

Current Kerbside Collection

- Mixed plastics collections
- Projected to collect c. 2,200 tonne (April 2019 to March 2020)
- Similar collected tonnage to April 2018 to March 2019
- Because this is *mixed* plastics it is classed as very low grade
- This is because it has to be sent for sorting to extract the better grades of plastic and this is a costly process
- As such, the mixed plastics grade has a gate fee (£20-£50 per tonne) as opposed to an income

Composition of Swindon's kerbside collected plastics

PET – 42%

HDPE – 18%

PP – 21%

Poly bags – 13%

Paper – 1%

Glass, ferrous and non-ferrous cans – 1%

Landfill – 4%

- The mixed composition with contaminants makes this expensive to process
- Currently the end destination for this product is in the UK

Recycling Technologies

- The RT700 is designed to produce hydrocarbon oils and waxes for the petrochemical and plastic production industries
- Pre-sorting of plastics types is required in order to produce the correct feedstock
- Requirements are:
 - > 75% mix of PP, PE, LDPE, HDPE, LLDPE, PB
 - < 13% mix of PET, PETP, PC
 - < 2% mix of PU, PVC, PS, ABS
 - Removal of all biomass and organics (paper, compostable, garden waste and other eg rubber, wood, textiles
 - Removal of inert materials; glass, stone, metals
- A gate fee (processing fee) to be charged
- The plant at Waterside is a Research and Development plant, not operational to accept large quantities of plastics

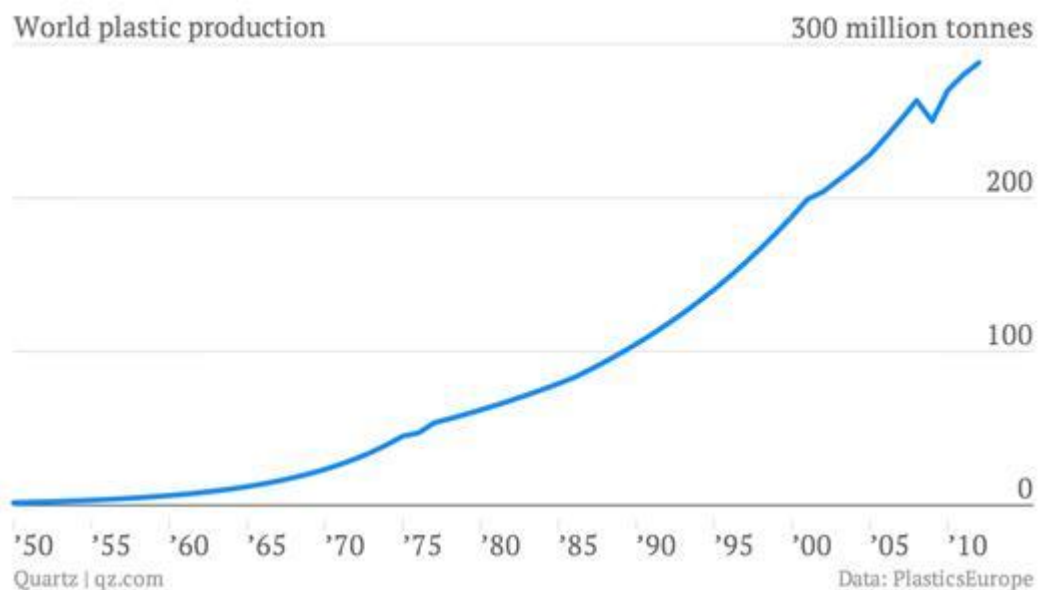
Hard Plastics

- Very volatile market








- PPS have used PVC windows and doors for reuse / recycling operating as a hub. Unfortunately the crash in the market forced the off-taker out of business
- Currently send clean plastics to Wessex Plastics in Bridgwater
- Clean plastics are single polymer types eg recycling boxes, dead wheelie bins
- Market conditions fluctuate for mixed hard plastics (buckets, panelling, posts, plant pots, children's toys, garden furniture etc.)
- Currently poor market conditions
- Hard plastics are put through SRF plant to increase the calorific value of the SRF

Future of plastics

- Plastic manufacture is a product of the Petrochemical Industry and account for 14% of oil use
- Over 8.3 billion metric tonnes of plastics has been produced – currently 350 million tonnes per annum
- C. 36,000 plastic bottles makes up one tonne
- Globally only 9% is recycled, 12% incinerated.
- 8 million metric tonnes of plastics per annum in the sea
- Virgin plastic production far outstrips all attempts to recycle plastic and reintroduce the product for use



Most commonly used plastics

	What is it used for?	Next life	Ease of recycling
Polyethylene Terephthalate (PET) 	Soft drink bottles, food packaging such as punnets	Used to make more PET products	Easy
High Density Polyethylene (HDPE) 	Milk cartons, cleaning products, yoghurt pots, soap dispensers	Garden furniture, pipes and more milk cartons	Easy
Polyvinyl Chloride (PVC) 	Pipe fittings, window fittings, thermal insulation, car parts	Used to make more PVC products	Difficult
Low Density Polyethylene (LDPE) 	Food bags, shopping bags, magazine wrapping	Bin liners, plastic furniture and floor tiles	Manageable
Polypropylene (PP) 	Margarine tubs, microwave meal trays, fibres and filaments for carpet, wall coverings, vehicle upholstery	Clothing fibres, food containers, speed humps	Easy
Polystyrene (PS) 	Some yoghurt pots, takeaway boxes, plastic cutlery, protective packaging, insulation	As more packaging	Difficult
Other 	This includes other forms of plastic including composites, such as salad bags and crisp packets	Goes to landfill	Very difficult



Recyclable



Recyclable at specialist points



Not easily recyclable

Commonly used plastic abbreviations

ABS - Acrylonitrile butadiene styrene

CPE - Chlorinated polyethylene

CPVC - Chlorinated polyvinyl chloride

EPDM - Ethylene propylene di-monomer

EPS - Expanded polystyrene

ETFE - Ethyl tetra fluoro ethylene

EVA - Ethylene vinyl acetate

GRP - Glass-reinforced polyester, Fibreglass

HDPE - High density polyethylene

HIPS - High impact polystyrene

LDPE - Low density polyethylene

LLDPE - Linear low-density polyethylene

MF - Melamine-formaldehyde

PA - Polyamide, Nylon

PB - Polybutylene

PC - Polycarbonate

PE – Polyethylene

PET - Polyethylene terephthalate

PF - Phenol-formaldehyde, Bakelite

PMMA - Polymethyl methacrylate, Perspex

PP - Polypropylene

PS - Polystyrene

PTFE - Polytetrafluoroethylene

PU - Polyurethane

PVA - Polyvinyl acetate, latex emulsion

PVC - polyvinyl chloride

PVB - Polyvinyl butyral

PVF - Polyvinyl fluoride

UF - Urea-formaldehyde

UP - Unsaturated polyester

UPVC - Unplasticised polyvinyl chloride