particular issue.
Mixed plastics	Post-consumer kerbside mix of plastics based packaging and non-packaging plastic items. Includes materials such as bottles, containers and other packaging formats consisting of all the major polymer groups. Often undergoes a polymer sort at MRFs or post-MRFs to positively recover a limited range of polymer types, typically PET and HDPE. Often has moderate to high levels of contamination.
Municipal solid waste (MSW)	Solid waste generated from municipal and residential activities, and including waste collected by, or on behalf of, a municipal council. In this document, MSW does not refer to waste delivered to municipal disposal sites by commercial operators or waste from municipal demolition projects.

Term	Description
O-I	Owens-Illinois.
OCC	Old corrugated paperboard.
OMG	Old magazines.
ONP	Old newsprint.
Open-loop recycling	Material from a product system is recycled into a different product system, and may be of lower quality and functionality than the original material. Also see 'Closed-loop recycling' and 'Downcycling'.
Optical sorting	Technologies used to sort glass by colour type, and plastics by polymer type.
Organic material	Plant or animal matter, e.g. grass clippings, tree prunings and food waste, originating from domestic or industrial sources.
Out the gate	Material leaving a facility following reprocessing; excludes most contamination.
Packaging	Material used for the containment, protection, marketing or handling of product. Includes primary, secondary and tertiary/freight packaging in both consumer and industrial packaging applications.
PE-HD or HDPE	High density polyethylene (PIC 2). Typically referred to as HDPE.
PE-LD/LLD or LDPE/LLDPE	Both low density polyethylene and linear low density polyethylene (PIC 4). Typically referred to as LDPE/LLDPE.
PE-LD or LDPE	Low density polyethylene (PIC 4). Typically referred to as LDPE.
PE-LLD or LLDPE	Linear low density polyethylene (PIC 4). Typically referred to as LLDPE.
PET	Polyethylene terephthalate (PIC 1).
PIC	Plastic identification code.
PS-E or EPS	Expanded polystyrene (PIC 6). Typically referred to as EPS.
Polymer-coated paperboard (PCPB)	PCPB is a type of paperboard that has a primary fibre-based layer, that is laminated on one or both sides with a layer of plastic film. Also see Liquid paperboard (LPB).
PP	Polypropylene (PIC 5).
Prescribed waste and prescribed industrial waste (PIW)	These wastes are defined in the Environment Protection (Industrial Waste Resource) Regulations 2009. EPA closely regulates these wastes because of their potential adverse impacts on human health and the environment. Prescribed wastes carry special handling, storage, transport and often licensing requirements, and attract substantially higher disposal levies than non-prescribed solid wastes. Also known as hazardous waste.
Process derived fuels	Also called process engineered fuel (PEF) or refuse derived fuel (RDF), is a fuel produced after basic processing in an MRF or MBT to increase the calorific value and remove recyclable materials and contaminants of municipal solid waste, commercial and industrial waste and construction and demolition waste.
Processing facilities	Facilities which either receive materials directly from collection systems or from recovery facilities for further sorting and/or processing to provide material for use in the generation of new products.

Term	Description
Product stewardship	A concept of shared responsibility by all sectors involved in the manufacture, distribution, use and disposal of products, which seeks to ensure value is recovered from products at the end of life.
Public place recycling	Recycling facilities found in public areas, such as parks, reserves, transport hubs, shopping centres and sport and entertainment venues, that allow the community to recycle when away from home.
Pulp (paper)	Pulp is a lignocellulosic fibrous material prepared by chemically or mechanically separating cellulose fibres from wood, fibre crops, waste paper, or rags.
Putrescible waste	Waste that readily decomposes, including food waste and organic waste from gardens.
PVC	Polyvinyl chloride (PIC 3).
Pyrolysis	Thermal breakdown of waste in the absence of air, to produce char, pyrolysis oil and syngas e.g. the conversion of wood into charcoal.
RCP	Recover paper.
Recover / recovery / resource recovery	The process of recovering resources from waste for reuse or reprocessing. This includes collection, sorting and aggregation of materials. To convert waste into a reusable material.
Recyclate	Scrap material either before or after reprocessing.
Recycle/Recyclables/Recycling	In common practice the term is used to cover a wide range of activities, including collection, sorting, reprocessing and reuse.
Refuse derived fuels	Refer to Process derived fuels.
Reprocess / reprocessing	To put a material that has been used through an industrial process to change it so that it can be used again.
Reprocessor / reprocessing facility / reprocessing infrastructure	Facility that uses an industrial process to change the physical structure and properties of a waste material so it can be used again. This can include facilities that dismantle products, such as tyres, e-waste and mattresses, and energy from waste facilities that use materials to generate energy.
Resale centre / shop	A centre/shop that enables the sale and subsequent reuse of good quality, saleable products and materials that were disposed of by their previous owner.
Residual waste	Residual material that remains after any source separation or reprocessing activities of recyclable materials or garden organics. Waste that is left over after suitable materials have been recovered for reuse and recycling. This generally means the environmental or economic costs of further separating and cleaning the waste are greater than any potential benefit of doing so.
Resource recovery infrastructure	Facility that receives and manages materials to enable them to be reused or reprocessed. This includes drop off points, resale centres, resource recovery centres, transfer stations and materials recovery facilities.
Reuse	Recovering value from a discarded resource without processing or remanufacture e.g. garments sold through opportunity shops are, strictly speaking, a form of reuse, rather than recycling.
Sectors / industry sectors	Groupings of industries used to generalise patterns in waste generation and disposal e.g. construction and demolition, food services including food retail and food manufacturing, small to medium enterprises.
Solid industrial waste (SIW)	Solid waste generated from commercial, industrial or trade activities, including waste from factories, offices, schools, universities, state and federal government operations and commercial construction and demolition work. Excludes MSW,

Term	Description
	wastes that are prescribed under the <i>Environment Protection Act 1970</i> and quarantine wastes.
Solid inert waste	Solid inert waste is hard waste that has a negligible activity or effect on the environment. The waste may be either a municipal or industrial waste.
Solid waste	Non-hazardous, non-prescribed, solid waste materials, ranging from municipal garbage to industrial waste.
Source separation	The practice of segregating materials into discrete material streams prior to collection by, or delivery to, processing facilities.
SV	Sustainability Victoria.
Transfer station	Facility which receives materials from the waste stream for possible segregation, consolidation or compaction for bulk transport for resource recovery, treatment or disposal facilities.
Unprocessed material	Material that is unrefined and has not been through any process of recycling.
'Virgin' material	Material that has been sourced through primary resource extraction (sometimes called primary materials) and is not sourced from recycled materials (sometimes called secondary materials). For example, 'virgin' steel is manufactured from iron ore, and 'virgin' paper is manufactured from plantation sourced wood fibre.
Waste	Any discarded, rejected, unwanted, surplus or abandoned matter, including where intended for recycling, reprocessing, recovery, purification or sale. Anything that is no longer valued by its owner for use or sale and which is, or will be, discarded. In this document, the term 'solid waste' refers to non-hazardous, non-prescribed, solid waste materials ranging from municipal garbage to industrial waste.
Waste and resource recovery group (WRRG)	Statutory authorities established under the Environment Protection Act 1970 responsible for preparing the regional waste and resource recovery implementation plan for their region.
Waste and Resource Recovery Planning Framework	The planning framework as defined in the 2014 amendments to the Environment Protection Act 1970 and including: <ul style="list-style-type: none"> • The Statewide Waste and Resource Recovery Infrastructure Plan (state infrastructure plan). • The seven regional waste and resource recovery implementation plans (regional implementation plans). • Relevant Ministerial Guidelines made under section 50CA of the EP Act. • The process for integration of the state infrastructure plan and regional implementation plans.
Waste management industry	Applies to those involved in managing waste e.g. collectors, sorters, processors and landfill operators.
Waste minimisation	The concept of, and strategies for, waste generation to be kept to a minimum level in order to reduce the requirement for waste collection, handling and disposal to landfill. Also referred to as waste avoidance.
Waste to energy	Refer to Energy from waste.

1.2 References

Provided here is a listing of the references used in the development of the bulletins. This listing was last updated for bulletin #7 (October 2019).

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